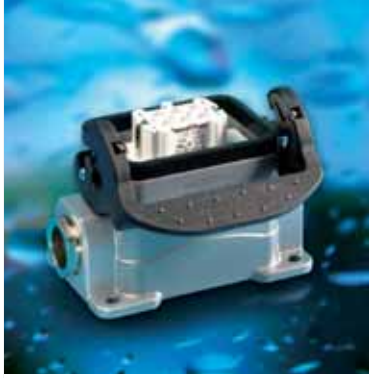

CEEtyp
Plugs and Sockets

PROCON
Industrial Connectors

E-Mobility
Infrastructure

Power Distributors
for Outside Areas

PROCON
Industrial Connectors
2014

MADE
IN
GERMANY

walther
Elektrotechnische Systeme

PROCON
Industrial Connectors 2014

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The indicated standard extracts are for your information but without any liability. In case of doubt please refer to the complete original standard or regulation. The quotes from standards are hints where to get additional information on a specific topic.

We reserve the right for technical changes.
Due to technical improvements some products may differ from the pictures as shown in the catalogue.

For prices please refer to our current trade price list.

walther
Elektrotechnische Systeme

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Update:
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- **Screw terminal inserts, crimp contact carriers, contacts**
  A 3 connectors with insulation displacement connection; 3-pole + PE up to 32-pole + PE, rated current 16 A max.; 10 A with 40° C ambient temperature, rated voltage 250 and 400 V
  5-pole compact insert for housing series A3 / A4

- **Screw terminal and crimp contact carriers, contacts, inserts with IDC and push-in connection, wiring adapters**
  6-pole + PE up to 48-pole + PE, rated current 16 A max., 16 A with 40° C ambient temperature rated voltage 500 V; series BB: 10-pole + PE to 92-pole + PE

- **Screw terminal inserts**
  6-pole + PE and 12-pole + PE
  rated current 35 A
  rated voltage 690 V

- **Crimp contact carriers, contacts, wiring adapters**
  7-pole + PE up to 128-pole + PE, optical waveguide
  rated current 10 A max., rated voltage 42 V and 250 V,
  hight contact density, modified contact arrangement

- **Crimp contact carriers, contacts**
  24-pole + PE up to 216-pole + PE, optical waveguide,
  rated current 10 A max., rated voltage 250 V,
  very high contact density, modified contact arrangement

- **Frames, crimp contact carriers, contacts, tools, blind modules**
  Frames with PE terminal, lock-in contact modules 3 to 280 poles, coax, optical waveguide,
  rated current 5 A - 50 A, rated voltage 63 V - 1000 V, tools
  RJ45 and pneumatic modules

- **Housings for inserts of series A 3, A 4, A 5, D 7 and D 8**
  Wall mount housings, panel housings, coupler hoods and hoods made of plastic and aluminium, protective plastic caps

- **Housings for inserts of series A 10 and D 15**
  Wall mount housings, panel housings, coupler hoods and hoods made of aluminium,
  snap-on mounting adapters, protective plastic caps,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series A 16 and D 25**
  Wall mount housings, panel housings, coupler hoods and hoods made of aluminium,
  snap-on mounting adapters, protective plastic caps,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series A 32 and D 50**
  Wall mount housings, panel housings and hoods made of aluminium,
  protective caps made of plastic

- **Housings for inserts of series B 6, BB 10, DD 24 and MOB 6**
  Wall mount and panel housings, coupler hoods and hoods, housings with central locking system,
  snap-on mounting adapters, protective caps made of plastic or aluminium,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series B 10, BB 18, DD 42 and MOB 10**
  Wall mount and panel housings, coupler hoods and hoods, housings with central locking system,
  snap-on mounting adapters, protective caps made of plastic or aluminium,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series B 16, BB 32, BA 6, D 40, DD 72 and MOB 16**
  Wall mount and panel housings, coupler hoods and hoods, housings with central locking system
  snap-on mounting adapters, protective caps made of plastic or aluminium,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series B 24, BB 46, D 64, DD 108, MOB 24**
  Wall mount and panel housings, coupler hoods and hoods, housings with central locking system,
  snap-on mounting adapters, protective caps made of plastic or aluminium,
  adapter plates for contact inserts, cover plates for switch cabinets

- **Housings for inserts of series B 32, BB 64, BA 12, D 80, DD 144, 2 x MOB 16**
  Wall mount housings, panel housings, coupler hoods and hoods.
  housings with spring cover, protective plastic caps

- **Housings for inserts of series B 48, BB 92, BV 20, BV 26, BV 32, D 128, DD 216, 2 x MOB 24**
  Wall mount housings, panel housings and hoods.

- **Screw-mountable hoods for inserts of series B, BB, BA, BHT, D, DD, MOB**
  Screw-mountable hoods, hoods with bayonet lock,
  flange set, protective caps for screw-mountable hoods

- **Series BHT**
  Contact inserts 6-pole + PE up to 24-pole + PE
  rated current 16 A max., 16 A with 180° C ambient temperature, incl. contact heating,
  rated voltage 400 V

- **Series BV**
  Contact inserts 3-pole + PE up to 32-pole + PE
  rated current 16 A max., rated voltage 660 V,
  electrical interlocking by shortened switch contact pins, mechanical coding for insertion/assembly

- **Special versions:** Suggestions for individual
- **Accessories:** Cable glands, (NPT)adapters, labels, coding accessories,
  accessories for POF conductors, thermo crimp contacts, connection with POF cable,
  crimping tools, tools, wire-through housings, protective caps

- Sockets, 16 and 32 A
- Plugs, 16 and 32 A
- Appliance plugs, 16 and 32 A
- Couplers, 16 and 32 A
- Panel sockets, 16 and 32 A
- Contacts for control section
- Tools and coding parts
- Accessories for POF connection
- CEPro cables

- **Information**
  • PROCON system • Regulations and approvals • Advantages • Application areas • Housings
  • Locking systems • Termination methods • Index • Part numbers • Certificates • General Conditions

Inserts

Series A
Inserts with 3 to 32 poles 1

Series B
Inserts / contacts
6, 10, 16, 24, 32, 48-pole

Series BB
Inserts / contacts
10, 18, 32, 46, 64, 92-pole 2

Series BA
Inserts and contacts
6- and 12-pole 3

Series D
Inserts and contacts
7-, 8-, 15-, 25-, 40-, 50-, 64-, 80-, 128-pole 4

Series DD
Inserts and contacts
24-, 42-, 72-, 108-, 144- and 216-pole 5

Series MO
Frames, contact carriers / contacts, tools, RJ-, pneumatic + blind modules 6

Housings

Housings for inserts of series A 3, A 4, A 5, D 7, D 8 7

Housings for inserts of series A 10, D 15 8

Housings for inserts of series A 16, D 25 9

Housings for inserts of series A 32, D 50 10

With new housing design

Housings for inserts of series B 6, BB 10, DD 24, MOB 6 11

Housings for inserts of series B 10, BB 18, DD 42, MOB 10 12

Housings for inserts of series B 16, BB 32, BA 6, D 40, DD 72, MOB 16 13

Housings for inserts of series B 24, BB 46, D 64, DD 108, MOB 24 14

Housings for inserts of series B 32, BB 64, BA 12, D 80, DD 144, 2 x MOB 16 15

Housings for inserts of series B 48, BB 92, BV 20, BV 26, BV 32, D 128, DD 216, 2 x MOB 24 16

Screw-mountable hoods / hoods with bayonet lock, for inserts of series B, BB, BA, BHT, D, DD, MOB 17

Series BHT
Inserts and housings
6-, 10-, 16-, 24-pole 18

Series BV *(short overview)*
inserts and housings
3-, 6-, 10-, 16-, 20-, 26-, 32-pole 19

Special versions, Accessories 20

CEPro - Plugs and sockets
Power and control in one unit 21

Information 22

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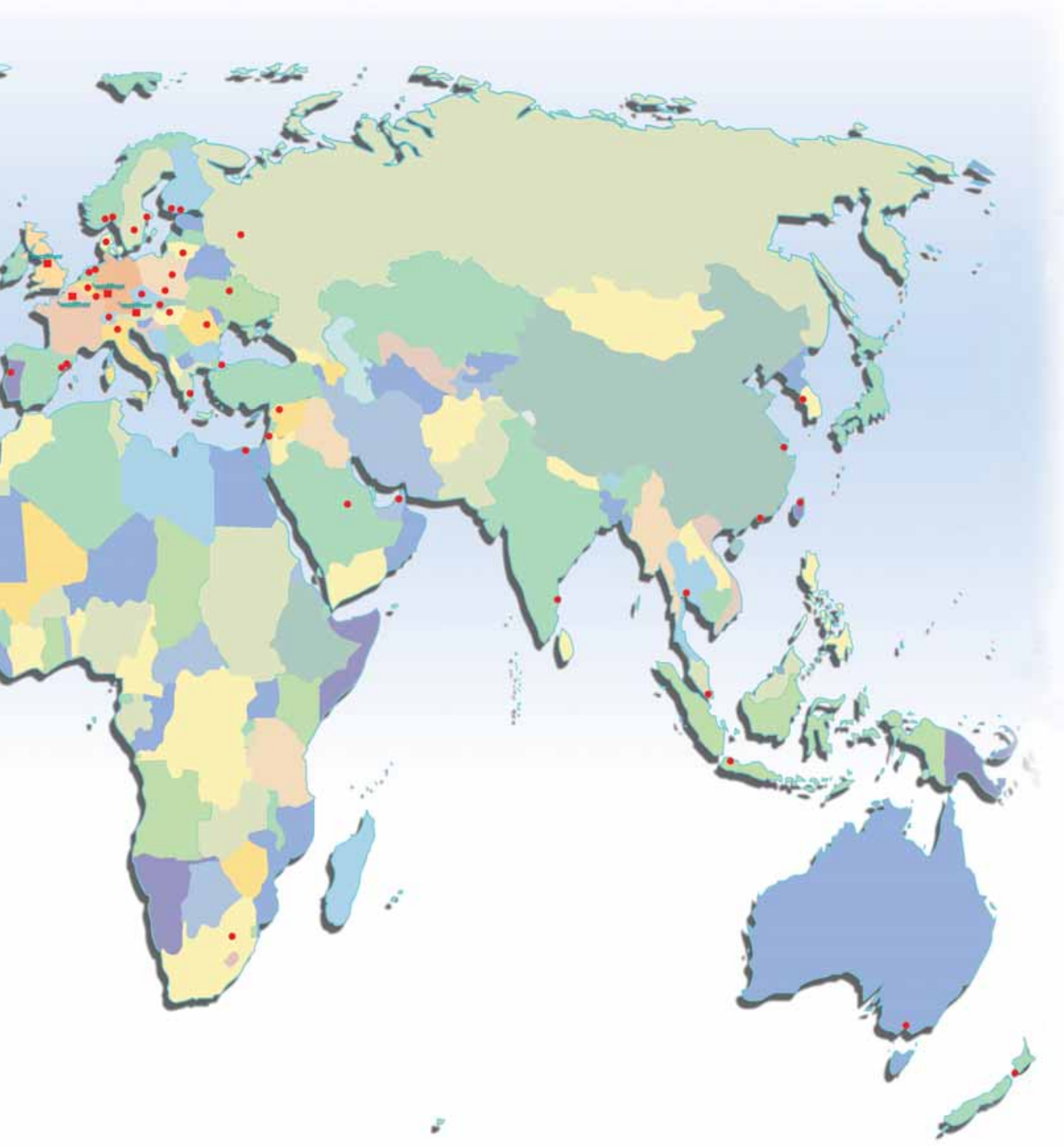
Representatives of Walther-Werke

A well-established distribution network and worldwide connections are the main advantages of Walther's delivery service. Fast and direct delivery is always of highest priority.



Sockets
Plugs
Couplers

Series A, 3 to 32-pole
Series B, 6 to 48-pole

Wall sockets
switched/
fused

Consumer boxes

Series BB, 10 to 92-pole
Series BA, 6 and 12-pole

Panel sockets

CEPro plugs
and sockets

Series D,
7 to 128-pole

Series DD,
24 to 216-pole

Socket
combinations

Plugs and sockets
for extra low voltages

Series MO
Series BHT
Series BV

CEEtyp
Plugs and Sockets

The CEEtyp product line ranges from 16 A to 125 A and also comprises Norvo plugs and sockets for extra low voltages up to 50 V with 16 A and 32 A. In addition, matching wall sockets and socket combinations are available. Even plugs and sockets for special applications like container or caravan installation and chemical resistant versions are available.

With its good sense of innovation, WALTHER has often been setting trends with its main product range of CEE plugs and sockets: with its socket combinations as modular system, with the flat CEE flush-mount socket, with the angled plug and the Multi Contact lamellas inside 125 A devices.

PROCON
Industrial Connectors

PROCON Industrial connectors are characterized by easy operation thanks to their cleverly designed locking system.

Due to their different housing sizes they are provided with ample wiring space. Other quality features are the ergonomically designed grips and the high-grade powder coating of the housings.

Main application areas are machinery and equipment construction, light and stage engineering, crane control, fairground equipment, switchgear construction and control engineering

Termination methods:

- Screw terminal connection
- Crimp connection
- Insulation displacement connection
- Push-in terminal connection

Charging plugs
and sockets
Charging cables

Power distributors
for construction sites

Power distributors
for camping sites

Charging stations
Wall boxes

Power distributors
for allotment gardens

Power distributors
for marinas

Coin-operated systems

Consumption billing systems

Testing facilities

Distributors with
modular technique

Distributors for fairgrounds
and market places

Energy bollards

Pedelec cabinets

Surface / flush-mount
distributors

Underfloor distributors

E-Mobility Infrastructure

New energy schemes and sustainable mobility strategies will shape the 21st century. Electric vehicles play an important role in this development. They stand for eco-friendly and future-oriented mobility.

To ensure the power supply of electric vehicles, a nationwide charging infrastructure is required. In national and international standardisation committees, WALTHER actively participates in this development.

In projects with worldwide leading automotive manufacturers and energy suppliers, WALTHER has established a leading technological position and has specialised on the entire product range between power grid and vehicle.

Power Distributors for Outside Areas

WALTHER power distributors come from the long established company Bosecker Verteilerbau Sachsen GmbH, which belongs to the WALTHER group of companies since 2001. With its robust and longlasting products, tailored to customers' requirements, this WALTHER subsidiary has earned a good reputation.

The products offered under the label "WALTHER - System Bosecker" include not only power distributors for outside areas but also ready-to-use transformer stations, which are produced in Zittau. Meanwhile, the WALTHER range of high-quality distributors comprises a multitude of different application-specific types, with numerous special distributors, which are also available with individual equipment variants. A separate series of distributors with AC/DC-sensitive RCDs even covers these customer requirements.

Over 110 years of expertise

Made in Germany

WALTHER headquarters, Eisenberg

Subsidiary Bosecker, Zittau

Company profile

By establishing his company in Grimma near Leipzig in 1897, Ferdinand Walther laid the foundation for a successful medium-sized company.

In 1945 Walher moved to Bad Reichenhall (Bavaria) and then in 1970 to new larger premises in Eisenberg, near Kaiserslautern (Rhineland-Palatinate)

The good infrastructure of this location - close to the centres Rhine-Main/Rhine-Neckar - enables fast service to all our market partners.

Together, WALTHER in Eisenberg and the subsidiary company BOSECKER in Zittau (Saxonia) have about 300 employees. On 14.500 m^2 of production, administration and storage space, the headquarters in Eisenberg produces electrotechnical components and systems. On a further 5.000 m^2 floorspace in Zittau the company produces power distributors for outside areas and transformer compact stations.

The range of systems is continuously enhanced in consultation with the electrical wholesale trade, electrical contractors, industry and planners

A high quality standard is certified by the German Association for the Certification of Quality Management Systems (DQS) with the certificate acc. to DIN EN ISO 9001-2008.

Marketing and Service

Visitors are always welcome.

Fairs and exhibitions

Close contact to the customer, e.g. during German and international electrotechnical fairs, is one of the WALTHER principles.

The results hereof are permanent innovations and improvements.

Profit from the expert advice on site.

Information material

- CEE catalogue
- PROCON catalogue
- E-Mobility catalogue
- Short overviews
- Leaflets
- WALTHER DVD
- www.walther-werke.de

Technical support

Subsidiaries in Great Britain, France, the United States and Austria, plus agencies in more than 60 countries worldwide offer you quick and competent support.

The WALTHER team will be pleased to assist you in planning and projecting your installation.

WALTHER - your best connection

- A brand „Made in Germany“
- Over 100 years of best connections to trade, craft and industry
- Consequent loyalty to three-tiered specialist distribution system
- Four product lines - four electrical connections from one source
  - CEEtyp plugs and sockets
  - Procon industrial connectors
  - Power distributors for outside areas
  - E-Mobility - charging plugs and sockets, charging cables, charging stations
- One of the safest and fastest screwless CEE plug and coupler systems for 16 and 32 A.

Design and Production

Tools

Even high precision tools which are required for production are manufactured at WALTHER by means of CNC controlled milling machines and electronically controlled spark eroding and cutting machines.

Experienced designers use the latest CAD technology systems to plan devices for practical use which comply with current standards and regulations.
Customer requirements have high priority, like for example:

- easy assembly
- ample wiring space
- first class contacts
- attractive design

All injection moulded plastic items have a high-class and highly compressed surface and are thus stain resistant.

From the smallest connector to the most complex socket combination - WALTHER produces the entire product range in Eisenberg (Rhineland-Palatinate).

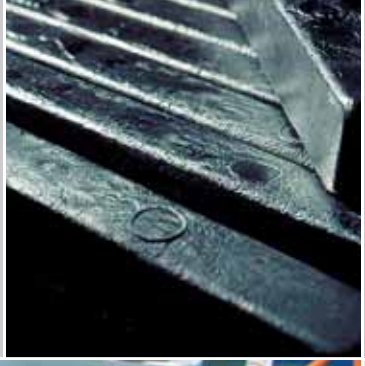
Injection moulding machines

Centrally controlled injection moulding machines produce plastic enclosures from type-tested first grade plastic.
An integrated supervision programme corrects deviations, warns or switches the machine off. This ensures consistently high quality.

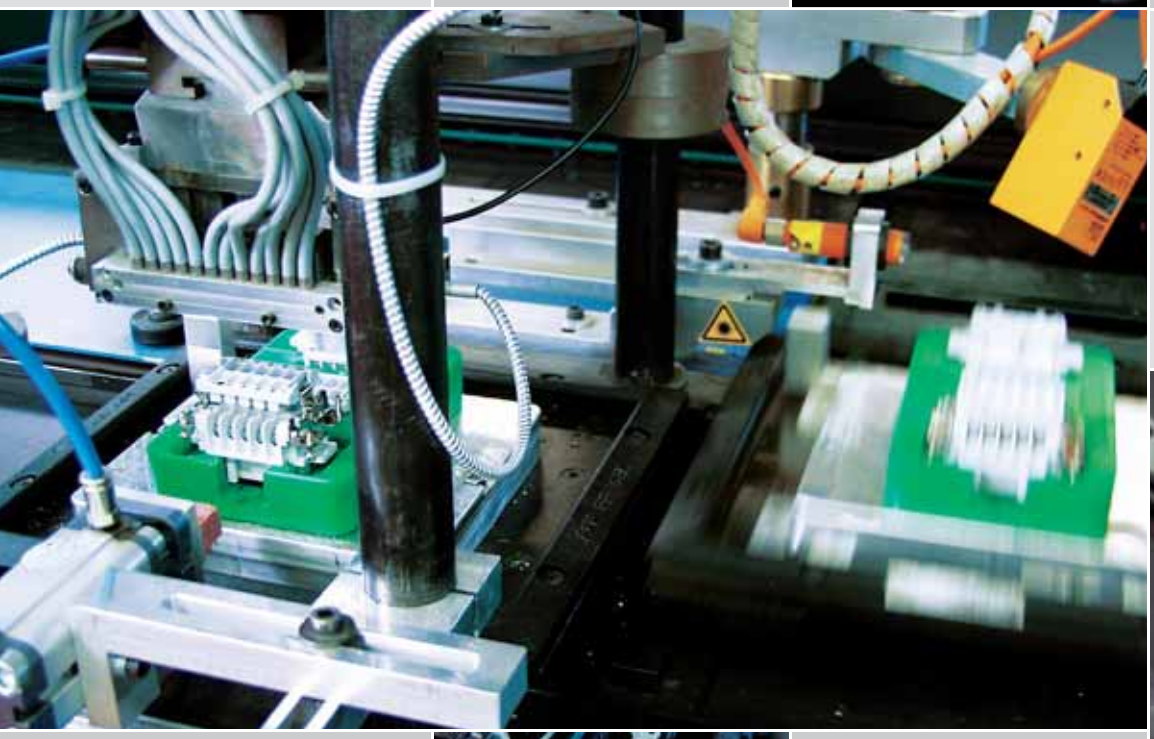
Die-cast housings

Aluminium housings for Procon industrial connectors are produced on die-cast machines with built-in quality control.

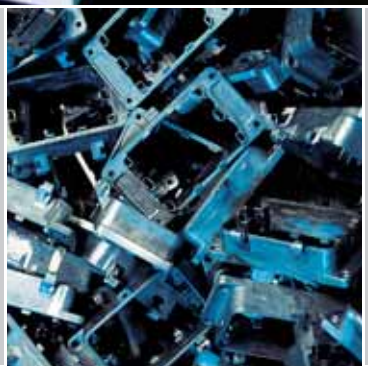
This supervision ensures that only first-class products are accepted for further processing and assembly.



Aluminium bars



Powder coating facility



Die-cast aluminium housings

Contacts

The heart of a plug and socket device are its contacts.
Rotary transfer machines automatically control each contact.
Pins and sleeves have to meet highest quality standards.
This ensures constantly easy plugging and withdrawing over the years. Furthermore all contacts are equipped with open, captive screws
for faster assembly. All contacts are turned from massive brass!

Efficient Assembly

Proven Safety

During and after assembly, stringent test are conducted to ensure the quality of WALTHER products.

High volume bulk production items are produced on fully automatic assembly lines.

After each assembly operation the product is electronically tested.

Universal screw-feed drive

All screws have combination heads for use with electrical, pneumatic or manual screw-drivers.
Pozidrive, Philips as well as slot blades can be used.

Pozidrive, Philips as well as slot blades can be used.

Checked in detail

Each socket combination - including the built-in components like MCBs and RCDs - pass a complete electrical function test.

The impeccable condition of the device is documented on the enclosed test certificate.
All data is saved and can be retrieved with the control number.

Worldwide approvals

WALTHER products have gained more than 6.000 approvals worldwide.
These approvals are not only proof of the high product quality but they also certify the electrical safety and compliance with valid standards.

Inspectors of different international testing laboratories check - also without prior notice - the production, the testing equipment and the end products for compliance with the standards.

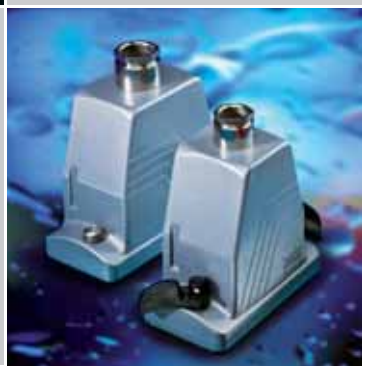
Technology and Design

IDC connection

Screw-mountable hood and hood with bayonet lock

Housing with double locking levers

Housing with single locking lever



Robust and individual

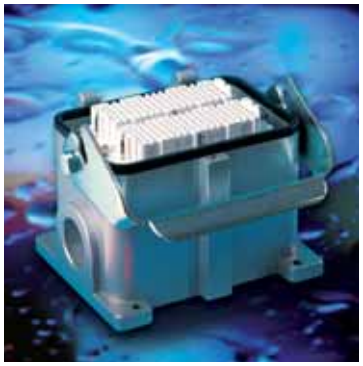
Besides the proven range of PROCON Industrial Connectors, WALTHER also offers special designs for special applications. Here, the size, number and arrangement of cable entries can be freely chosen. Also hoods without drill holes can be supplied.

In addition, WALTHER has improved the design of the series B PROCON connectors in the core product range. The new ergonomic design with its improved grip enables easier removal and insertion.

Besides the standard protection covers, there are user-specific variants on offer for the PROCON series, to protect the contact carriers and contact parts against dirt and corrosion. A wide variety of contact inserts makes the use of connectors flexible.

Production in Germany ensures short delivery times, also for custom-made products.

Series DD:
According to your requirements, up to 216 poles are at your disposal



Housings

A3	A10	A16	A32	B6	B10	B16	B24	B32	B48

possible in all locking systems listed below

		A3	A10	A16	A32	B6	B10	B16	B24	B32	B48
Wall mount housings without flap lid		■	■	■	■	■	■	■	■	■	■
		■				■	■	■	■		
Wall mount housings with flap lid			■	■	■	■	■	■	■	■	■
						■	■	■	■		
Panel housings without flap lid		■	■	■	■	■	■	■	■	■	■
		■				■	■	■	■		
Panel housings with flap lid		■	■	■	■	■	■	■	■	■	■
		■				■	■	■	■		
Hoods without lever		■	■	■	■	■	■	■	■	■	■
		■				■	■	■	■		
Hoods with lever						■	■	■	■	■	
						■	■	■	■		
Coupler hoods		■	■	■	■	■	■	■	■	■	
		■				■	■	■	■		
Screw-locked hoods						■	■	■	■		
						■	■	■	■		
Hoods with bayonet lock						■	■	■	■		
						■	■	■	■		

Material — Plastic | Zinc | Standard Aluminium | Sea water aluminium

Locking systems

Double locking system

Single locking system

Central locking system

Screw locking

Bayonet locking

Cable glands

Pressure gland,
with multiple seal,
with pressure rings

Complete cable gland
brass, nickel-plated

Special cable assembly
brass, nickel-plated

Pressure gland
with strain relief,
brass, nickel-plated

Blanking plug
brass,
nickel-plated

EMC cable gland
brass, nickel-plated

Inserts

Series	3-pole to 280-pole Female	Male	Ampere	Volt AC	No. of poles	Termination method	Terminal cross section in mm²
A			10 10 16	250/400 V 230/400 V 250/400 V	3 - 32 3 5 - 32	Screw IDC Crimp	0,5 - 1,5 0,75 - 1,5 0,14 - 2,5
B			16 16 16 16	500 V 500 V 500 V 500 V	6 - 48 6 - 48 6 - 48 6 - 48	Screw Push-In IDC Crimp	0,5 - 2,5 0,5 - 2,5 0,5 - 2,5 0,14 - 4,0
BB			16	500 V	10 - 92	Crimp	0,14 - 4,0
BHT			16	500 V	6 - 24	Screw	0,5 - 2,5
BA			35	690 V	6 - 12	Screw	0,5 - 6,0
BV			16 16	690 V 690 V	3 - 32 3 - 32	Screw Crimp	0,5 - 2,5 0,14 - 4,0
D			10	250 V	7 - 128	Crimp	0,14 - 2,5
DD			10	250 V	24 - 216	Crimp	0,14 - 2,5
MO			max. 80	max. 1000 V	3 - 280	Screw Crimp	0,09 - 10,0

Termination methods

Contact carrier for crimp termination
0,5 - 4 mm²

Screw terminal connection
0,5 - 2,5 mm²
Screw drive:
Pozidrive PZ 0 (series A)
Pozidrive PZ 1 (series B)

Screwless termination method
(IDC - insulation displacement connection)
0,5 - 2,5 mm²

Push in termination method
(spring clamp connection)
0,5 - 2,5 mm²

	Standard	Special version
Contact carrier		
Material:	Glassfibre reinforced polyamide	High temperature resistant polyamide up to +180 °C
Temperature range:	-40 °C to +125 °C	
Flame class rating:	V0	
Mechanical operating life:	≥ 500 mating cycles	≥ 500 mating cycles
Contacts	**Standard**	
Material:	Copper alloy, hard silver-plated	
Surface:	3 µm Ag, hard gold plated 2 µm Au over 3 µm Ni	

Series A 3 - A 32

Housings of **series A 3** to **A 16** are provided with a **single locking lever**.
Housings of series **A 32** have **two locking levers**.

Series **A 3** housings are available either in **plastic** or **zinc die-casting** - according to your requirements.

Series **A 3** connectors are available both with **screw and IDC terminals**.

Series **A 4** connectors, however, are **only available with screw terminals**.

Series **A 5** is equipped with **crimp contacts** of series B for 16 A. The use of a coding pin prevents incorrect mating of connectors.

If necessary, the engaged crimp contacts can be released by means of a special **removal tool**.

This applies also for the series **A 10, A 16** and **A 32**, which are **additionally available with screw contact carriers**.

Screw terminal inserts are equipped with a wire protection. This **wire protection** saves the time-consuming crimping of wire-end ferrules.

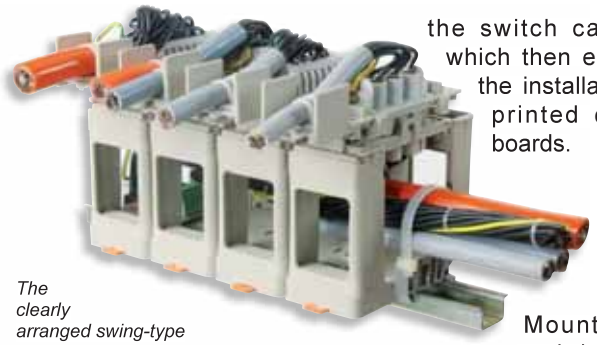
Of course, all WALTHER contacts are provided with open, captive screws.

The convenience of IDC connection is now also available with a classic square connector – a 4-pole (3+PE) industrial plug connector of series A.

Male and female versions are available in hoods and coupler hoods made of plastic.

Thanks to insulation displacement connection, it now only takes a few seconds to connect the 4-pole round conductor: Only the sleeve nut has to be slid over the conductor – since splicing ring, seal and strain relief are included in the sleeve nut.

Snap-on mounting adapters
are ideal for mounting into switch cabinets.



The clearly arranged swing-type insertion plate allows easy wiring.

When installing several mounting plates side-by side, an additional cable duct can be built up inside the switch cabinet, which then enables the installation of printed circuit boards.

Mounting is made by snapping connectors onto DIN-rails in transverse direction

Series A

Specifications

Regulations: DIN VDE 0627, DIN VDE 0110, DIN EN 61 984

Approvals: UR, CSA, MEIE, EZÚ

Number of poles: 3, 4, 5, 10, 16, 32 (2 x 16) + PE

Electrical data acc. to DIN EN 61 984:

Series A3/A4	10 A	230 / 400 V	4 kV	3
Rated current				
Rated voltage conductor - earth				
Rated voltage conductor - conductor				
Rated surge				
Pollution degree				
or	10 A	250 V	4 kV	3

Series A5	16 A	230 / 400 V	4 kV	3
Rated current				
Rated voltage conductor - earth				
Rated voltage conductor - conductor				
Rated surge				
Pollution degree				
Pollution degree 2 also	16 A	320/500 V	4 kV	2

Series A 10 / A 16	16 A	250 V	4 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				
Pollution degree 2 also	16 A	230 / 400 V	4 kV	2

Rated voltage acc. to UL/CSA: 600 V
(Table with rated surges see chapter "Information")

Material: Glass-fibre reinforced polyamide
Temperature range: - 40 °C up to + 125 °C
Flame class rating acc. to UL 94: V 0
Mechanical operating life: ≥ 500 mating cycles

Contacts

Material: Copper alloy
Surface
- hard silver plated: 3 µm Ag
- hard gold plated: 2 µm Au over 3 µm Ni

Contact resistance: < 1 m Ω

Series A 10 / A 16:
Crimp type terminal mm² (AWG): 0,14 - 4,0 mm² (26-12 AWG)
Screw type terminal mm² (AWG): 0,5 - 2,5 mm² (14 AWG)

Series A 3 / A 4:
only screw type mm² (AWG): 0,5 - 1,5 mm² (16 AWG)
Torque/testing torque: A 3 and A 4: 0,25 Nm
A 10 and A 16: 0,5 Nm

Series A 5:
only crimp terminal mm² (AWG): 0,14 - 2,5 mm² (26-14 AWG)

Wire stripping length:
Series A 3 and A 4: 5 mm
Series A 5, A 10 and A 16: 7 mm with screw and crimping contacts

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

Page

A 3-pole + ⏚
Inserts 18
- Short overview see page 104 -
- Matching housings see page 105 - 104 -

A 4-pole + ⏚
Inserts 19
- Short overview see page 104 -
- Matching housings see page 105 - 106 -

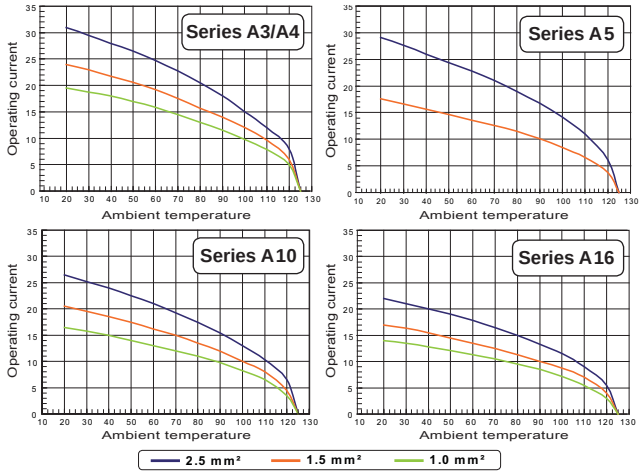
A 5-pole + ⏚
Inserts 19
- Short overview see page 104 -
- Matching housings see page 105 - 106 -

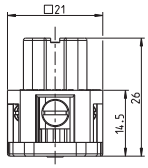
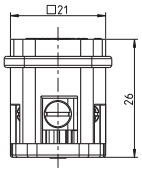
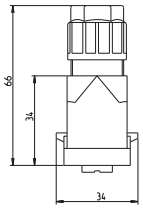
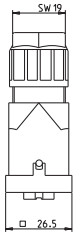
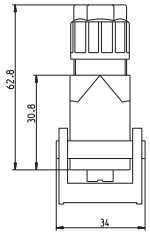
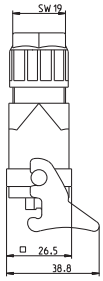
A 10-pole + ⏚
Inserts 20
- Short overview see page 108 -
- Matching housings see page 109 - 110 -

A 16-pole + ⏚
Inserts 21
- Short overview see page 112 -
- Matching housings see page 113 - 114 -

A 32-pole + ⏚
Inserts 22
- Short overview see page 116 -
- Matching housings see page 117 - 119 -

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can - depending on ambient temperature and conductor size - circulate through each contact without exceeding the upper limiting temperature.



Description	Part no.		Series A — 3 P + ⏚ 10 A / 230/400 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminal without wire protection 0,5-1,5 mm² (20-16 AWG)	**700 103**	ex stock		10 14
Male insert Screw terminal without wire protection 0,5-1,5 mm² (20-16 AWG)	**700 203**	ex stock		10 14
Contact arrangement			View from termination side Female insert: 1, 3, 2 Male insert: 1, 2, 3	
Connectors with insulation displacement connection (IDC)				
Hood with female insert Height 66 mm for single locking lever	**700 724**		 	10 25
Hood with male insert Height 66 mm for single locking lever	**700 725**			10 25
Coupler hood with female insert Height 63 mm with single locking lever	**700 726**		 	10 28
Coupler hood with male insert Height 63 mm with single locking lever	**700 727**			10 28

Specifications of connectors with insulation displacement connection:

General specifications:

Key width of sleeve nut	19 mm
Torque of sleeve nut	3 Nm
Mating cycles	≤ 500

Cable specifications for IDC connection:

Conductor cross section area:	0,75 - 1,5 mm² / 18 -16 AWG
Stranded cable / smallest wire diameter:	VDE 0295 class 2 up to 5/0,2 mm
Core insulating material:	PVC/PE
External cable diameter:	6 - 12 mm
Wire diameter (including insulation)	≤ 3 mm

Mechanical specifications:

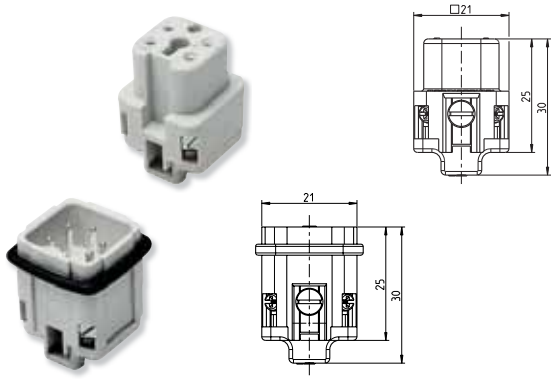
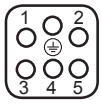
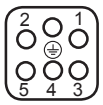
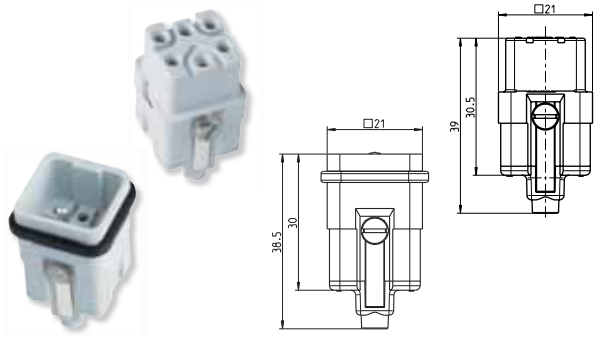
Frequency of connection of cables with equal diameter: 10

Material specifications:

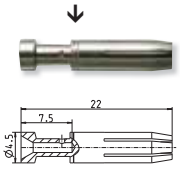
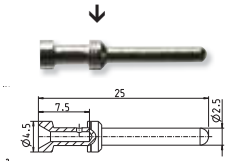
Contact material / contact surface:	Copper alloy / nickel base coat, silver-plated
Insulating material / flammability acc. to UL 94:	PA / V0
Approvals:	UL/CSA

► **Matching housings for screw terminal inserts see page 105 - 106**

walther

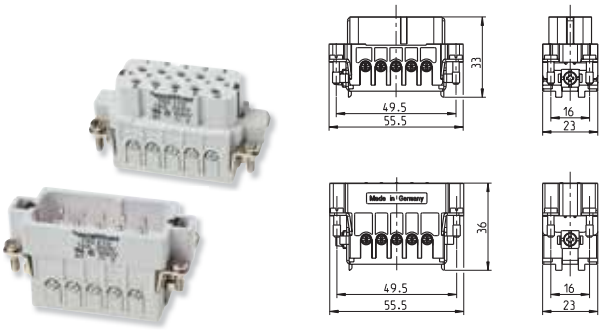
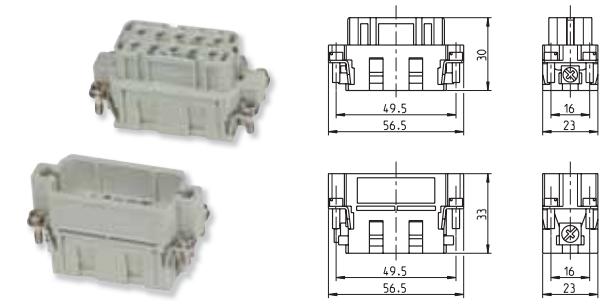
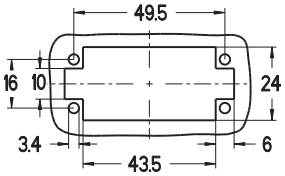
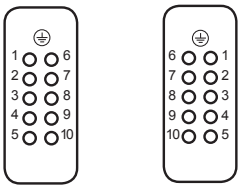
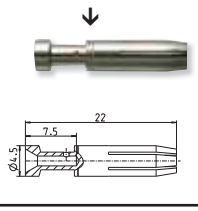
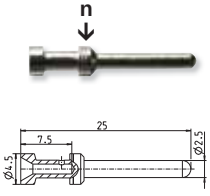
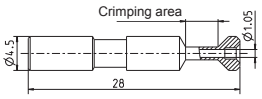
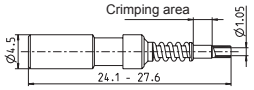
Description	Part no.			
			Series A **4 P +** ⏚ 10 A / 230/400 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminal without wire protection 0,5-1,5 mm² (20-16 AWG)	**700 104**	*ex stock*		10 17
Male insert Screw terminal without wire protection 0,5-1,5 mm² (20-16 AWG)	**700 204**	*ex stock*		10 18
Contact arrangement			**Series A 4** — Female insert: Male insert: **Series A 5** — Female insert:  Male insert:  - View from termination side -	
Description	Part no.		**Series A** **5 P +** ⏚ 16 A / 400 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts	**700 105**	**Please order crimp contacts separately**		10 18
Contact carrier for pin contacts	**700 205**			10 14
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1

Contacts for crimp contact carriers

	silver-plated	gold-plated	Number of grooves = n	Termination cross section indicated by grooves n		
Sleeve contacts for series A 5 crimp-type, solid, turned, weight per 100	**710 508**	710 916		0	0,14-0,37 mm²	26-22 AWG	100 162
	710 504	710 842		0	0,5 mm²	20 AWG	160
	710 509	710 917		1	0,75 mm²	18 AWG	148
	710 500	710 843		1	1 mm²	18 AWG	148
	710 501	710 844		2	1,5 mm²	16 AWG	150
	710 502	710 845		3	2,5 mm²	14 AWG	154
Pin contacts for series A 5 crimp-type, solid, turned, weight per 100	**710 518**	710 918		0	0,14-0,37 mm²	26-22 AWG	100 125
	710 514	710 847		0	0,5 mm²	20 AWG	124
	710 519	710 919		1	0,75 mm²	18 AWG	128
	710 510	710 848		1	1 mm²	18 AWG	128
	710 511	710 849		2	1,5 mm²	16 AWG	132
	710 512	710 850		3	2,5 mm²	14 AWG	132

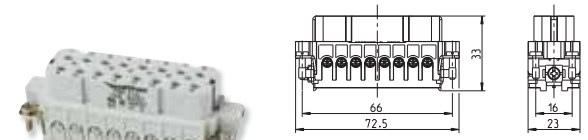
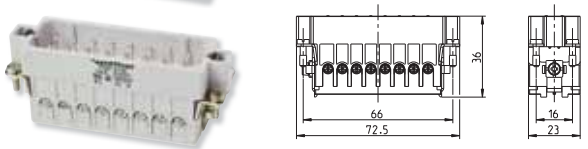
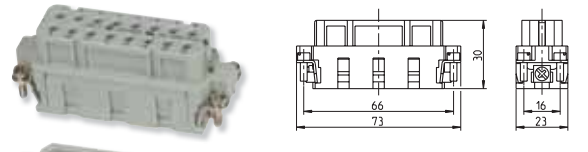
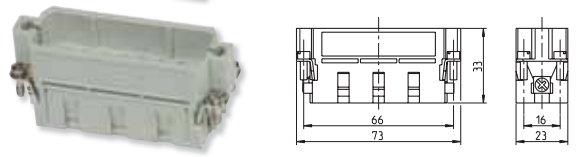
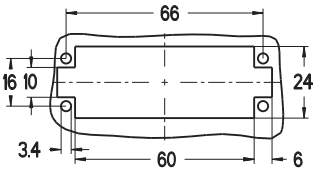
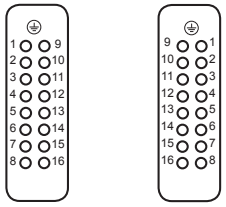
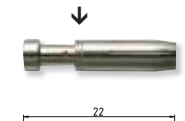
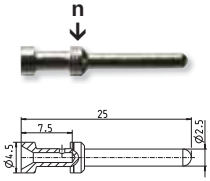
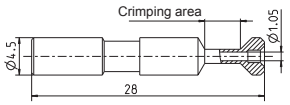
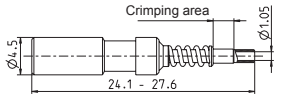
► **Matching housings see page 105 - 106**

Procon

Description	Part no.		Series A 10 P + ⏚ 16 A / 250 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**700 110**	ex stock		10 46
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**700 210**	ex stock		10 47
Crimp contact carriers				
Contact carrier for sleeve contacts	**700 310**	Please order crimp contacts separately		10 26
Contact carrier for pin contacts	**700 410**			10 27
Contact arrangement			Panel cutout  View from termination side Female insert / Male insert 	
Contacts for crimp contact carriers			Number of grooves = n 	
Sleeve contacts for series A 10 crimp-type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502** **710 503**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845 710 846	n: 0 / 0 / 1 / 1 / 2 / 3 / 0 Termination cross section indicated by grooves: 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 162 160 148 148 150 154 165
Pin contacts for series A 10 crimp-type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512** **710 513**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850 710 851	 n: 0 / 0 / 1 / 1 / 2 / 3 / 0 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 125 124 128 128 132 132 134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 	100 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1

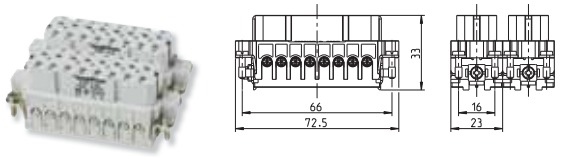
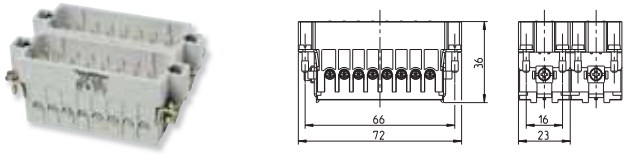
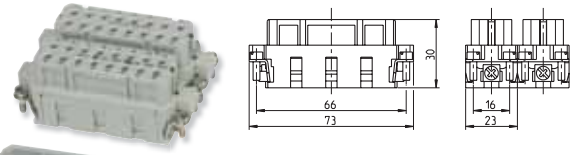
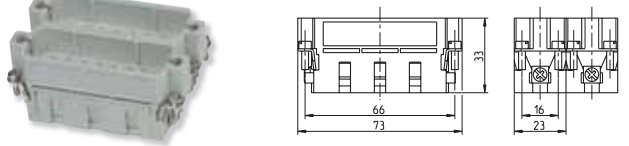
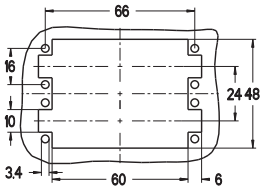
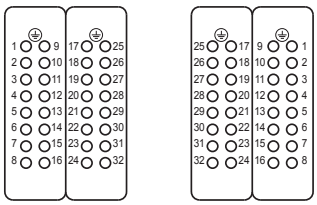
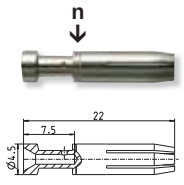
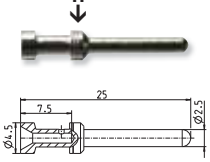
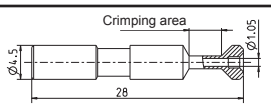
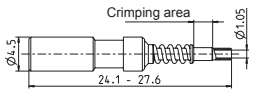
► **Matching housings see page 109 - 110**

walther

Description	Part no.		Series A 16 P + ⏚ 16 A / 250 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**700 116**	*ex stock*		10 65
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**700 216**	*ex stock*		10 63
Crimp contact carriers				
Contact carrier for sleeve contacts	**700 316**	**Please order crimp contacts separately**		10 32
Contact carrier for pin contacts	**700 416**			10 31
Contact arrangement			Panel cutout  View from termination side Female insert Male insert 	
Contacts for crimp contact carriers				
Sleeve contacts for series A 16 crimp-type, solid, turned, weight per 100	silver-plated / gold-plated		Number of grooves = n 	100
	710 508	710 916	n = 0 — 0,14-0,37 mm² — 26-22 AWG	162
	710 504	710 842	n = 0 — 0,5 mm² — 20 AWG	160
	710 509	710 917	n = 1 — 0,75 mm² — 18 AWG	148
	710 500	710 843	n = 1 — 1 mm² — 18 AWG	148
	710 501	710 844	n = 2 — 1,5 mm² — 16 AWG	150
	710 502	710 845	n = 3 — 2,5 mm² — 14 AWG	154
	710 503	710 846	n = 0 — 4,0 mm² — 12 AWG	165
Pin contacts for series A 16 crimp-type, solid, turned, weight per 100	silver-plated / gold-plated		n 	100
	710 518	710 918	n = 0 — 0,14-0,37 mm² — 26-22 AWG	125
	710 514	710 847	n = 0 — 0,5 mm² — 20 AWG	124
	710 519	710 919	n = 1 — 0,75 mm² — 18 AWG	128
	710 510	710 848	n = 1 — 1 mm² — 18 AWG	128
	710 511	710 849	n = 2 — 1,5 mm² — 16 AWG	132
	710 512	710 850	n = 3 — 2,5 mm² — 14 AWG	132
	710 513	710 851	n = 0 — 4,0 mm² — 12 AWG	134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 	100 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1

► **Matching housings see page 113 - 114**

Procon

Description	Part no.		Series A 32 P + ⏚ 16 A / 250 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminal, 0,5-2,5 mm² (20-14 AWG)				
with wire protection 1 - 16	**700 116**			10 69
with wire protection 17 - 32	**700 132**			69
Male insert Screw terminal, 0,5-2,5 mm² (20-14 AWG)				
with wire protection 1 - 16	**700 216**			10 64
with wire protection 17 - 32	**700 232**			64
Crimp contact carriers				
Contact carriers for sleeve contacts 1 - 16	**700 316**	**Please order crimp contacts separately**		10 38
for sleeve contacts 17 - 32	**700 332**			38
Contact carriers for pin contacts 1 - 16	**700 416**			10 36
for pin contacts 17 - 32	**700 432**			36
Contact arrangement			Panel cutout  View from termination side Female insert / Male insert 	
Contacts for crimp contact carriers				
Sleeve contacts for series A 10 crimp-type, solid, turned, weight per 100	silver-plated / gold-plated		Number of grooves = n 	100
	710 508 / 710 916		n: 0 — 0,14-0,37 mm² — 26-22 AWG	162
	710 504 / 710 842		0 — 0,5 mm² — 20 AWG	160
	710 509 / 710 917		1 — 0,75 mm² — 18 AWG	148
	710 500 / 710 843		1 — 1 mm² — 18 AWG	148
	710 501 / 710 844		2 — 1,5 mm² — 16 AWG	150
	710 502 / 710 845		3 — 2,5 mm² — 14 AWG	154
	710 503 / 710 846		0 — 4,0 mm² — 12 AWG	165
Pin contacts for series A 10 crimp-type, solid, turned, weight per 100	silver-plated / gold-plated			100
	710 518 / 710 918		n: 0 — 0,14-0,37 mm² — 26-22 AWG	125
	710 514 / 710 847		0 — 0,5 mm² — 20 AWG	124
	710 519 / 710 919		1 — 0,75 mm² — 18 AWG	128
	710 510 / 710 848		1 — 1 mm² — 18 AWG	128
	710 511 / 710 849		2 — 1,5 mm² — 16 AWG	132
	710 512 / 710 850		3 — 2,5 mm² — 14 AWG	132
	710 513 / 710 851		0 — 4,0 mm² — 12 AWG	134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 	100 74
Coding pin	700 734		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1

► **Matching housings see page 117 - 119**

Series B 6 - B 48 and BB 10 - BB 92

Series B 6 - B 24
with new housing design

Series B 6 - B 48
with push-in terminals

Termination methods available with series B

- Screw terminal inserts
- Contact carriers for crimp contacts
- Inserts with insulation displacement connection (IDC) for considerable time saving during installation
- Push-In terminals

Screw terminal inserts

are available either with or without **wire protection**. This wire protection **saves the time-consuming crimping of wire-end ferrules**.

Of course, all WALTHER contacts are provided with **open, captive screws**.

Locking systems:

- Series **B 6** and **B 48**: only with **single locking system**
- Series **B 32**: only with **double locking system**
- Series **B 10, B 16, B 24**: **both locking systems** possible

Housing size 5 with single locking system

Housing size 9 with double locking system

Housing sizes 6-7-8 with both locking systems

Housing size 10 with single locking system

Housings of series B 6 - B 24:
More possibilities with exchangeable locking levers

Easy and cost-saving exchange of single and double locking levers in case of damage or material fatigue.

Just press replacement lever in axial direction onto the bolts until they lock in place.

Series BB 10 - BB 92

Series BB has only contact carriers for crimp contacts

Attachable rubber flange gasket for series B 6, B 10, B 16, B 24

- reduced mounting time
- optimum handling
- quick switch cabinet mounting

Series B 6 - B 24

If connectors have to be disconnected frequently, wall-mount or panel housings with hinged spring cover and single locking system should be used.

Thus also data connectors are protected against harsh industrial environments.
Mounting of data connectors in aluminium housings is made possible by adapter plates.

Wiring adapters

are mounted directly into the panel housing - as cost-saving switch cabinet feed-through and space-saving connection element.
With screw terminals

Series B

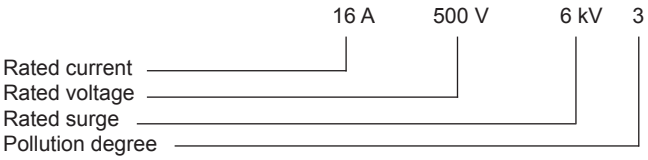
Specifications

Regulations: DIN VDE 0627,
DIN VDE 0110,
DIN EN 61 984

Approvals: UR, CSA, SEV, MEIE, EZÚ

Number of poles: 6, 10, 16, 24, 32 (2 x 16),
48 (2 x 24) + PE

Electrical data acc. to DIN EN 61 984:



Rated voltage acc. to UL/CSA: 600 V
(Table with rated surges see chapter "Information")

Material:	Glass-fibre reinforced polyamide
Temperature range:	- 40 °C up to + 125 °C
Flame class rating acc. to UL 94:	V 0
Mechanical operating life:	≥ 500 mating cycles

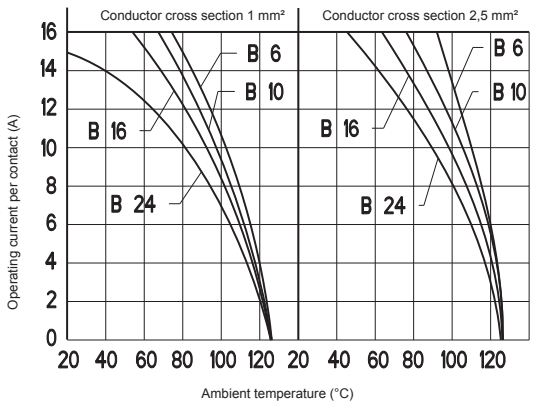
Contacts

Material:	Copper alloy
Surface:	hard silver plated: 3 µm Ag hard gold plated: 2 µm Au over 3 µm Ni
Contact resistance:	< 1 m Ω
Screw type terminal with wire protection:	2,5 mm² (14 AWG)
Screw type terminal without wire protection:	4 mm² (12 AWG)
Torque / testing torque:	0,5 Nm
Crimp type terminal:	0,5 - 4 mm² (20 - 12) AWG
Wire stripping length:	7 mm with screw + crimp contacts
IDC terminals:	0,5 - 2,5 mm² (20 - 14 AWG)

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can - depending on ambient temperature and conductor size - circulate through each contact without exceeding the upper limiting temperature.



Page

B 6-pole + ⏚
Inserts 26 - 27
- Short overview see page 120 -
- Matching housings see page 121 - 123 -

B 10-pole + ⏚
Inserts 28 - 29
- Short overview see page 124 -
- Matching housings see page 125 - 131 -

B 16-pole + ⏚
Inserts 30 - 31
- Short overview see page 132 -
- Matching housings see page 133 - 140 -

B 24-pole + ⏚
Inserts 32 - 33
- Short overview see page 142 -
- Matching housings see page 143 - 149 -

B 32-pole + ⏚
Inserts 34 - 35
- Short overview see page 150 -
- Matching housings see page 151 - 152 -

B 48-pole + ⏚
Inserts 36 - 37
- Short overview see page 154-
- Matching housings see page 155 -

Series BB

Specifications

Regulations: DIN VDE 0627,
DIN VDE 0110,
DIN EN 61 984

Approvals: UR, CSA, SEV, MEIE, EZÚ

Number of poles: 10, 18, 32, 46, 64, 92

Electrical data acc. to DIN EN 61 984:

	16 A	500 V	6 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				

Rated voltage acc. to UL/CSA: 600 V
(Table with rated surges see chapter "Information")

Material: Glass-fibre reinforced polyamide
Temperature range: - 40 °C up to + 125 °C
Flame class rating acc. to UL 94: V 0
Mechanical operating life: ≥ 500 mating cycles

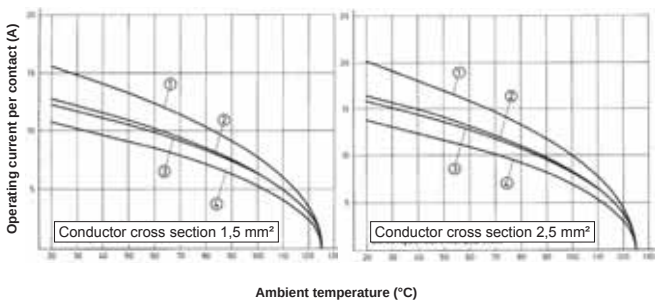
Contacts
Material: copper alloy
Surface: - hard silver plated: 3 µm Ag
- hard gold plated: 2 µm Au over 3 µm Ni

Contact resistance: ≤ 1 m Ω
Crimp type terminal: 0,5 - 4 mm² (20 - 12) AWG
Wire stripping length: 7 mm

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can - depending on ambient temperature and conductor size - circulate through each contact without exceeding the upper limiting temperature.



① = BB10, ② = BB 18, ③ = BB 32, ④ = BB 46

Page

BB 10-pole + ⏚
Inserts 27
- Short overview see page 120 -
- Matching housings see page 121 - 123 -

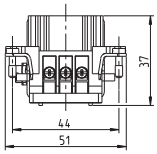
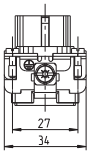
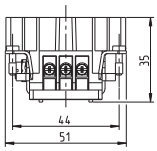
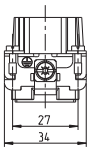
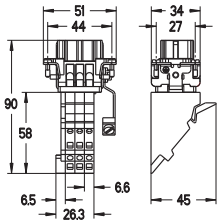
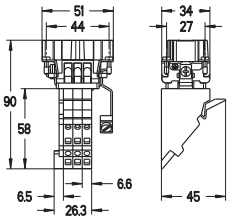
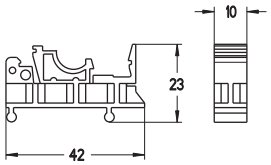
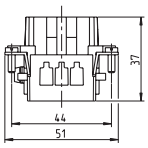
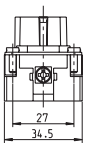
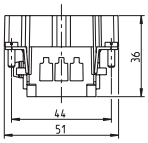
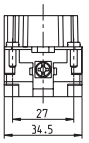
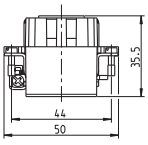
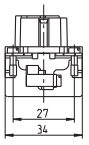
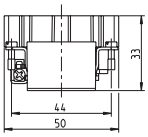
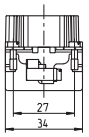
BB 18-pole + ⏚
Inserts 29
- Short overview see page 124 -
- Matching housings see page 125 - 131 -

BB 32-pole + ⏚
Inserts 31
- Short overview see page 132 -
- Matching housings see page 133 - 140 -

BB 46-pole + ⏚
Inserts 33
- Short overview see page 142 -
- Matching housings see page 143 - 149 -

BB 64-pole + ⏚
Inserts 35
- Short overview see page 150 -
- Matching housings see page 151 - 152 -

BB 92-pole + ⏚
Inserts 37
- Short overview see page 154 -
- Matching housings see page 155 -

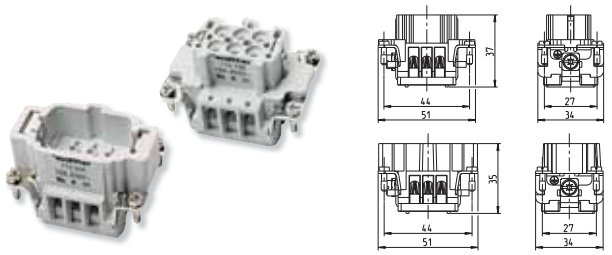
Description	Part no.	Terminal cross section	Series B 6 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals				
with wire protection ex stock	**710 106**	0,5-2,5 mm² (20-14 AWG)	 	10 52
without wire protection	710 769	0,5-4 mm² (20-12 AWG)		49
Male insert Screw terminals			 	
with wire protection ex stock	**710 206**	0,5-2,5 mm² (20-14 AWG)		10 50
without wire protection	710 773	0,5-4 mm² (20-12 AWG)		47
Wiring adapters				
Female insert Screw terminals			Similar to picture 	
Earth pin on the right	**710 657**	0,5-2,5 mm² (20-14 AWG)		10 84
Earth pin on the left	**710 661**			84
Male insert Screw terminals			Similar to picture 	
Earth pin on the right	**710 665**	0,5-2,5 mm² (20-14 AWG)		10 85
Earth pin on the left	**710 669**			85
Combi snap element				
for DIN-rail mounting	**710 807**			10 4
1 piece required per adapter				
IDC terminal inserts				
Female insert IDC terminals ex stock	**710 106 01**	0,5-2,5 mm² (20-14 AWG)	 	10 56
Male insert IDC terminals ex stock	**710 206 01**	0,5-2,5 mm² (20-14 AWG)	 	10 56
Push-in terminal inserts				
Female insert Push-in terminals	**710 106 04**	0,5-2,5 mm² (20-14 AWG)	 	10 51
Male insert Push-in terminals	**710 206 04**	0,5-2,5 mm² (20-14 AWG)	 	10 50
Coding pin for insertion into the coding grooves	**710 607**		*B 6 inserts can be equipped with max. 2 coding pins*	10 1

Series B — 6 P + ⏚

16 A / 500 V
UL/CSA: 600 V

g

Description	Part no.		
Crimp contact carriers			
Contact carrier for sleeve contacts ex stock	**710 306**	Please order crimp contacts separately	10 / 40
Contact carrier for pin contacts ex stock	**710 406**		10 / 38



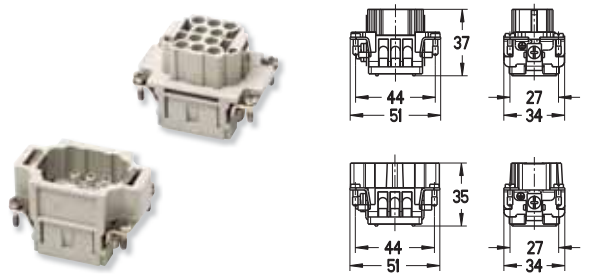
Contacts for crimp contact carriers	silver-plated	gold-plated				
Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	**710 508**	710 916	n	0	0,14-0,37 mm²	26-22 AWG	100 / 162
	710 504	710 842		0	0,5 mm²	20 AWG	160
	710 509	710 917		1	0,75 mm²	18 AWG	148
	710 500	710 843		1	1 mm²	18 AWG	148
	710 501	710 844		2	1,5 mm²	16 AWG	150
	710 502	710 845		3	2,5 mm²	14 AWG	154
	710 503	710 846		0	4,0 mm²	12 AWG	165
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	**710 518**	710 918	n	0	0,14-0,37 mm²	26-22 AWG	100 / 125
	710 514	710 847		0	0,5 mm²	20 AWG	124
	710 519	710 919		1	0,75 mm²	18 AWG	128
	710 510	710 848		1	1 mm²	18 AWG	128
	710 511	710 849		2	1,5 mm²	16 AWG	132
	710 512	710 850		3	2,5 mm²	14 AWG	132
	710 513	710 851		0	4,0 mm²	12 AWG	134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	POF* Ø 1 mm				100 / 89
Male contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	POF* Ø 1 mm				100 / 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.				10 / 1

Series BB — 10 P + ⏚

16 A / 500 V
UL/CSA: 600 V

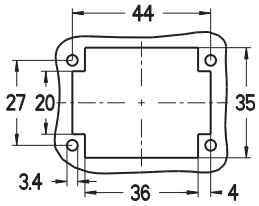
g

Description	Part no.		
Crimp contact carriers			
Contact carrier for sleeve contacts	**710 311**	Please order crimp contacts separately	10 / 42
Contact carrier for pin contacts	**710 411**		10 / 40

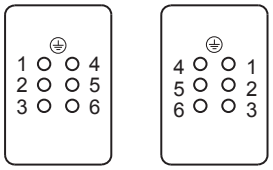


Contact arrangement

Panel cutout:

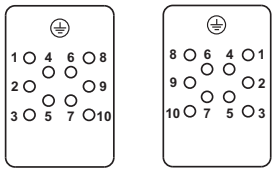


Series B6



Female insert — Male insert

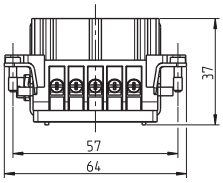
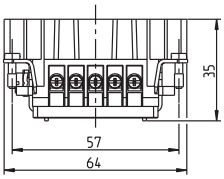
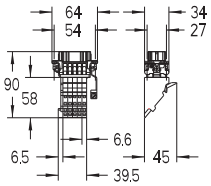
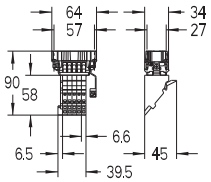
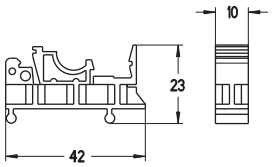
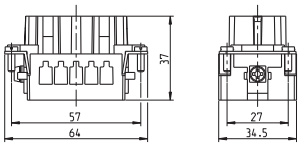
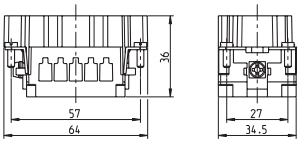
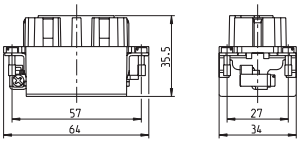
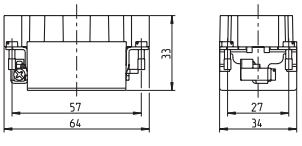
Series BB 10

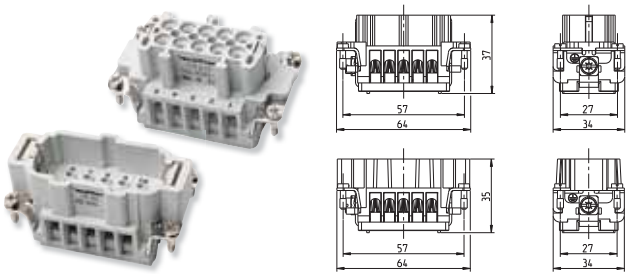
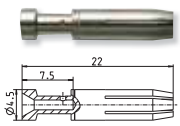
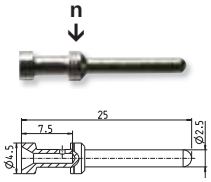
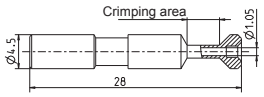
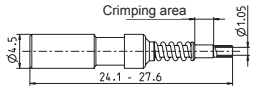
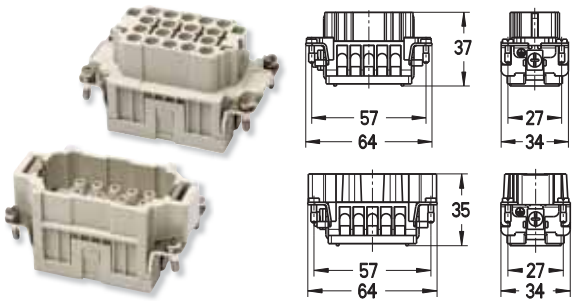
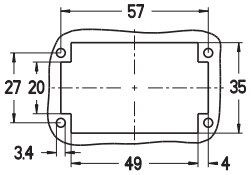
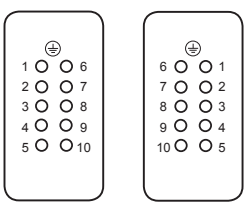
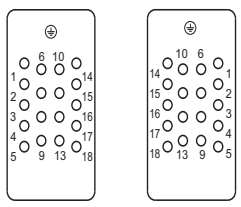


Female insert — Male insert

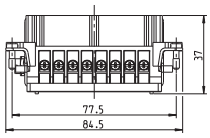
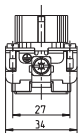
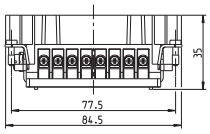
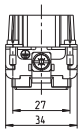
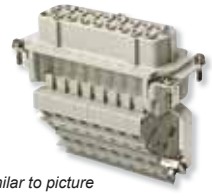
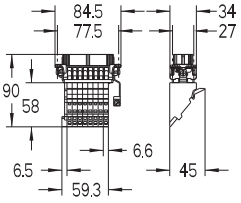
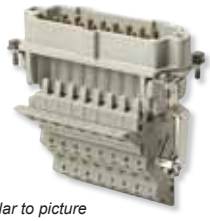
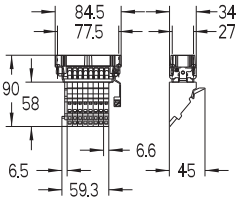
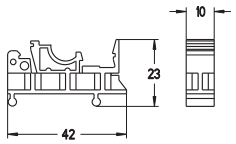
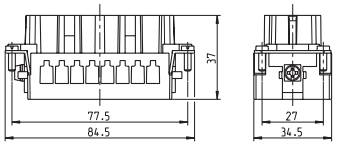
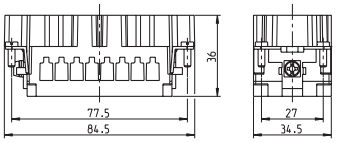
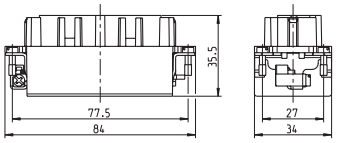
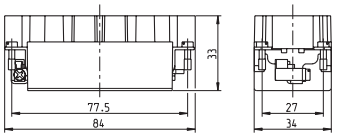
View from termination side

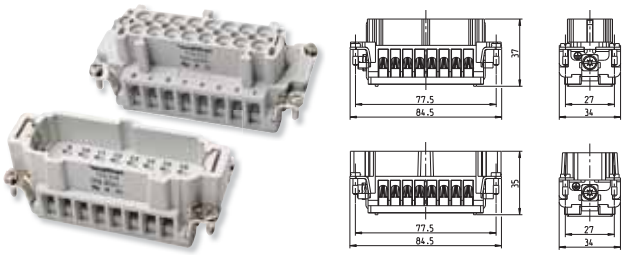
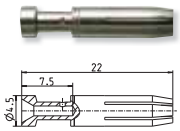
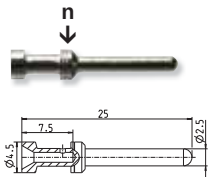
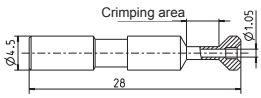
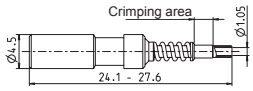
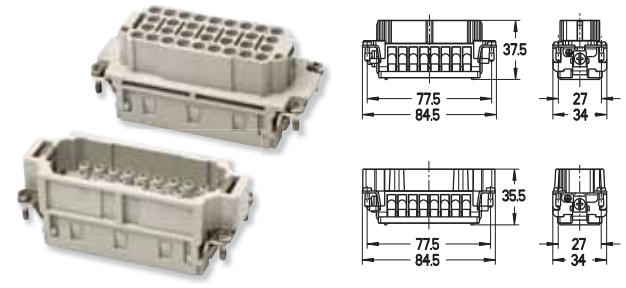
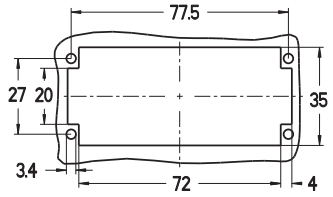
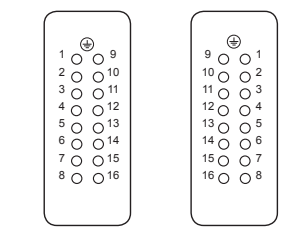
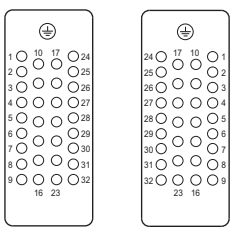
► Matching housings see page 121 - 123 / screw-mountable hoods see page 159

Description	Part no.	Terminal cross section	Series B 10 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals				
with wire protection ex stock	**710 110**	0,5-2,5 mm² (20-14 AWG)		10 69
without wire protection	710 770	0,5-4 mm² (20-12 AWG)		65
Male insert Screw terminals				
with wire protection ex stock	**710 210**	0,5-2,5 mm² (20-14 AWG)		10 65
without wire protection	710 774	0,5-4 mm² (20-12 AWG)		60
Wiring adapters				
Female insert Screw terminals			Similar to picture 	
Earth pin on the right	**710 658**	0,5-2,5 mm² (20-14 AWG)		10 122
Earth pin on the left	**710 662**			122
Male insert Screw terminals			Similar to picture 	
Earth pin on the right	**710 666**	0,5-2,5 mm² (20-14 AWG)		10 124
Earth pin on the left	**710 670**			124
Combi snap element				
for DIN-rail mounting	**710 807**			10 4
1 piece required per adapter				
IDC terminal inserts				
Female insert IDC terminals	**710 110 01**	0,5-2,5 mm² (20-14 AWG)		10 74
Male insert IDC terminals	**710 210 01**	0,5-2,5 mm² (20-14 AWG)		10 74
Push-in terminal inserts				
Female insert Push-in terminals	**710 110 04**	0,5-2,5 mm² (20-14 AWG)		10 66
Male insert Push-in terminals	**710 210 04**	0,5-2,5 mm² (20-14 AWG)		10 64
Coding pin for insertion into the coding grooves	**710 607**		*B 10 inserts can be equipped with max. 2 coding pins*	10 1

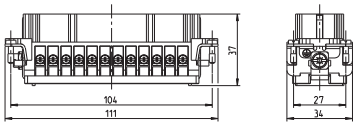
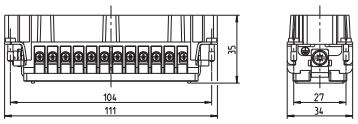
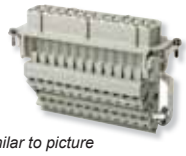
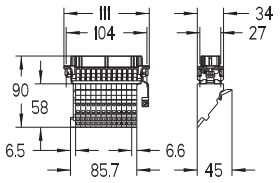
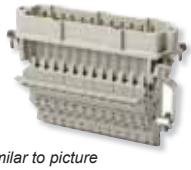
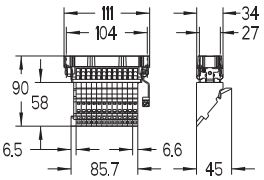
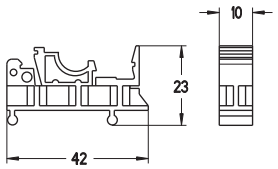
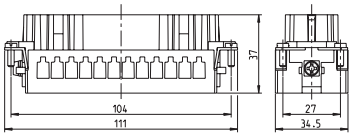
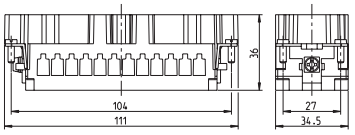
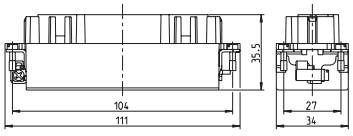
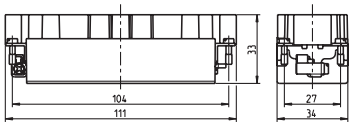
Description	Part no.		Series B 10 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts	**710 310**	Please order crimp contacts separately		10 49
Contact carrier for pin contacts ex stock	**710 410**			10 46
Contacts for crimp contact carriers				
Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502** **710 503**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845 710 846	Number of grooves = n  Terminal cross sections indicated by grooves n 0 0,14-0,37 mm² 26-22 AWG 0 0,5 mm² 20 AWG 1 0,75 mm² 18 AWG 1 1 mm² 18 AWG 2 1,5 mm² 16 AWG 3 2,5 mm² 14 AWG 0 4,0 mm² 12 AWG	100 162 160 148 148 150 154 165
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512** **710 513**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850 710 851	n  n 0 0,14-0,37 mm² 26-22 AWG 0 0,5 mm² 20 AWG 1 0,75 mm² 18 AWG 1 1 mm² 18 AWG 2 1,5 mm² 16 AWG 3 2,5 mm² 14 AWG 0 4,0 mm² 12 AWG	100 125 124 128 128 132 132 134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 	100 89
Male contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 	100 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1
Description	Part no.		**Series BB 18 P +** ⏚ 16 A / 500 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts	**710 318**	Please order crimp contacts separately		10 53
Contact carrier for pin contacts	**710 418**			10 47
Contact arrangement				
Panel cutout: 			**Series B 10** Female insert Male insert  *View from termination side* **Series BB 18** Female insert Male insert 	

► Matching housings see page 125 - 131 / screw-mountable hoods see page 161

Description	Part no.	Terminal cross section	Series B 16 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals			 	
with wire protection ex stock	**710 116**	0,5-2,5 mm² (20-14 AWG)		10 94
without wire protection	710 771	0,5-4 mm² (20-12 AWG)		90
Male insert Screw terminals			 	
with wire protection ex stock	**710 216**	0,5-2,5 mm² (20-14 AWG)		10 94
without wire protection ex stock	710 775	0,5-4 mm² (20-12 AWG)		90
Wiring adapters				
Female insert Screw terminals			 *Similar to picture* 	
Earth pin on the right	**710 659**	0,5-2,5 mm² (20-14 AWG)		10 136
Earth pin on the left	**710 663**			136
Male insert Screw terminals			 *Similar to picture* 	
Earth pin on the right	**710 667**	0,5-2,5 mm² (20-14 AWG)		10 135
Earth pin on the left	**710 671**			135
Combi snap element for DIN-rail mounting 1 piece required per adapter	**710 807**			10 4
IDC terminal inserts				
Female insert IDC terminals	**710 116 01**	0,5-2,5 mm² (20-14 AWG)		10 102
Male insert IDC terminals	**710 216 01**	0,5-2,5 mm² (20-14 AWG)		10 102
Push-in terminal inserts				
Female insert Push-in terminals	**710 116 04**	0,5-2,5 mm² (20-14 AWG)		10 89
Male insert Push-in terminals	**710 216 04**	0,5-2,5 mm² (20-14 AWG)		10 84
Coding pin for insertion into the coding grooves	**710 607**		*B 16 inserts can be equipped with max. 4 coding pins*	10 1

Description	Part no.		Series B 16 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts	**710 316**	Please order crimp contacts separately		10 68
Contact carrier for pin contacts	**710 416**			10 63
Contacts for crimp contact carriers				
Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502** **710 503**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845 710 846	Number of grooves = n  n: 0 / 0 / 1 / 1 / 2 / 3 / 0 Terminal cross sections indicated by grooves: 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 162 160 148 148 150 154 165
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512** **710 513**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850 710 851	n  n: 0 / 0 / 1 / 1 / 2 / 3 / 0 Terminal cross sections indicated by grooves: 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 125 124 128 128 132 132 134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 	100 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1
Description	Part no.		**Series BB 32 P + ⏚** 16 A / 500 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts	**710 333**	Please order crimp contacts separately		10 68
Contact carrier for pin contacts	**710 433**			10 58
Contact arrangement				
Panel cutout: 			Series B 16  Female insert Male insert *View from termination side* Series BB 32  Female insert Male insert	

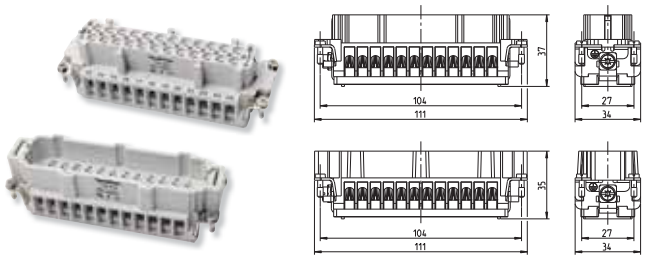
► Matching housings see page 133 - 140 / screw-mountable hoods see page 163

Description	Part no.	Terminal cross section	Series B 24 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals				
with wire protection ex stock	**710 124**	0,5-2,5 mm² (20-14 AWG)		10 138
without wire protection	710 772	0,5-4 mm² (20-12 AWG)		134
Male insert Screw terminals				
with wire protection ex stock	**710 224**	0,5-2,5 mm² (20-14 AWG)		10 118
without wire protection	710 776	0,5-4 mm² (20-12 AWG)		114
Wiring adapters				
Female insert Screw terminals			 *Similar to picture* 	
Earth pin on the right	**710 660**	0,5-2,5 mm² (20-14 AWG)		10 140
Earth pin on the left	**710 664**			140
Male insert Screw terminals			 *Similar to picture* 	
Earth pin on the right	**710 668**	0,5-2,5 mm² (20-14 AWG)		10 241
Earth pin on the left	**710 672**			241
Combi snap element				
for DIN-rail mounting	**710 807**			10 4
1 piece required per adapter				
IDC terminal inserts				
Female insert IDC terminals	**710 124 01**	0,5-2,5 mm² (20-14 AWG)		10 135
Male insert IDC terminals	**710 224 01**	0,5-2,5 mm² (20-14 AWG)		10 135
Push-in terminal inserts				
Female insert Push-in terminals	**710 124 04**	0,5-2,5 mm² (20-14 AWG)		10 119
Male insert Push-in terminals	**710 224 04**	0,5-2,5 mm² (20-14 AWG)		10 113
Coding pin for insertion into the coding grooves	**710 607**		*B 24 inserts can be equipped with max. 4 coding pins*	10 1

Series B — 24 P + ⏚

16 A / 500 V
UL/CSA: 600 V

Description	Part no.		g
Crimp contact carriers			
Contact carrier for sleeve contacts	**710 324**	Please order crimp contacts separately	10 / 88
Contact carrier for pin contacts *ex stock*	**710 424**		10 / 80

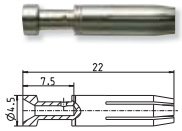


Contacts for crimp contact carriers

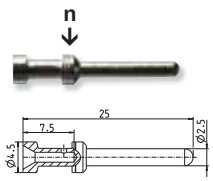
Number of grooves = n

Terminal cross sections indicated by grooves

n			
0	0,14-0,37 mm²	26-22 AWG	
0	0,5 mm²	20 AWG	
1	0,75 mm²	18 AWG	
1	1 mm²	18 AWG	
2	1,5 mm²	16 AWG	
3	2,5 mm²	14 AWG	
0	4,0 mm²	12 AWG	



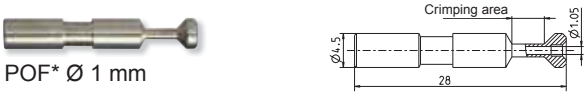
	silver-plated	gold-plated	g
Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	**710 508**	710 916	100 / 162
	710 504	710 842	160
	710 509	710 917	148
	710 500	710 843	148
	710 501	710 844	150
	710 502	710 845	154
	710 503	710 846	165



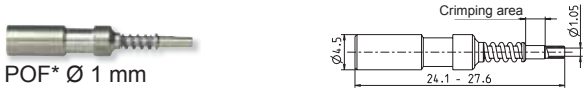
n			
0	0,14-0,37 mm²	26-22 AWG	
0	0,5 mm²	20 AWG	
1	0,75 mm²	18 AWG	
1	1 mm²	18 AWG	
2	1,5 mm²	16 AWG	
3	2,5 mm²	14 AWG	
0	4,0 mm²	12 AWG	

	silver-plated	gold-plated	g
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	**710 518**	710 918	100 / 125
	710 514	710 847	124
	710 519	710 919	128
	710 510	710 848	128
	710 511	710 849	132
	710 512	710 850	132
	710 513	710 851	134

Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	100 / 89



Male contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	100 / 74



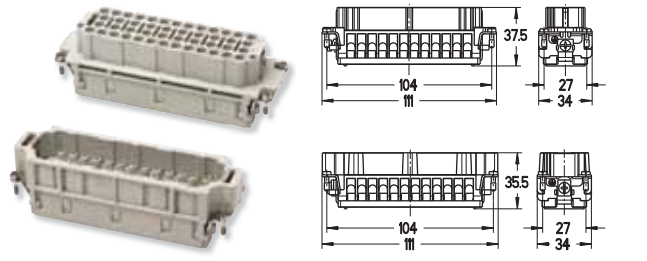
Coding pin	**700 734**		10 / 1

The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.

Series BB — 46 P + ⏚

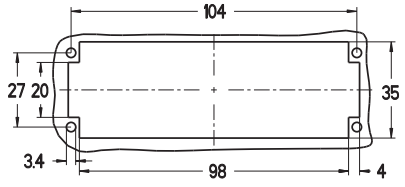
16 A / 500 V
UL/CSA: 600 V

Description	Part no.		g
Crimp contact carriers			
Contact carrier for sleeve contacts	**710 346**	Please order crimp contacts separately	10 / 90
Contact carrier for pin contacts	**710 446**		10 / 74

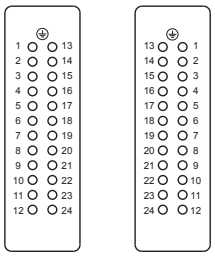


Contact arrangement

Panel cutout:



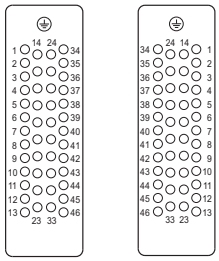
Series B 24



Female insert — Male insert

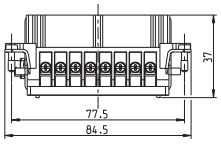
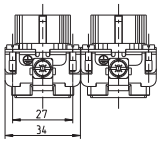
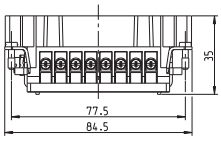
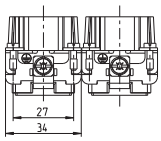
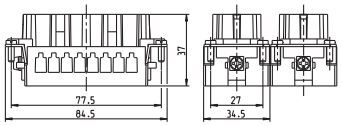
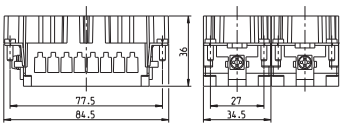
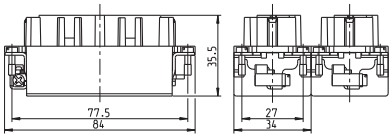
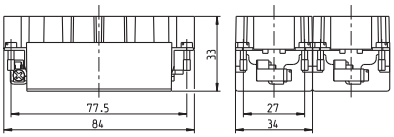
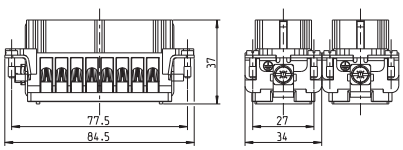
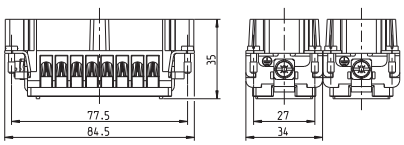
View from termination side

Series BB 46



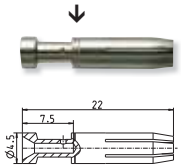
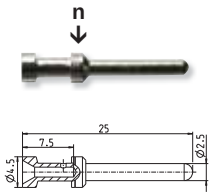
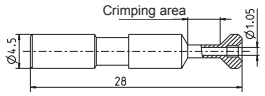
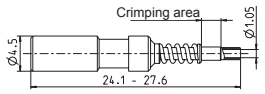
Female insert — Male insert

► Matching housings see page 143 - 149 / screw-mountable hoods see page 165

Description	Part no.	Terminal cross section	Series B 32 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals			 	
with wire protection 1-16 ex stock	**710 116**	0,5-2,5 mm²/20-14 AWG		10
without wire protection	710 771	0,5-4 mm²/20-12 AWG		94 90
with wire protection 17-32 ex stock	**710 132**	0,5-2,5 mm²/20-14 AWG		94
without wire protection	710 859	0,5-4 mm²/20-12 AWG		90
Male insert Screw terminals			 	
with wire protection 1-16 ex stock	**710 216**	0,5-2,5 mm²/20-14 AWG		10
without wire protection	710 775	0,5-4 mm²/20-12 AWG		94 90
with wire protection 17-32 ex stock	**710 232**	0,5-2,5 mm²/20-14 AWG		94
without wire protection	710 860	0,5-4 mm²/20-12 AWG		90
IDC terminal inserts				
Female insert				
1 - 16	**710 116 01**	0,5-2,5 mm²/20-14 AWG		10
17 - 32	**710 132 01**			102 102
Male insert				
1 - 16	**710 216 01**	0,5-2,5 mm²/20-14 AWG		10
17 - 32	**710 232 01**			102 102
Push-in terminal inserts				
Female insert Push-in terminals				
for sleeve contacts 1 - 16	**710 116 04**	0,5-2,5 mm²/20-14 AWG		10 89
for sleeve contacts 17 - 32	**710 132 04**			89
Male insert Push-in terminals				
for pin contacts 1 - 16	**710 216 04**	0,5-2,5 mm²/20-14 AWG		10 84
for pin contacts 17 - 32	**710 232 04**			84
Coding pin for insertion into the coding grooves	**710 607**		*B 32 inserts can be equipped with max. 8 coding pins*	10 1
Crimp contact carriers				
Contact carrier				
for sleeve contacts 1 - 16	**710 316**	Please order crimp contacts separately		10 68
for sleeve contacts 17 - 32	**710 332**			68
Contact carrier				
for pin contacts 1 - 16	**710 416**			10 63
for pin contacts 17 - 32	**710 432**			63

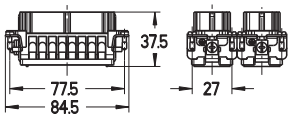
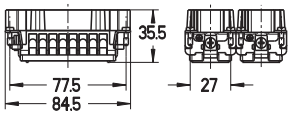
Description	Part no.		Series B 32 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g

Contacts for crimp contact carriers

Description	Part no.			g
Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502** **710 503**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845 710 846	 Number of grooves = n n: 0, 0, 1, 1, 2, 3, 0 Terminal cross sections indicated by grooves: 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 162 160 148 148 150 154 165
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512** **710 513**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850 710 851	 n: 0, 0, 1, 1, 2, 3, 0 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4,0 mm² 12 AWG	100 125 124 128 128 132 132 134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm  	100 89
Male contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm  	100 74
Coding pin	**700 734**		 The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.	10 1

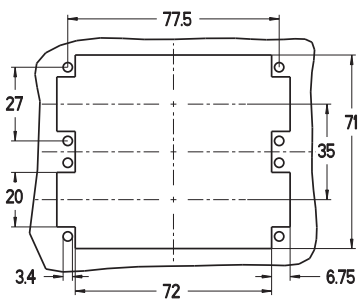
Description	Part no.		Series BB 64 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g

Crimp contact carriers

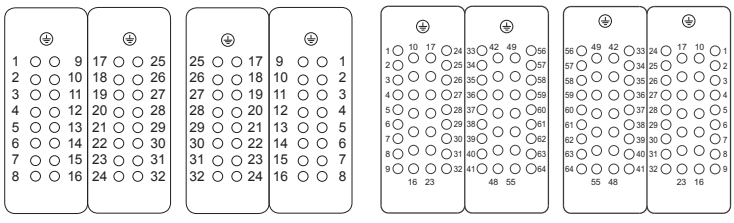
Contact carrier for sleeve contacts 1 - 32 for sleeve contacts 33 - 64	**710 333** **710 364**	Please order crimp contacts separately	  	10 68 68
Contact carrier for pin contacts 1 - 32 for pin contacts 33 - 64	**710 433** **710 464**		  	10 58 58

Contact arrangement

Panel cutout:



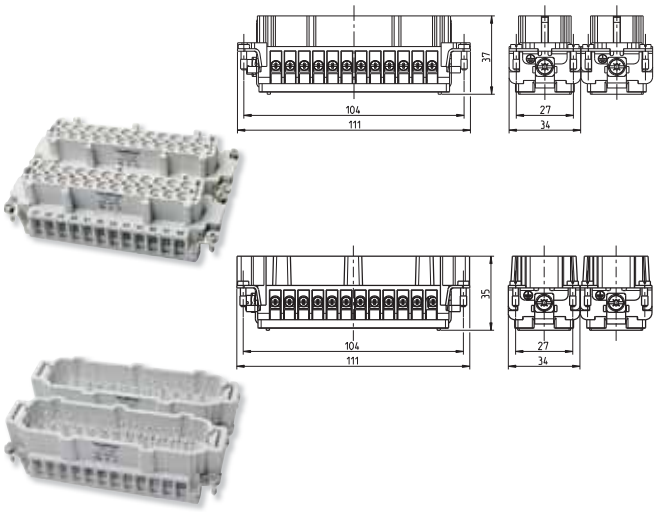
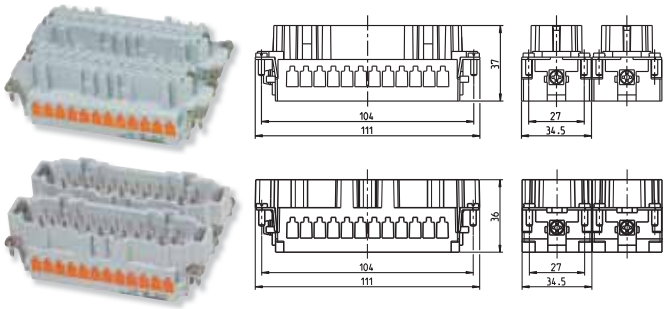
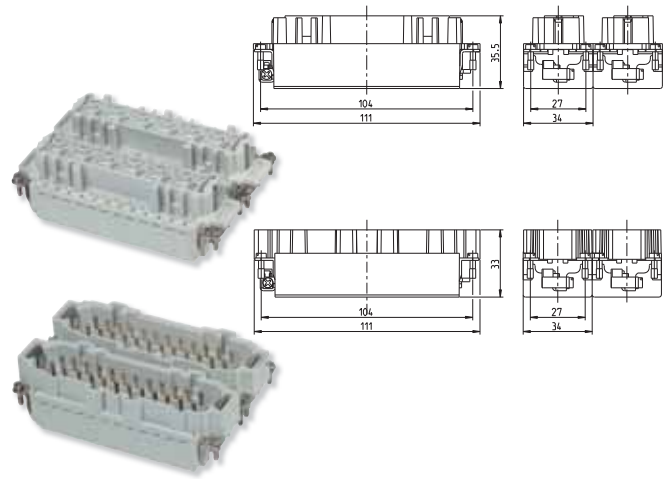
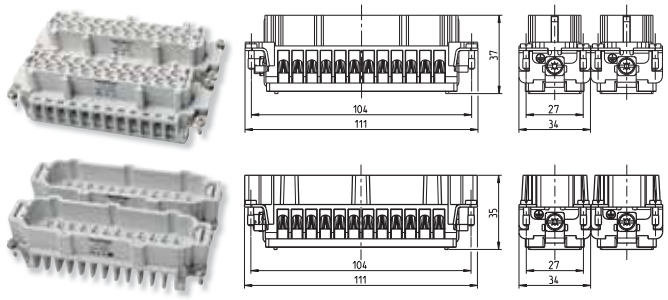
Series B 32 | **Series BB 64**



Female insert | Male insert | Female insert | Male insert

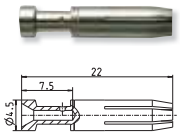
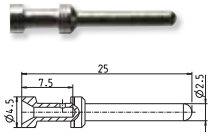
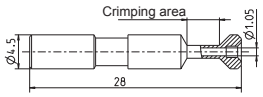
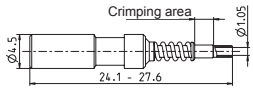
View from termination side

► **Matching housings see page 151/152**

Description	Part no.	Terminal cross section	Series B 48 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals				
with wire protection 1-24 ex stock	**710 124**	0,5-2,5 mm²/20-14 AWG		10
without wire protection	710 772	0,5-4 mm²/20-12 AWG		138
with wire protection 25-48 ex stock	**710 148**	0,5-2,5 mm²/20-14 AWG		130
without wire protection	710 861	0,5-4 mm²/20-12 AWG		138 130
Male insert Screw terminals				
with wire protection 1-24 ex stock	**710 224**	0,5-2,5 mm²/20-14 AWG		10
without wire protection	710 776	0,5-4 mm²/20-12 AWG		118
with wire protection 25-48 ex stock	**710 248**	0,5-2,5 mm²/20-14 AWG		110
without wire protection	710 862	0,5-4 mm²/20-12 AWG		118 110
IDC terminal inserts				
Female insert				
1 - 24	**710 124 01**	0,5-2,5 mm²/20-14 AWG		10
25 - 48	**710 148 01**			135
Male insert				135
1 - 24	**710 224 01**	0,5-2,5 mm²/20-14 AWG		10
25 - 48	**710 248 01**			135
				135
Push-in terminal inserts				
Female insert Push-in terminals				
for sleeve contacts 1 - 24	**710 124 04**	0,5-2,5 mm²/20-14 AWG		10
for sleeve contacts 25 - 48	**710 148 04**			119
Male insert Push-in terminals				119
for pin contacts 1 - 24	**710 224 04**	0,5-2,5 mm²/20-14 AWG		10
for pin contacts 25 - 48	**710 248 04**			113
				113
Coding pin for insertion into the coding grooves	**710 607**		*B 48 inserts can be equipped with max. 8 coding pins*	10 1
Crimp contact carriers				
Contact carrier				
for sleeve contacts 1 - 24	**710 324**	Please order crimp contacts separately		10
for sleeve contacts 25 - 48	**710 348**			88
Contact carrier				88
for pin contacts 1 - 24	**710 424**			10
for pin contacts 25 - 48	**710 448**			80
				80

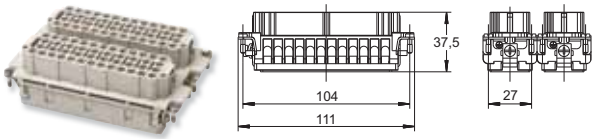
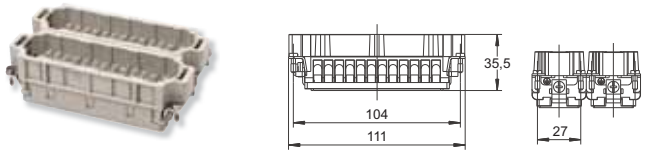
Description	Part no.		Series B 48 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g

Contacts for crimp contact carriers

Sleeve contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502** **710 503**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845 710 846	Number of grooves = n  	Terminal cross sections indicated by grooves n 0 0,14-0,37 mm² 26-22 AWG 0 0,5 mm² 20 AWG 1 0,75 mm² 18 AWG 1 1 mm² 18 AWG 2 1,5 mm² 16 AWG 3 2,5 mm² 14 AWG 0 4,0 mm² 12 AWG	100 162 160 148 148 150 154 165
Pin contacts for series B and BB crimp type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512** **710 513**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850 710 851	n  	n 0 0,14-0,37 mm² 26-22 AWG 0 0,5 mm² 20 AWG 1 0,75 mm² 18 AWG 1 1 mm² 18 AWG 2 1,5 mm² 16 AWG 3 2,5 mm² 14 AWG 0 4,0 mm² 12 AWG	100 125 124 128 128 132 132 134
Sleeve contact Optical waveguide for POF, solid, turned	710 521	Weight per 100	 POF* Ø 1 mm 		100 89
Male contact Optical waveguide for POF, solid, turned	710 531	Weight per 100	 POF* Ø 1 mm 		100 74
Coding pin	**700 734**		The use of a coding pin prevents confusion of equal connectors. The pin contact opposite to the coding pin is not equipped.		10 1

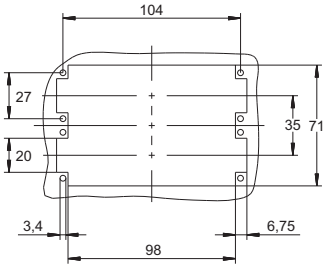
Description	Part no.		Series BB 92 P + ⏚ 16 A / 500 V UL/CSA: 600 V	g

Crimp contact carriers

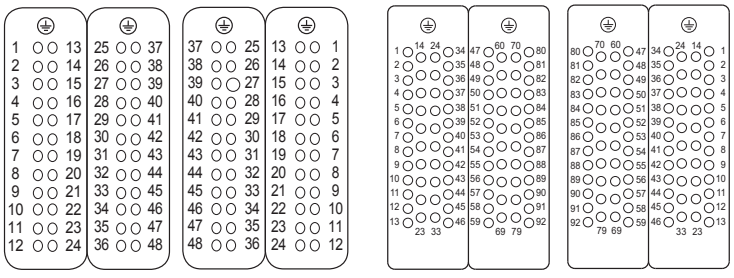
Contact carrier for sleeve contacts 1 - 46 for sleeve contacts 47 - 92	 **710 346** **710 392**	**Please order crimp contacts separately**		10 90 90
Contact carrier for pin contacts 1 - 46 for pin contacts 47 - 92	 **710 446** **710 492**			10 74 74

Contact arrangement

Panel cutout:



Series B 48 **Series BB 92**



Female insert Male insert Female insert Male insert

View from termination side

► Matching housings see page 155

Walther
Procon
P 711216
Walther
Procon
P 711216

Technical Specifications

Regulations:	DIN VDE 0627, DIN VDE 0110, DIN EN 61 984
Approvals:	UR, SEV, MEIE, EZÚ
Number of poles:	6, 12 (2 x 6) + PE

Electrical data acc. to DIN EN 61 984:

	35 A	400/690 V	6 kV	3
Rated current				
Rated voltage conductor - earth				
Rated voltage conductor - conductor				
Rated surge				
Pollution degree				
or	35 A	500 V	6 kV	3

Rated voltage acc. to UL/CSA: 600 V
(Table with rated surges see chapter "Information")

Material:	Glass-fibre reinforced polyamide
Temperature range:	- 40 °C up to + 125 °C
Flame class rating acc. to UL 94:	V 0
Mechanical operating life:	
Mating cycles:	≥ 500

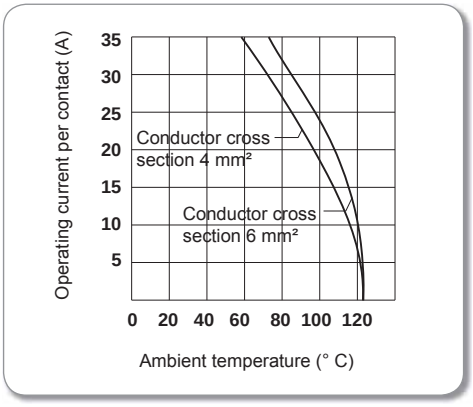
Contacts

Material:	copper alloy
Surface - hard silver plated:	3 µm Ag
Contact resistance:	≤ 0,5 m Ω
Screw terminal with wire protection:	6 mm² (10 AWG)
Torque/testing torque:	1,2 Nm
Wire stripping length:	10 mm

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

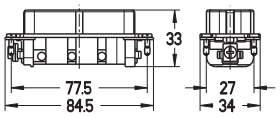
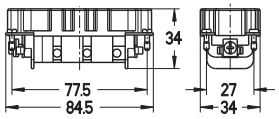
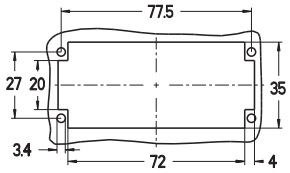
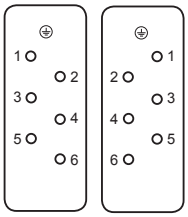
The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can - depending on ambient temperature and conductor size - circulate through each contact without exceeding the upper limiting temperature.



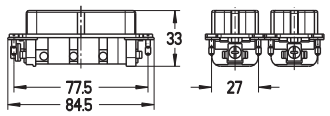
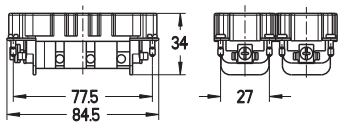
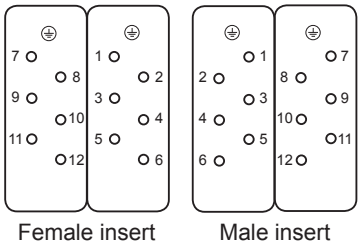
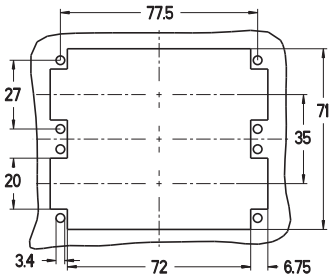
Page

BA 6-pole + ⏚
Inserts 40
- Short overview see page 132 -
- Matching housings see page 133 - 140 -

BA 12-pole + ⏚
Inserts 41
- Short overview see page 150 -
- Matching housings see page 151 - 152 -

Description	Part no.		Series BA 6 P + ⏚ 35 A / 400/690 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals **with wire protection** 0,5-6 mm² (20-10 AWG)	**710 620**	ex stock		10 88
Male insert Screw terminals **with wire protection** 0,5-6 mm² (20-10 AWG)	**710 621**	ex stock		10 86
Contact arrangement			Panel cutout  View from termination side  Female insert Male insert	

► Matching housings see page 133 - 140 / matching housings see page 163

Description	Part no.		Series BA 12 P + ⏚ 35 A / 400/690 V UL/CSA: 600 V	g
Screw terminal inserts				
Female insert Screw terminals **with wire protection 1 - 6** 0,5 - 6 mm² (20-10 AWG)	**710 620**	ex stock		10 88
with wire protection 7 - 12 0,5 - 6 mm² (20-10 AWG)	**710 692**			88
Male insert Screw terminals **with wire protection 1 - 6** 0,5 - 6 mm² (20-10 AWG)	**710 621**	ex stock		10 86
with wire protection 7 - 12 0,5 - 6 mm² (20-10 AWG)	**710 693**			86
Contact arrangement			View from termination side  Female insert Male insert Panel cutout 	

► Matching housings see page 151/152

Series D 7 - D 128

Due to the large number of conductors, the higher series B housings are very advantageous, since they offer enough space and easy mounting.

D7 inserts may only be installed in plastic housings, as no connection between protective earth conductor and housing can be established.

If connectors have to be disconnected frequently, wall-mount or panel housings with hinged spring cover and single locking system should be used.

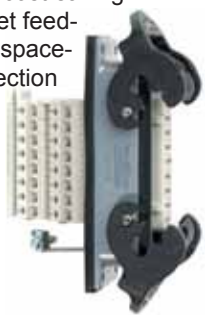
Locking systems:

- Housings for series **D 7, D 8, D 15, D 25** and **D 128:** only with **single locking system**
- Housings for series **D 50 and D 80:** only with **double locking system**
- Housings for series **D 40** and **D64**: **both locking systems** possible

Wiring adapters

mounted directly into the panel housing - as cost-saving switch cabinet feed-through and space-saving connection element.

With screw terminals.



Optical waveguide

Instead of silver or gold-plated brass contacts for copper wires, also contacts for optical waveguide made of polymer optical fibre (POF) fit into the contact cavities of series D contact carriers.

Series D contact carriers can only be equipped with crimp contacts, which have to be ordered separately according to the relevant conductor cross section. The contacts are crimped with a special crimping tool and then snapped into the contact carrier by means of an insertion tool.
If required, they can be released with a special removal tool.

The millionfold proven crimp-type contacts guarantee a safe connection.

Snap-on mounting adapters
are ideal for mounting into switch cabinets.

The clearly arranged swing-type insertion plate allows easy wiring.

When installing several mounting plates side by side, an additional cable duct can be built up inside the switch cabinet, which then enables the installation of printed circuit boards.

Mounting is made by snapping connectors onto DIN-rails in transverse direction.

Specifications

Regulations:	DIN VDE 0627, DIN VDE 0110, DIN EN 61 984
Approvals:	UR, CSA, SEV, MEIE, EZÚ
Standards:	DIN EN 175 301-801
Number of poles:	7, 15, 25, 40, 50 (2 x 25), 64, 80 (2 x 40), 128 (2 x 64) + PE

Electrical data acc. to DIN EN 61 984 for series D 7, D 15, D 25, D 40, D 50, D 64, D 80 and D 128:

	10 A	250 V	4 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				
Pollution degree 2 also	10 A	230/400 V	4 kV	2

Rated voltage acc. to UL/CSA: 300 V

Electrical data acc. to DIN EN 61 984 for series D 8:

	10 A	50 V	0,8 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				

Rated voltage acc. to UL/CSA: 50 V
(Table with rated surges see chapter "Information")

Material:	Glass-fibre reinforced polyamide
Temperature range:	- 40 °C to + 125 °C
Flame class rating acc. to UL 94:	V 0
Mechanical operating life:	
Mating cycles:	≥ 500

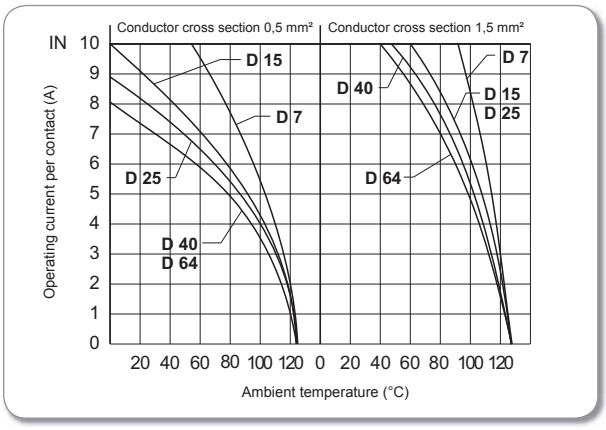
Contacts:

Material:		Copper alloy
Surface	- hard silver plated:	3 µm Ag
	- hard gold plated:	2 µm Au over 3 µm Ni
Contact resistance:		< 3 m Ω
Crimp type terminal:		0,14 - 2,5 mm² (26 - 14) AWG
Wire stripping length:		7 mm

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60512 applies to such kind of current which can - depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature.



Page

Inserts
D 7-pole + ⏚, D 7 modified, D 3-pole + ⏚ **44**
• *Short overview see page 104*
• *Matching housings see page 105*

Inserts
D 8-pole **45**
• *Short overview see page 104*
• *Matching housings see page 105 - 106*

Inserts
D 15-pole + ⏚, D 15 modified, D 7.1-pole + ⏚, D 5-pole + ⏚ **46 - 47**
• *Short overview see page 108*
• *Matching housings see page 109 - 110*

Inserts
D 25-pole + ⏚, D 25 modified, D 11-pole + ⏚ **48 - 49**
• *Short overview see page 112*
• *Matching housings see page 113 - 114*

Inserts
D 40-pole + ⏚, D 40 modified D 20-pole + ⏚, D 16-pole + ⏚ **50 - 51**
• *Short overview see page 132*
• *Matching housings see page 133 - 140*

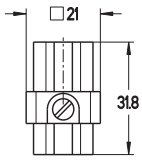
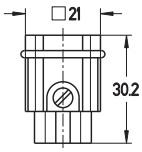
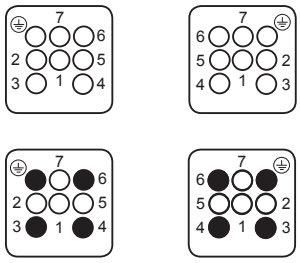
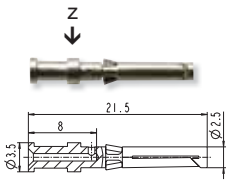
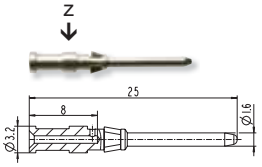
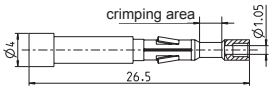
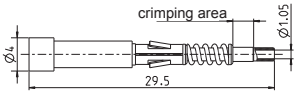
Inserts
D 50-pole + ⏚, D 50 modified, D 22-pole + ⏚ **52**
• *Short overview see page 116*
• *Matching housings see page 117 - 119*

Inserts
D 64-pole + ⏚, D 64 modified D 32-pole + ⏚, D 28-pole + ⏚ **53 - 54**
• *Short overview see page 142*
• *Matching housings see page 143 - 149*

Inserts
D 80-pole + ⏚, D 80 modified D 40.1-pole + ⏚, D 32.1-pole + ⏚ **55 - 56**
• *Short overview see page 150*
• *Matching housings see page 151 - 152*

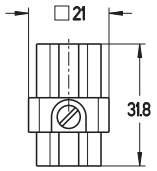
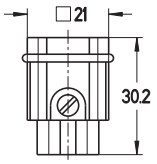
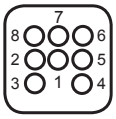
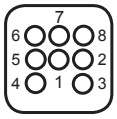
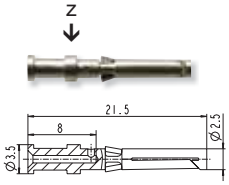
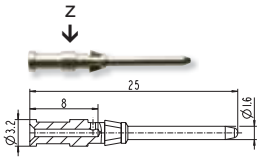
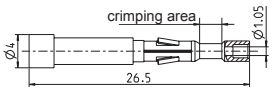
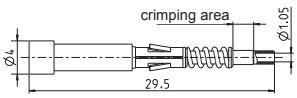
Inserts
D 128-pole + ⏚, D 128 modified D 64.1-pole + ⏚, D 56-pole + ⏚ **57 - 58**
• *Short overview see page 154*
• *Matching housings see page 155*

Important note: For connectors of series D 15 - D 128, guiding pins and sleeves have to be used, see page 185

Description	Part no.		Series D 7 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier only for plastic housings for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 307**			10 8
Contact carrier only for plastic housings for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 407**			10 7
Contact arrangement				
D 7 completely equipped with 7 + PE contacts Rated voltage: 250 V			View from termination side Female insert / Male insert  ● working contact ○ without contact	
D 7 modified: **D 3-pole + PE** D 7 equipped with 3 + PE contacts Rated voltage: 500 V				
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z / Terminal cross section marked by z 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 z 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm 	100 74
Dummy contact sleeve for coding, with loss of one contact	720 696		 *To avoid wrong plugging of similar contact inserts, a coding system is required. Coding is achieved by inserting the dummy contact sleeve into a selected contact cavity of the female insert. The opposite male insert must not be equipped at this position.*	100 1

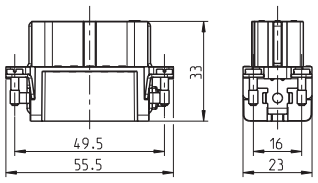
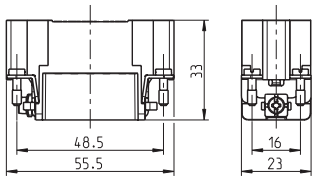
► **Matching housings see page 105**

*POF= Polymer Optical Fibre

Description	Part no.		Series D 8 P 10 A / 50 V UL/CSA:50 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 308**			10 8
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 408**			10 7
Contact arrangement D 8 completely equipped with 8 contacts Rated voltage: 42 V			View from termination side Female insert  Male insert 	
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z / Terminal cross section marked by z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		POF* Ø 1 mm 	100 74
Dummy contact sleeve for coding, with loss of one contact	720 696		*To avoid wrong plugging of similar contact inserts, a coding system is required. Coding is achieved by inserting the dummy contact sleeve into a selected contact cavity of the female insert. The opposite male insert must not be equipped at this position.*	100 1

*POF= Polymer Optical Fibre

► Matching housings see page 105 - 106

Description	Part no.		Series D 15 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 315**			10 29
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 415**			10 29

Contact arrangement

D 15 completely equipped with 15 contacts
Rated voltage: 250 V

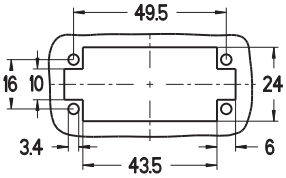
D 15 modified: **D 7.1-pole +** ⏚

D 15 equipped with 7 contacts
Rated voltage: 400 V

D 15 modified: **D 5-pole +** ⏚

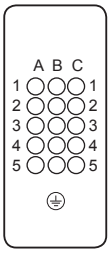
D 15 equipped with 5 contacts
Rated voltage: 500 V

Panel cutout

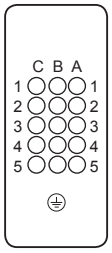


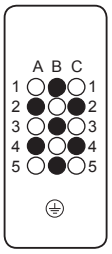
View from termination side

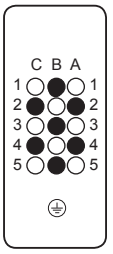
Female insert

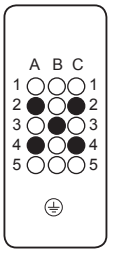


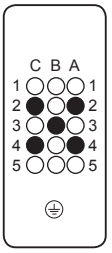
Male insert



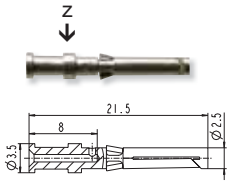
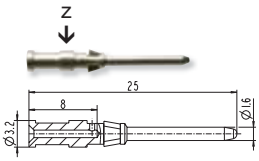
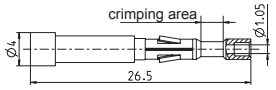
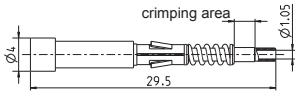






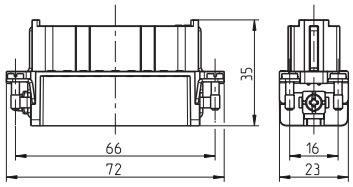
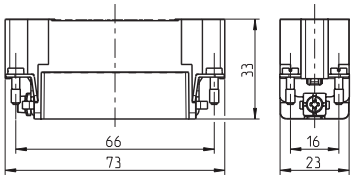
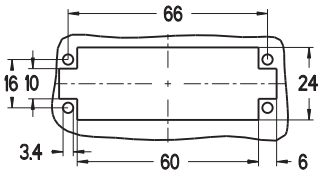
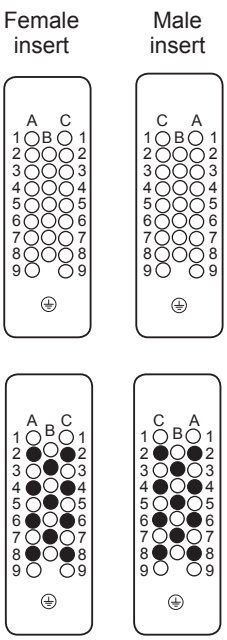


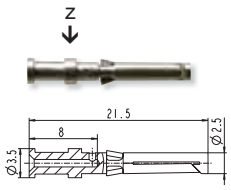
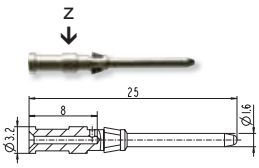
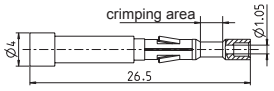
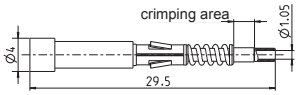
● working contact ○ without contact

Description	Part no.		Series D 15 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm 	100 74

*POF= Polymer Optical Fibre

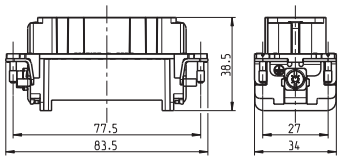
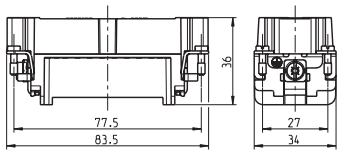
► Matching housings see page 109 - 110

Description	Part no.		Series D 25 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 325**			10 36
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 425**			10 34
Contact arrangement			Panel cutout  View from termination side 	
D 25 completely equipped with 25 contacts Rated voltage: 250 V			● working contact ○ without contact	
D 25 modified: **D 11-pole +** ⏚ D 25 equipped with 11 contacts Rated voltage: 500 V				

Description	Part no.		Series D 25 P + ⏚ 10 A / 250 V UL/CSA: 300 V	100 g
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm 	100 74

*POF= Polymer Optical Fibre

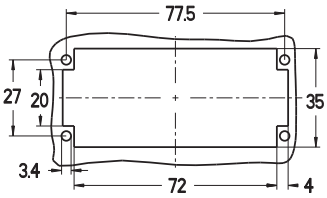
► Matching housings see page 113 - 114

Description	Part no.		Series D 40 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 340**			10 64
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 440**			10 57

Contact arrangement

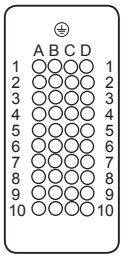
D 40 completely equipped with 40 contacts
Rated voltage: 250 V

Panel cutout

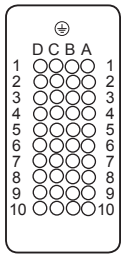


View from termination side

Female insert

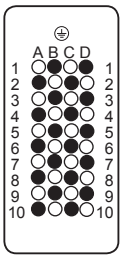


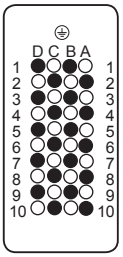
Male insert



D 40 modified: **D 20-pole +** ⏚

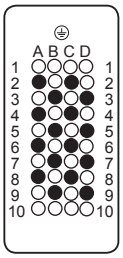
D 40 equipped with 20 contacts
Rated voltage: 400 V

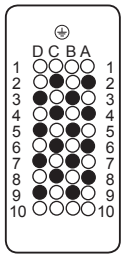




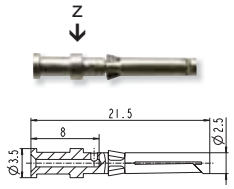
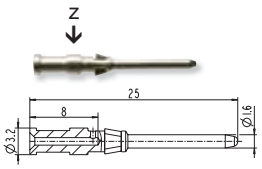
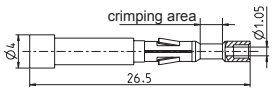
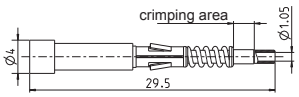
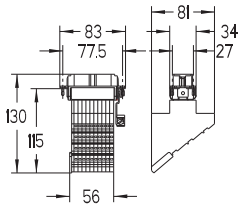
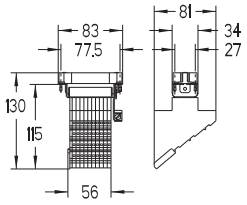
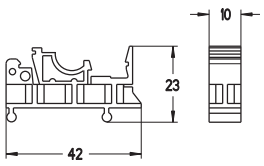
D 40 modified: **D 16-pole +** ⏚

D 40 equipped with 16 contacts
Rated voltage: 500 V

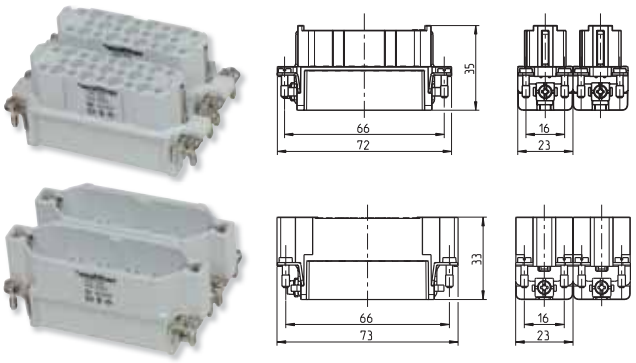
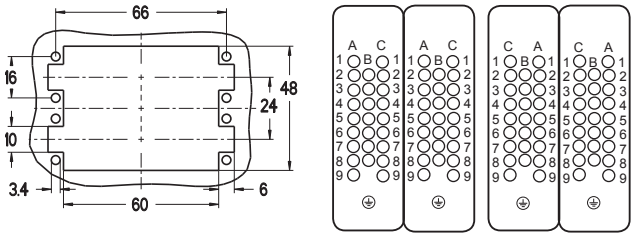
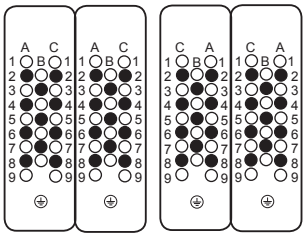
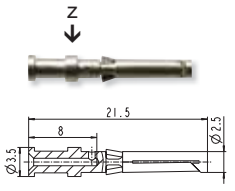
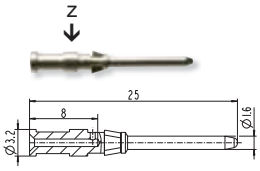
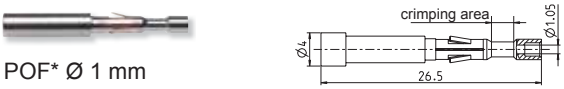
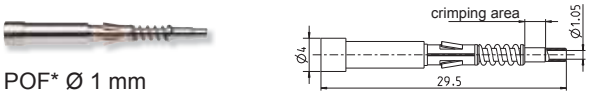




● working contact
○ without contact

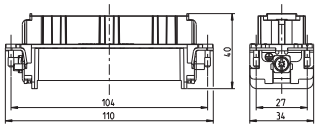
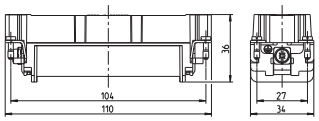
Description	Part no.		Series D 40 P + ⏚ 10 A / 250 V UL/CSA: 300 V	9
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by z 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm 	100 74
Wiring adapters			*POF= Polymer Optical Fibre	
Female insert Earth pin on the left 0,2 - 2,5 mm² (26-14 AWG)	**720 633**			10 64
Male insert Earth pin on the left 0,2 - 2,5 mm² (26-14 AWG)	**720 632**			10 54
Combi snap element for DIN-rail mounting 2 pieces required per adapter	**710 807**			10 4

► Matching housings see page 133 - 140 / screw-mountable hoods see page 163

Description	Part no.		Series D 50 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts **2 x** *Please order crimp and glass fibre cable contacts separately*	**720 325**			10 36
Contact carrier for pin contacts **2 x** *Please order crimp and glass fibre cable contacts separately*	**720 425**			10 34
Contact arrangement				
D 50 completely equipped with 50 contacts Rated voltage: 250 V			Panel cutout / View from termination side (Female insert, Male insert) 	
D 50 modified: **D 22-pole +** ⏚ D 50 equipped with 2 x 11 contacts Rated voltage: 500 V			● working contact ○ without contact 	
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z / Terminal cross section marked by z 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 z 1 0,14 - 0,37 mm² 26 - 22 AWG 2 0,5 mm² 20 AWG 3 0,75 - 1 mm² 19 - 18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm	100 74

► **Matching housings see page 117 - 119**

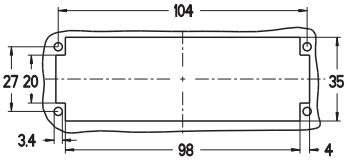
*POF= Polymer Optical Fibre

Description	Part no.		Series D 64 P + ⏚ 10 A / 250 V UL/CSA: 300 V	9
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**720 364**			10 83
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**720 464**			10 68

4

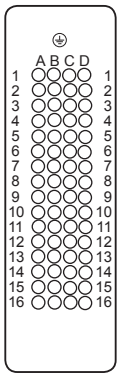
Contact arrangement

Panel cutout

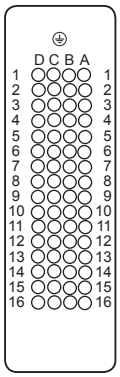


View from termination side

Female insert



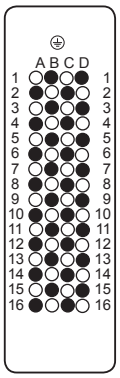
Male insert

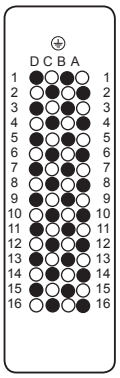


D 64 completely equipped with 64 contacts
Rated voltage: 250 V

D 64 modified: **D 32-pole +** ⏚

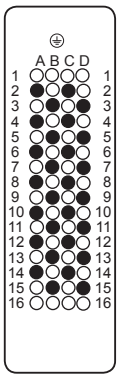
D 64 equipped with 32 contacts
Rated voltage: 400 V

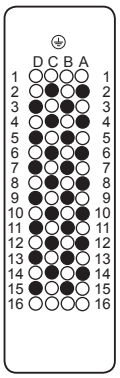




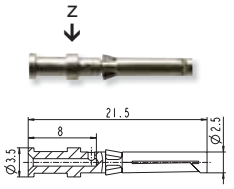
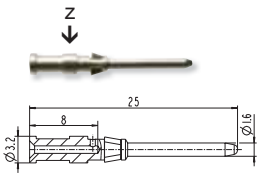
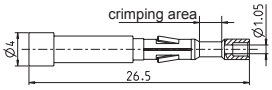
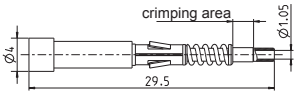
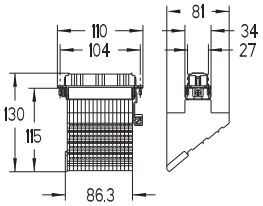
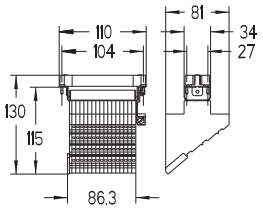
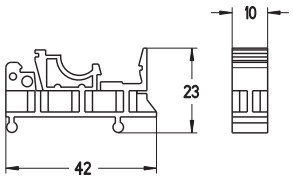
D 64 modified: **D 28-pole +** ⏚

D 64 equipped with 28 contacts
Rated voltage: 500 V

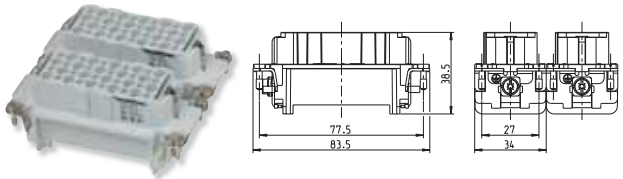
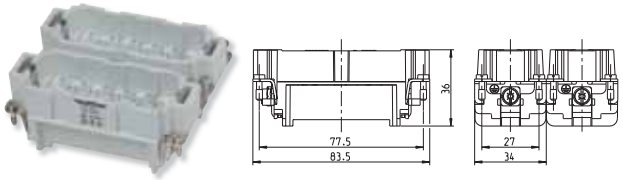




● working contact
○ without contact

Description	Part no.		Series D 64 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Contacts				
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 z — Terminal cross section marked by z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm *POF= Polymer Optical Fibre 	100 74
Wiring adapters				
Female insert Earth pin on the left 0,2 - 2,5 mm² (26-14 AWG)	**720 635**			10 82
Male insert Earth pin on the left 0,2 - 2,5 mm² (26-14 AWG)	**720 634**			10 67
Combi snap element for DIN-rail mounting 2 pieces required per adapter	**710 807**			10 4

► **Matching housings see page 143 - 149 / screw-mountable hoods see page 165**

Description	Part no.		Series D 80 P + ⏚ 10 A / 250 V UL/CSA: 300 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts **2 x** *Please order crimp and glass fibre cable contacts separately*	**720 340**			10 64
Contact carrier for pin contacts **2 x** *Please order crimp and glass fibre cable contacts separately*	**720 440**			10 54

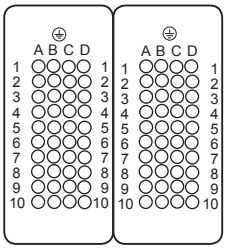
Contact arrangement

D 80 (2 x D 40),
completely equipped with 80 contacts

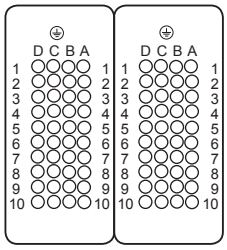
Rated voltage: 250 V

View from termination side

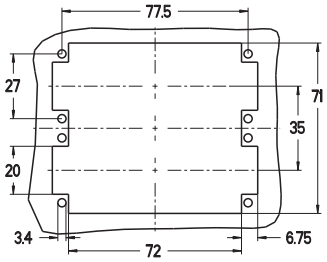
Female insert



Male insert

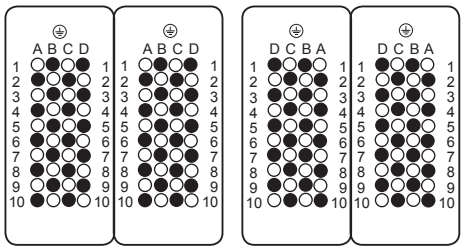


Panel cutout



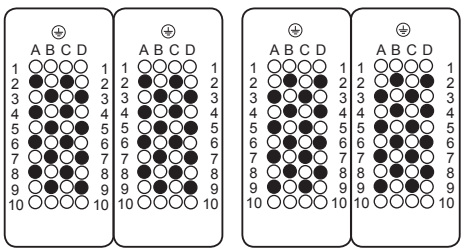
D 80 modified: **D 40.1-pole +** ⏚

D 80 equipped with 2 x 20 contacts
Rated voltage: 400 V



D 80 modified: **D 32.1-pole +** ⏚

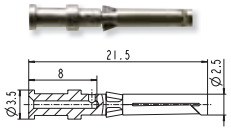
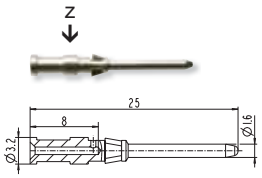
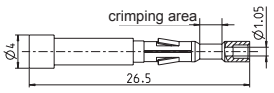
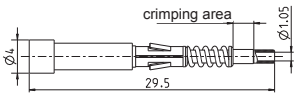
D 80 equipped with 2 x 16 contacts
Rated voltage: 500 V



● working contact ○ without contact

Contacts

Series D **80 P +** ⏚
10 A / 250 V
UL/CSA: 300 V

Description	Part no.						g
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690		z 1 2 3 4 5	Terminal cross section marked by z 0,14 - 0,37 mm² 0,5 mm² 0,75 - 1 mm² 1,5 mm² 2,5 mm²	 26 - 22 AWG 20 AWG 19 - 18 AWG 16 AWG 14 AWG	100 65 68 70 72 62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695		1 2 3 4 5	0,14 - 0,37 mm² 0,5 mm² 0,75 - 1 mm² 1,5 mm² 2,5 mm²	26 - 22 AWG 20 AWG 19 - 18 AWG 16 AWG 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm				100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm				100 74

► **Matching housings see page 151/152**

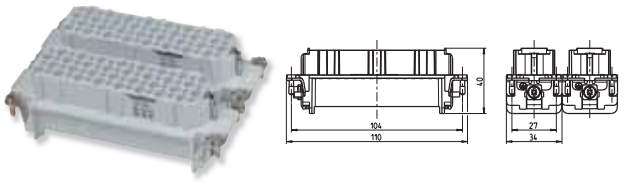
*POF= Polymer Optical Fibre

Description	Part no.		Series D 128 P + ⏚ 10 A / 250 V UL/CSA: 300 V	9

Crimp contact carriers

Contact carrier
for sleeve contacts **2 x** — **720 364**

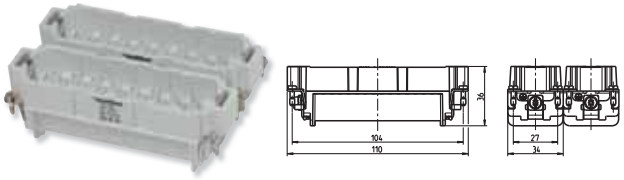
Please order crimp and glass fibre cable contacts separately



10
82

Contact carrier
for pin contacts **2 x** — **720 464**

Please order crimp and glass fibre cable contacts separately



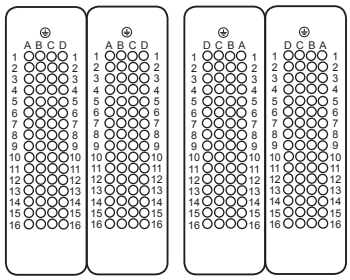
10
67

Contact arrangement

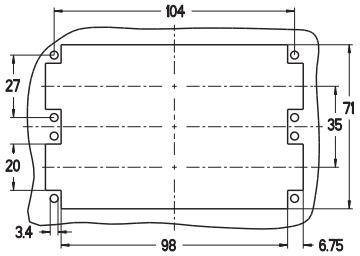
D 128 (2 x D 64),
completely equipped with 128 contacts
Rated voltage: 250 V

View from termination side

Female insert Male insert

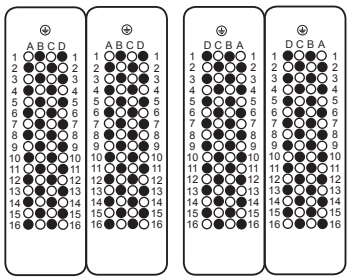


Panel cutout



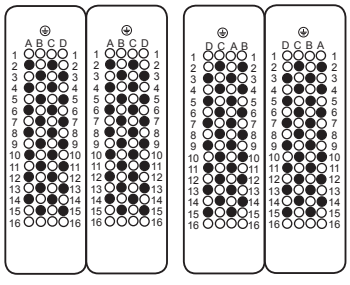
D 128 modified: **D 64.1-pole +** ⏚

D 128 equipped with 2 x 32 contacts
Rated voltage: 400 V



D 128 modified: **D 56-pole +** ⏚

D 128 equipped with 2 x 28 contacts
Rated voltage: 500 V



● working contact ○ without contact

Series D — 128 P + ⏚

10 A / 250 V
UL/CSA: 300 V

Description	Part no.		z	Terminal cross section marked by z		g
Contacts						
Sleeve contacts D crimp-type, solid, turned, weight per 100	silver-plated	gold-plated				100
	720 506	720 686	1	0,14 - 0,37 mm²	26 - 22 AWG	65
	720 507	720 687	2	0,5 mm²	20 AWG	68
	720 508	720 688	3	0,75 - 1 mm²	19 - 18 AWG	70
	720 509	720 689	4	1,5 mm²	16 AWG	72
	720 502	720 690	5	2,5 mm²	14 AWG	62
Pin contacts D crimp-type, solid, turned, weight per 100	silver-plated	gold-plated				100
	720 516	720 691	1	0,14 - 0,37 mm²	26 - 22 AWG	60
	720 517	720 692	2	0,5 mm²	20 AWG	63
	720 518	720 693	3	0,75 - 1 mm²	19 - 18 AWG	65
	720 519	720 694	4	1,5 mm²	16 AWG	67
	720 512	720 695	5	2,5 mm²	14 AWG	70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		POF* Ø 1 mm	crimping area		100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		POF* Ø 1 mm	crimping area		100 74

► **Matching housings see page 155**

Walther
720 340
10A 250V
600V
Walther
Procon
711032 M

Series DD 24 - DD 216

Housings of series B6-B24 with new design

Series DD is the economic and space-saving solution for applications in which high contact density is needed. Up to **216 contacts** can be fitted.

The high contact density requires a high wiring density. To ensure comfortable termination, maximum conductor sizes and optimum wiring space, WALTHER offers housings in higher version.
Of course these housings can also be used with the other series.

Locking systems:

- Series **DD 24** & **DD 216**: only with **single locking system**
- Series **DD 144**: only with **double locking system**
- Series **DD 42, DD 72** and **DD 108**: **both locking systems** possible

Housing size 5 with single locking system

Housing size 9 with double locking system

Housing size 6-7-8 with both locking systems

Housing size 10 with single locking systems

Housings of series B6-B24: More possibilities with exchangeable locking levers

Easy and cost-saving exchange of single and double locking levers in case of damage or material fatigue.

Just press replacement lever in axial direction onto the bolts until they lock in place.

Series DD contact carriers can only be equipped with crimp contacts, which have to be ordered separately according to the relevant conductor cross section. The contacts are crimped with a special crimping tool and then snapped into the contact carrier by means of an insertion tool.
If required, they can be released with a special removal tool.

The millionfold proven crimp-type contacts guarantee a safe connection.

Optical waveguide

Instead of silver or gold-plated brass contacts for copper wires, also contacts for optical waveguide made of polymer optical fibre (POF) fit into the contact cavities of series DD contact carriers.

Specifications

Regulations: DIN VDE 0627, DIN VDE 0110, DIN EN 61 984

Approvals: UR, EZÚ

Number of poles: 24, 42, 72, 108, 144 (2 x 72), 216 (2 x 108) + PE

Electrical data acc. to DIN EN 61 984:

	10 A	250 V	4 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				

Rated voltage acc. to UL: 600 V
(Table with rated surges see chapter "Information")

Material:	Glass-fibre reinforced polyamide
Temperature range:	- 40 °C up to + 125 °C
Flame class rating acc. to UL 94:	V 0
Mechanical operating life:	
Mating cycles:	> 500

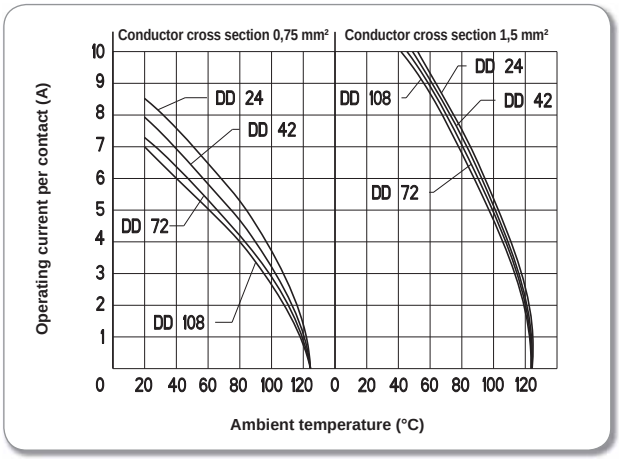
Contacts:

Material:		copper alloy
Surface	- hard silver plated:	3 µm Ag
	- hard gold plated:	2 µm Au over 3 µm Ni
Contact resistance:		≤ 3 m Ω
Crimp-type terminal:		0,14 - 2,5 mm² (26 - 14) AWG
Wire stripping length:		7 mm

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60512 applies to such kind of current which can - depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature.



Page

Inserts
DD 24-pole + DD 24 modified
DD 12-pole +
DD 5-pole +
62
• *Short overview see page 120*
• *Matching housings see page 121 - 123*

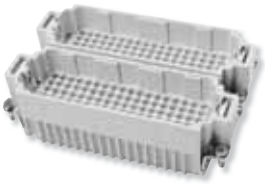
Inserts
DD 42-pole + DD 42 modified
DD 21-pole +
DD 11-pole +
63
• *Short overview see page 124*
• *Matching housings see page 125 - 131*

Inserts
DD 72-pole + DD 72 modified
DD 34-pole +
DD 17-pole +
64
• *Short overview see page 132*
• *Matching housings see page 133 - 140*

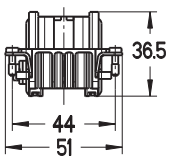
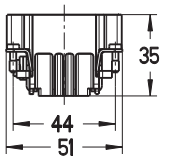
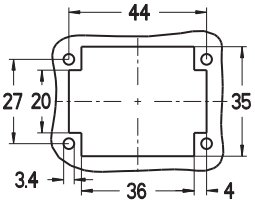
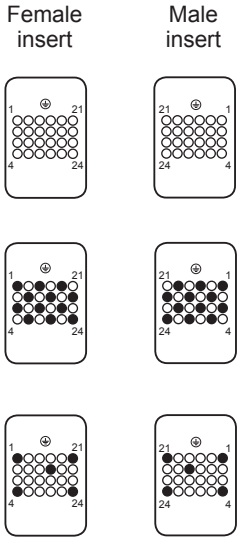
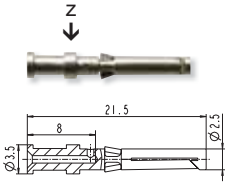
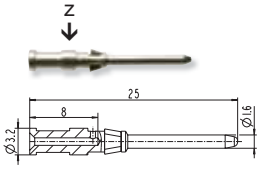
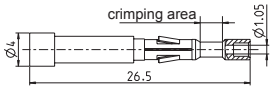
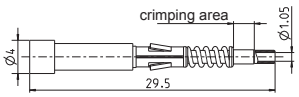
Inserts
DD 108-pole + DD 108 modified
DD 52-pole +
DD 26-pole +
66
• *Short overview see page 142*
• *Matching housings see page 143 - 149*

Inserts
DD 144-pole + DD 144 modified
DD 68-pole +
DD 34.1-pole +
68
• *Short overview see page 150*
• *Matching housings see page 151 - 152*

Inserts
DD 216-pole + DD 216 modified
DD 104-pole +
DD 52.1-pole +
70
Short overview see page 144
Matching housings see page 145



Important note: For connectors of series DD, guiding pins and sleeves have to be used, see page 185

Description	Part no.		Series DD 24 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**750 124**			10 40
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**750 224**			10 39
Contact arrangement				
DD 24 completely equipped with 24 contacts Rated voltage: 250 V			Panel cutout  View from termination side  ● working contact ○ without contact	
DD 24 modified: **DD 12-pole +** ⏚ DD 24 equipped with 12 contacts Rated voltage: 400 V				
DD 24 modified: **DD 5-pole +** ⏚ DD 24 equipped with 5 contacts Rated voltage: 500 V				
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by Z 1 — 0,14-0,37 mm² — 26-22 AWG 2 — 0,5 mm² — 20 AWG 3 — 0,75-1 mm² — 19-18 AWG 4 — 1,5 mm² — 16 AWG 5 — 2,5 mm² — 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 — 0,14-0,37 mm² — 26-22 AWG 2 — 0,5 mm² — 20 AWG 3 — 0,75-1 mm² — 19-18 AWG 4 — 1,5 mm² — 16 AWG 5 — 2,5 mm² — 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		POF* Ø 1 mm  *POF = Polymer Optical Fibre	100 74

► **Matching housings see page 121 - 123 / screw-mountable hoods see page 159**

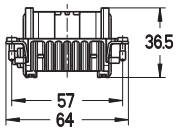
Description	Part no.		Series DD 42 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g

Crimp contact carriers

Contact carrier
for sleeve contacts

Please order crimp and glass fibre cable contacts separately

750 142

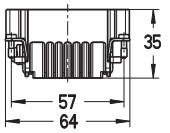


10
51

Contact carrier
for pin contacts

Please order crimp and glass fibre cable contacts separately

750 242



10
47

Contact arrangement

DD 42 completely equipped with 42 contacts
Rated voltage: 250 V

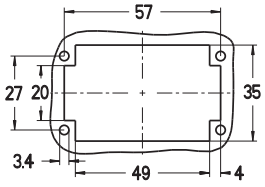
DD 42 modified: **DD 21-pole +** ⏚

DD 42 equipped with 21 contacts
Rated voltage: 400 V

DD 42 modified: **DD 11-pole +** ⏚

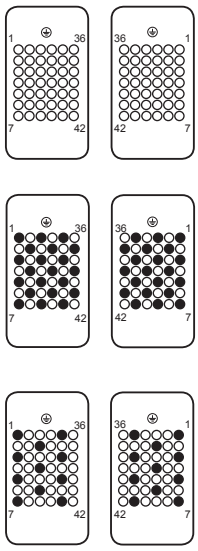
DD 42 equipped with 11 contacts
Rated voltage: 500 V

Panel cutout



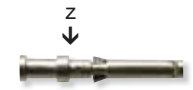
View from termination side

Female insert / Male insert



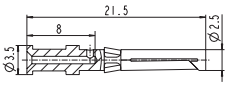
● working contact
○ without contact

Contacts



z	Terminal cross section marked by Z	
1	0,14 - 0,37 mm²	26 - 22 AWG
2	0,5 mm²	20 AWG
3	0,75 - 1 mm²	19 - 18 AWG
4	1,5 mm²	16 AWG
5	2,5 mm²	14 AWG

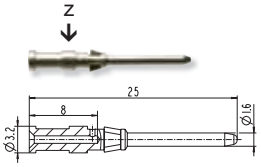
Sleeve contact D
crimp-type,
solid, turned,
weight per 100



silver-plated	gold-plated	
720 506	720 686	65
720 507	720 687	68
720 508	720 688	70
720 509	720 689	72
720 502	720 690	62

100

Pin contact D
crimp-type,
solid, turned,
weight per 100



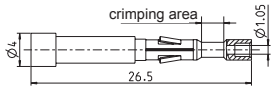
silver-plated	gold-plated	
720 516	720 691	60
720 517	720 692	63
720 518	720 693	65
720 519	720 694	67
720 512	720 695	70

100

Sleeve contact
Optical waveguide for POF,
solid, turned,
weight per 100

720 520

POF* Ø 1 mm

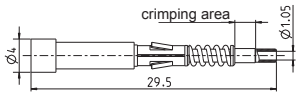


100
89

Pin contact
Optical waveguide for POF,
solid, turned,
weight per 100

720 530

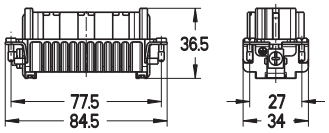
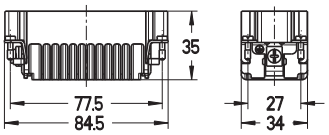
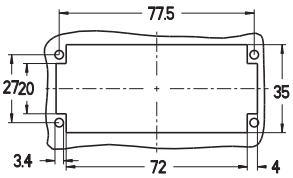
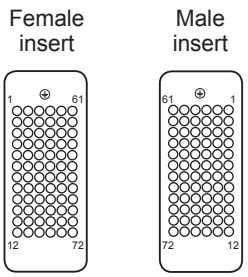
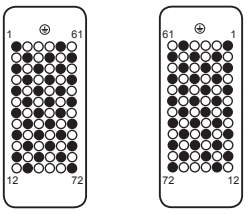
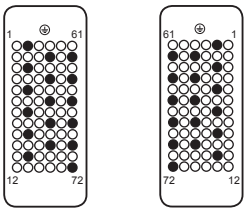
POF* Ø 1 mm

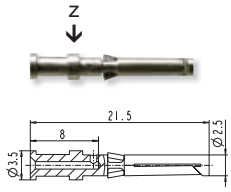
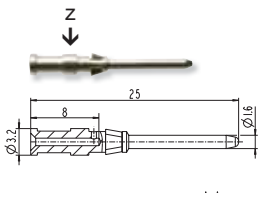
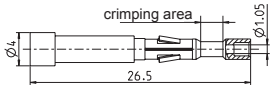
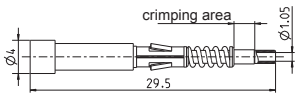


*POF = Polymer Optical Fibre

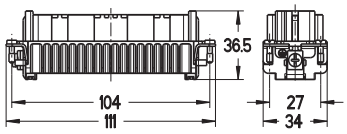
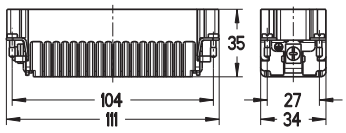
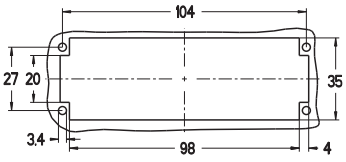
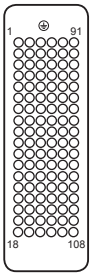
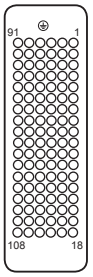
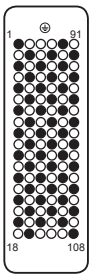
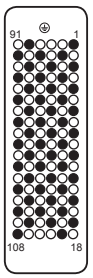
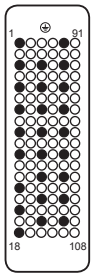
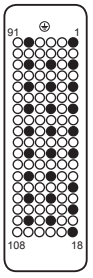
100
74

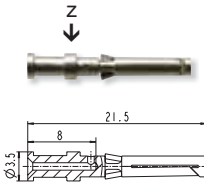
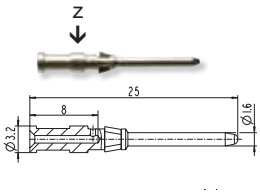
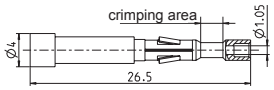
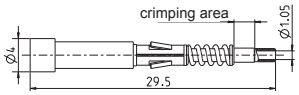
► Matching housings see page 125 - 131 / screw-mountable hoods see page 161

Description	Part no.		Series DD 72 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**750 172**			10 64
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**750 272**			10 58
Contact arrangement				
DD 72 completely equipped with 72 contacts Rated voltage: 250 V			Panel cutout  View from termination side 	
DD 72 modified: **DD 34-pole +** ⏚ DD 72 equipped with 34 contacts Rated voltage: 400 V				
DD 72 modified: **DD 17-pole +** ⏚ DD 72 equipped with 17 contacts Rated voltage: 500 V			 ● working contact ○ without contact	

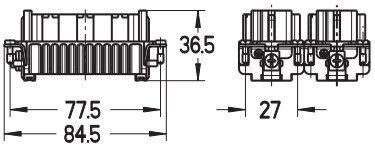
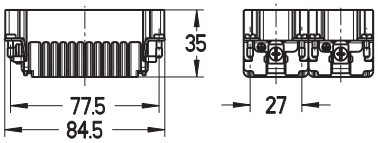
Description	Part no.		Series DD 72 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by Z 1 — 0,14 - 0,37 mm² — 26 - 22 AWG 2 — 0,5 mm² — 20 AWG 3 — 0,75 - 1 mm² — 19 - 18 AWG 4 — 1,5 mm² — 16 AWG 5 — 2,5 mm² — 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 — 0,14 - 0,37 mm² — 26 - 22 AWG 2 — 0,5 mm² — 20 AWG 3 — 0,75 - 1 mm² — 19 - 18 AWG 4 — 1,5 mm² — 16 AWG 5 — 2,5 mm² — 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm *POF = Polymer Optical Fibre 	100 74

► Matching housings see page 133 - 140 / screw-mountable hoods see page 163

Description	Part no.		Series DD 108 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carrier for sleeve contacts *Please order crimp and glass fibre cable contacts separately*	**750 108**			10 83
Contact carrier for pin contacts *Please order crimp and glass fibre cable contacts separately*	**750 208**			10 73
Contact arrangement				
DD 108 completely equipped with 108 contacts Rated voltage: 250 V			Panel cutout  View from termination side Female insert  Male insert 	
DD 108 modified: **DD 52-pole +** ⏚ DD 108 equipped with 52 contacts Rated voltage: 400 V			 	
DD 108 modified: **DD 26-pole +** ⏚ DD 108 equipped with 26 contacts Rated voltage: 500 V			  ● working contact ○ without contact	

Description	Part no.		Series DD 108 P + ⏚ 10 A / 250 V UL/CSA: 600 V				g
Contacts							
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690		z 1 2 3 4 5	Terminal cross section marked by Z 0,14 - 0,37 mm² 26 - 22 AWG 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG		100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695		1 2 3 4 5	0,14 - 0,37 mm² 26 - 22 AWG 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG		100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm				100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm *POF = Polymer Optical Fibre				100 74

► Matching housings see page 143 - 149 / screw-mountable hoods see page 165

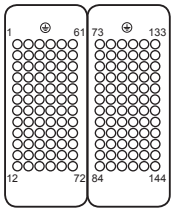
Description	Part no.		Series DD 144 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carriers for sleeve contacts 1 - 72 for sleeve contacts 73 - 144 *Please order crimp and glass fibre cable contacts separately*	**750 172** **750 144**			10 83 83
Contact carriers for pin contacts 1 - 72 for pin contacts 73 - 144 *Please order crimp and glass fibre cable contacts separately*	**750 272** **750 244**			10 73 73

Contact arrangement

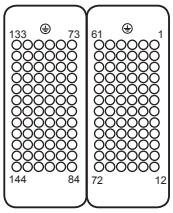
DD 144 completely equipped with 144 contacts
Rated voltage: 250 V

View from termination side

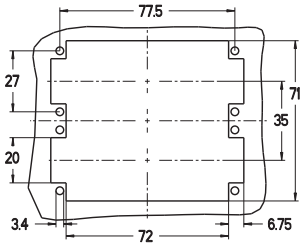
Female insert



Male insert

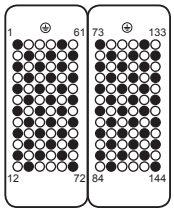


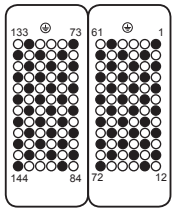
Panel cutout



DD 144 modified: **DD 68-pole +** ⏚

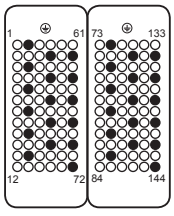
DD 144 equipped with 2 x 34 contacts
Rated voltage: 400 V

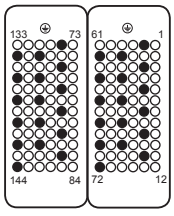




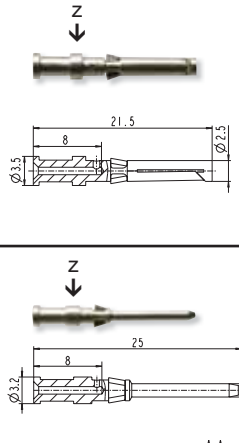
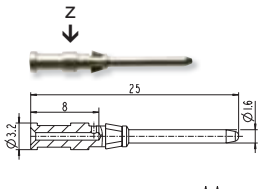
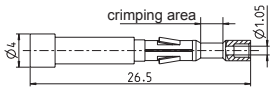
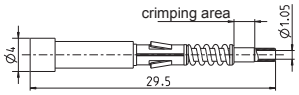
DD 144 modified: **DD 34-pole +** ⏚

DD 144 equipped with 2 x 17 contacts
Rated voltage: 500 V



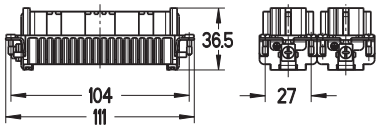
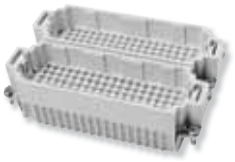
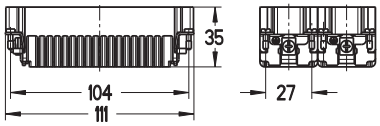
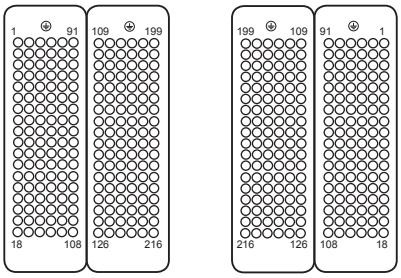
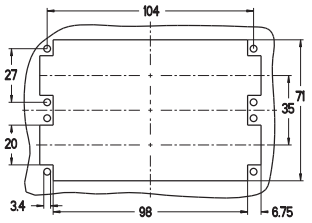
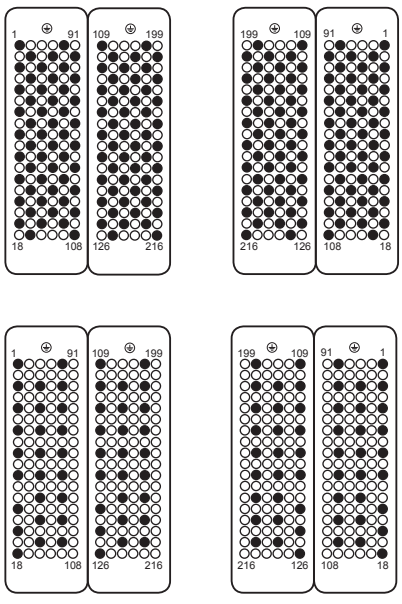


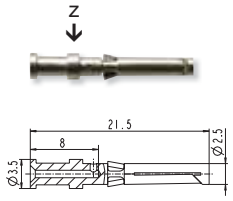
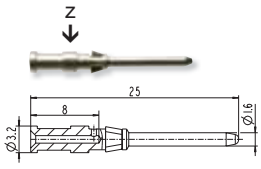
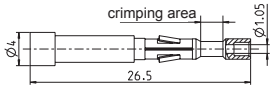
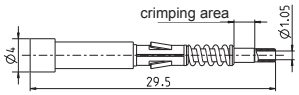
● working contact ○ without contact

Description	Part no.		Series DD 144 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z: 1 – 0,14 - 0,37 mm² – 26 - 22 AWG 2 – 0,5 mm² – 20 AWG 3 – 0,75 - 1 mm² – 19 - 18 AWG 4 – 1,5 mm² – 16 AWG 5 – 2,5 mm² – 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 z: 1 – 0,14 - 0,37 mm² – 26 - 22 AWG 2 – 0,5 mm² – 20 AWG 3 – 0,75 - 1 mm² – 19 - 18 AWG 4 – 1,5 mm² – 16 AWG 5 – 2,5 mm² – 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm  *POF = Polymer Optical Fibre	100 74

*POF= Polymer Optical Fibre

► **Matching housings see page 151/152**

Description	Part no.		Series DD 216 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Crimp contact carriers				
Contact carriers for sleeve contacts 1-108 for sleeve contacts 109-216 *Please order crimp and glass fibre cable contacts separately*	**750 108** **750 116**			10 64 64
Contact carriers for pin contacts 1 - 108 for pin contacts 109 - 216 *Please order crimp and glass fibre cable contacts separately*	**750 208** **750 216**		 	10 58 58
Contact arrangement				
DD 216 completely equipped with 216 contacts Rated voltage: 250 V			View from termination side Female insert Male insert 	
DD 216 modified: **DD 104-pole +** ⏚ DD 216 equipped with 2 x 52 contacts, Rated voltage: 400 V			Panel cutout 	
DD 216 modified: **DD 52.1-pole +** ⏚ DD 216 equipped with 2 x 26 contacts, Rated voltage: 500 V			 ● working contact ○ without contact	

Description	Part no.		Series DD 216 P + ⏚ 10 A / 250 V UL/CSA: 600 V	g
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	 z — Terminal cross section marked by Z 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	 1 0,14-0,37 mm² 26-22 AWG 2 0,5 mm² 20 AWG 3 0,75-1 mm² 19-18 AWG 4 1,5 mm² 16 AWG 5 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF, solid, turned, weight per 100	720 520		 POF* Ø 1 mm 	100 89
Pin contact Optical waveguide for POF, solid, turned, weight per 100	720 530		 POF* Ø 1 mm *POF = Polymer Optical Fibre 	100 74

*POF= Polymer Optical Fibre

► Matching housings see page 155

The different modules are inserted into the appropriate retaining frames (which vary according to the different housing sizes). There they snap in easily and safely. A special removal tool ensures quick and easy customisation of the connector to meet any change in the users' requirements.

The modular MO series is an extension of the PROCON range of industrial connectors. The advantage is the modularisation of inserts. The known division into male and female inserts does not apply here anymore. The user has the possibility of inverse equipment, i.e. in the modular system, a retaining frame can accommodate contact carriers for both pin and sleeve contacts.

In combination with the proven series B standard housings, the MO series allows the synthesis of electrical and optical contacts in inserts with different amperages and voltages inside one retaining frame.

The modular construction of inserts leaves the decision on the specific arrangement in individual applications to the user.

Due to the extensive range of different available housing sizes, the user can implement combinations of 2 up to max. 2 x 7 contact carriers per housing - and thus realise any pole number from 3 to 280.

The following regulations apply to the combination of several circuits in one cable and/or for example a connector:

VDE 0100/1.97 § 411.1.3.2
and
DIN EN 60 204/11.98 § 14.1.3.

Specifications

Regulations:	DIN VDE 0627, DIN VDE 0110, DIN EN 61 984
Approvals:	UR, CSA, SEV
Number of poles:	3 - 280 + PE
Electrical data:	

See individual series.

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

Delivery information:

Retaining frames and modules are available in grey or black. We will supply the colour version which is currently available at the time of ordering - no colour can be reserved!

	Page
Retaining frames MOB 6 up to MOB 24	75
MO 2-pole (1 + PE) 82 A / 1000 V	76 - 77
MO 2-pole 82 A / 1000 V	78 - 79
MO 3-pole coax	80 - 81
MO 3-pole 50 A / 630 V	82 - 83
MO 3.1-pole 50 A / 1000 V	84 - 85
MO 4-pole 25 A / 630 V	86 - 87
MO 4-pole + ⏚ 16 A / 1000 V	88 - 89
MO Universal bus 4-pole + shielding 1 A / 30 V	90 - 91
MO Profibus DP 2-pole + shielding 1 A / 30 V	92 - 93
MO 5.1-pole 16 A / 1000 V	88 - 89
MO 5-pole 20 A / 400 V	94 - 95
MO 10-pole 10 A / 250 V	96 - 97
MO 20-pole 5 A / 63 V	98 - 99
MO RJ45 13 A / 400 V AC	100 - 101
MO pneumatic Air pressure	102
Blind module MO 0	102

MO modules overview

Series	Specifications	5*	6*	7*	8*	9*	10*	Starting on page: Inserts / Housings
MO	Retaining frame: No. of contact carriers:	**MO B6** **2**	**MO B10** **3**	**MO B16** **5**	**MO B24** **7**	**2 x MO B16** **2 x 5**	**2 x MO B24** **2 x 7**	
MO 2	80 A / 100 V	S |	S |	S |	S |	S |	S |	
MO 3 coax	250 V	C |	C |	C |	C |	C |	C |	
MO 3	50 A / 630 V	C |	C |	C |	C |	C |	C |	
MO 3.1	50 A / 1000 V	C |	C |	C |	C |	C |	C |	
MO 4 MO 5.1	16 A / 1000 V	C |	C |	C |	C |	C |	C |	
MO 5	20 A / 400 V	C |	C |	C |	C |	C |	C |	71 / 121
MO 10	10 A / 250 V	C | LWL	C | POF	C | POF	C | POF	C | POF	C | POF	
MO 20	5 A / 63 V	C |	C |	C |	C |	C |	C |	
MO Pneumatic								
MO Universal bus		S |						
MO Profibus DP		S |						
MO RJ 45		C |	C |	C |	C |	C |	C |	
MO Blind module								

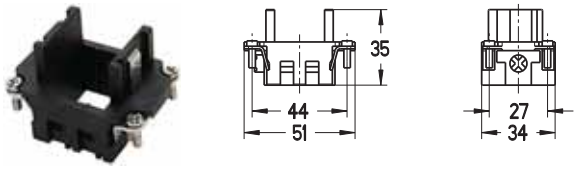
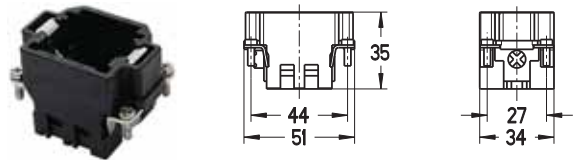
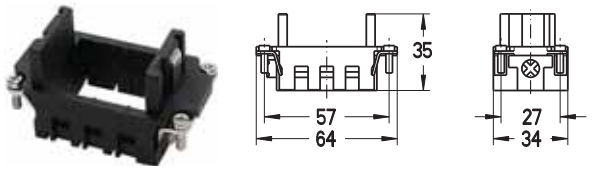
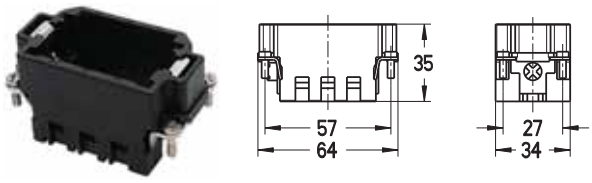
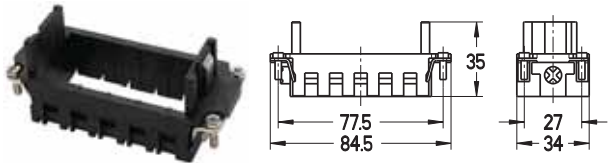
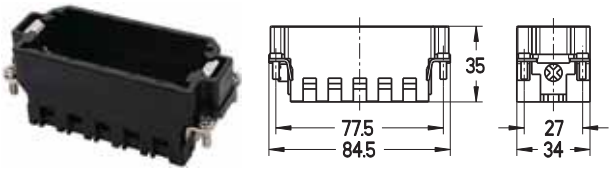
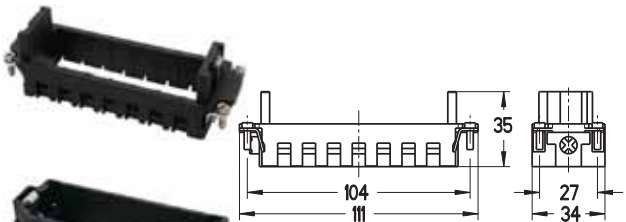
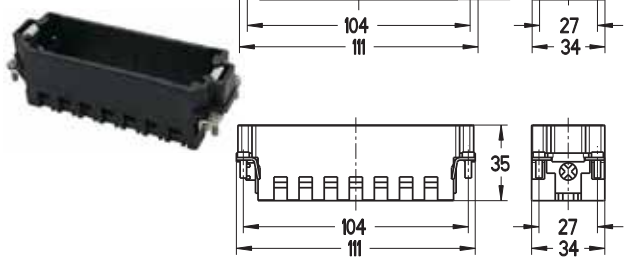
***Vertical columns:** identical housing sizes and fixing dimensions for the different series and numbers of poles

S \| SK / C \| LWL = **S**crew \| **I**nsulation **D**isplacement **C**onnection / **C**rimp \| **P**olymer **O**ptical **F**ibre

Note for users

The following regulations apply to the combination of several circuits in one cable and/or for example a connector:

VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3

Description	Part no.	Frame coding	Series MO B	g
Retaining frames				
Female frames MO B 6 **for 2 contact carriers** for pin and sleeve contacts mountable in series B 6	**770 006** 770 406 (2 x PE)	A - B		10 29 31
Male frames MO B 6 **for 2 contact carriers** for pin and sleeve contacts mountable in series B 6	**770 106** 770 506 (2 x PE)	A - B		10 33 35
Female frames MO B 10 **for 3 contact carriers** for pin and sleeve contacts mountable in series B 10	**770 010** 770 410 (2 x PE)	A - C		10 33 35
Male frames MO B 10 **for 3 contact carriers** for pin and sleeve contacts mountable in series B 10	**770 110** 770 510 (2 x PE)	A - C		10 39 41
Female frames MO B 16 **for 5 contact carriers** for pin and sleeve contacts mountable in series B 16 **with additional female frame** mountable in series B 32	**770 016** 770 416 (2 x PE) **770 216** 770 616 (2 x PE)	A - E V - Z		10 33 35 33 35
Male frames MO B 16 **for 5 contact carriers** for pin and sleeve contacts mountable in series B 16 **with additional male frame** mountable in series B 32	**770 116** 770 516 (2 x PE) **770 316** 770 716 (2 x PE)	A - E V - Z		10 42 44 42 44
Female frames MO B 24 **for 7 contact carriers** for pin and sleeve contacts mountable in series B 24 **with additional female frame** mountable in series B 48	**770 024** 770 424 (2 x PE) **770 224** 770 624 (2 x PE)	A - G T - Z		10 40 42 40 42
Male frames MO B 24 **for 7 contact carriers** for pin and sleeve contacts mountable in series B 24 **with additional male frame** mountable in series B 48	**770 124** 770 524 (2 x PE) **770 324** 770 724 (2 x PE)	A - G T - Z		10 49 51 49 51

► Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165

Series MO 2-pole (1 + PE)

Specifications

Number of poles
1 + PE

Termination method
Screw

Contacts
solid, turned, copper alloy,
silver-plated,
contact diameter 3,6 mm

Terminal cross section
10 - 25 mm² (8 - 4 AWG)

Mating cycles
100

Rated current
82 A

Contact resistance
< 2 mOhm

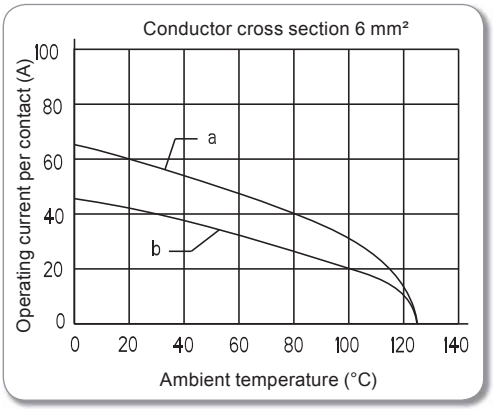
Rated voltage
IEC: 1000 V
UL: 600 V
CSA: 600 V

Test voltage
5,7 kV

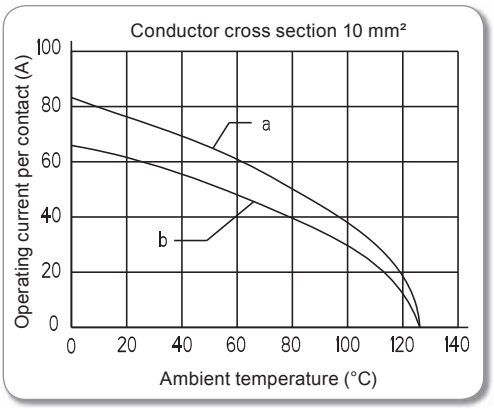
Temperature range
-40 °C up to +100 °C, temporarily up to + 125 °C

Pollution degree
3

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



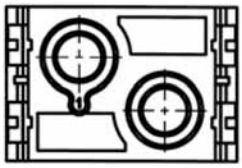
Curve	Poles	Retaining frame
a	2	MO B 6
a	9	MO B 10
b	4	MO B 16
b	4	MO B 24



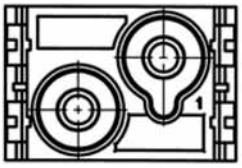
Contact arrangement

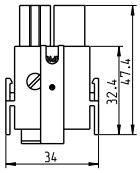
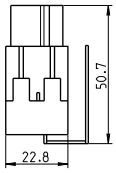
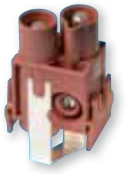
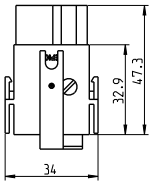
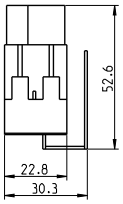
View from termination side

Female insert



Male insert



Description	Part no.		Series MO 2 P (1 + PE) 82 A / 1000 V	g
High current MC modules				
Female insert	**771 401**		 	10
Male insert	**771 501**		  	10
			- Occupies 2 slots in the module frame - Power and signal modules can be combined in one housing. This mixed equipment guarantees high flexibility. **Application areas:** • Industrial machinery and plant engineering • Printing machines • Control engineering	
Tools				
Removal tool for contact carriers	**779 300**			1 30

Series MO 2-pole

Specifications

Number of poles
2

Termination method
Screw

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 3,6 mm

Terminal cross section
10 - 25 mm² (8 - 4 AWG)

Mating cycles
100

Rated current
82 A

Contact resistance
< 2 mOhm

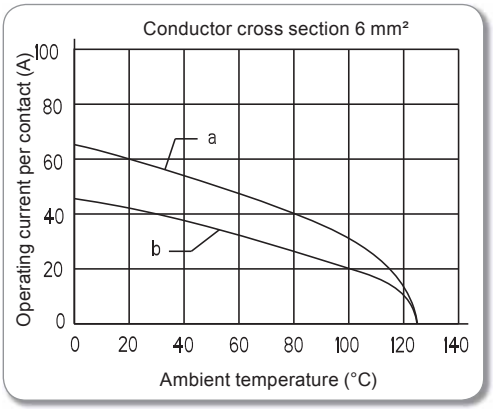
Rated voltage
IEC: 1000 V
UL: 600 V
CSA: 600 V

Test voltage
5,7 kV

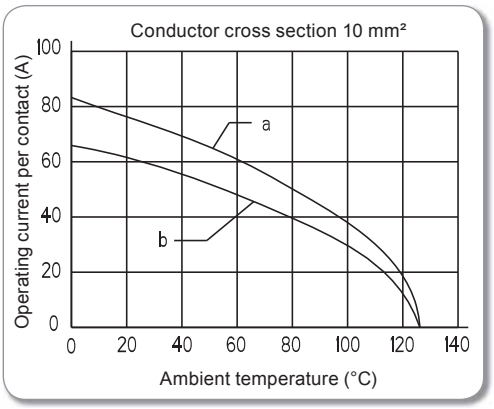
Temperature range
-40 °C up to +100 °C,
temporarily up to + 125 °C

Pollution degree
3

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



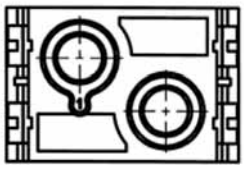
Curve	Poles	Retaining frame
a	2	MO B 6
a	2	MO B 10
b	4	MO B 16
b	6	MO B 24



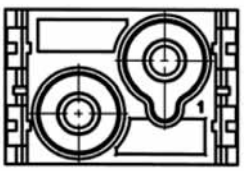
Contact arrangement

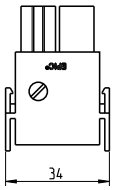
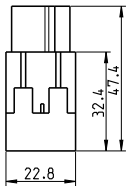
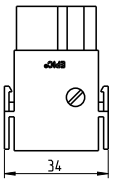
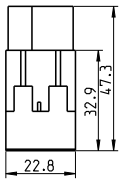
View from termination side

Female insert



Male insert



Description	Part no.		Series MO 2 P 82 A / 1000 V	g
High current MC modules				
Female insert	**771 402**		 	10
Male insert	**771 502**		 	10
			- Occupies 2 slots in the module frame - Power and signal modules can be combined in one housing. This mixed equipment guarantees high flexibility. **Application areas:** • Industrial machinery and plant engineering • Printing machines • Control engineering	
Tools				
Removal tool for contact carriers	**779 300**			1 30

Series MO 3-pole coax

Specifications

Number of poles
3

Termination method
Crimp, solder-type

Contacts
solid, turned, copper alloy
gold-plated,
contact diameter 3,6 mm coax

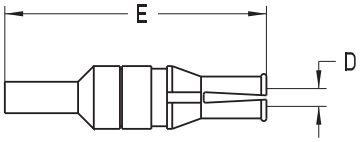
Rated voltage
250 V

Contact resistance
< 5 mΩ

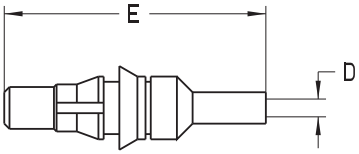
Wave impedance
50 Ω

Frequency range
2 GHz

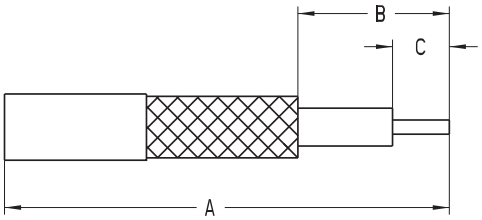
Sleeve contact



Pin contact



Stripping / contact dimensions



Cable size

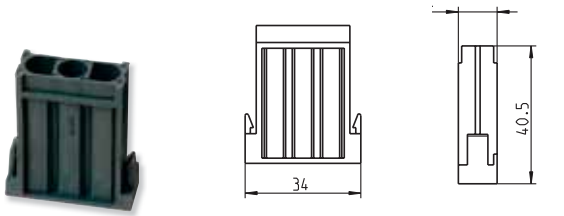
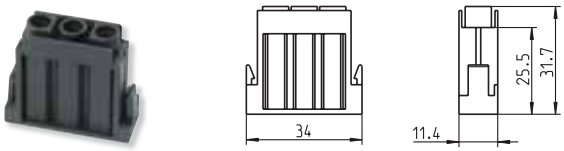
RG 174, 179, 316	A = 9,9	B = 3,6 C = 2	D = 1,7	D = 1,7 E = 23,6 E = 23,6
RG 58	A = 11,5	D = 3,2 B = 3,6 C = 2		D = 3,2 E = 23,6 E = 23,6

Contact arrangement

View from termination side

Female insert

Male insert

Description	Part no.		Series MO 3 P coax	g
Crimp contact carriers				
Contact carrier MO 3 K for sleeve contacts *Please order crimp contacts separately*	**771 203**			10 8
Contact carrier MO 3 K for pin contacts *Please order crimp contacts separately*	**771 303**			10 6
Contacts				
Sleeve contact MO 3 K for crimp or solder-type terminals, for cable size RG 174, 179, 316 for cable size RG 58	gold-plated 772 400 772 410			1 3 3
Pin contact MO 3 K for crimp or solder-type terminals, for cable size RG 174, 179, 316 for cable size RG 58	gold-plated 772 500 772 510			1 3 3
Tools				
Removal tool for contacts MO 3	**779 000**			1 28
Crimping tool for single contacts **Crimping dies** cable size RG 174, 179, 316 cable size RG 58	**779 700** **779 710** **779 720**			1 420
Removal tool for contact carriers	**779 300**			1 30

► Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165

Series MO 3-pole

Specifications

Number of poles
3

Termination method
Crimp

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 3,6 mm

Terminal cross section
1,5 - 10 mm² (16 - 8 AWG)

Rated current
max. 50 A, see derating diagram

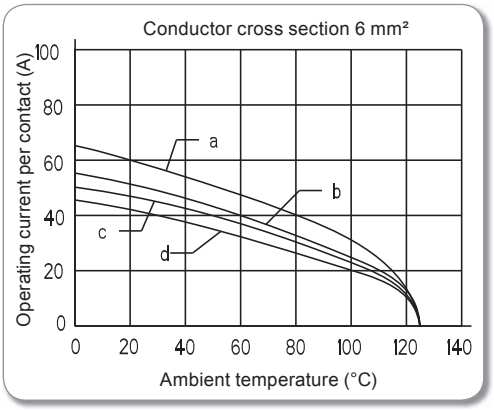
Rated voltage
630 V

Rated surge
8,0 kV

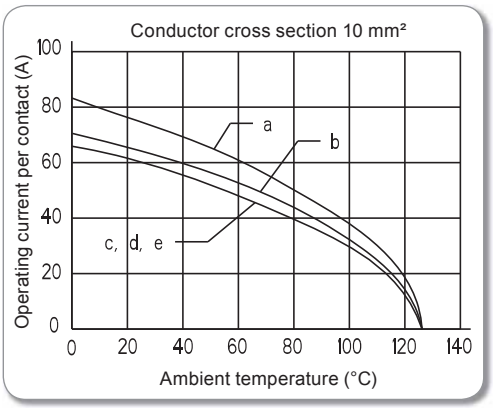
Test voltage
4 kV

Contact resistance
≤ 1 mΩ

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



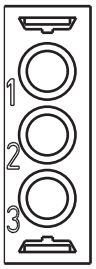
Curve	Poles	Retaining frame
a	3	MO B 6
b	6	MO B 6
c	9	MO B 10
d	15	MO B 16
e	21	MO B 24



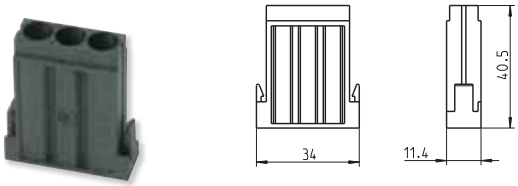
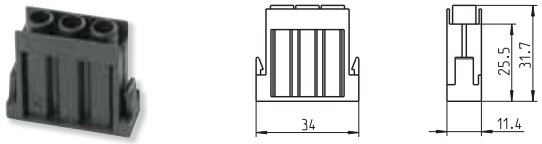
Contact arrangement

View from termination side

Female insert



Male insert

Description	Part no.		Series MO 3 P 50 A / 630 V	100 g
Crimp contact carriers				
Contact carrier MO 3 for sleeve contacts *Please order crimp contacts separately*	**771 003**			10 8
Contact carrier MO 3 for pin contacts *Please order crimp contacts separately*	**771 103**			10 6
Contacts				
Sleeve contact MO 3 crimp-type, weight per 100	silver-plated 772 030 772 040 772 050 772 060 772 070		 Terminal cross section 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4 mm² 12 AWG 6 mm² 10 AWG 10 mm² 8 AWG	100 300 300 300 300 300
Pin contact MO 3 crimp-type, weight per 100, pin Ø 3,6 mm²	silver-plated 772 130 772 140 772 150 772 160 772 170		 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4 mm² 12 AWG 6 mm² 10 AWG 10 mm² 8 AWG	100 300 300 300 300 300
Tools				
Removal tool for contacts MO 3	**779 000**			1 28
Crimping tool for turned contacts 1,5-10 mm² or 16-8 AWG 4 indent crimping tool	**710 610**			1 663
Removal tool for contact carriers	**779 300**			1 30

► Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165

Series MO 3.1-pole

Specifications

All contacts 2 mm first-to-mate to other contact carriers

Number of poles
3

Termination method
Crimp

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 3,6 mm

Terminal cross section
1,5 - 10 mm² (16 - 8 AWG)

Rated current
max. 50 A, see derating diagram

Rated voltage
1000 V

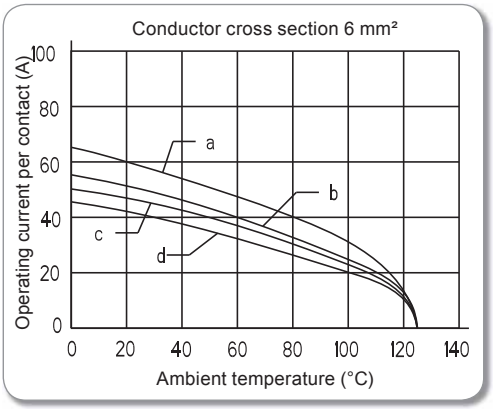
Rated surge
8,0 kV

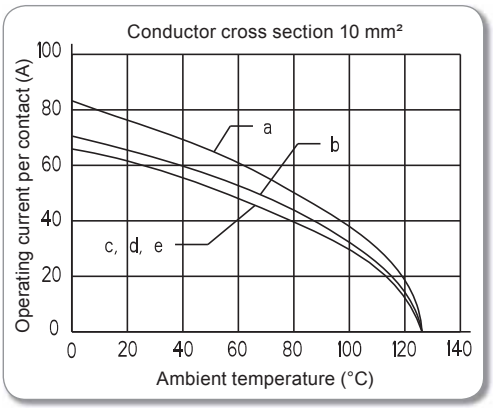
Test voltage
5,7 kV

Contact resistance
1 m

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature

Curve	Poles	Retaining frame
a	3	MO B 6
b	6	MO B 6
c	9	MO B 10
d	15	MO B 16
e	21	MO B 24



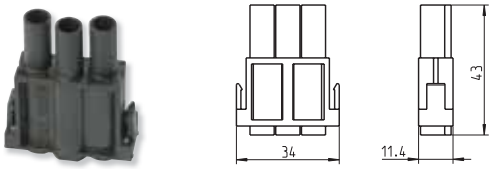
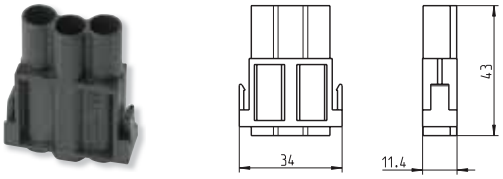


Contact arrangement

View from termination side:

Female insert

Male insert

Description	Part no.		Series MO 3.1 P 50 A / 1000 V	g
Crimp contact carriers				
Contact carrier MO 3.1 for sleeve contacts *Please order crimp contacts separately*	771 403			10 6
Contact carrier MO 3.1 for pin contacts *Please order crimp contacts separately*	771 503			10 7
Contacts				
Sleeve contact MO 3 crimp-type, weight per 100	silver-plated 772 030 772 040 772 050 772 060 772 070		 Terminal cross section 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4 mm² 12 AWG 6 mm² 10 AWG 10 mm² 8 AWG	100 300 300 300 300 300
Pin contact MO 3 crimp-type, weight per 100, pin Ø 3,6 mm²	silver-plated 772 130 772 140 772 150 772 160 772 170		 1,5 mm² 16 AWG 2,5 mm² 14 AWG 4 mm² 12 AWG 6 mm² 10 AWG 10 mm² 8 AWG	100 300 300 300 300 300
Tools				
Removal tool for contacts MO 3	**779 000**			1 28
Crimping tool for turned contacts 1,5 - 10 mm² or 16 - 8 AWG 4 indent crimping tool	**710 610**			1 663
Removal tool for contact carriers	**779 300**			1 30

► Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165

Series MO 4-pole

Specifications

Number of poles
4

Termination method
Crimp

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 3,6 mm

Terminal cross section
0,5 - 4 mm² (20 - 12 AWG)

Mating cycles
100

Rated current
25 A

Contact resistance
< 2 mOhm

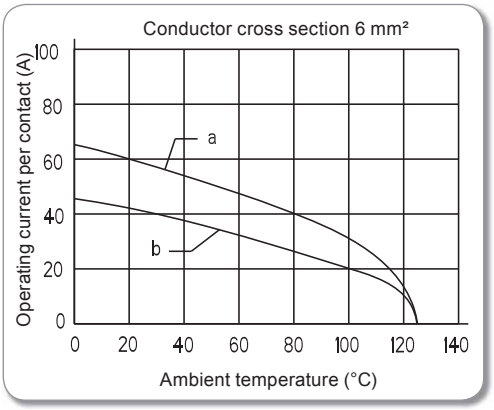
Rated voltage
630 V

Test voltage
4 kV

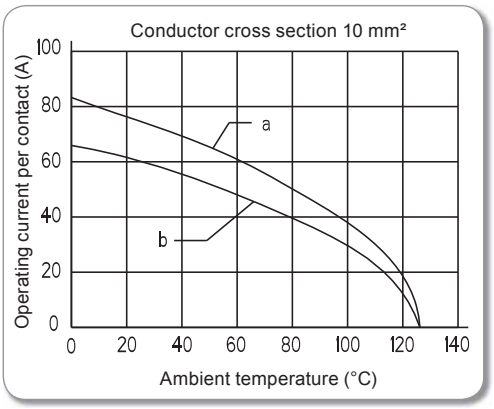
Temperature range
-40 °C up to +100 °C,
temporarily up to + 125 °C

Pollution degree
3

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



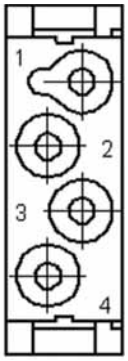
Curve	Poles	Retaining frame
a	4	MO B 6
b	8	MO B 6
c	12	MO B 10
d	20	MO B 16
e	28	MO B 24



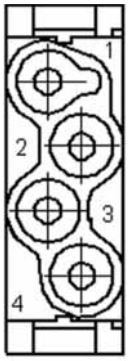
Contact arrangement

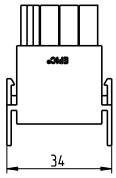
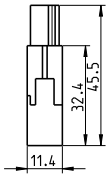
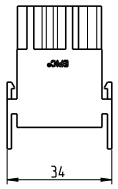
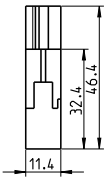
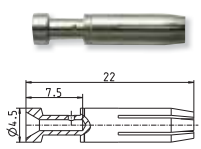
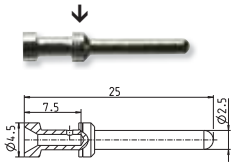
View from termination side

Female insert



Male insert



Description	Part no.		Series MO 4 P 25 A / 630 V	g
Crimp contact carriers				
Contact carrier MO 4P for sleeve contacts	**771 605**		 	10
Contact carrier MO 4P for pin contacts	**771 705**		 	10
			Power and signal modules can be combined in one housing. This mixed equipment guarantees high flexibility. **Application areas:** • Industrial machinery and plant engineering • Printing machines • Control engineering	
Contacts				
Sleeve contact MO 4 crimp-type, solid, turned, weight per 100	silver-plated **710 508** **710 504** **710 509** **710 500** **710 501** **710 502**	gold-plated 710 916 710 842 710 917 710 843 710 844 710 845	 Number of grooves = n n: 0 / 0 / 1 / 1 / 2 / 3 Terminal cross sections indicated by grooves 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG	100 162 160 148 148 150 154
Pin contact MO 4 crimp-type, solid, turned, weight per 100	silver-plated **710 518** **710 514** **710 519** **710 510** **710 511** **710 512**	gold-plated 710 918 710 847 710 919 710 848 710 849 710 850	 n n: 0 / 0 / 1 / 1 / 2 / 3 0,14-0,37 mm² 26-22 AWG 0,5 mm² 20 AWG 0,75 mm² 18 AWG 1 mm² 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG	100 125 124 128 128 132 132
Tools				
Removal tool for contact carriers	**779 300**			1 30

Series MO 4-pole + ⏚ / 5.1-pole

Specifications

With pin contact carrier MO 4 P + ⏚ the PE contact is 2 mm first-to-mate

Number of poles
4 + ⏚
5

Termination method
Crimp

Contacts
stamped, copper alloy
silver-plated,
contact diameter 2,5 mm

Terminal cross section
0,5 - 4 mm² (20 - 12 AWG)

Rated current
max. 16 A, see derating diagram

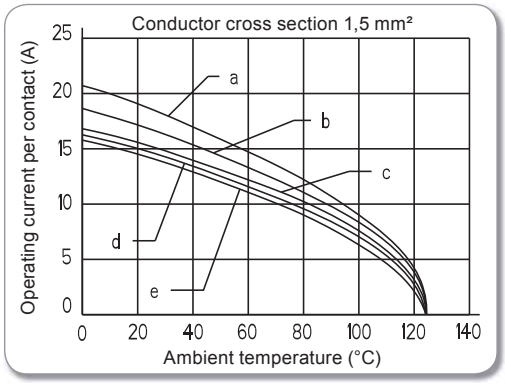
Rated voltage
1000 V

Rated surge
8,0 kV

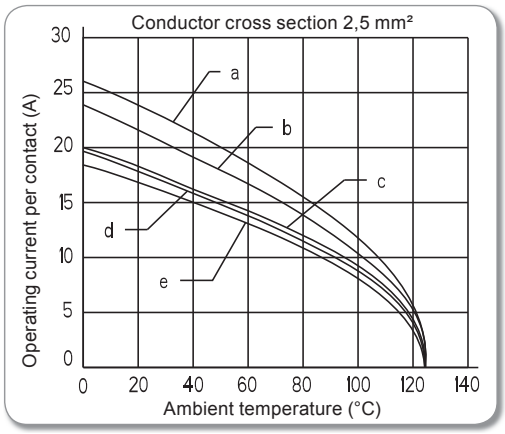
Test voltage
5,7 kV

Contact resistance
5 m

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



Curve	Poles	Retaining frame
a	5	MO B 6
b	10	MO B 6
c	15	MO B 10
d	25	MO B 16
e	35	MO B 24

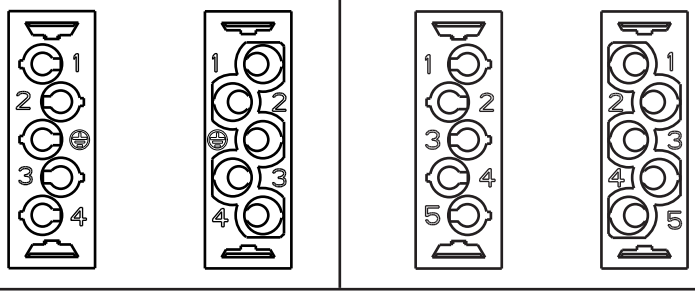


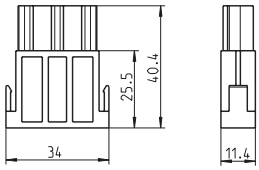
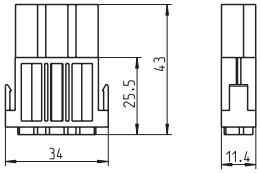
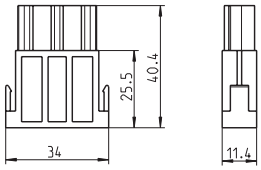
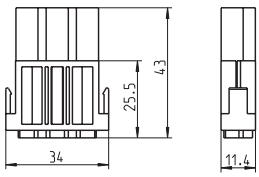
Contact arrangement

View from termination side:

4-pole + ⏚ | 5-pole

Female insert | Male insert | Female insert | Male insert



Description	Part no.		Series MO 4 P + ⏚ / 5.1 P 16 A / 1000 V	g
Crimp contact carriers				
Contact carrier MO 4 + ⏚ for sleeve contacts *Please order crimp contacts separately*	**771 610**			10 6
Contact carrier MO 4 + ⏚ for pin contacts PE contact 2 mm first-to-mate *Please order crimp contacts separately*	**771 710**			10 7
Crimp contact carriers				
Contact carrier MO 5.1 for sleeve contacts *Please order crimp contacts separately*	**771 620**			10 6
Contact carrier MO 5.1 for pin contacts *Please order crimp contacts separately*	**771 720**			10 7
Contacts				
Sleeve contact MO 5.1 crimp-type, stamped, single contact weight per 100 - strip contacts on request -	silver-plated 773 200 773 230 773 260		 Terminal cross section 0,5 - 1,5 mm² 20 - 16 AWG 1,5 - 2,5 mm² 16 - 14 AWG 2,5 - 4 mm² 12 AWG	100 30 30 30
Pin contact MO 5.1 crimp-type, stamped, single contact, pin Ø 2,5 mm² weight per 100 - strip contacts on request -	silver-plated 773 300 773 330 773 360		 0,5 - 1,5 mm² 20 - 16 AWG 1,5 - 2,5 mm² 16 - 14 AWG 2,5 - 4 mm² 12 AWG	100 60 60 60
Tools	**(Crimping tools and machines for strip contacts on request)**			
Removal tool for contacts MO 5.1	**779 800**			1 26
Crimping tool for single contacts **Crimping dies** **Contact locators**	**779 700** **779 730** **779 740** **774 010** **774 020**		 **Conductor cross section** (mm²) (AWG) 0,5 - 1,5 20 - 16 1,5 - 2,5 16 - 14 0,5 - 1,5 20 - 16 1,5 - 2,5 16 - 14	1 420
Removal tool for contact carriers	**779 300**			1 30

► Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165

Series MO universal bus 4-pole + shield

Specifications

Number of poles
4 + shield

Termination method
Screw

Contacts
copper alloy,
gold-plated

Terminal cross section
0,08 - 1,5 mm² (20 - 16 AWG)

Mating cycles
100

Rated current
1 A

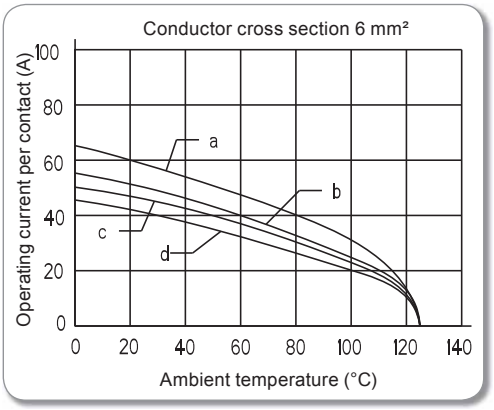
Contact resistance
< 2 mOhm

Rated voltage
30 V

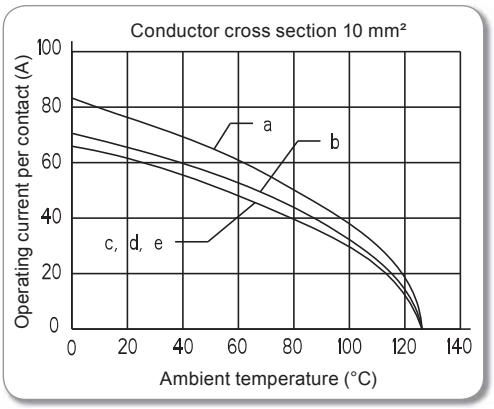
Temperature range
-20 °C up to +85 °C

Pollution degree
3

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



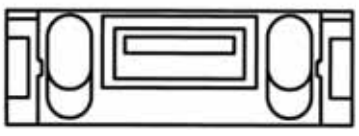
Curve	Poles	Retaining frame
a	3	MO B 6
b	6	MO B 6
c	9	MO B 10
d	15	MO B 16
e	21	MO B 24



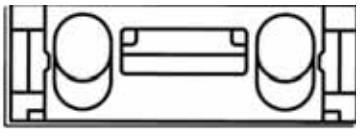
Contact arrangement

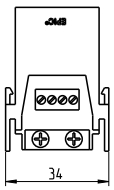
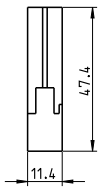
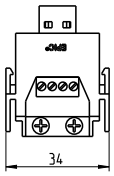
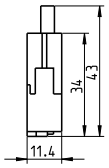
View from termination side

Female insert



Male insert



Description	Part no.		MO universal bus 4 P + shield 1 A / 30 V	9
Universal bus modules				
Female insert	**775 010**		 	10
Male insert	**775 110**		 	10
			Power and signal modules can be combined in one housing. This mixed equipment guarantees high flexibility. **Application areas:** • Plant engineering • Control engineering	
Tools				
Removal tool for contact carriers	**779 300**			1 30

Series MO Profibus DP 2-pole + shield

Specifications

Number of poles
2 + shield

Termination method
Screw, for Profibus cable

Contacts
copper alloy,
gold-plated

Terminal cross section
0,08 - 1,5 mm² (20 - 16 AWG)

Mating cycles
100

Rated current
1 A

Contact resistance
< 2 mOhm

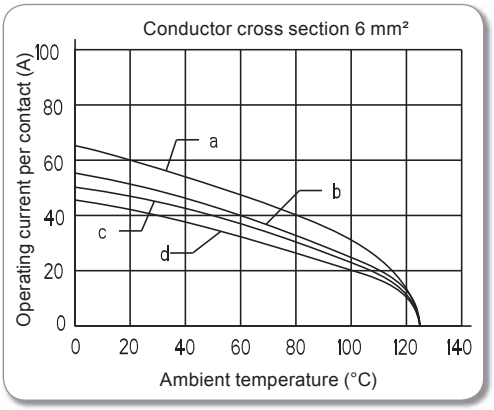
Rated voltage
30 V

Test voltage
4 kV

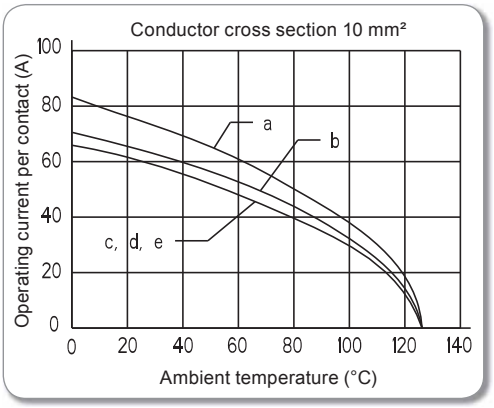
Temperature range
-20 °C up to +85 °C

Pollution degree
3

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



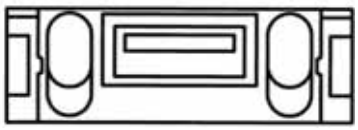
Curve	Poles	Retaining frame
a	3	MO B 6
b	6	MO B 6
c	9	MO B 10
d	15	MO B 16
e	21	MO B 24



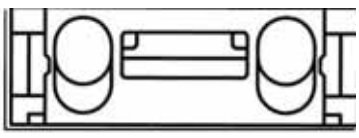
Contact arrangement

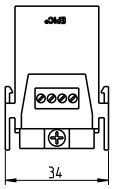
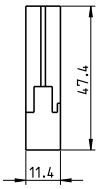
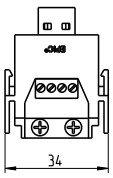
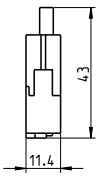
View from termination side

Female insert



Male insert



Description	Part no.		MO Profibus DP 2 P + shield 1 A / 30 V	g
Profibus modules				
Female insert	**775 020**		 	10
Male insert	**775 120**		 	10
			Power and signal modules can be combined in one housing. This mixed equipment guarantees high flexibility. **Application areas:** • Plant engineering • Control engineering	
Tools				
Removal tool for contact carriers	**779 300**			1 30

Module MO 5-pole

Specifications

Number of poles
5

Termination method
Crimp

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 2,5 mm

Terminal cross section
0,5 - 4 mm² (20 - 12 AWG)

Rated current
max. 20 A, see derating diagram

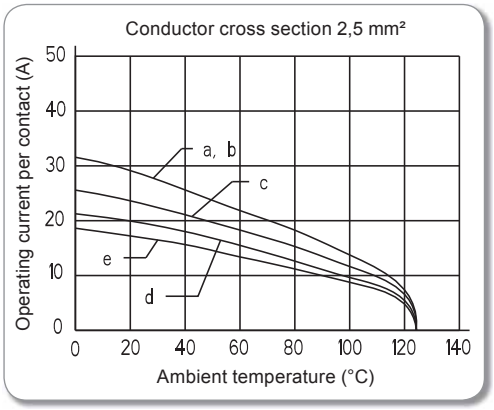
Rated voltage
400 V

Rated surge
6,0 kV

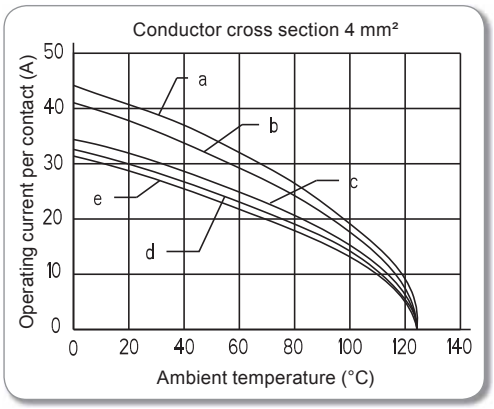
Test voltage
3,5 kV

Contact resistance
≤ 2 mΩ

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



Curve	Poles	Retaining frame
a	5	MO B 6
b	10	MO B 6
c	15	MO B 10
d	25	MO B 16
e	35	MO B 24

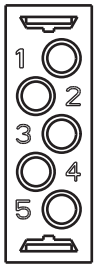


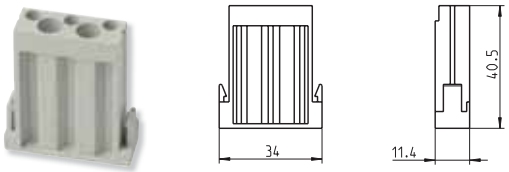
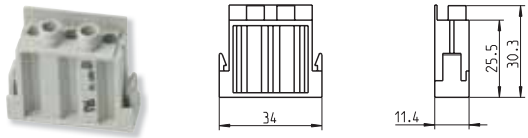
Contact arrangement

View from termination side:

Female insert

Male insert



Description	Part no.		Series MO 5 P 20 A / 400 V	g
Crimp contact carriers				
Contact carrier MO 5 for sleeve contacts *Please order crimp contacts separately*	**771 005**			10 8
Contact carrier MO 5 for pin contacts *Please order crimp contacts separately*	**771 105**			10 6
Contacts				
Sleeve contact MO 5 crimp-type, weight per 100	silver-plated 772 210 772 220 772 230 772 240 772 250		 Terminal cross section 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 - 12 AWG 4 mm² 12 AWG	100 152 163 170 200 240
Pin contact MO 5 crimp-type, weight per 100, pin Ø 2,5 mm²	silver-plated 772 310 772 320 772 330 772 340 772 350		 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 - 12 AWG 4 mm² 12 AWG	100 58 65 70 100 140
Tools				
Removal tool for contacts MO 5	**779 100**			1 26
Walther crimping tool for conductor cross sections of 0,14 - 4,0 mm² or 26 - 12 AWG only for turned contacts	**710 611**			1 510
Removal tool for contact carriers	**779 300**			1 30

► **Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165**

Series MO 10-pole

Specifications

Number of poles
10

Termination method
Crimp
LWL

Contacts
solid, turned, copper alloy
silver-plated,
contact diameter 1,6 mm

Terminal cross section
0,14 - 2,5 mm² (26 - 14 AWG)

Rated current
max. 10 A, see derating diagram

Rated voltage
250 V

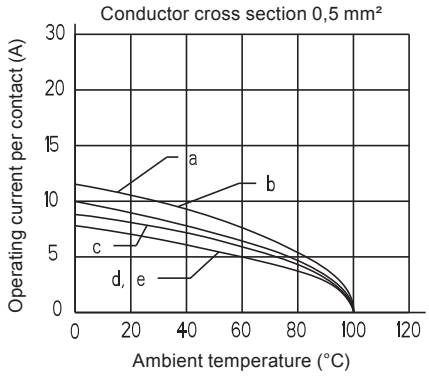
Rated surge
4,0 kV

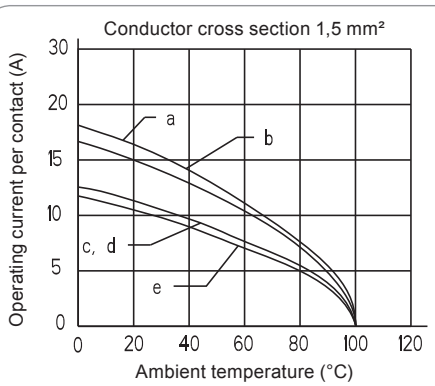
Test voltage
2,2 kV

Contact resistance
3 m

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature

Curve	Poles	Retaining frame
a	10	MO B 6
b	20	MO B 6
c	30	MO B 10
d	50	MO B 16
e	70	MO B 24

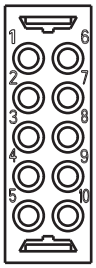




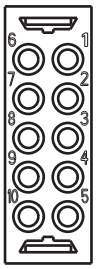
Contact arrangement

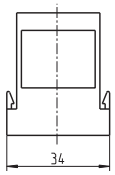
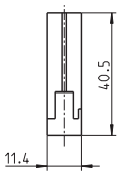
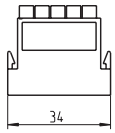
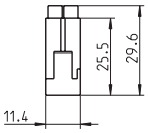
View from termination side

Female insert



Male insert



Description	Part no.		Series MO 10 P 10 A / 250 V	g
Crimp contact carriers				
Contact carrier MO 10 for sleeve contacts *Please order crimp contacts and contacts for optical waveguide separately*	**771 010**		 	10 11
Contact carrier MO 10 for pin contacts *Please order crimp contacts and contacts for optical waveguide separately*	**771 110**		 	10 7
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	z / 1 / 2 / 3 / 4 / 5 Terminal cross section marked by z 0,14 - 0,37 mm² 26 - 22 AWG 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100, pin Ø 1,6 mm²	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	z / 1 / 2 / 3 / 4 / 5 0,14 - 0,37 mm² 26 - 22 AWG 0,5 mm² 20 AWG 0,75 - 1 mm² 19 - 18 AWG 1,5 mm² 16 AWG 2,5 mm² 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF solid, turned, weight per 100	720 520		POF* Ø 1 mm	100 89
Pin contact Optical waveguide for POF solid, turned, weight per 100	720 530		POF* Ø 1 mm	100 74
Tools				
Removal tool for contacts D	**710 614**			1 7
Removal tool for contact carriers	**779 300**			1 30
Walther crimping tool for conductor cross sections of 0,14 - 4,0 mm² only for turned contacts Replacement crimping dies	**710 611** **710 873**			1 510 57

Tools and connection of glass fibre cables see page 186

► **Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165**

Series MO 20-pole

Specifications

Number of poles
20

Termination method
Crimp

Contacts
stamped, copper alloy
gold-plated,
contact diameter 1,0 mm

Terminal cross section
0,09 - 0,5 mm² (28 - 20 AWG)

Rated current
max. 5 A, see derating diagram

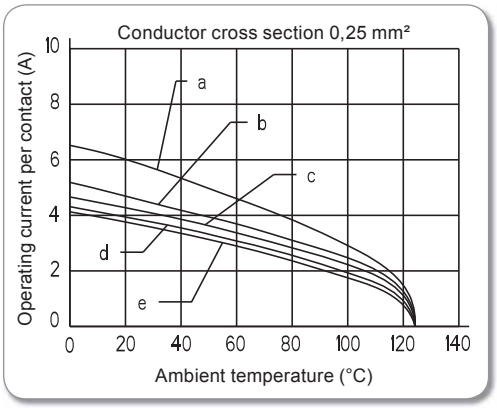
Rated voltage
63 V

Rated surge
4,0 kV

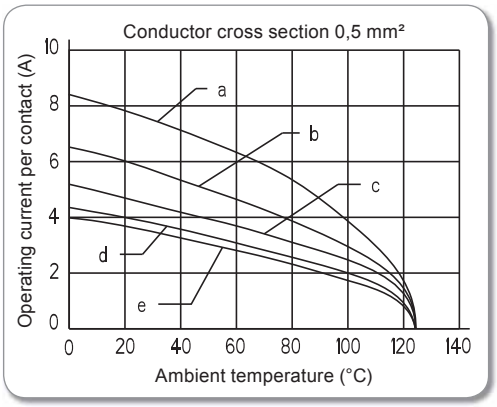
Test voltage
1,68 kV

Contact resistance
≤ 5 mΩ

The **derating diagram** (corrected current capacity curve) acc. to DIN/IEC 512 applies to such kind of current which can (depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature



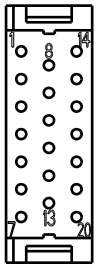
Curve	Poles	Retaining frame
a	20	MO B 6
b	40	MO B 6
c	60	MO B 10
d	100	MO B 16
e	140	MO B 24



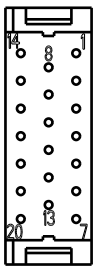
Contact arrangement

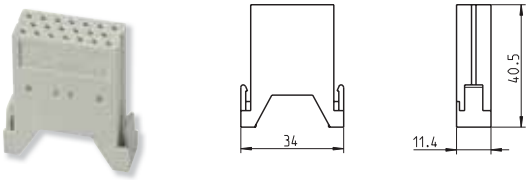
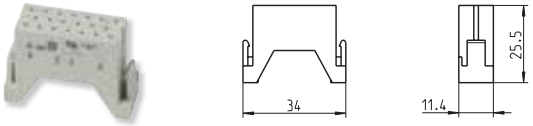
View from termination side

Female insert



Male insert



Description	Part no.		Series MO 20 P 5 A / 63 V	g
Crimp contact carriers				
Contact carrier MO 20 for sleeve contacts *Please order crimp contacts separately*	**771 020**			10 6
Contact carrier MO 20 for pin contacts *Please order crimp contacts separately*	**771 120**			10 4
Contacts				
Sleeve contact MO 20 crimp-type, stamped, single contact, weight per 100, - strip contacts on request -	gold-plated 773 000 773 001		 Terminal cross section 0,09 - 0,25 mm² 28 - 24 AWG 0,25 - 0,5 mm² 24 - 20 AWG	100 45 45
Pin contact MO 20 crimp-type, stamped, single contact, weight per 100, - strip contacts on request - pin Ø 1 mm²	gold-plated 773 100 773 101		 0,09 - 0,25 mm² 28 - 24 AWG 0,25 - 0,5 mm² 24 - 20 AWG	100 45 45
Tools				
Removal tool for contacts MO 20	**779 200**			1 20
Crimping tool for stamped contacts MO 20	**779 500**			1 486
Removal tool for contact carriers	**779 300**			1 30

Crimping tools and crimping machines for strip contacts on request.

► **Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165**

Series MO RJ45

Specifications

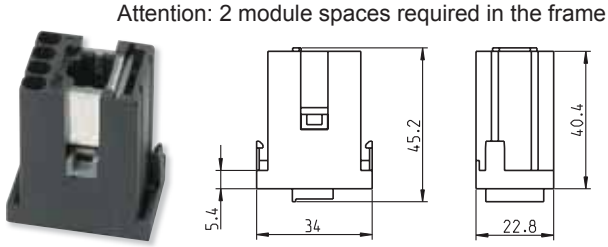
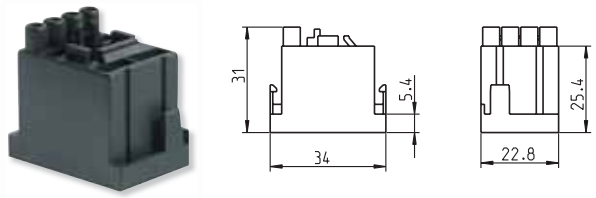
General characteristics	***value crimp contact***	***value RJ45***
Number of poles	4	8
Termination method	crimping	plugging / crimping
Terminal cross section	0,14 - 2,5 mm²	
Flame class rating	V0	V0
Electrical data		
Rated voltage	400 V AC	125 V AC
Rated surge voltage	6,0 kV	1,8 kV
Voltage sustaining capability	3,51 kV	1,0 kV
Current-carrying capacity	13 A[1)]	1,5 A
Contact resistance	≤ 5 mΩ	≤ 20 mΩ
Insulation resistance	10^{10} Ω	5^{8} Ω
Climatic characteristics		
Upper limit temperature	+ 100 °C / 1000 h	+ 80 °C / 1000 h
Lower limit temperature		- 20 °C / 16 h
Mechanical characteristics		
Plugging and withdrawing force	15 - 20 N	max. 20 N
Mechanical operating life	≥ 500 mating cycles	≥ 100 mating cycles
Materials:		
Contact insert	PA 6.6 GF	
Colour	black	black
Contacts pin / sleeve	CuZn	CuSn
Contact surface	Ag (silver)	Au (gold)

1) 2 modules, 40 °C ambient temperature, 1,5 mm² terminal cross section

RJ modules

For integration of standard RJ45 components

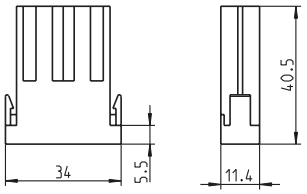
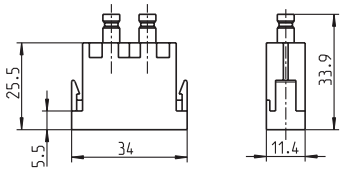
- Worldwide real-time access to machines and facilities
- Very easy wiring by using standard RJ45 components
- One connector for power, signals and data transmission
- 4 D crimp contacts additionally
- Time and cost savings due to active and passive components
- Homogeneous transmission protocol both in office and production areas
- Achieves CAT 5 for Ethernet acc. to ISO/IEC 11801

Description	Part no.		Series MO RJ45 13 A / 400 V AC	g
RJ modules				
Female module *Please order crimp contacts and contacts for optical waveguide separately*	**775 000**		Attention: 2 module spaces required in the frame 	10 24,5
Male module *Please order crimp contacts and contacts for optical waveguide separately*	**775 100**			10 10,3
Contacts				
Sleeve contact D crimp-type, solid, turned, weight per 100	silver-plated **720 506** **720 507** **720 508** **720 509** **720 502**	gold-plated 720 686 720 687 720 688 720 689 720 690	z: 1 – 0,14 - 0,37 mm² – 26 - 22 AWG 2 – 0,5 mm² – 20 AWG 3 – 0,75 - 1 mm² – 19 - 18 AWG 4 – 1,5 mm² – 16 AWG 5 – 2,5 mm² – 14 AWG	100 65 68 70 72 62
Pin contact D crimp-type, solid, turned, weight per 100, pin Ø 1,6 mm²	silver-plated **720 516** **720 517** **720 518** **720 519** **720 512**	gold-plated 720 691 720 692 720 693 720 694 720 695	z: 1 – 0,14 - 0,37 mm² – 26 - 22 AWG 2 – 0,5 mm² – 20 AWG 3 – 0,75 - 1 mm² – 19 - 18 AWG 4 – 1,5 mm² – 16 AWG 5 – 2,5 mm² – 14 AWG	100 60 63 65 67 70
Sleeve contact Optical waveguide for POF solid, turned, weight per 100	720 520		POF* Ø 1 mm	100 89
Pin contact Optical waveguide for POF solid, turned, weight per 100	720 530		POF* Ø 1 mm	100 74
Pin contact RJ 45 crimp-type, Cat 5	720 545		24 - 26 AWG	10 8
Tools				
Removal tool for contacts D	**710 614**			1 7
Removal tool for contact carriers	**779 300**			1 30

Crimping tool 710 611 see page 97 / 188

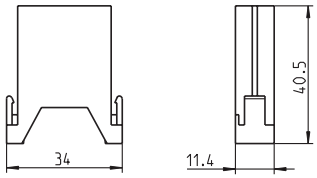
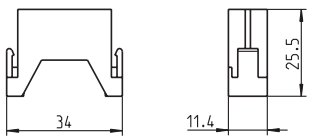
Tools and connection of glass fibre cables see page 186

► **Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165**

Description	Part no.		Series MO 1P + 2P pneumatic	g
Pneumatic				
Pneumatic module Female insert with contacts	**771 001** **771 002** **771 004** **771 006**	1P hose Ø 2,5 mm 2P hose Ø 2,5 mm 1P hose Ø 4,0 mm 2P hose Ø 4,0 mm	 1 pole contact concentric	10 10 12 9 11
Pneumatic module Male insert with contacts	**771 101** **771 102** **771 104** **771 106**	1P hose Ø 2,5 mm 2P hose Ø 2,5 mm 1P hose Ø 4,0 mm 2P hose Ø 4,0 mm	 1 pole contact concentric	10 9 10 8 9

Specifications

Number of poles:	1 and 2
Material:	glass-fibre reinforced PA
Temperature range:	- 20 °C up to + 100 °C
Flame class rating:	V0 acc. to UL 94
Mechanical operating life:	5000 mating cycles
Termination method:	hose connection, only PTFE
Operating pressure:	8 bar
Switched path:	4,0 mm
Shut off:	unidirectional
Contacts (mounted):	brass MS 58

Description	Part no.		Series MO 0	g
Blind modules				
Blind module **for female frames** without contact cavities	**771 000**			10 5
Blind module **for male frames** without contact cavities	**771 100**			3
			Use of blind modules: • to fill gaps in retaining frames • as dummy for future upgrading	
Tools				
Removal tool for contact carriers and blind modules	**779 300**			1 30

► **Matching housings see page 121 - 175 / screw-mountable hoods see page 159 - 165**

Housings

Page

Housings for inserts

A3, A4, A5, D7, D8, plastic 105
A3, A4, A5, D8, zinc die casting 106
A3 IDC connectors 107

Housing size 1

Housings for inserts

A10 and D15 109 - 110

Housing size 2

Housings for inserts

A16 and D25 113 - 114

Housing size 3

Housings for inserts

A32 and D50 117 - 119

Housing size 4

Housings for inserts

B6, BB10, DD24, MOB6 121 - 123

Housing size 5

Housings for inserts

B10, BB18, DD42, MOB10 125 - 131

Housing size 6

Housings for inserts

B16, BB32, BA6, D40,
DD72, MOB16 133 - 140

Housing size 7

Housings for inserts

B24, BB46, D64,
DD108, MOB24 143 - 149

Housing size 8

Housings for inserts

B32, BB64, BA12, D80,
DD144, 2xMOB16 151 - 152

Housing size 9

Housings for inserts

B48, BB92, BV20, BV26, BV32,
D128, DD216, 2xMOB24 155

Housing size 10

Specifications of „size 1” housings and short overview of installation possibilities for series A3, A4, A5, D7 and D8 inserts

Plastic housings

Material:	Glass-fibre reinforced polyamide
Locking levers:	Polyamide
Flame class rating acc. to UL 94:	V 0
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

D7 inserts are only suitable for plastic housings!

Metal housings

Material:	Zinc die casting
Surface:	Powder coated
Locking levers:	Zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

7

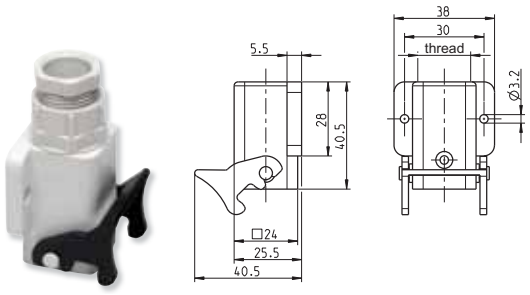
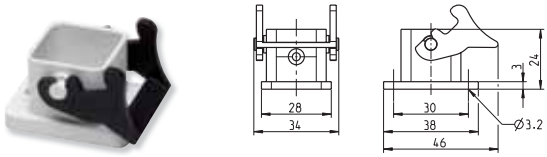
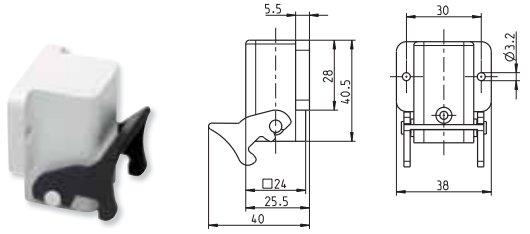
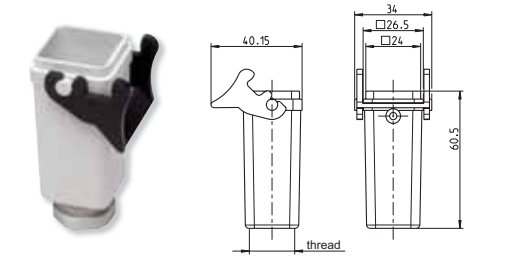
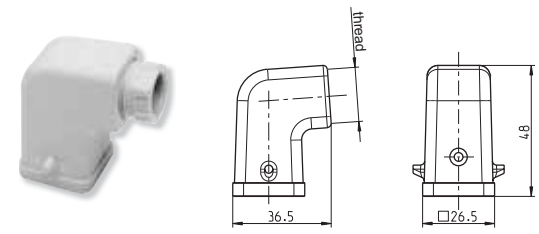
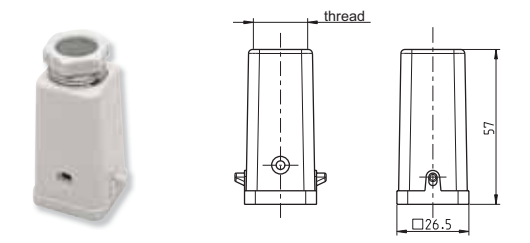
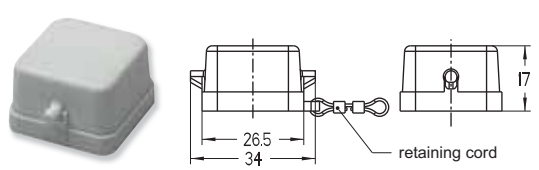
The housings shown on the following pages can be equipped with the inserts listed below:

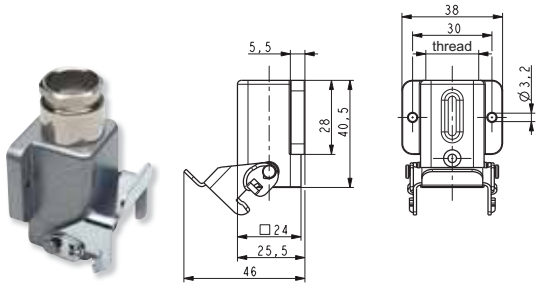
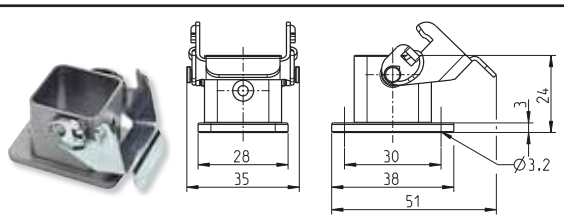
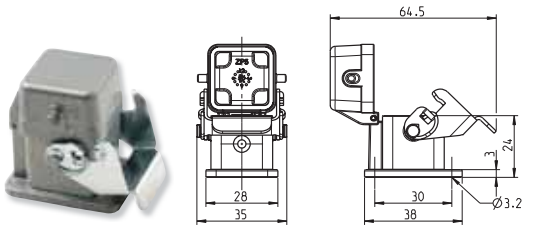
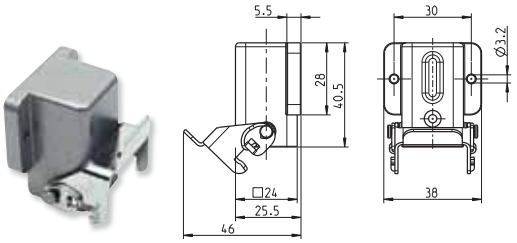
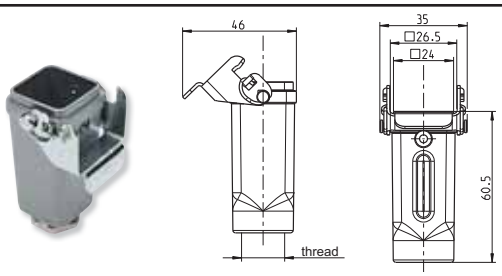
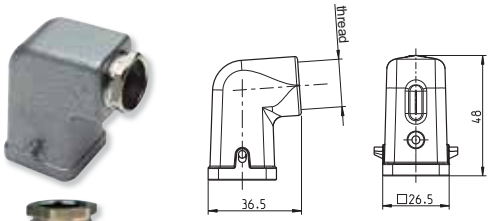
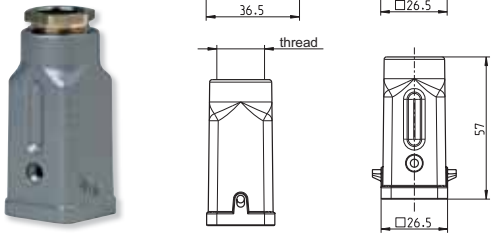
	Screw terminal inserts		Crimp contact carriers	
A3 ▸ p. 18	Female insert, screw terminal, Part no. **700 103**	Male insert, screw terminal, Part no. **700 203**		
A4 ▸ p. 19	Female insert, screw terminal, Part no. **700 104**	Male insert, screw terminal, Part no. **700 204**		
A5 ▸ p. 19			Female insert Part no. **700 105**	Male insert Part no. **700 205**
D7 ▸ p. 44			Crimp contact carrier for sleeve contacts, Part no. **720 307** ***- only for plastic housings -***	Crimp contact carrier for pin contacts, Part no. **720 407** ***- only for plastic housings -***
D8 ▸ p. 45			Crimp contact carrier for sleeve contacts, Part no. **720 308**	Crimp contact carrier for pin contacts, Part no. **720 408**

▸ **The page reference at the left of the table guides you to the detailed overview of inserts.**

Contacts for crimp contact carriers of series ...

A 5: see page 19
D 7: see page 44
D 8: see page 45

Description	Part no.	M	Housings for series A 3, A 4, A 5, D 7, D 8	g
Housing: plastic				
Wall mount housing, height 25,5 mm with single locking system				
light grey (RAL 7035) **with threaded hole** with collar with cable gland	**T 700 620** T 700 620 MS T 700 620 MV ex stock	1 x M 20 Housings open at flange		10 20 25 29
black **with threaded hole** with collar with cable gland	**T 700 671** T 700 671 MS T 700 671 MV			20 25 29
Panel housings, height 24 mm with single locking system, straight				
light grey (RAL 7035) *black*	**700 621** ex stock 700 672	Panel cutout 21x21 mm		10 18 18
Panel housings, height 25,5 mm with single locking system, angled				
light grey (RAL 7035) *black*	**700 622** 700 673	Panel cutout 21x21 mm		10 23 23
Coupler hoods, height 60,5 mm with single locking system, top cable entry				
light grey (RAL 7035) **with collar** with cable gland	**T 700 623 MS** ex stock T 700 623 MV	1 x M 20		10 23 27
black **with collar** with cable gland	**T 700 674 MS** T 700 674 MV			23 27
Hoods, height 48 mm for single locking system, side cable entry				
light grey (RAL 7035) **with collar** with cable gland	**T 700 624 MS** ex stock T 700 624 MV	1 x M 20		10 13 17
black **with collar** with cable gland	**T 700 675 MS** T 700 675 MV			13 17
Hoods, height 57 mm for single locking system, top cable entry				
light grey (RAL 7035) **with collar** with cable gland	**T 700 625 MS** ex stock T 700 625 MV	1 x M 20		10 18 22
black **with collar** with cable gland	**T 700 676 MS** T 700 676 MV			18 22
Protective covers: plastic				
with retaining cord, for housings with single locking system, *light grey (RAL 7035)*				
for housing with female insert for housing with male insert	**700 631 MD** **700 631**			10 5 5

Description	Part no.	M	Housings for series A 3, A 4, A 5, D 8	g
Housings: zinc die casting				
Wall mount housing, height 25,5 mm with single locking system				
<u>with open bottom</u> **with threaded hole** with collar with cable gland	**T 701 403** ex stock T 701 403 MS ex stock T 701 403 MV ex stock	1 x M 20		10 57 72 85
<u>with closed bottom</u> **with threaded hole** with collar with cable gland	**T 701 003** T 701 003 MS T 701 003 MV	1 x M 20		64 79 92
Panel housing, height 24 mm with single locking system, straight				
Panel cutout 21 x 21 mm	**704 303** ex stock			10 22
Panel housings, height 24 mm with single locking system, straight				
with zinc flap lid, for female insert	**704 403** ex stock	Panel cutout 21 x 21 mm		10 27
with aluminium flap lid, for male insert	**704 403 OD**			
Panel housing, height 25,5 mm with single locking system, angled				
Panel cutout 21 x 21 mm	**704 503** ex stock			10 67
Coupler hoods, height 60,5 mm with single locking system, top cable entry				
with collar with cable gland	**T 703 803 MS** ex stock T 703 803 MV ex stock	1 x M 20		10 80 92,5
Hoods, height 48 mm for single locking system, side cable entry				
with collar with cable gland	**T 702 603 MS** ex stock T 702 603 MV ex stock	1 x M 20		10 56 68,5
Hoods, height 57 mm for single locking system, top cable entry				
with collar with cable gland	**T 702 803 MS** ex stock T 702 803 MV ex stock	1 x M 20		10 63 75,5

Series A 3 connectors with insulation displacement connection

The convenience of insulation displacement connection can now be utilized with a clasic square connector - a 4-pole (3 + PE) industrial plug connector, series A.

Male and female versions are available in hood and coupler hoods made of plastic.

Thanks to insulation displacement connection it now only takes a few seconds to connect the 4-pole round conductor: Only the sleeve nut has to be slid onto the conductor - since splicing ring, seal and strain relief are included in the sleeve nut.

Assembly

Slide the sleeve nut of the insulation displacement connection onto the stripped conductor.

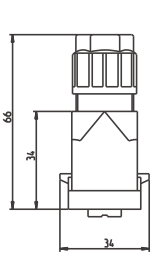
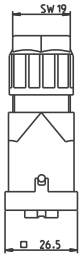
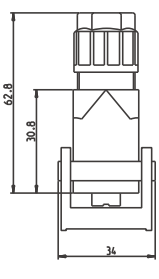
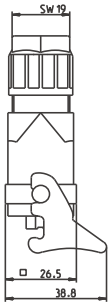
Lead the cores into the marked core entries and cut off the projecting core ends flush, i.e. so that there is no overhang.

Screw the sleeve nut onto the plug connector - and the round conductor connection is ready.

If you need to undo the connection, then just unscrew the sleeve nut.

IDC technique is tested on basis of:

• **EN 60 352-4:**	Solder-free and inaccessible IDC terminal blocks
• **EN 50 262:**	Entries for cables and conductors
• **DIN EN 60 998-2-3:**	Equipment for IDC terminal points
• **DIN VDE 0627:**	Connectors and plug-in socket devices

Description	Part no.	Series A 3 connectors with insulation displacement connection	g
A 3 connectors with insulation displacement connection			
Hoods with female insert Height 66 mm for single locking system	**700 724**	 	10 25
Hoods with male insert Height 66 mm for single locking system	**700 725**		10 25
Coupler hood with female insert Height 63 mm with single locking system	**700 726**	 	10 28
Coupler hood with male insert Height 63 mm with single locking system	**700 727**		10 28

► **General specifications of A 3 connectors with insulation displacement connection see page 18**

Specifications of „size 2” housings and short overview of installation possibilities for series A 10 and D 15

Housings

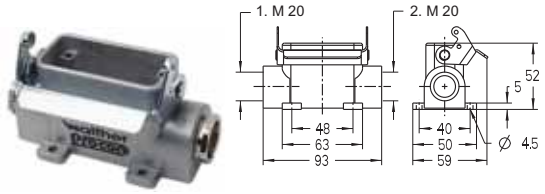
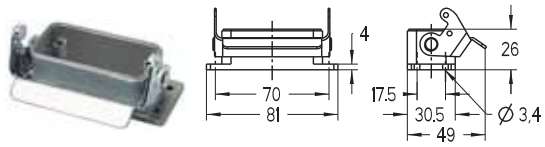
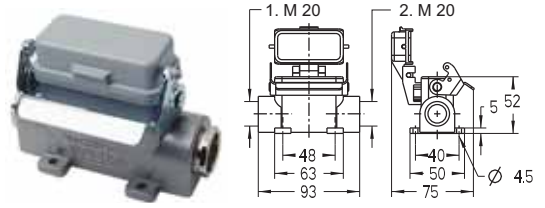
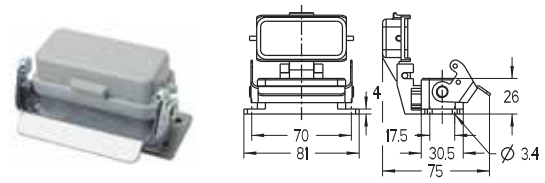
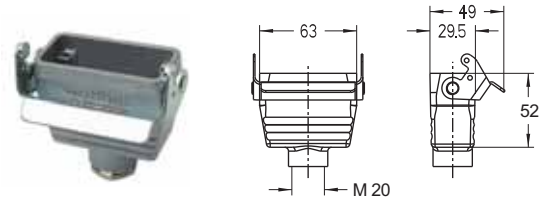
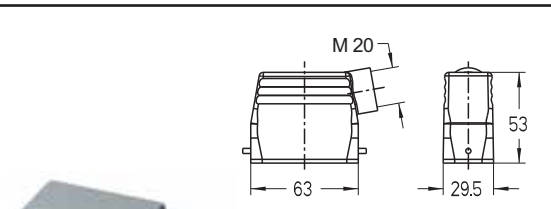
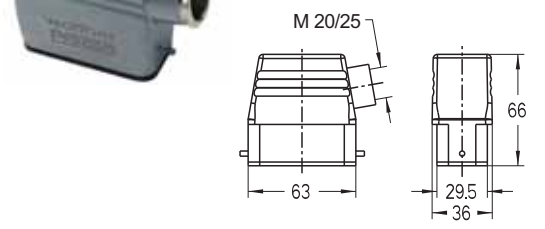
Material:	aluminium die casting
Surface:	powder coated
Locking levers:	zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts		Crimp contact carriers	
A10 ▸ p. 20	Female insert, screw terminal, Part no. **700 110**	Male insert, screw terminal, Part no. **700 210**	Crimp contact carrier for sleeve contacts Part no. **700 310**	Crimp contact carrier for pin contacts Part no. **700 410**
D 15 ▸ p. 46			Crimp contact carrier for sleeve contacts Part no. **720 315**	Crimp contact carrier for pin contacts Part no. **720 415**

▸ **The page reference at the left of the table guides you to the detailed overview of inserts.**

Contacts for crimp contact carriers of series ... A 10: see page 20
D 15: see page 47

Description	Part no.	M	Housings for series A 10 and D 15	9
Housings: single locking system				
Wall mount housing, height 52 mm with single locking system				
with collar with cable gland	**T 701 410 MS** ex stock T 701 410 MV	1 x M 20		10 197 210
with collar with cable gland	**T 701 510 MS** ex stock T 701 510 MV	2 x M 20		195 222
Panel housing, height 26 mm with single locking system				
Panel cutout 57,5 x 24 mm	**704 310** ex stock			10 76
Wall mount housing, height 52 mm with single locking system, with hinged cover				
with collar with cable gland	**T 701 610 MS** ex stock T 701 610 MV ex stock	1 x M 20		10 219 232
with collar with cable gland	**T 701 710 MS** T 701 710 MV	2 x M 20		217 244
Panel housing, height 26 mm with single locking system, with hinged cover				
Panel cutout 57,5 x 24 mm	**704 410**			10 98
Coupler hoods, height 52 mm with single locking system, top cable entry				
with collar with cable gland	**T 703 810 MS** ex stock T 703 810 MV ex stock	1 x M 20		10 108 121
Hoods, height 53 mm for single locking system, side cable entry				
with collar with cable gland	**T 702 610 MS** ex stock T 702 610 MV ex stock	1 x M 20		10 78 92
Hoods, height 66 mm for single locking system, side cable entry				
with threaded hole with collar with cable gland	**T 708 610** T 708 610 MS T 708 610 MV	1 x M 20		10 139 154 168
with threaded hole with collar with cable gland	**T 708 710** ex stock T 708 710 MS T 708 710 MV	1 x M 25		131 155 177

Description	Part no.	M	Housings for series A 10 and D 15	g
Housings: single locking system				
Hoods, height 53 mm for single locking system, top cable entry				
with collar with cable gland	**T 702 810 MS** ex stock T 702 810 MV	1 x M 20		10 80 94
Hoods, height 66 mm for single locking system, top cable entry				
with threaded hole with collar with cable gland	**T 708 810** T 708 810 MS T 708 810 MV	1 x M 20		10 139 154 167
with threaded hole with collar with cable gland	**T 708 910** ex stock T 708 910 MS T 708 910 MV	1 x M 25		137 161 182
Snap-on mounting adapter, swing-type				
Snap-on mounting adapter **Adapter module 150** mountable on DIN-rails, top can be screwed with bottom	**760 115**			5 213
Protective cover: plastic				
for housings with single locking system with retaining cord	**700 633**			10 11
for hoods without single locking system with retaining cord	**700 637**			10 10
Adapter plates for contact inserts				
for installation in A 10 housings **Sub miniature single** 9-pole 15-pole 25-pole	 **700 681** **700 677** **700 678**			10 3 3,5 3,5
Cover plates for switch cabinets				
for A 10 panel housings grey orange	 **700 684** **700 686**			10 12 12

Walther
700 116
Walther
700 132
16A 250V
600V

Specifications of „size 3” and short overview of installation possibilities for series A 16 and D 25 inserts

Housings

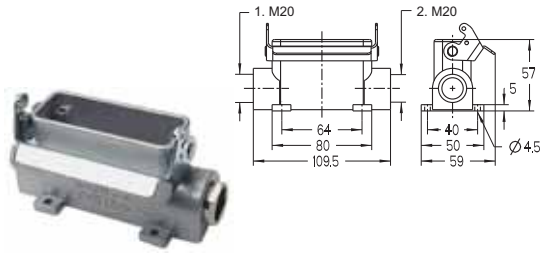
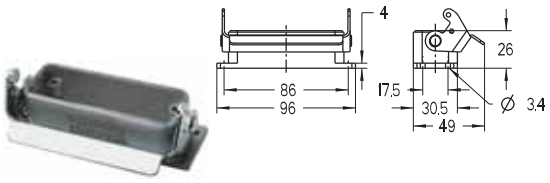
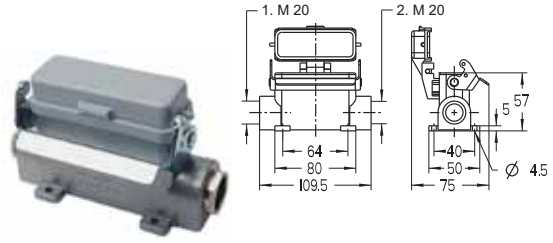
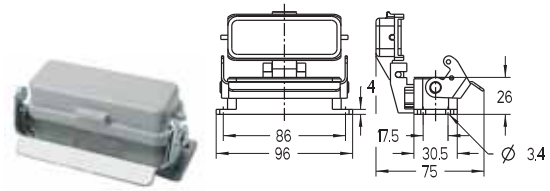
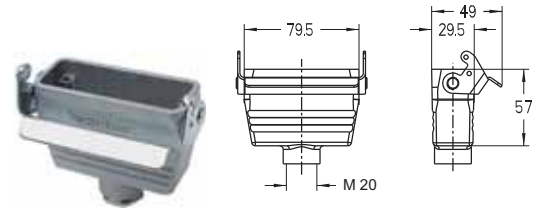
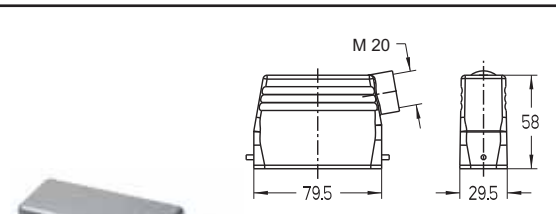
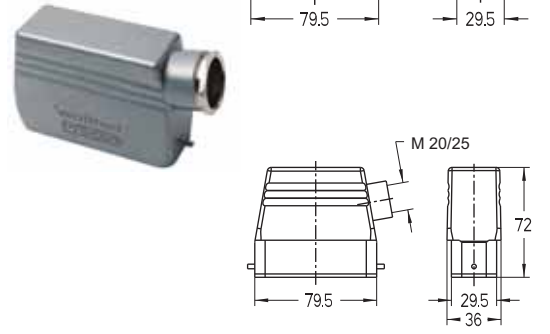
Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts		Crimp contact carriers	
A 16 ▸ p. 21	Female insert, screw terminal, Part no. **700 116**	Male insert, screw terminal, Part no. **700 216**	Crimp contact carrier for sleeve contacts, Part no. **700 316**	Crimp contact carrier for pin contacts, Part no. **700 416**
D 25 ▸ p. 48			Crimp contact carrier for sleeve contacts, Part no. **720 325**	Crimp contact carrier for pin contacts, Part no. **720 425**

▸ **The page reference at the left of the table guides you to the detailed overview of inserts.**

Contacts for crimp contact carriers of series ... A 16: see page 21
D 25: see page 49

Description	Part no.	M	Housings for series A 16 and D 25	9
Housings: single locking system				
Wall mount housings, height 57 mm with single locking system				
with collar with cable gland	**T 701 416 MS** ex stock T 701 416 MV	1 x M 20		10 233 246
with collar with cable gland	**T 701 516 MS** T 701 516 MV	2 x M 20		233 260
Panel housing, height 26 mm with single locking system				
Panel cutout 74 x 24 mm	**704 316** ex stock			10 88
Wall mount housings, height 57 mm with single locking system, with hinged cover				
with collar with cable gland	**T 701 616 MS** T 701 616 MV	1 x M 20		10 252 270
with collar with cable gland	**T 701 716 MS** T 701 716 MV	2 x M 20		252 285
Panel housing, height 26 mm with single locking system, with hinged cover				
Panel cutout 74 x 24 mm	**704 416** ex stock			10 112
Coupler hoods, height 57 mm with single locking system, top cable entry				
with collar with cable gland	**T 703 816 MS** ex stock T 703 816 MV	1 x M 20		10 134 147
Hoods, height 58 mm for single locking system, side cable entry				
with collar with cable gland	**T 702 616 MS** ex stock T 702 616 MV ex stock	1 x M 20		10 96 110
Hoods, height 72 mm for single locking system, side cable entry				
with threaded hole with collar with cable gland	**T 708 616** T 708 616 MS T 708 616 MV	1 x M 20		10 189 204 225
with threaded hole with collar with cable gland	**T 708 716** ex stock T 708 716 MS T 708 716 MV	1 x M 25		166 190 228

Description	Part no.	M	Housings for series A 16 and D 25	g
Housings: single locking system				
Hoods, height 58 mm for single locking system, top cable entry				
with collar with cable gland	**T 702 816 MS** ex stock T 702 816 MV	1 x M 20		10 110 114
Hoods, height 72 mm for single locking system, top cable entry				
with threaded hole with collar with cable gland	**T 708 816** T 708 816 MS T 708 816 MV	1 x M 20		10 192 207 221
with threaded hole with collar with cable gland	**T 708 916** ex stock T 708 916 MS T 708 916 MV	1 x M 25		189 213 235
Snap-on mounting adapter, swing-type				
Snap-on mounting adapter **Adapter module 150** mountable on DIN-rails, top can be screwed with bottom	**760 125**			5 211
Protective covers: plastic				
for housings with single locking lever with retaining cord	**700 635**			10 15
for hoods without single locking lever with retaining cord	**700 639**			10 14
Adapter plates for contact inserts				
for installation in A 16 housings **Sub miniature, single** 37-pole 50-pole	 **700 682** **700 683**			10 4 4
Cover plates for switch cabinets				
for A 16 panel housings grey orange	 **700 685** **700 687**			10 15 15

Specifications of „size 4” housings and short overview of installation possibilities for series A 32 and D 50

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

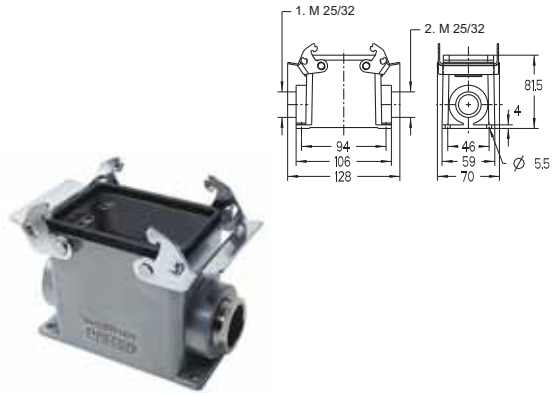
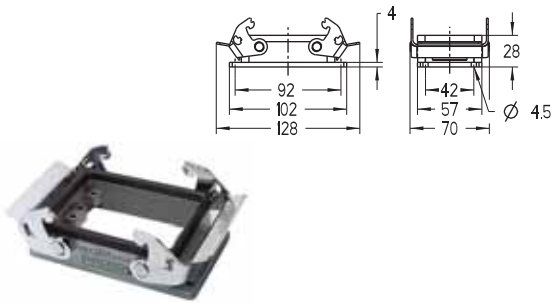
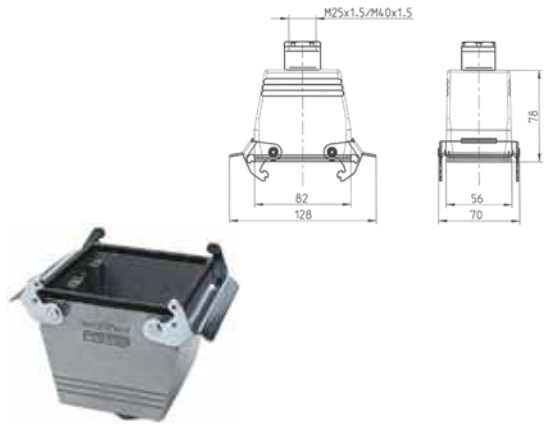
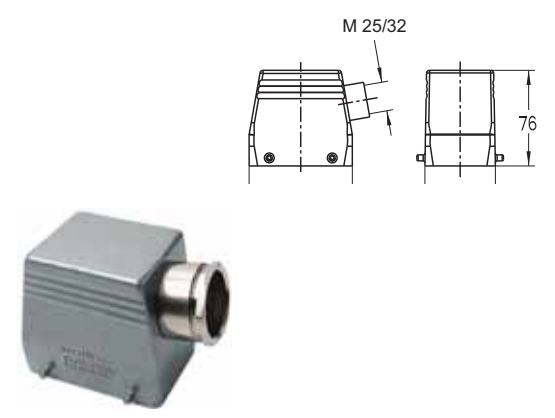
The housings shown on the following pages can be equipped with the inserts listed below:

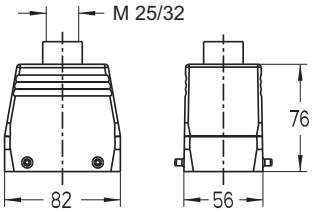
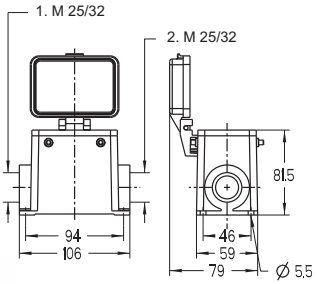
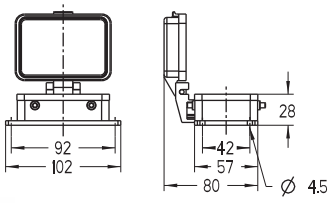
	Screw terminal inserts		Crimp contact carriers	
A 32	Female insert, screw terminal, wire protection 1-16 Part no. **700 116** Female insert, screw terminal, wire protection 17-32 Part no. **700 132**	Male insert, screw terminal, wire protection 1-16 Part no. **700 216** Male insert, screw terminal, wire protection 17-32 Part no. **700 232**	Crimp contact carrier for sleeve contacts 1-16 Part no. **700 316** Crimp contact carrier for sleeve contacts 17-32 Part no. **700 332**	Crimp contact carrier for pin contacts 1-16 Part no. **700 416** Crimp contact carrier for pin contacts 17-32 Part no. **700 432**
▸ p. 22				
D 50			Crimp contact carrier for sleeve contacts, Part no. **2 x 720 325**	Crimp contact carrier for pin contacts, Part no. **2 x 720 425**
▸ p. 52				

▸ **The page reference at the left of the table guides you to the detailed overview of inserts.**

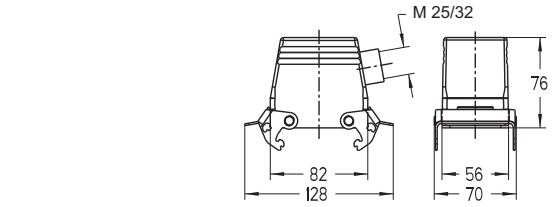
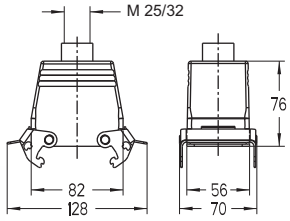
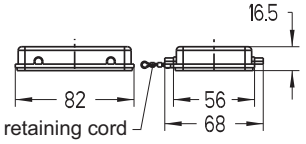
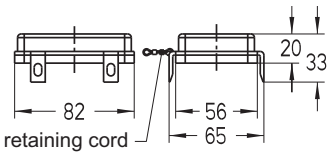
Contacts for crimp contact carriers of series ...

A 32: see page 22
D 50: see page 52

Description	Part no.	M	Housings for series A 32 and D 50	g
Housings: double locking system				
Wall mount housings, height 81,5 mm with double locking system				
with collar with cable gland	**T 701 032 MS** T 701 032 MV	1 x M 25		10 483 505
with two collars with two cable glands	**T 701 132 MS** T 701 132 MV	2 x M 25		479 522
with collar with cable gland	**T 701 832 MS** T 701 832 MV	1 x M 32		459 495
with two collars with two cable glands	**T 707 132 MS** T 707 132 MV	2 x M 32		474 517
Panel housing, height 28 mm with double locking system				
Panel cutout 76 x 48 mm	**704 132**			10 156
Coupler hoods, height 78 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**T 703 632** T 703 632 MS T 703 632 MV	1 x M 25		10 280 300 320
with two threaded holes with two collars with two cable glands	**T 703 632 00** T 703 632 00 MS T 703 632 00 MV	2 x M 25		276 396 316
with threaded hole with collar with cable gland	**T 703 732** T 703 732 MS T 703 732 MV	1 x M 32		275 320 340
with two threaded holes with two collars with two cable glands	**T 703 732 00** T 703 732 00 MS T 703 732 00 MV	2 x M 32		270 315 335
Hoods, height 76 mm for double locking system, side cable entry				
with threaded hole with collar with cable gland	**T 708 032** T 708 032 MS T 708 032 MV	1 x M 25		10 244 268 290
with two threaded holes with two collars with two cable glands	**T 708 032 00** T 708 032 00 MS T 708 032 00 MV	2 x M 25		240 264 286
with threaded hole with collar with cable gland	**T 708 132** T 708 132 MS T 708 132 MV	1 x M 32		242 276 313
with two threaded holes with two collars with two cable glands	**T 708 132 00** T 708 132 00 MS T 708 132 00 MV	2 x M 32		237 271 308

Description	Part no.	M	Housings for series A 32 and D 50	g
Housings: double locking system				
Hoods, height 76 mm for double locking system, top cable entry			 	10
with threaded hole with collar with cable gland	**T 708 232** T 708 232 MS T 708 232 MV	1 x M 25		251 275 297
with two threaded holes with two collars with two cable glands	**T 708 232 00** T 708 232 00 MS T 708 232 00 MV	2 x M 25		247 271 293
with threaded hole with collar with cable gland	**T 708 332** T 708 332 MS T 708 332 MV	1 x M 32		247 281 316
with two threaded holes with two collars with two cable glands	**T 708 332 00** T 708 332 00 MS T 708 332 00 MV	2 x M 32		242 276 311
Wall mount housings, height 81,5 mm for double locking system, with hinged cover			 	10
with collar with cable gland	**T 701 232 MS** T 701 232 MV	1 x M 25		444 465
with two collars with two cable glands	**T 701 332 MS** T 701 332 MV	2 x M 25		463 486
with collar with cable gland	**T 707 232 MS** T 707 232 MV	1 x M 32		439 461
with two collars with two cable glands	**T 707 332 MS** T 707 332 MV	2 x M 32		458 483
Panel housing, height 28 mm for double locking system, with hinged cover			 	10
Panel cutout 76 x 48 mm	**704 232**			121

10

Description	Part no.	M	Housings for series A 32 and D 50	g
Housings: double locking system				
Hoods, height 76 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**T 703 032** T 703 032 MS T 703 032 MV	1 x M 25	 	10 316 340 361
with two threaded holes with two collars with two cable glands	**T 703 032 00** T 703 032 00 MS T 703 032 00 MV	2 x M 25		312 336 357
with threaded hole with collar with cable gland	**T 703 132** T 703 132 MS T 703 132 MV	1 x M 32		321 355 391
Hoods, height 76 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**T 703 232** T 703 232 MS T 703 232 MV	1 x M 25	 	10 315 339 360
with two threaded holes with two collars with two cable glands	**T 703 232 00** T 703 232 00 MS T 703 232 00 MV	2 x M 25		311 335 356
with threaded hole with collar with cable gland	**T 703 332** T 703 332 MS T 703 332 MV	1 x M 32		320 354 390
with two threaded holes with two collars with two cable glands	**T 703 332 00** T 703 332 00 MS T 703 332 00 MV	2 x M 32		315 349 385
Protective covers: plastic				
without gasket for housings with double locking levers with retaining cord	**700 627**		 	10 17
with gasket for hoods without double locking levers with retaining cord	**700 629**		 	10 23

Specifications of „size 5” housings and short overview of installation possibilities for series B 6, BB 10, DD 24 and MOB 6

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Plastic; locking elements made of stainless steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

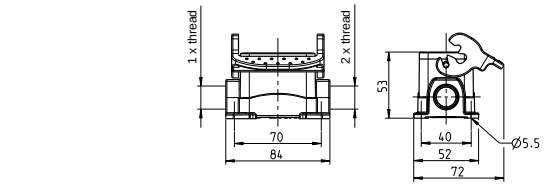
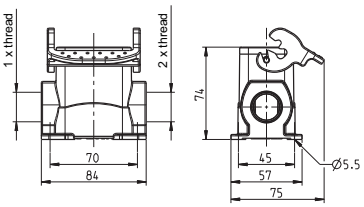
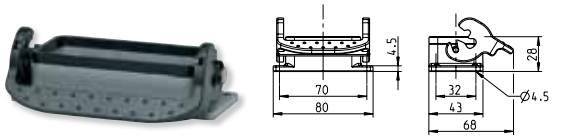
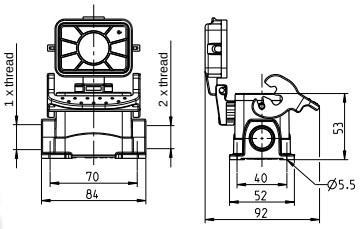
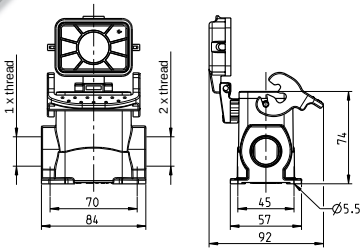
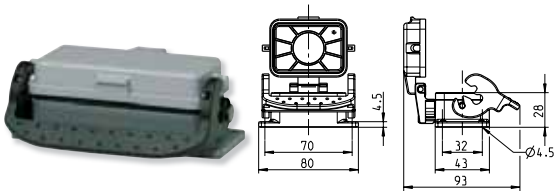
The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push-in inserts	Wiring adapters for panel housings
B 6 ▸ p. 26	Female insert, screw terminal, with wire protection, Part no. **710 106** Male insert, screw terminal, with wire protection, Part no. **710 206** Female insert, screw terminal, without wire protection Part no. **710 769** Male insert, screw terminal, without wire protection Part no. **710 773**	Crimp contact carrier for sleeve contacts Part no. **710 306** Crimp contact carrier for pin contacts Part no. **710 406** 	Female insert, IDC terminal Part no. **710 106 01** Male insert, IDC terminal Part no. **710 206 01** 	Female insert, push-in terminal no. **710 106 04** Male insert, push-in terminal no. **710 206 04** 	Wiring adapter, female insert, earth pin on the right Part no. **710 657** Wiring adapter, male insert, earth pin on the right Part no. **710 665** earth pin on the left: Part no. **710 661** earth pin on the left: Part no. **710 669**
BB 10 ▸ p. 27		Crimp contact carrier for sleeve contacts Part no. **710 311** Crimp contact carrier for pin contacts Part no. **710 411** 			
DD 24 ▸ p. 62		Crimp contact carrier for sleeve contacts Part no. **750 124** Crimp contact carrier for pin contacts Part no. **750 224** 			
MOB 6 ▸ p. 75	Female frame MO B6 for 2 contact carriers for pin and sleeve contacts (frame coding A-B) Part no. **770 006** for pin and sleeve contacts (2 x PE) Part no. **770 406** 		Male frame MO B6 for 2 contact carriers for pin and sleeve contacts (frame coding A-B) Part no. **770 106** for pin and sleeve contacts (2 x PE) Part no. **770 506** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

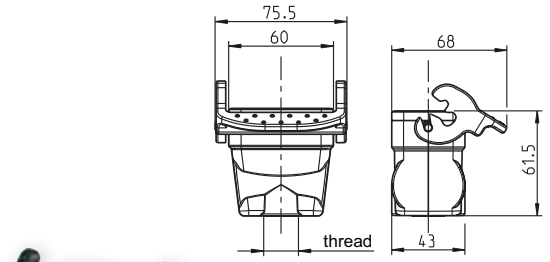
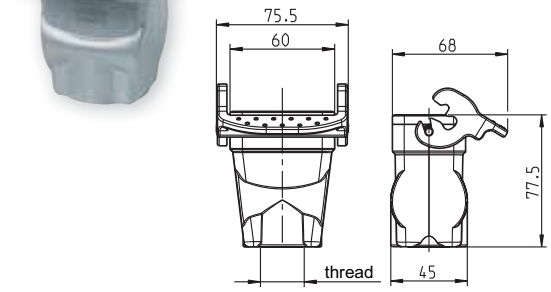
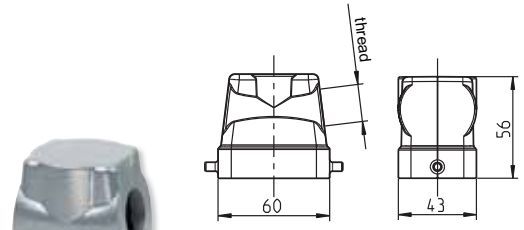
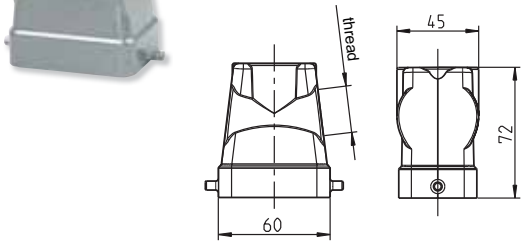
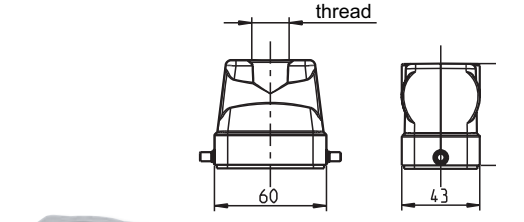
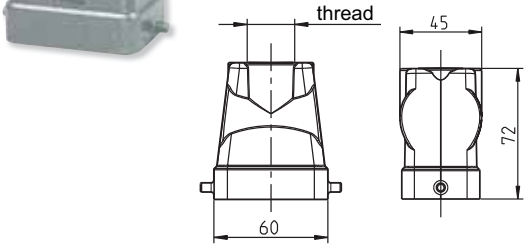
Contacts for crimp contact carriers of series ...

B 6: | see page 27
BB 10: |
DD 24: see page 62
MO: see page 77, 79, 81, 84, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 6, BB 10, DD 24 and MOB 6	g
Housings: single locking system				
Wall mount housings, height 53 mm with single locking system				
with collar with cable gland	**P 711 406 MS** ex stock P 711 406 MV ex stock	1 x M 20		10 196 208
with collar with cable gland	**P 711 506 MS** ex stock P 711 506 MV	2 x M 20		195 219
Wall mount housings, height 74 mm with single locking system				
with collar with cable gland	**P 751 424 MS** P 751 424 MV	1 x M 25		10 296 315
with collar with cable gland	**P 751 524 MS** P 751 524 MV	2 x M 25		294 332
with collar with cable gland	**P 757 424 MS** P 757 424 MV	1 x M 32		279 306
with collar with cable gland	**P 757 524 MS** P 757 524 MV	2 x M 32		262 316
Panel housing, height 28 mm with single locking system				
Panel cutout 52 x 35 mm	**714 306** ex stock			10 109
Wall mount housings, height 53 mm with single locking system, with hinged cover				
with collar with cable gland	***P 711 606 MS** ex stock *P 711 606 MV ex stock	1 x M 20		10 230 242
with collar with cable gland	***P 711 706 MS** ex stock *P 711 706 MV	2 x M 20		229 253
Wall mount housings, height 74 mm with single locking system, with hinged cover				
with collar with cable gland	***P 751 624 MS** *P 751 624 MV	1 x M 25		10 331 350
with collar with cable gland	***P 751 724 MS** *P 751 724 MV	2 x M 25		329 367
with collar with cable gland	***P 757 624 MS** *P 757 624 MV	1 x M 32		314 341
with collar with cable gland	***P 757 724 MS** *P 757 724 MV	2 x M 32		297 351
Panel housing, height 28 mm with single locking system, with hinged cover				
Panel cutout 52 x 35 mm	***714 406** ex stock			10 135

**** Other cover version required?*** *Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 6, BB 10, DD 24 and MOB 6	g
Housings: single locking system				
Coupler hoods, height 61,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 806** ex stock P 713 806 MS P 713 806 MV ex stock	1 x M 20		10 138 153 166
with two threaded holes with two collars with two cable glands	**P 713 806 00** P 713 806 00 MS P 713 806 00 MV	2 x M 20		135 150 163
Coupler hoods, height 77,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 824** ex stock P 753 824 MS P 753 824 MV	1 x M 25		10 162 184 203
with threaded hole with collar with cable gland	**P 753 924** P 753 924 MS P 753 924 MV	1 x M 32		159 192 220
Hoods, height 56 mm for single locking system, side cable entry				
with threaded hole with collar with cable gland	**P 712 606** ex stock P 712 606 MS ex stock P 712 606 MV ex stock	1 x M 20		10 112 127 140
Hoods, height 72 mm for single locking system, side cable entry				
with threaded hole with collar with cable gland	**P 758 624** ex stock P 758 624 MS P 758 624 MV	1 x M 25		10 138 160 179
with threaded hole with collar with cable gland	**P 758 724** P 758 724 MS P 758 724 MV	1 x M 32		134 167 195
Hoods, height 56 mm for single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 712 806** ex stock P 712 806 MS P 712 806 MV ex stock	1 x M 20		10 112 127 140
with two threaded holes with two collars with two cable glands	**P 712 806 00** P 712 806 00 MS P 712 806 00 MV	2 x M 20		108 123 136
Hoods, height 72 mm for single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 758 824** ex stock P 758 824 MS P 758 824 MV	1 x M 25		10 143 165 206
with threaded hole with collar with cable gland	**P 758 924** P 758 924 MS P 758 924 MV	1 x M 32		140 173 201

11

Description	Part no.	M

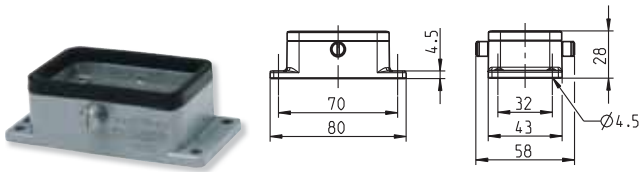
Housings for series B 6, BB 10, DD 24 and MOB 6

g

Housings: central locking system

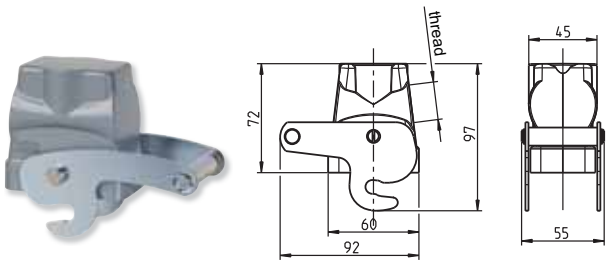
Panel housing, height 28 mm
for central locking system

Panel cutout 52 x 35 mm	**770 650**		10 70



Hoods, height 72 mm
with central locking system, side cable entry

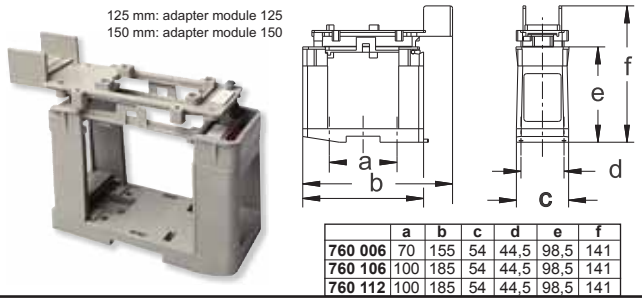
with threaded hole with collar with cable gland	**P 770 651** P 770 651 MS P 770 651 MV	M 25	10 273 295 314



Snap-on mounting adapters

swing-type

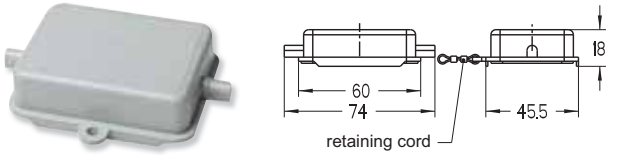
adapter module 125 **adapter module 150** **adapter module 150**	for 1 insert for 1 insert for 2 insert	**760 006** **760 106** **760 112**	5 191 211 205
mountable on DIN-rails, top can be screwed with bottom			



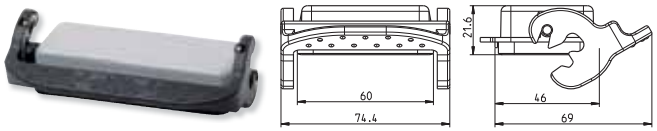
	a	b	c	d	e	f
760 006	70	155	54	44,5	98,5	141
760 106	100	185	54	44,5	98,5	141
760 112	100	185	54	44,5	98,5	141

Protective covers

with retaining cord, for housings with single locking system Plastic Aluminium	 **710 630** **710 630 AL**		 10 13 48



with single locking system, gasket and retaining cord, for hoods with latch pins for single locking system Plastic Aluminium	 **710 762** **710 762 AL**		10 54 96



Adapter plates for contact inserts

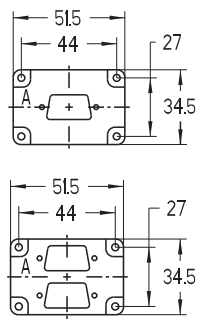
for installation in series B 6 housings **Sub miniature, single** 9-pole 15-pole	 **710 796** **710 797**		10 14 14
Sub miniature, double 9-pole 15-pole	 **710 802** **710 803**		10 9 8

Installation possibilities:

Front and reverse side of the plate are marked with “A” or “T”.

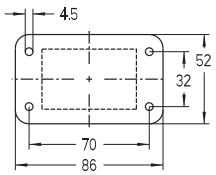
If installed in a **panel housing**, the **A** must be readable, if installed in a **hood**, the **T** must be readable.

The corresponding fixing screws are included in the scope of delivery.



Cover plates for switch cabinets

for panel housing B 6 grey orange	 **720 638** **720 642**		10 18 18



11

Specifications of „size 6” housings and short overview of installation possibilities for series B 10, BB 18, DD 42 and MOB 10 inserts

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Plastic; locking elements made of stainless steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

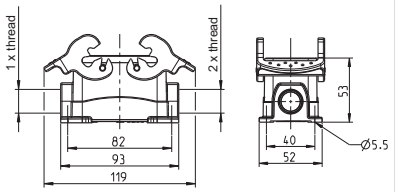
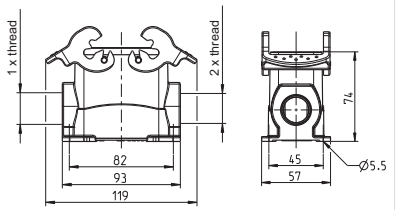
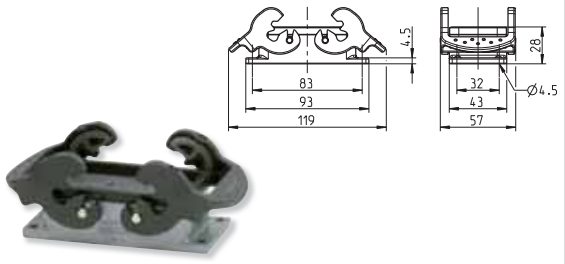
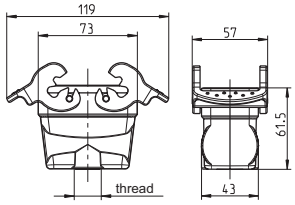
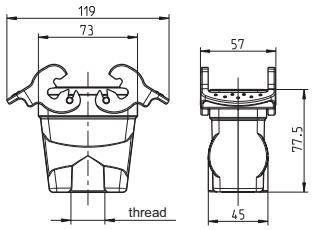
The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push-in inserts	Wiring adapters for panel housings
B 10 ▸ p. 28 to 29	Female insert, screw terminal, with wire protection, Part no. **710 110** Male insert, screw terminal, with wire protection, Part no. **710 210** Female insert, screw terminal, without wire protection, Part no. **710 770** Male insert, screw terminal without wire protection, Part no. **710 774**	Crimp contact carrier for sleeve contacts, Part no. **710 310** Crimp contact carrier for pin contacts, Part no. **710 410** 	Female insert, IDC terminal, No. **710 110 01** Male insert, IDC terminal, No. **710 210 01** 	Female insert, push-in terminal, No. **710 110 04** Male insert, push-in terminal, No. **710 210 04** 	Wiring adapter, female insert, earth pin on the right: Part no. **710 658** Wiring adapter, male insert, earth pin on the right: Part no. **710 666** earth pin o. the left: Part no. **710 662** earth pin o. the left: Part no. **710 670**
BB 18 ▸ p. 29		Crimp contact carrier for sleeve contacts, Part no. **710 318** Crimp contact carrier for pin contacts, Part no. **710 418** 			
DD 42 ▸ p. 63		Crimp contact carrier for sleeve contacts, Part no. **750 142** Crimp contact carrier for pin contacts, Part no. **750 242** 			
MOB 10 ▸ p. 75	Female frame MO B10 for 3 contact carriers for pin and sleeve contacts (frame coding A-C) Part no. **770 010** for pin and sleeve contacts (2 x PE) Part no. **770 410** 		Male frame MO B10 for 3 contact carriers for pin and sleeve contacts (frame coding A-C) Part no. **770 110** for pin and sleeve contacts (2 x PE) Part no. **770 510** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series . . .

B 10: | see page 29
BB 18: |
DD 42: see page 63
MOB 10: see page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: double locking system				
Wall mount housing, height 53 mm with double locking system				
with collar with cable gland	**P 711 010 MS** ex stock P 711 010 MV ex stock	1 x M 20		10 231 243
with two collars with two cable glands	**P 711 110 MS** P 711 110 MV	2 x M 20		230 254
Wall mount housing, height 74 mm with double locking system				
with collar with cable gland	**P 751 042 MS** P 751 042 MV	1 x M 25		10 332 351
with two collars with two cable glands	**P 751 142 MS** P 751 142 MV	2 x M 25		330 368
with collar with cable gland	**P 757 042 MS** P 757 042 MV	1 x M 32		303 330
with two collars with two cable glands	**P 757 142 MS** P 757 142 MV	2 x M 32		299 353
Panel housing, height 28 mm with double locking system				
Panel cutout 65 x 35 mm	**714 110** ex stock			10 147
Coupler hoods, height 61,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 610** P 713 610 MS P 713 610 MV	1 x M 20		10 171 186 199
with two threaded holes with two collars with two cable glands	**P 713 610 00** P 713 610 00 MS P 713 610 00 MV	2 x M 20		168 183 196
with two threaded holes with two collars with two cable glands	**P 713 710** P 713 710 MS P 713 710 MV	1 x M 25		166 190 205
Coupler hoods, height 77,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 642** P 753 642 MS P 753 642 MV	1 x M 25		10 202 224 243
with two threaded holes with two collars with two cable glands	**P 753 642 00** P 753 642 00 MS P 753 642 00 MV	2 x M 25		198 220 239
with threaded hole with collar with cable gland	**P 753 742** P 753 742 MS P 753 742 MV	1 x M 32		199 232 260

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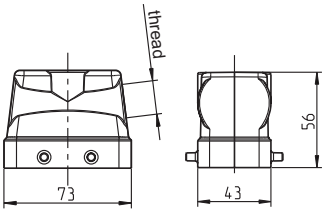
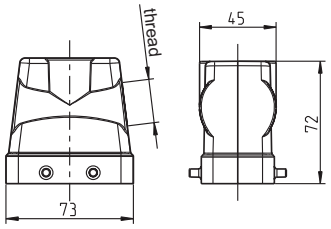
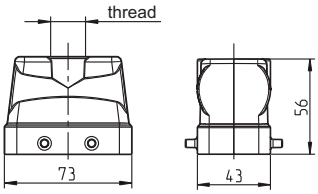
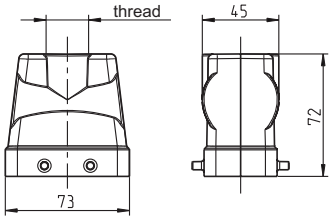
Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: double locking system				
Hoods, height 56 mm for double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 712 010** ex stock P 712 010 MS P 712 010 MV ex stock	1 x M 20		10 130 145 158
with threaded hole with collar with cable gland	**P 712 110** P 712 110 MS P 712 110 MV	1 x M 25		125 150 165
Hoods, height 72 mm for double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 758 042** P 758 042 MS P 758 042 MV	1 x M 25		10 158 180 199
with threaded hole with collar with cable gland	**P 758 142** P 758 142 MS P 758 142 MV	1 x M 32		155 188 216
Hoods, height 56 mm for double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 712 210** ex stock P 712 210 MS P 712 210 MV ex stock	1 x M 20		10 130 145 158
with two threaded holes with two collars with two cable glands	**P 712 210 00** P 712 210 00 MS P 712 210 00 MV	2 x M 20		127 142 155
with threaded hole with collar with cable gland	**P 712 310** P 712 310 MS P 712 310 MV	1 x M 25		125 150 165
Hoods, height 72 mm for double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 758 242** P 758 242 MS P 758 242 MV	1 x M 25		10 159 181 200
with two threaded holes with two collars with two cable glands	**P 758 242 00** P 758 242 00 MS P 758 242 00 MV	2 x M 25		155 177 196
with threaded hole with collar with cable gland	**P 758 342** P 758 342 MS P 758 342 MV	1 x M 32		156 189 217

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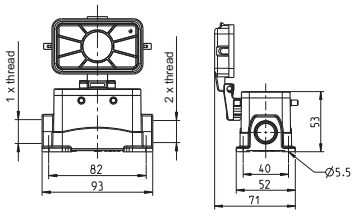
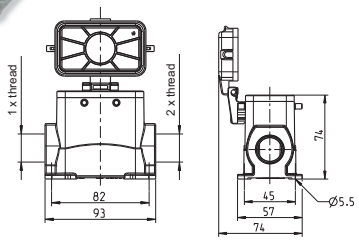
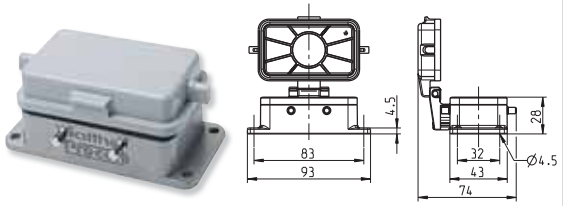
Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: double locking system				
Wall mount housing, height 53 mm for double locking system, with hinged cover				
with collar with cable gland	***P 711 210 MS** *P 711 210 MV	1 x M 20		10 236 248
with two collars with two cable glands	***P 711 310 MS** *P 711 310 MV	2 x M 20		235 259
Wall mount housing, height 74 mm for double locking system, with hinged cover				
with collar with cable gland	***P 751 242 MS** *P 751 242 MV	1 x M 25		10 335 354
with two collars with two cable glands	***P 751 342 MS** *P 751 342 MV	2 x M 25		333 371
with collar with cable gland	***P 757 242 MS** *P 757 242 MV	1 x M 32		307 334
with two collars with two cable glands	***P 757 342 MS** *P 757 342 MV	2 x M 32		303 357
Panel housing, height 28 mm for double locking system, with hinged cover				
Panel cutout 65 x 35 mm	***714 210**			10 105

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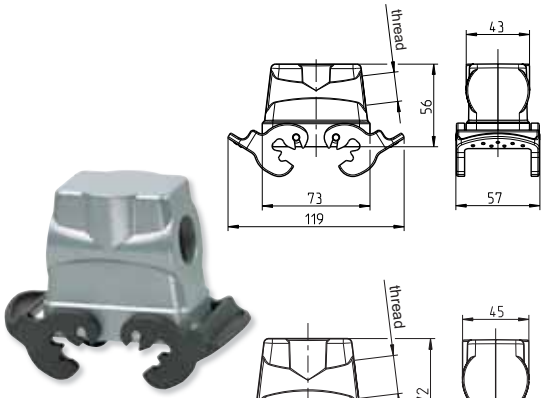
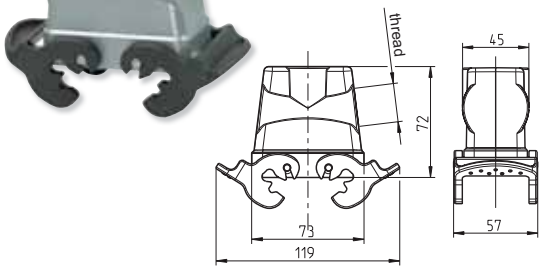
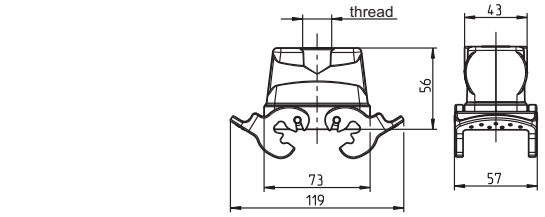
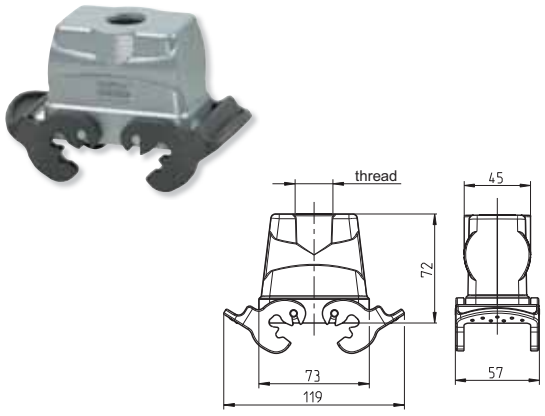
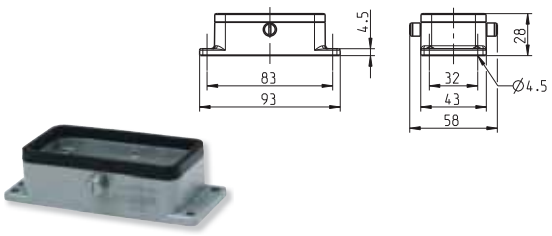
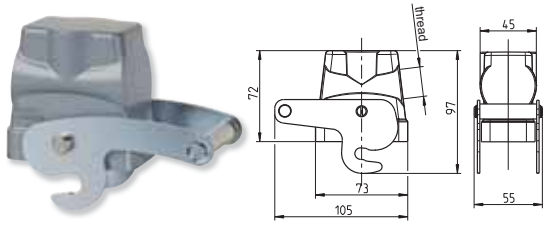
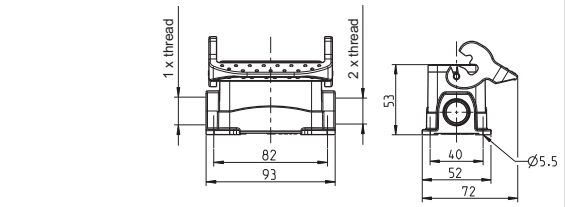
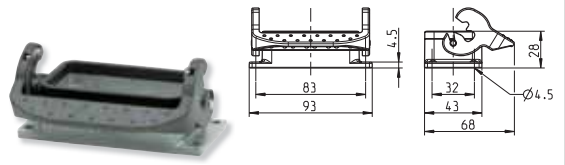
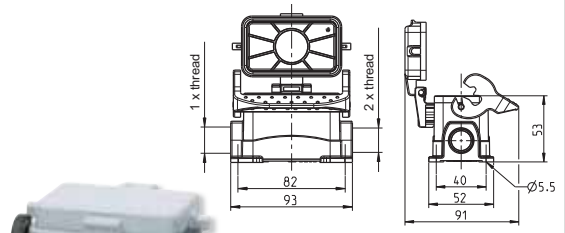
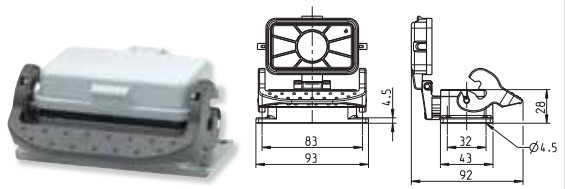
**** Other cover version required?*** *Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: double locking system				
Hoods, height 56 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 713 010** P 713 010 MS P 713 010 MV	1 x M 20		10 163 178 191
Hoods, height 72 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 753 042** P 753 042 MS P 753 042 MV	1 x M 25		10 191 213 232
with threaded hole with collar with cable gland	**P 753 142** P 753 142 MS P 753 142 MV	1 x M 32		186 219 247
Hoods, height 56 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 210** P 713 210 MS P 713 210 MV	1 x M 20		10 162 177 190
with two threaded holes with two collars with two cable glands	**P 713 210 00** P 713 210 00 MS P 713 210 00 MV	2 x M 20		159 174 187
Hoods, height 72 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 242** P 753 242 MS P 753 242 MV	1 x M 25		10 192 214 233
with two threaded holes with two collars with two cable glands	**P 753 242 00** P 753 242 00 MS P 753 242 00 MV	2 x M 25		188 210 229
with threaded hole with collar with cable gland	**P 753 342** P 753 342 MS P 753 342 MV	1 x M 32		189 222 250
Housings: central locking system				
Panel housing, height 28 mm for central locking system				
Panel cutout 65 x 35 mm	**770 652**			10 78
Hoods, height 72 mm with central locking system, side cable entry				
with threaded hole with collar with cable gland	**P 770 653** P 770 653 MS P 770 653 MV	M 25		10 295 317 336

Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: single locking system				
Wall mount housing, height 53 mm with single locking system				
with collar with cable gland	**P 711 410 MS** ex stock P 711 410 MV	1 x M 20		10 216 228
with two collars with two cable glands	**P 711 510 MS** P 711 510 MV	2 x M 20		215 239
Wall mount housing, height 74 mm with single locking system				
with collar with cable gland	**P 751 442 MS** P 751 442 MV	1 x M 25		10 317 340
with two collars with two cable glands	**P 751 542 MS** P 751 542 MV	2 x M 25		315 353
with collar with cable gland	**P 757 442 MS** P 757 442 MV	1 x M 32		287 314
with two collars with two cable glands	**P 757 542 MS** P 757 542 MV	2 x M 32		283 337
Panel housing, height 28 mm with single locking system				
Panel cutout 65 x 35 mm	**714 310** ex stock			10 125
Wall mount housing, height 53 mm with single locking system, with hinged cover				
with collar with cable gland	***P 711 610 MS** ex stock *P 711 610 MV	1 x M 20		10 254 266
with two collars with two cable glands	***P 711 710 MS** ex stock *P 711 710 MV	2 x M 20		253 277
Wall mount housing, height 74 mm with single locking system, with hinged cover				
with collar with cable gland	***P 751 642 MS** *P 751 642 MV	1 x M 25		10 355 374
with two collars with two cable glands	***P 751 742 MS** *P 751 742 MV	2 x M 25		353 391
with collar with cable gland	***P 757 642 MS** *P 757 642 MV	1 x M 32		326 353
with two collars with two cable glands	***P 757 742 MS** *P 757 742 MV	2 x M 32		322 376
Panel housing, height 28 mm with single locking system, with hinged cover				
Panel cutout 65 x 35 mm	***714 410** ex stock			10 152

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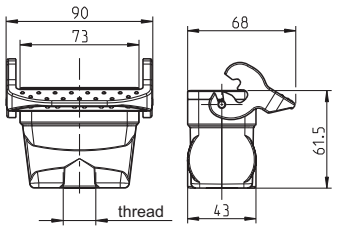
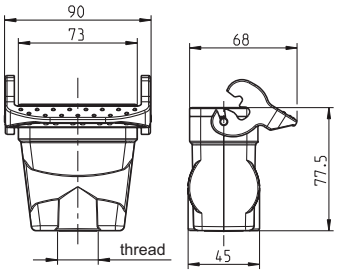
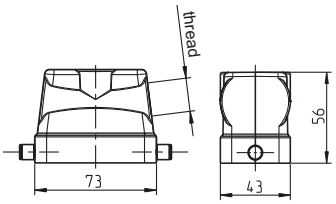
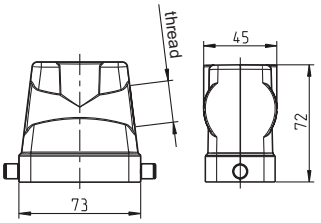
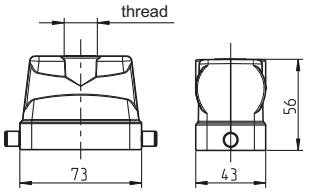
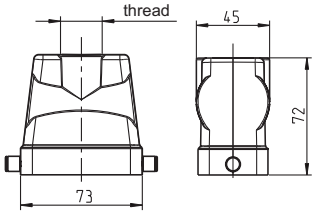
SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 10, BB 18, DD 42, MOB 10	g
Housings: single locking system				
Coupler hoods, height 61,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 810** P 713 810 MS P 713 810 MV	1 x M 20		10 158 173 186
with two threaded holes with two collars with two cable glands	**P 713 810 00** P 713 810 00 MS P 713 810 00 MV	2 x M 20		155 170 183
Coupler hoods, height 77,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 842** P 753 842 MS P 753 842 MV	1 x M 25		10 187 209 228
with two threaded holes with two collars with cable glands	**P 753 842 00** P 753 842 00 MS P 753 842 00 MV	2 x M 25		183 205 224
with threaded hole with collar with cable gland	**P 753 942** P 753 942 MS P 753 942 MV	1 x M 32		184 217 245
Hoods, height 56 mm for single locking lever, side cable entry				
with threaded hole with collar with cable gland	**P 712 610** ex stock P 712 610 MS P 712 610 MV ex stock	1 x M 20		10 136 151 164
Hoods, height 72 mm for single locking lever, side cable entry				
with threaded hole with collar with cable gland	**P 758 642** ex stock P 758 642 MS P 758 642 MV ex stock	1 x M 25		10 166 188 207
with threaded hole with collar with cable gland	**P 758 742** P 758 742 MS P 758 742 MV	1 x M 32		161 194 222
Hoods, height 56 mm for single locking lever, top cable entry				
with threaded hole with collar with cable gland	**P 712 810** ex stock P 712 810 MS P 712 810 MV ex stock	1 x M 20		10 135 150 163
with two threaded holes with two collars with two cable glands	**P 712 810 00** P 712 810 00 MS P 712 810 00 MV	2 x M 20		132 147 160
Hoods, height 72 mm for single locking lever, top cable entry				
with threaded hole with collar with cable gland	**P 758 842** P 758 842 MS P 758 842 MV	1 x M 25		10 167 189 208
with two threaded holes with two collars with two cable glands	**P 758 842 00** P 758 842 00 MS P 758 842 00 MV	2 x M 25		163 185 204
with threaded hole with collar with cable gland	**P 758 942** P 758 942 MS P 758 942 MV	1 x M 32		164 197 225

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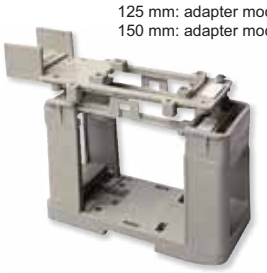
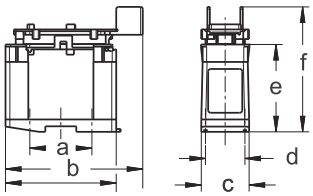
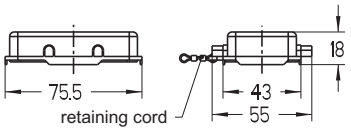
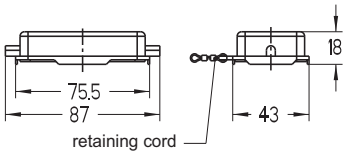
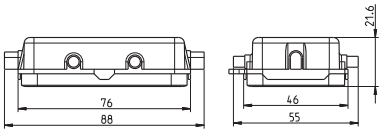
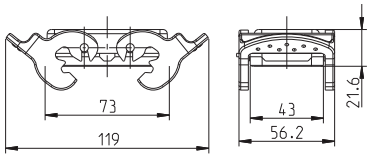
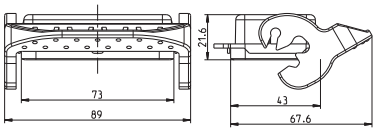
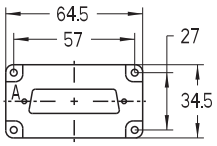
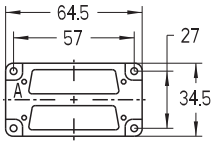
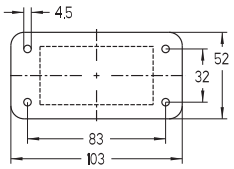
Description	Part no.	Housings for series B 10, BB 18, DD 42, MOB 10	g
Snap-on mounting adapters			
swing-type **adapter module 125** **adapter module 150** mountable on DIN-rails top can be screwed with bottom	**760 010** **760 110**	 125 mm: adapter module 125 150 mm: adapter module 150  |	a	b	c	d	e	f | |---|---|---|---|---|---|---| | **760 010** | 70 | 155 | 54 | 44,5 | 98,5 | 141 | | **760 110** | 100 | 185 | 54 | 44,5 | 98,5 | 141 |	5 207 207
Protective covers			
with retaining cord for housings with double locking system Plastic Aluminium	 **710 624** **710 624 AL**	 	10 15 55
with retaining cord for housings with single locking system Plastic Aluminium	 **710 632** **710 632 AL**	 	10 15 54
with gasket and retaining cord for hoods with double locking system Plastic Aluminium	 **710 756** **710 756 AL**	 	10 20 60
with gasket and retaining cord for hoods with latch pins for double locking system Plastic Aluminium	 **710 759** **710 759 AL**	 	10 80 120
with gasket and retaining cord for hoods with latch pins for single locking system Plastic Aluminium	 **710 763** **710 763 AL**	 	10 61 107
Adapter plates for contact inserts			
for installation in series B 10 housings **Sub miniature, single** 25-pole	 **710 798**	 **Installation possibilities:** Front and reverse side of the plate are marked with “A” or “T”. If installed in a **panel housing**, the **A** must be readable, if installed in a **hood**, the **T** must be readable. The corresponding fixing screws are included in the scope of delivery. 	10 15
Sub miniature, double 25-pole	**710 804**	 	10 10
Cover plates for switch cabinets			
for panel housing B10 grey orange green	 **720 639** **720 643** **720 647**	 	10 20 20 20

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Specifications of „size 7” housings and short overview of installation possibilities for series B 16, BA 6, BB 32, D 40, DD 72 and MOB 16 inserts

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Plastic; locking elements made of stainless steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

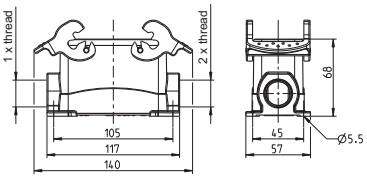
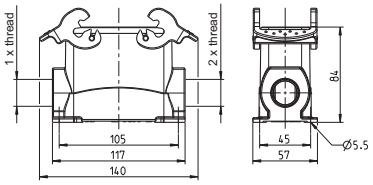
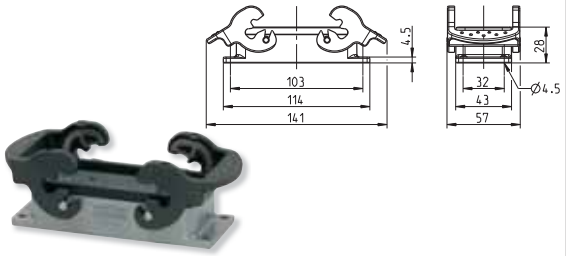
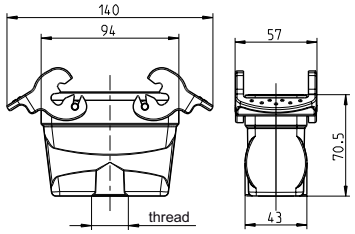
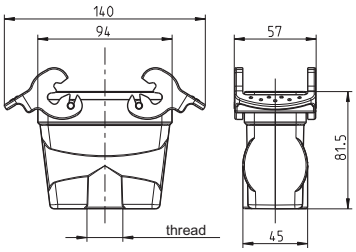
The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push-in inserts	Wiring adapters for panel housings
B 16 p. 30 to 31	Female insert, screw terminal, with wire protection, Part no. **710 116** Male insert, screw terminal, with wire protection, Part no. **710 216** Female insert, screw terminal without wire protection, Part no. **710 771** Male insert, screw terminal, without wire protection Part no. **710 775**	Crimp contact carrier for sleeve contacts Part no. **710 316** Crimp contact carrier for pin contacts Part no. **710 416** 	Female insert IDC terminal No. **710 116 01** Male insert IDC terminal No. **710 216 01** 	Female insert, push-in contact No. **710 116 04** Male insert, push-in contact No. **710 216 04** 	Wiring adapter, female insert, earth pin on the right: Part no. **710 659** Wiring adapter, male insert, earth pin on the right: Part no. **710 667** earth pin on the left: Part no. **710 663** earth pin on the left: Part no. **710 671**
BB 32 p. 31		Crimp contact carrier for sleeve contacts Part no. **710 333** Crimp contact carrier for pin contacts Part no. **710 433** 			
BA 6 p. 40	Female insert, screw terminal, with wire protection, Part no. **710 620** Male insert, screw terminal, with wire protection, Part no. **710 621** 				
D 40 p. 50 to 51		Crimp contact carrier for sleeve contacts Part no. **720 340** Crimp contact carrier for pin contacts Part no. **720 440** 			Wiring adapter, female insert, earth pin on the left: Part no. **720 633** Wiring adapter, female insert, earth pin on the left: Part no. **720 632**
DD 72 p. 64		Crimp contact carrier for sleeve contacts Part no. **750 172** Crimp contact carrier for pin contacts Part no. **750 272** 			
MOB 16 p. 75	Female frame MO B16 for 5 contact carriers for pin and sleeve contacts (frame coding A-E) Part no. **770 016** for pin and sleeve contacts (2 x PE) Part no. **770 416** 		Male frame MO B16 for 5 contact carriers for pin and sleeve contacts (frame coding A-E) Part no. **770 116** for pin and sleeve contacts (2 x PE) Part no. **770 516** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series . . .

B 16:	see page 31
BB 32:	
D 40:	see page 51
DD 72:	see page 65
MOB 16:	see page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g
Housings: double locking system				
Wall-mount housing, height 68 mm with double locking system				
with collar with cable gland	**P 711 016 MS** ex stock P 711 016 MV ex stock	1 x M 25		10 340 359
with two collars with two cable glands	**P 711 116 MS** P 711 116 MV	2 x M 25		338 376
Wall-mount housing, height 84 mm with double locking system				
with collar with cable gland	**P 757 072 MS** P 757 072 MV	1 x M 32		10 418 445
with two collars with two cable glands	**P 757 172 MS** P 757 172 MV	2 x M 32		414 468
with collar with cable gland	**P 757 072 40 MS** P 757 072 40 MV	1 x M 40		379 422
with two collars with two cable glands	**P 757 172 40 MS** P 757 172 40 MV	2 x M 40		350 436
Panel housing, height 28 mm with double locking system				
Panel cutout 86 x 35 mm	**714 116** ex stock			10 165
Coupler hoods, height 70,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 616** P 713 616 MS P 713 616 MV	1 x M 25		10 208 230 249
with two threaded holes with two collars with two cable glands	**P 713 616 00** P 713 616 00 MS P 713 616 00 MV	2 x M 25		204 226 245
with threaded hole with collar with cable gland	**P 713 716** P 713 716 MS P 713 716 MV	1 x M 32		205 238 266
Coupler hoods, height 81,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 772** P 753 772 MS P 753 772 MV	1 x M 32		10 234 267 295
with two threaded holes with two collars with two cable glands	**P 753 772 00** P 753 772 00 MS P 753 772 00 MV	2 x M 32		229 262 290
with threaded hole with collar with cable gland	**P 753 772 40** P 753 772 40 MS P 753 772 40 MV	1 x M 40		228 272 314

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Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g

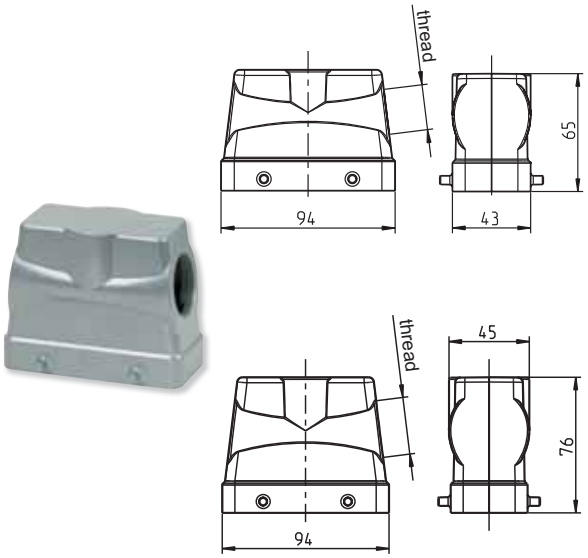
Housings: double locking system

Hoods, height 65 mm
for double locking system, side cable entry

with threaded hole with collar with cable gland	**P 718 016** ex stock P 718 016 MS ex stock P 718 016 MV ex stock	1 x M 25	10 166 188 207
with threaded hole with collar with cable gland	**P 718 116** P 718 116 MS P 718 116 MV	1 x M 32	162 195 223

Hoods, height 76 mm
for double locking system, side cable entry

with threaded hole with collar with cable gland	**P 728 140** ex stock P 728 140 MS P 728 140 MV ex stock	1 x M 32	10 185 218 246
with threaded hole with collar with cable gland	**P 728 140 40** P 728 140 40 MS P 728 140 40 MV	1 x M 40	176 220 262

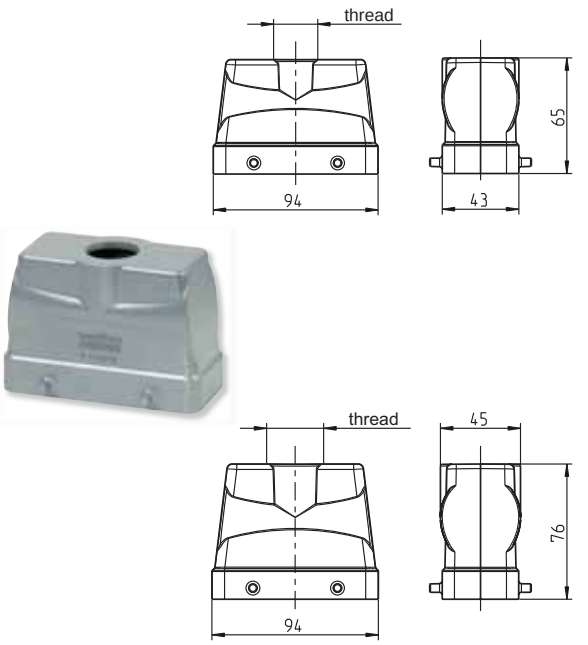


Hoods, height 65 mm
for double locking system, top cable entry

with threaded hole with collar with cable gland	**P 718 216** ex stock P 718 216 MS P 718 216 MV	1 x M 25	10 167 189 208
with two threaded holes with two collars with two cable glands	**P 718 216 00** P 718 216 00 MS P 718 216 00 MV	2 x M 25	163 185 204
with threaded hole with collar with cable gland	**P 718 316** P 718 316 MS P 718 316 MV	1 x M 32	164 197 225

Hoods, height 76 mm
for double locking system, top cable entry

with threaded hole with collar with cable gland	**P 728 340** P 728 340 MS P 728 340 MV	1 x M 32	10 188 221 249
with threaded hole with collar with cable gland	**P 728 340 00** P 728 340 00 MS P 728 340 00 MV	2 x M 32	180
with two threaded holes with two collars with two cable glands	**P 728 340 40** P 728 340 40 MS P 728 340 40 MV	1 x M 40	182 226 268

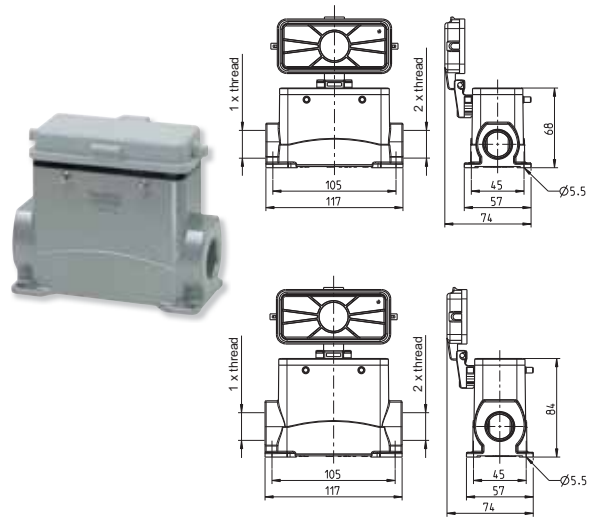


Wall-mount housing, height 68 mm
for double locking system, with hinged lid

with collar with cable gland	***P 711 216 MS** *P 711 216 MV	1 x M 25	10 350 369
with two collars with two cable glands	***P 711 316 MS** *P 711 316 MV	2 x M 25	348 386

Wall-mount housing, height 84 mm
for double locking system, with hinged lid

with collar with cable gland	***P 751 272 MS** *P 751 272 MV	1 x M 25	10 458 477
with two collars with two cable glands	***P 751 372 MS** *P 751 372 MV	2 x M 25	456 494
with collar with cable gland	***P 757 272 MS** *P 757 272 MV	1 x M 32	427 454
with two collars with two cable glands	***P 757 372 MS** *P 757 372 MV	2 x M 32	423 477



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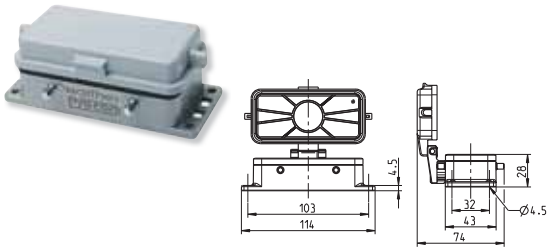
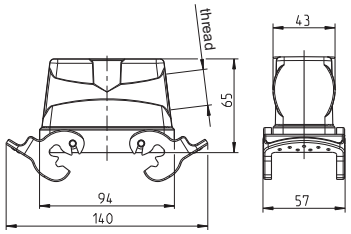
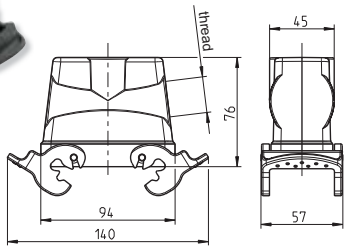
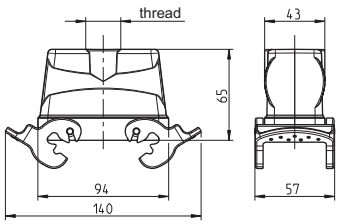
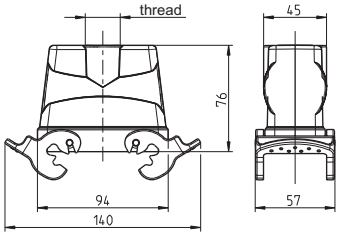
***Other cover version required?** Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g
Housings: double locking system				
Panel housing, height 28 mm for double locking system, with hinged lid				
Panel cutout 86 x 35 mm	***714 216**			10 111
Hoods, height 65 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 713 016** ex stock P 713 016 MS P 713 016 MV ex stock	1 x M 25		10 200 222 241
Hoods, height 76 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 723 040** P 723 040 MS P 723 040 MV	1 x M 25		10 222 244 263
with threaded hole with collar with cable gland	**P 723 140** P 723 140 MS P 723 140 MV	1 x M 32		217 250 278
Hoods, height 65 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 216** P 713 216 MS P 713 216 MV	1 x M 25		10 200 222 241
with two threaded holes with two collars with two cable glands	**P 713 216 00** P 713 216 00 MS P 713 216 00 MV	2 x M 25		196 218 237
Hoods, height 76 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 723 240** P 723 240 MS P 723 240 MV	1 x M 25		10 224 246 265
with two threaded holes with two collars with two cable glands	**P 723 240 00** P 723 240 00 MS P 723 240 00 MV	2 x M 25		220 242 261
with threaded hole with collar with cable gland	**P 723 340** P 723 340 MS P 723 340 MV	1 x M 32		221 254 282
with two threaded holes with two collars with two cable glands	**P 723 340 00** P 723 340 00 MS P 723 340 00 MV	2 x M 32		216 249 277

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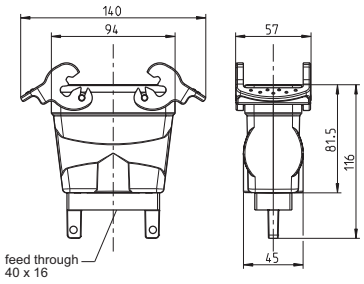
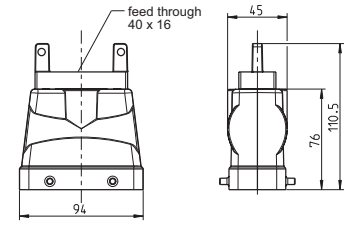
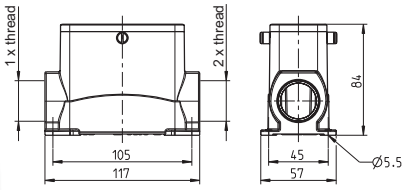
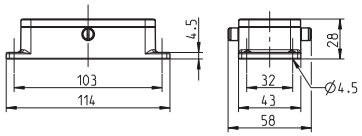
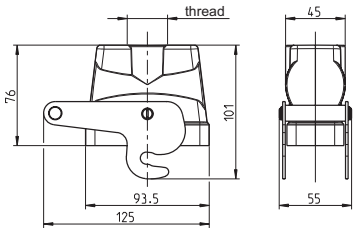
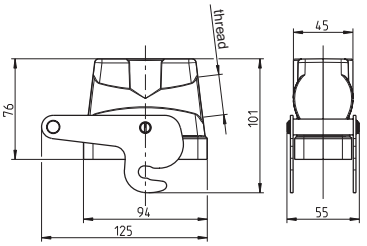
***Other cover version required?** *Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g
Housings: double locking system				
Coupler hood for flat cable, height 81 mm				
with double locking system	**P 729 740**			10 322
Hood for flat cable, height 76 mm				
with double locking system	**P 729 440**			10 278
Housings: central locking system				
Wall-mount housing, height 84 mm				
for central locking system **with collar** with cable gland	**P 770 654 MS** P 770 654 MV	1 x M 32		10 381 408
Panel housing, height 28 mm				
for central locking system Panel cutout 86 x 35 mm	**770 655**			10 82
Hoods, height 76 mm				
with central locking system top cable entry **with threaded hole** with collar with cable gland	**P 770 656** P 770 656 MS P 770 656 MV	M 32		10 327 360 388
Hoods, height 76 mm				
with central locking system side cable entry **with threaded hole** with collar with cable gland	**P 770 657** P 770 657 MS P 770 657 MV	M 32		10 324 357 385

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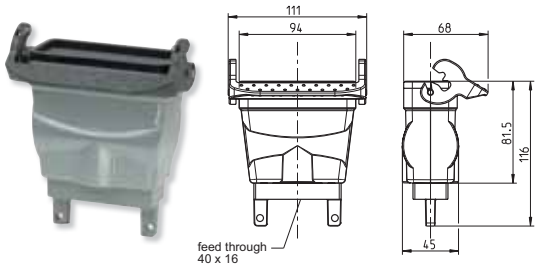
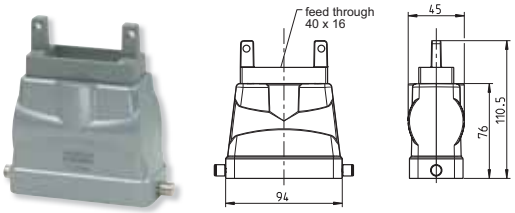
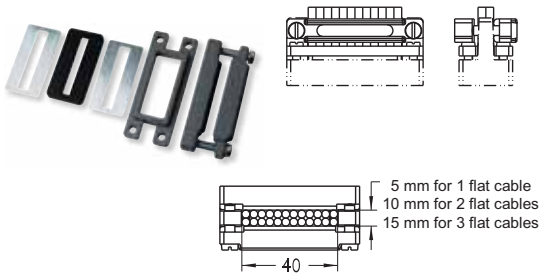
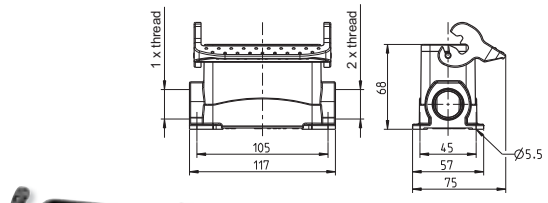
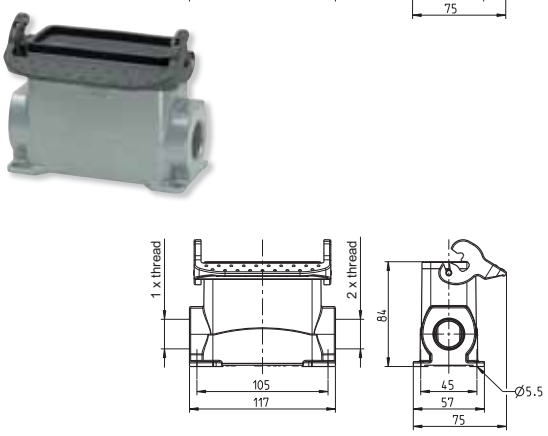
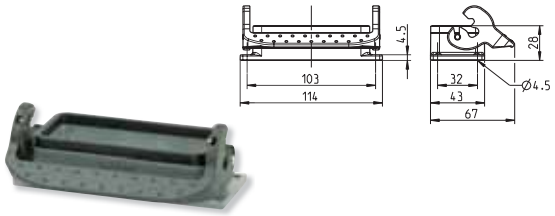
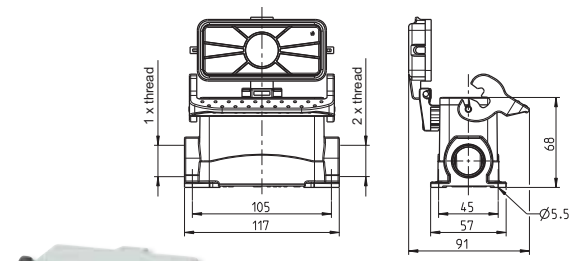
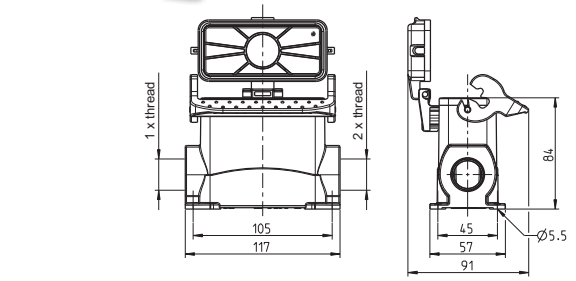
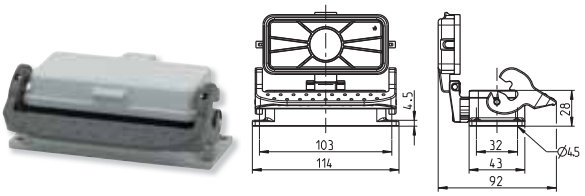
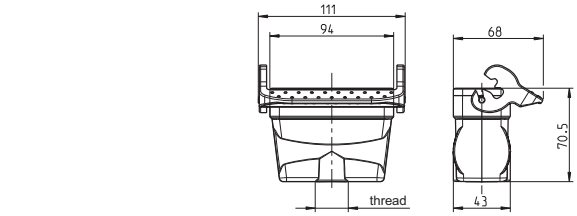
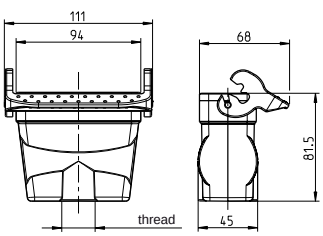
Description	Part no.		Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g
Housings: single locking system				
Coupler hood for flat cable, height 81 mm				
with single locking system	**P 729 840**			10 309
Hood for flat cable, height 76 mm				
for single locking system	**P 729 640**			10 285
Gasket sets with strain relief clamp				
for 1 flat cable	**719 601**	40 x 5 mm		10 87
for 2 flat cables	**719 602**	40 x 10 mm		84
for 3 flat cables	**719 603**	40 x 15 mm		81
Wall-mount housing, height 68 mm with single locking system				
with collar with cable gland	**P 711 416 MS** ex stock P 711 416 MV	1 x M 25		10 328 347
with two collars with two cable glands	**P 711 516 MS** P 711 516 MV	2 x M 25		326 364
Wall-mount housing, height 84 mm with single locking system				
with collar with cable gland	**P 757 472 MS** P 757 472 MV	1 x M 32		10 406 433
with two collars with two cable glands	**P 757 572 MS** P 757 572 MV	2 x M 32		402 456
with collar with cable gland	**P 757 472 40 MS** P 757 472 40 MV	1 x M 40		379 422
with two collars with two cable glands	**P 757 572 40 MS** P 757 572 40 MV	2 x M 40		350 436
Panel housing, height 28 mm with single locking system				
Panel cutout 86 x 35 mm	**714 316** ex stock			10 146

Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g
Housings: single locking system				
Wall-mount housing, height 68 mm with single locking system, with hinged lid				
with collar with cable gland	***P 711 616 MS** ex stock *P 711 616 MV	1 x M 25		10 370 389
with two collars with two cable glands	***P 711 716 MS** *P 711 716 MV	2 x M 25		368 406
Wall-mount housing, height 84 mm with single locking system, with hinged lid				
with collar with cable gland	***P 757 672 MS** *P 757 672 MV	1 x M 32		10 447 474
with two collars with two cable glands	***P 757 772 MS** *P 757 772 MV	2 x M 32		443 497
with collar with cable gland	***P 757 672 40 MS** *P 757 672 40 MV	1 x M 40		421 464
with two collars with two cable glands	***P 757 772 40 MS** *P 757 772 40 MV	2 x M 40		392 478
Panel housing, height 28 mm with single locking system, with hinged lid				
Panel cutout 86 x 35 mm	***714 416** ex stock			10 179
Coupler hoods, height 70,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 816** P 713 816 MS P 713 816 MV	1 x M 25		10 199 221 240
with two threaded holes with two collars with two cable glands	**P 713 816 00** P 713 816 00 MS P 713 816 00 MV	2 x M 25		195 217 236
with threaded hole with collar with cable gland	**P 713 916** P 713 916 MS P 713 916 MV	1 x M 32		196 229 257
Coupler hoods, height 81,5 mm with single locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 972** P 753 972 MS P 753 972 MV	1 x M 32		10 220 253 281
with two threaded holes with two collars with two cable glands	**P 753 972 00** P 753 972 00 MS P 753 972 00 MV	2 x M 32		213 246 264
with threaded hole with collar with cable gland	**P 753 972 40** P 753 972 40 MS P 753 972 40 MV	1 x M 40		215 259 301

13

***Other cover version required?** Simply add the corresponding letters at the end of the part number:*

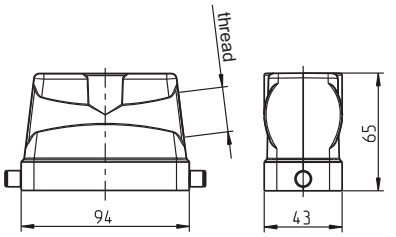
SK = self-closing, plastic | **AL = Aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g

Housings: single locking system

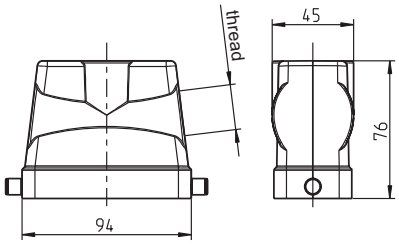
Hoods, height 65 mm
for single locking system, side cable entry

with threaded hole with collar with cable gland	**P 718 616** ex stock P 718 616 MS P 718 616 MV ex stock	1 x M 25	10 168 190 209
with threaded hole with collar with cable gland	**P 718 716** P 718 716 MS P 718 716 MV	1 x M 32	163 195 215



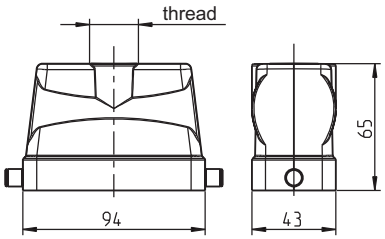
Hoods, height 76 mm
for single locking system, side cable entry

with threaded hole with collar with cable gland	**P 728 740** P 728 740 MS P 728 740 MV	1 x M 32	10 190 223 251
with threaded hole with collar with cable gland	**P 728 740 40** P 728 740 40 MS P 728 740 40 MV	1 x M 40	182 226 268



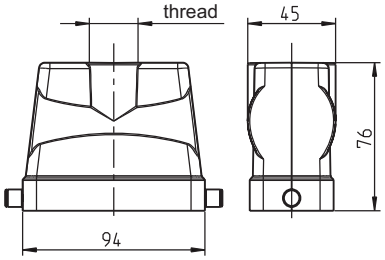
Hoods, height 65 mm
for single locking system, top cable entry

with threaded hole with collar with cable gland	**P 718 816** P 718 816 MS P 718 816 MV	1 x M 25	10 170 192 233
with two threaded holes with two collars with two cable glands	**P 718 816 00** P 718 816 00 MS P 718 816 00 MV	2 x M 25	166 188 229
with threaded hole with collar with cable gland	**P 718 916** P 718 916 MS P 718 916 MV	1 x M 32	163 195 215



Hoods, height 76 mm
for single locking system, top cable entry

with threaded hole with collar with cable gland	**P 728 940** ex stock P 728 940 MS P 728 940 MV ex stock	1 x M 32	10 193 226 254
with two threaded holes with two collars with two cable glands	**P 728 940 00** P 728 940 00 MS P 728 940 00 MV	2 x M 32	188 221 249
with threaded hole with collar with cable gland	**P 728 940 40** P 728 940 40 MS P 728 940 40 MV	1 x M 40	187 231 273



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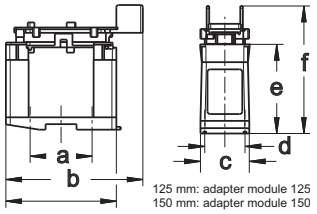
Description	Part no.	Housings for series B 16, BA 6, BB 32, D 40, DD 72, MOB 16	g

Snap-on mounting adapters

swing-type

Adapter module 125 — **760 016**
Adapter module 150 — **760 116**

mountable on DIN-rails,
top can be screwed with bottom



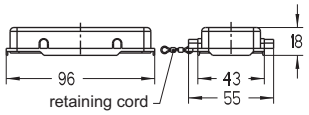
	a	b	c	d	e	f
760 016	70	155	54	44,5	98,5	141
760 116	100	185	54	44,5	98,5	141

5
183
294

Protective covers

with retaining cord
for housings with double locking system

Plastic — **710 626** *ex stock*
Aluminium — **710 626 AL**



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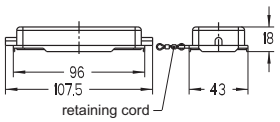
19
70

with retaining cord
for housings with single locking system

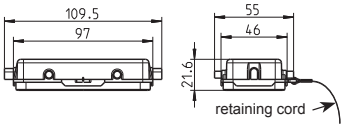
Plastic — **710 634**
Aluminium — **710 634 AL**



10
18
65

with gasket and retaining cord
for hoods with double locking system

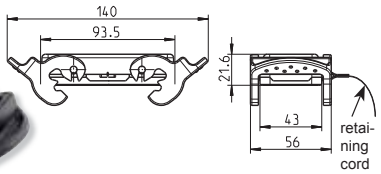
Plastic — **710 757**
Aluminium — **710 757 AL**



10
25
76

with gasket and retaining cord
for hoods with latch pins for double locking system

Plastic — **710 760**
Aluminium — **710 760 AL**



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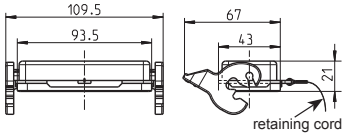
85
136

with gasket and retaining cord
for hoods with latch pins for single locking system

Plastic — **710 764**
Aluminium — **710 764 AL**



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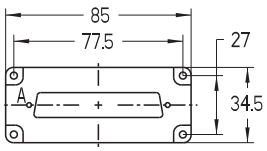
84
138

Adapter plates for contact inserts

for installation in series B 16 housings



Installation possibilities:

Front and reverse side of the plate are marked with A or T. If installed in a **panel housing**, the **A** must be readable, if installed in a **hood**, the **T** must be readable. Fixing screws are included in the scope of delivery.

Sub miniature, single
37-pole — **710 799**
50-pole — **710 800**

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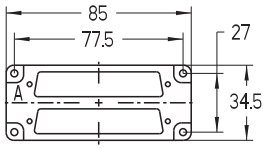
17
16

Sub miniature, double
37-pole — **710 805**
50-pole — **710 806**

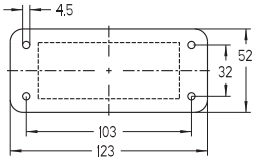


10
14
13

Cover plates for switch cabinets

for panel housing B 16

grey — **720 640**
orange — **720 644**
green — **720 648**



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23
23
23

Specifications of „size 8” housings and short overview of installation possibilities for series B 24, BB 46, D 64, DD 108 and MOB 24 inserts

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Plastic, locking elements made of stainless steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

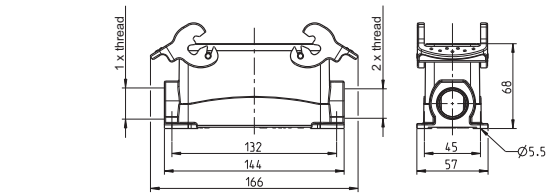
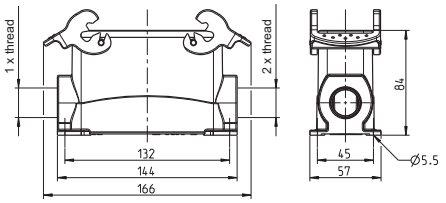
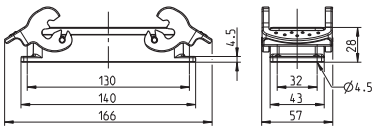
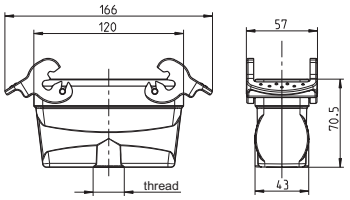
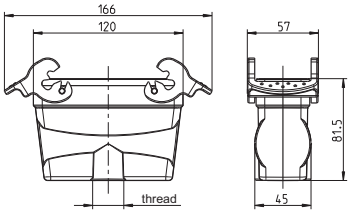
The housings shown on the following pages can be equipped with the inserts listed below:

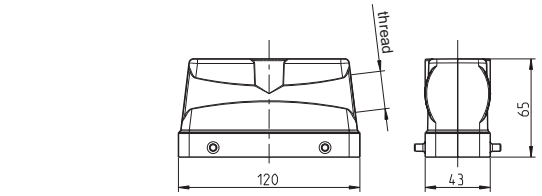
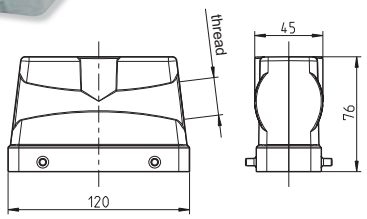
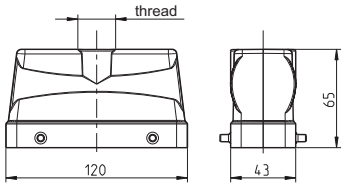
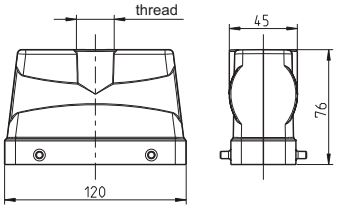
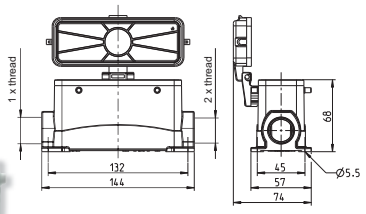
	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push-in inserts	Wiring adapters for panel housings
B 24 ▸ p. 32 to 33	Female insert, screw terminal, with wire protection, Part no. **710 124** Male insert, screw terminal, with wire protection, Part no. **710 224** Female insert, screw terminal, without wire protection, Part no. **710 772** Male insert, screw terminal, without wire protection Part no. **710 776**	Crimp contact carrier for sleeve contacts, Part no. **710 324** Crimp contact carrier for pin contacts, Part no. **710 424** 	Female insert, IDC terminal No. **710 124 01** Male insert, IDC terminal No. **710 224 01** 	Female insert, push-in terminal No. **710 124 04** Male insert, Push-in terminal No. **710 224 04** 	Wiring adapter female insert earth pin o. t. right: Part no. **710 660** Wiring adapter male insert earth pin o. t. right: Part no. **710 668** earth pin o. t. left: Part no. **710 664** earth pin o. t. left: Part no. **710 672**
BB 46 ▸ p. 33		Crimp contact carrier for sleeve contacts Part no. **710 346** Crimp contact carrier for pin contacts Part no. **710 446** 			
D 64 ▸ p. 53		Crimp contact carrier for sleeve contacts Part no. **720 364** Crimp contact carrier for pin contacts Part no. **720 464** 			Wiring adapter female insert earth pin o. t. left: Part no. **720 635** Wiring adapter male insert earth pin o. t. left: Part no. **720 634**
DD 108 ▸ p. 66		Crimp contact carrier for sleeve contacts Part no. **750 108** Crimp contact carrier for pin contacts Part no. **750 208** 			
MOB 24 ▸ p. 75	Female frame MO B24 for 7 contact carrier for pin and sleeve contacts (frame coding A-G) Part no. **770 024** for pin and sleeve contacts (2 x PE) Part no. **770 424** 		Male frame MO B24 for 7 contact carriers for pin and sleeve contacts (frame coding A-G) Part no. **770 124** for pin and sleeve contacts (2 x PE) Part no. **770 524** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series ...

B 24: | see page 33
BB 46: |
D 64: see page 54
DD 108: see page 67
MO: see page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings: double locking system				
Wall mount housing, height 68 mm with double locking system				
with collar with cable gland	**P 711 024 MS** ex stock P 711 024 MV ex stock	1 x M 25		10 396 415
with two collars with two cable glands	**P 711 124 MS** P 711 124 MV	2 x M 25		393 431
Wall mount housing, height 84 mm with double locking system				
with collar with cable gland	**P 757 008 MS** P 757 008 MV	1 x M 32		10 485 512
with two collars with two cable glands	**P 757 108 MS** P 757 108 MV	2 x M 32		480 534
with collar with cable gland	**P 757 008 40 MS** P 757 008 40 MV	1 x M 40		460 503
with two collars with two cable glands	**P 757 108 40 MS** P 757 108 40 MV	2 x M 40		458 544
Panel housing, height 28 mm with double locking system				
Panel cutout 112 x 35 mm	**714 124** ex stock			10 178
Coupler hoods, height 70,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 753 608** P 753 608 MS P 753 608 MV	1 x M 25		10 248 270 289
with two threaded holes with two collars with two cable glands	**P 753 608 00** P 753 608 00 MS P 753 608 00 MV	2 x M 25		244 266 285
with threaded hole with collar with cable gland	**P 753 708** P 753 708 MS P 753 708 MV	1 x M 32		245 278 306
Coupler hoods, height 81,5 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 724** P 713 724 MS P 713 724 MV	1 x M 32		10 277 310 338
with two threaded holes with two collars with two cable glands	**P 713 724 00** P 713 724 00 MS P 713 724 00 MV	2 x M 32		272 305 333
with threaded hole with collar with cable gland	**P 713 724 40** P 713 724 40 MS P 713 724 40 MV	1 x M 40		272 316 358

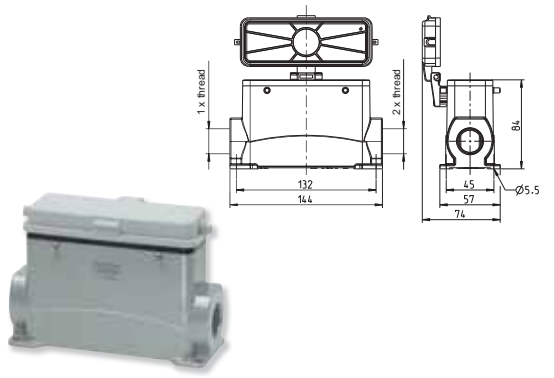
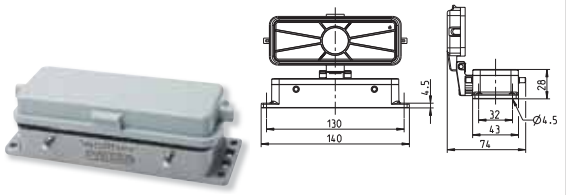
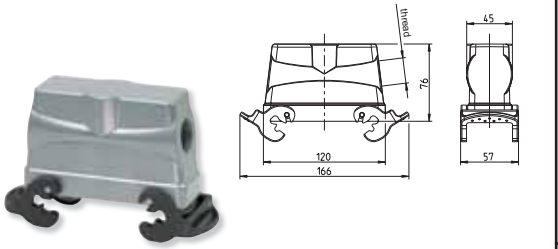
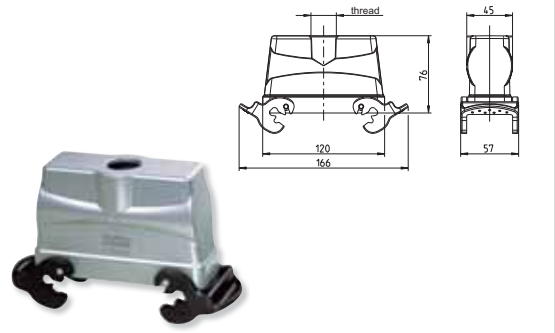
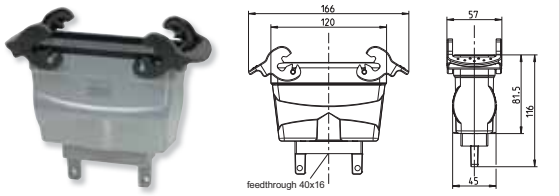
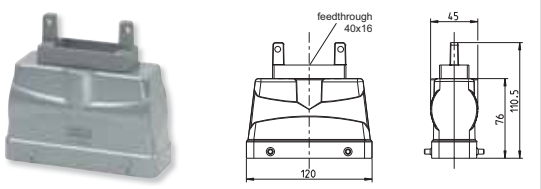
Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings: double locking system				
Hoods, height 65 mm for double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 712 024** ex stock P 712 024 MS P 712 024 MV ex stock	1 x M 25		10 200 222 241
with threaded hole with collar with cable gland	**P 712 124** ex stock P 712 124 MS ex stock P 712 124 MV	1 x M 32		196 229 257
Hoods, height 76 mm for double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 718 124** ex stock P 718 124 MS P 718 124 MV ex stock	1 x M 32		10 232 265 293
with threaded hole with collar with cable gland	**P 718 124 40** P 718 124 40 MS P 718 124 40 MV	1 x M 40		224 268 310
Hoods, height 65 mm for double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 712 224** P 712 224 MS P 712 224 MV	1 x M 25		10 202 224 243
with two threaded holes with two collars with two cable glands	**P 712 224 00** P 712 224 00 MS P 712 224 00 MV	2 x M 25		198 220 239
with threaded hole with collar with cable gland	**P 712 324** P 712 324 MS P 712 324 MV	1 x M 32		196 229 257
Hoods, height 76 mm for double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 718 324** P 718 324 MS P 718 324 MV	1 x M 32		10 235 268 296
with two threaded holes with two collars with two cable glands	**P 718 324 00** P 718 324 00 MS P 718 324 00 MV	2 x M 32		230 263 291
with threaded hole with collar with cable gland	**P 718 324 40** P 718 324 40 MS P 718 324 40 MV	1 x M 40		229 273 315
Wall mount housing, height 68 mm for double locking system, with hinged lid				
with collar with cable gland	***P 711 224 MS** *P 711 224 MV	1 x M 25		10 413 432
with two collars with two cable glands	***P 711 324 MS** *P 711 324 MV	2 x M 25		410 448

14

144

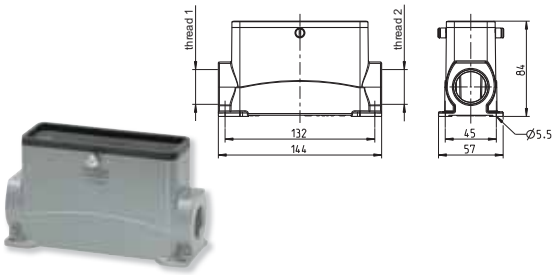
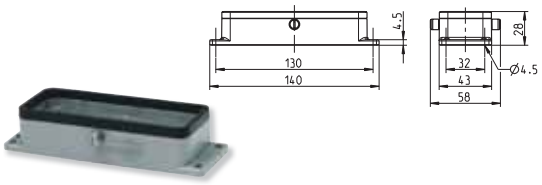
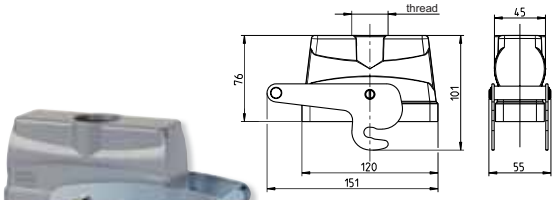
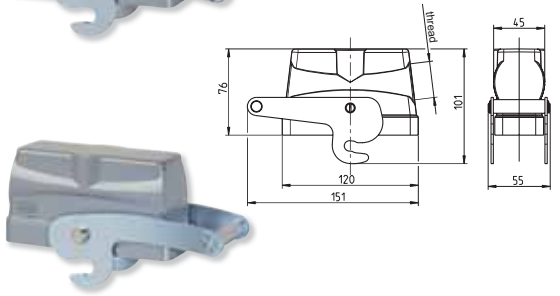
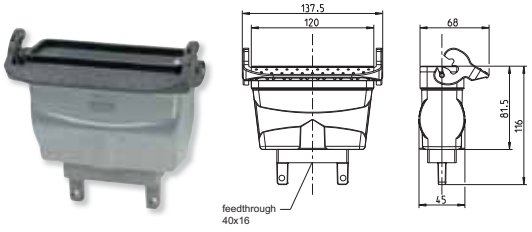
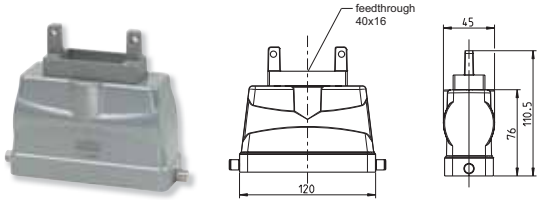
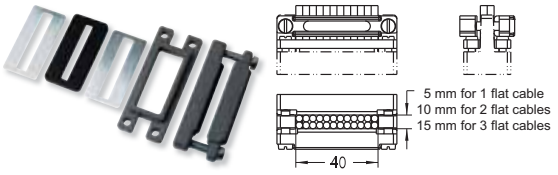
***Other cover version required?** Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

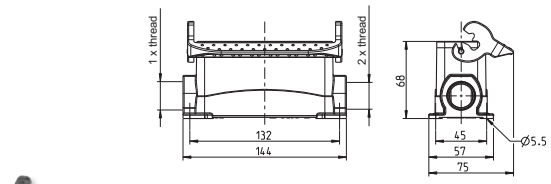
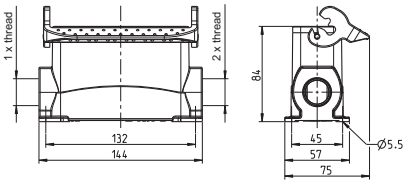
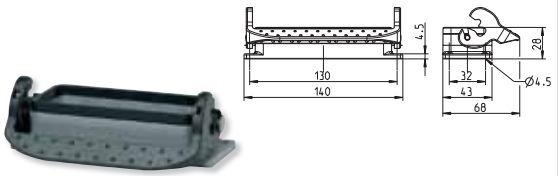
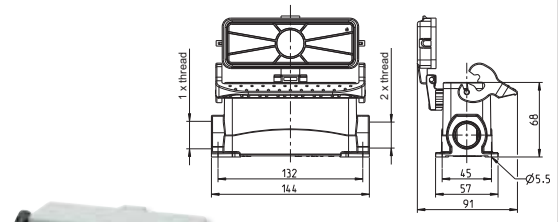
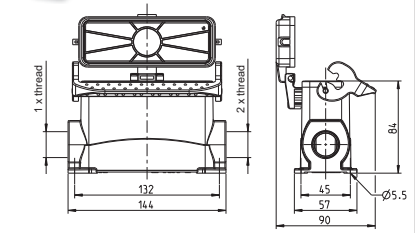
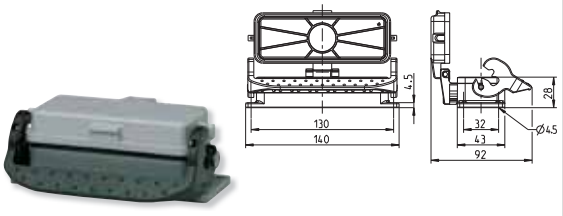
Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings: double locking system				
Wall mount housing, height 84 mm for double locking system, with hinged lid				
with collar with cable gland	***P 751 208 MS** *P 751 208 MV	1 x M 25		10 534 553
with two collars with two cable glands	***P 751 308 MS** *P 751 308 MV	2 x M 25		532 570
with collar with cable gland	***P 757 208 MS** *P 757 208 MV	1 x M 32		502 529
with two collars with two cable glands	***P 757 308 MS** *P 757 308 MV	2 x M 32		497 551
Panel housing, height 28 mm for double locking system, with hinged lid				
Panel cutout 112 x 35 mm	***714 224** *ex stock*			10 132
Hoods, height 76 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**P 713 024** P 713 024 MS P 713 024 MV	1 x M 25		10 270 292 311
with threaded hole with collar with cable gland	**P 713 124** P 713 124 MS P 713 124 MV	1 x M 32		266 299 327
Hoods, height 76 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**P 713 224** P 713 224 MS P 713 224 MV	1 x M 25		10 271 293 312
with two threaded holes with two collars with two cable glands	**P 713 224 00** P 713 224 00 MS P 713 224 00 MV	2 x M 25		267 289 308
with threaded hole with collar with cable gland	**P 713 324** P 713 324 MS P 713 324 MV	1 x M 32		269 302 330
with two threaded holes with two collars with two cable glands	**P 713 324 00** P 713 324 00 MS P 713 324 00 MV	2 x M 32		264 298 325
Coupler hood for flat cable, height 81 mm with double locking system				
	P 719 724			10 364
Hood for flat cable, height 76 mm for double locking system				
	P 719 424			10 324

**** Other cover version required?*** *Simply add the corresponding letters at the end of the part number:*

SK = self-closing, plastic | **AL = aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

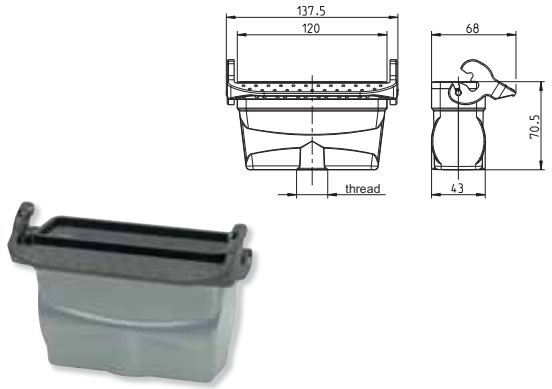
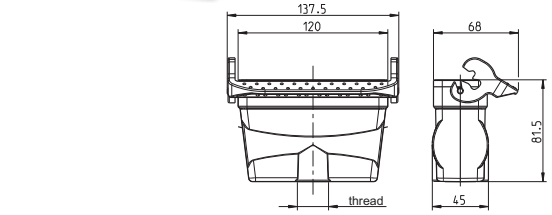
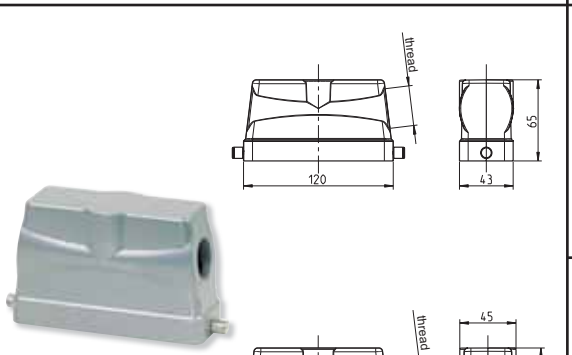
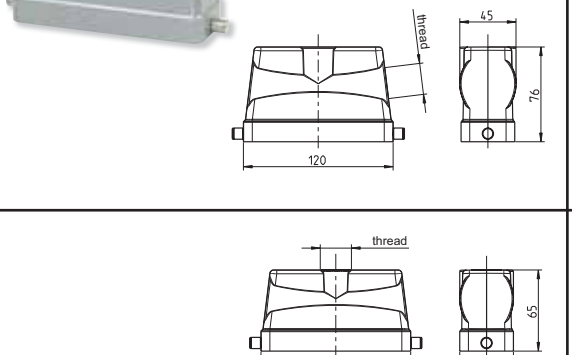
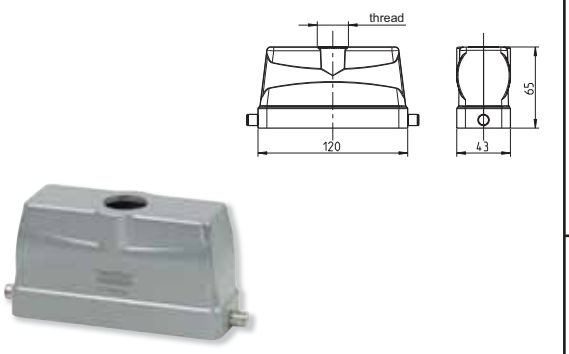
Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings: central locking system				
Wall mount housing, height 84 mm for central locking system				
with collar with cable gland	**P 770 658 MS** P 770 658 MV	1 x M 32		10 448 475
Panel housing, height 28 mm for central locking system				
Panel cutout 112 x 35 mm	**770 659**			10 140
Hoods, height 76 mm with central locking system, top cable entry				
with threaded hole with collar with cable gland	**P 770 660** P 770 660 MS P 770 660 MV	M 32		10 384 417 445
Hoods, height 76 mm with central locking system, side cable entry				
with threaded hole with collar with cable gland	**P 770 661** P 770 661 MS P 770 661 MV	M 32		10 384 417 445
Housings, single locking system				
Coupler hood for flat cable, height 81 mm with single locking system				
	P 719 824			10 351
Hood for flat cable, height 76 mm for single locking system				
	P 719 624			10 333
Gasket set with strain relief clamp				
for 1 flat cable for 2 flat cables for 3 flat cables	**719 601** **719 602** **719 603**	40 x 5 mm 40 x 10 mm 40 x 15 mm		10 151 156 201

14

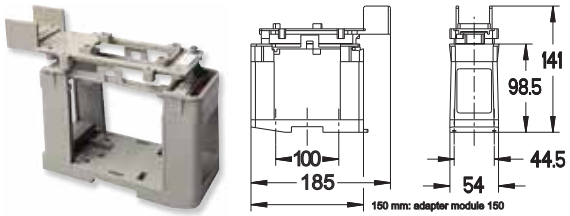
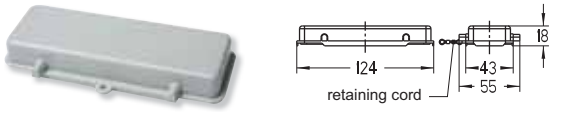
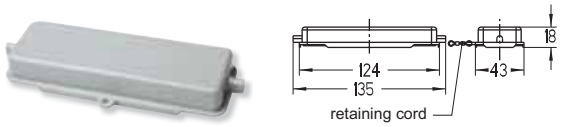
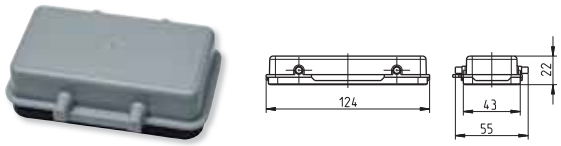
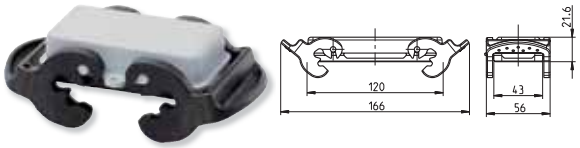
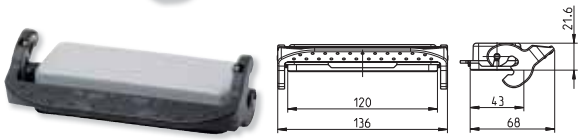
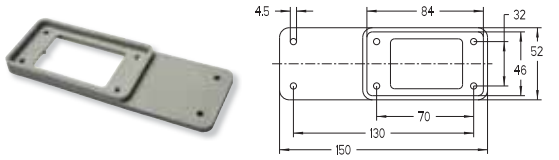
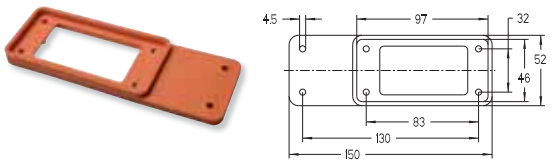
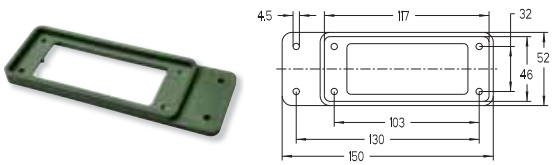
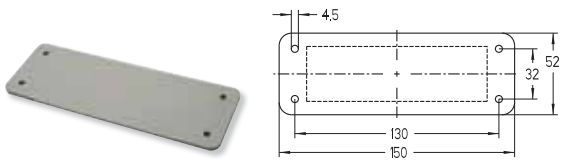
Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings, single locking system				
Wall mount housing, height 68 mm with single locking system				
with collar with cable gland	**P 711 424 MS** P 711 424 MV	1 x M 25		10 386 405
with two collars with two cable glands	**P 711 524 MS** P 711 524 MV	2 x M 25		383 421
Wall mount housing, height 84 mm with single locking system				
with collar with cable gland	**P 757 408 MS** P 757 408 MV	1 x M 32		10 474 501
with two collars with two cable glands	**P 757 508 MS** P 757 508 MV	2 x M 32		469 523
with collar with cable gland	**P 757 408 40 MS** P 757 408 40 MV	1 x M 40		449 492
with two collars with two cable glands	**P 757 508 40 MS** P 757 508 40 MV	2 x M 40		420 506
Panel housing, height 28 mm with single locking system				
Panel cutout 112 x 35 mm	**714 324** ex stock			10 171
Wall mount housing, height 68 mm with single locking system, with hinged lid				
with collar with cable gland	***P 711 624 MS** *P 711 624 MV	1 x M 25		10 436 455
with two collars with two cable glands	***P 711 724 MS** *P 711 724 MV	2 x M 25		433 471
Wall mount housing, height 84 mm with single locking system, with hinged lid				
with collar with cable gland	***P 757 608 MS** *P 757 608 MV	1 x M 32		10 524 551
with two collars with two cable glands	***P 757 708 MS** *P 757 708 MV	2 x M 32		519 573
with collar with cable gland	***P 757 608 40 MS** *P 757 608 40 MV	1 x M 40		499 542
with two collars with two cable glands	***P 757 708 40 MS** *P 757 708 40 MV	2 x M 40		470 556
Panel housing, height 28 mm with single locking system, with hinged lid				
Panel cutout 112 x 35 mm	***714 424** ex stock			10 208

***Other cover version required?** Simply add the corresponding letters at the end of the part number:

SK = self-closing, plastic | **AL = aluminium** | **SA = self-closing, aluminium** *(For wall mount and panel housings)*

Description	Part no.	M	Housings for series B 24, BB 46, D 64, DD 108, MOB 24	g
Housings, single locking system				
Coupler hoods, height 70,5 mm with single locking system, top cable entry				10
with threaded hole with collar with cable gland	**P 753 808** P 753 808 MS P 753 808 MV	1 x M 25		240 262 281
with two threaded holes with two collars with two cable glands	**P 753 808 00** P 753 808 00 MS P 753 808 00 MV	2 x M 25		236 258 277
with threaded hole with collar with cable gland	**P 753 908** P 753 908 MS P 753 908 MV	1 x M 32		237 270 298
Coupler hoods, height 81,5 mm with single locking system, top cable entry				10
with threaded hole with collar with cable gland	**P 713 924** P 713 924 MS P 713 924 MV	1 x M 32		263 296 324
with two threaded holes with two collars with two cable glands	**P 713 924 00** P 713 924 00 MS P 713 924 00 MV	2 x M 32		258 291 319
with threaded hole with collar with cable gland	**P 713 924 40** P 713 924 40 MS P 713 924 40 MV	1 x M 40		258 302 344
Hoods, height 65 mm for single locking system, side cable entry				10
with threaded hole with collar with cable gland	**P 712 624** *ex stock* P 712 624 MS P 712 624 MV *ex stock*	1 x M 25		209 231 250
with threaded hole with collar with cable gland	**P 712 724** P 712 724 MS P 712 724 MV	1 x M 32		204 237 265
Hoods, height 76 mm for single locking system, side cable entry				10
with threaded hole with collar with cable gland	**P 718 724** P 718 724 MS P 718 724 MV	1 x M 32		234 267 295
with threaded hole with collar with cable gland	**P 718 724 40** P 718 724 40 MS P 718 724 40 MV	1 x M 40		226 270 312
Hoods, height 65 mm for single locking system, top cable entry				10
with threaded hole with collar with cable gland	**P 712 824** P 712 824 MS P 712 824 MV	1 x M 25		210 232 251
with two threaded holes with two collars with two cable glands	**P 712 824 00** P 712 824 00 MS P 712 824 00 MV	2 x M 25		206 228 247
Hoods, height 76 mm for single locking system, top cable entry				10
with threaded hole with collar with cable gland	**P 718 924** P 718 924 MS P 718 924 MV	1 x M 32		235 268 296
with two threaded holes with two collars with two cable glands	**P 718 924 00** P 718 924 00 MS P 718 924 00 MV	2 x M 32		230 263 291
with threaded hole with collar with cable gland	**P 718 924 40** P 718 924 40 MS P 718 924 40 MV	1 x M 40		192 236 278

Housings for series B 24, BB 46, D 64, DD 108, MOB 24

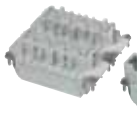
Description	Part no.		g
Snap-on mounting adapters			
swing-type **Adapter module 150** mountable on DIN-rails, top can be screwed with bottom	**760 124**		5 197
Protective covers			
with retaining cord for housings with double locking system Plastic Aluminium	**710 628** **710 628 AL**		10 24 83
with retaining cord for housings with single locking system Plastic Aluminium	**710 636** **710 636 AL**		10 23 77
with gasket and retaining cord for hoods with double locking system Plastic Aluminium	**710 758** **710 758 AL**		10 31 90
with gasket and retaining cord for hoods with latch pins for double locking system Plastic Aluminium	**710 761** **710 761 AL**		10 91 150
with gasket and retaining cord for hoods with latch pins for single locking system Plastic Aluminium	**710 765** **710 765 AL**		10 105 166
Adapter plates for switch cabinets			
Panel housing B24 on B6 grey orange green	 **720 650** **720 653** **720 656**		10 37 37 37
Panel housing B24 on B10 grey orange green	 **720 651** **720 654** **720 657**		 35 35 35
Panel housing B24 on B16 grey orange green	 **720 652** **720 655** **720 658**		 33 33 33
Cover plates for switch cabinets			
Cover plate for panel housing B24 grey orange green	 **720 641** **720 645** **720 649**		10 27 27 27

Specifications of „size 9” housings and short overview of installation possibilities for series B 32, BA 12, BB 64, D 80, DD 144 and 2 x MOB 16

Housings

Material:	Aluminium die casting
Surface:	Powder coated
Locking levers:	Zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

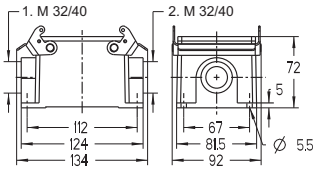
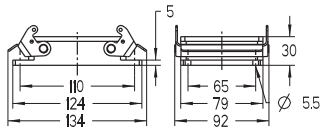
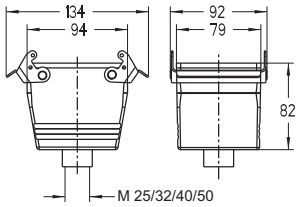
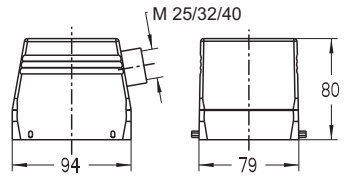
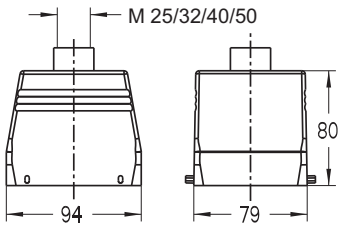
The housings shown on the following pages can be equipped with the inserts listed below:

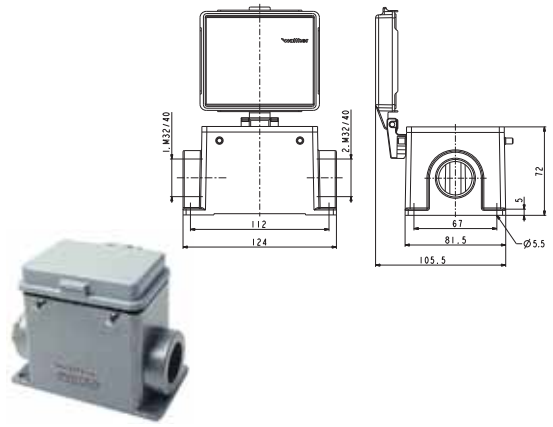
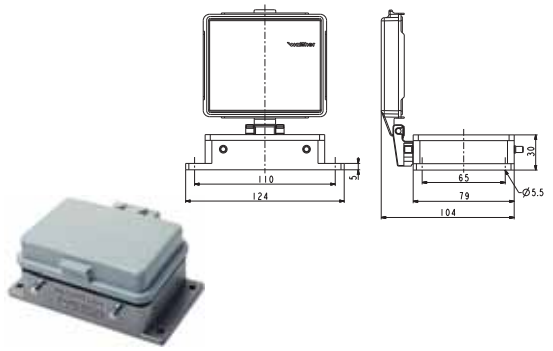
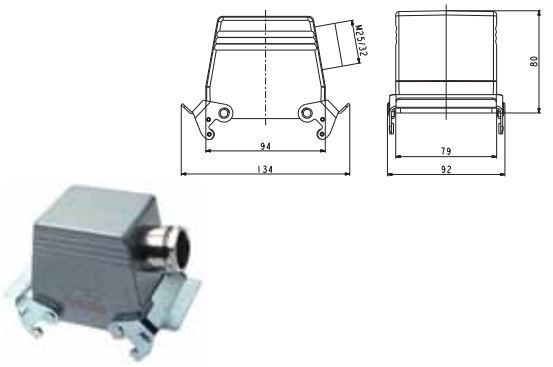
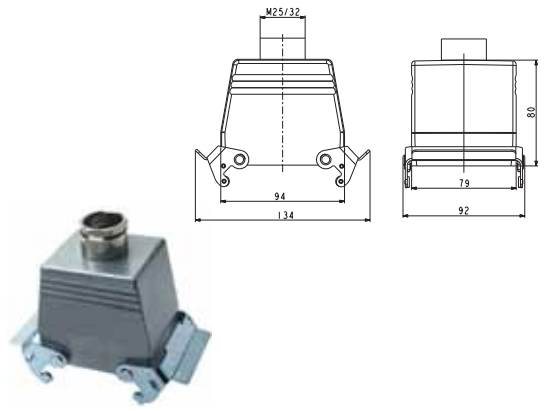
	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push-in inserts
B 32 ▸ p. 34	Female insert, screw terminal: with wire protection 1-16 Part no. **710 116** Female insert, screw terminal: w/o wire protection Part no. **710 771** Male insert, screw terminal: with wire protection 1-16, Part no. **710 216** Male insert, screw terminal: without wire protection Part no. **710 775** with wire protection 17-32 Part no. **710 132** w/o wire protection Part no. **710 859** with wire protection 17-32 Part no. **710 232** w/o wire protection Part no. **710 860**	Crimp contact carrier f. sleeve contacts 1-16 Part no. **710 316** Crimp contact carrier for pin contacts 1-16 Part no. **710 416** for sleeve contacts 17-32 Part no. **710 332** for pin contacts 17-32 Part no. **710 432**	Female insert IDC contact, 1-16 No. **710 116 01** Male insert IDC contact, 1-16 No. **710 216 01** IDC contact, 17-32 No. **710 132 01** IDC contact, 17-32 No. **710 232 01**	Female insert, push-in contact 1-16 No. **710 116 04** Male insert, push-in contact 1-16 Part no. **710 216 04**  push-in contact 17-32 Part no. **710 132 04** push-in contact 17-32 Part no. **710 232 04**
BB 64 ▸ p. 35		Crimp contact carrier f. sleeve contacts 1-32 Part no. **710 333** Crimp contact carrier for pin contacts 1-32 Part no. **710 433** f. sleeve contacts 33-64 Part no. **710 364** for pin contacts 33-64 Part no. **710 464**		
BA 12 ▸ p. 41	Female insert, screw terminal, with wire protection 1-6, Part no. **710 620** Female insert, screw terminal, with wire protection 7-12, Part no. **710 692** Male insert, screw terminal, with wire protection 1-6, Part no. **710 621** Male insert, screw terminal, with wire protection 7-12, Part no. **710 693**			
D 80 ▸ p. 55		Crimp contact carrier f. sleeve contacts Part no. **720 340 (2x)** Crimp contact carrier for pin contacts Part no. **720 440 (2x)** 		
DD 144 ▸ p. 68		Crimp contact carrier f. sleeve contacts 1-72 Part no. **750 172** Crimp contact carrier for pin contacts 1-72 Part no. **750 272** f. sleeve contacts 73-144 Part no. **750 144** for pin contacts 73-144 Part no. **750 244**		
2 x MOB 16 ▸ p. 75	Female frame MO B16, for 5 contact carriers for pin and sleeve contacts, with additional female frame (frame coding V- Z) Part no. **770 216** for pin and sleeve contacts (2 x PE) Part no. **770 616** 	Male frame MO B16 for 5 contact carriers for pin and sleeve contacts, with additional male frame, (frame coding V - Z) **Part no. 770 316** for pin and sleeve contacts (2 x PE) **Part no. 770 716** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series ...

B 32: / BB 64: see page 35
D 80: see page 56
DD 144: see page 69
MO: see page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 32, BA 12, BB 64, D 80, DD 144, 2 x MOB 16	9
Housings: double locking system				
Wall mount housing, height 72 mm with double locking system				10
with collar	**T 711 032 MS**	1 x M 32		497
with cable gland	T 711 032 MV			532
with two collars	**T 711 132 MS**	2 x M 32		477
with two cable glands	T 711 132 MV			550
with collar	**T 711 032 40 MS**	1 x M 40		532
with cable gland	T 711 032 40 MV			532
with two collars	**T 711 132 40 MS**	2 x M 40		477
with two cable glands	T 711 132 40 MV			550
Panel housing, height 30 mm with double locking system				10
Panel cutout 84 x 70 mm	**714 132** ex stock			224
Coupler hoods, height 82 mm with double locking system, top cable entry				10
with threaded hole	**T 713 632**	1 x M 25		438
with collar	T 713 632 MS			462
with cable gland	T 713 632 MV			484
with threaded hole	**T 713 732**	1 x M 32		431
with collar	T 713 732 MS			465
with cable gland	T 713 732 MV			501
with threaded hole	**T 750 664**	1 x M 40		452
with collar	T 750 664 MS			497
with cable gland	T 750 664 MV			554
with threaded hole	**T 750 669**	1 x M 50		465
with collar	T 750 669 MS			522
with cable gland	T 750 669 MV			618
Hoods, height 80 mm for double locking system, side cable entry				10
with threaded hole	**T 718 032**	1 x M 25		353
with collar	T 718 032 MS			377
with cable gland	T 718 032 MV			399
with threaded hole	**T 718 132**	1 x M 32		349
with collar	T 718 132 MS			383
with cable gland	T 718 132 MV			418
with two threaded holes	**T 718 132 00**	2 x M 32		344
with two collars	T 718 132 00 MS			378
with two cable glands	T 718 132 00 MV			413
with threaded hole	**T 750 670**	1 x M 40		369
with collar	T 750 670 MS			414
with cable gland	T 750 670 MV			471
Hoods, height 80 mm for double locking system, top cable entry				10
with threaded hole	**T 718 232**	1 x M 25		353
with collar	T 718 232 MS			377
with cable gland	T 718 232 MV			399
with threaded hole	**T 718 332**	1 x M 32		356
with collar	T 718 332 MS			390
with cable gland	T 718 332 MV			425
with two threaded holes	**T 718 332 00**	2 x M 32		351
with two collars	T 718 332 00 MS			385
with two cable glands	T 718 332 00 MV			420
with threaded hole	**T 750 663**	1 x M 40		369
with collar	T 750 663 MS			414
with cable gland	T 750 663 MV			471
with threaded hole	**T 750 671**	1 x M 50		382
with collar	T 750 671 MS			439
with cable gland	T 750 671 MV			535

Description	Part no.	M	Housings for series B 32, BA 12, BB 64, D 80, DD 144, 2 x MOB 16	g
Housings: double locking system				
Wall mount housing, height 72 mm for double locking system, with hinged lid				
with collar with cable gland	**T 711 232 MS** T 711 232 MV	1 x M 32		10 490 550
with two collars with two cable glands	**T 711 332 MS** T 711 332 MV	2 x M 32		486 610
with collar with cable gland	**T 711 232 40 MS** T 711 232 40 MV	1 x M 40		450 560
with two collars with two cable glands	**T 711 332 40 MS** T 711 332 40 MV	2 x M 40		450 630
Panel housing, height 30 mm for double locking system, with hinged lid				
Panel cutout 84 x 70 mm	**714 232**			10 184
Hoods, height 80 mm with double locking system, side cable entry				
with threaded hole with collar with cable gland	**T 713 032** T 713 032 MS T 713 032 MV	1 x M 25		10 446 470 512
with threaded hole with collar with cable gland	**T 713 132** T 713 132 MS T 713 132 MV	1 x M 32		426 460 518
with two threaded holes with two collars with two cable glands	**T 713 132 00** T 713 132 00 MS T 713 132 00 MV	2 x M 32		421 455 513
Hoods, height 80 mm with double locking system, top cable entry				
with threaded hole with collar with cable gland	**T 713 232** T 713 232 MS T 713 232 MV	1 x M 25		10 446 470 512
with threaded hole with collar with cable gland	**T 713 332** T 713 332 MS T 713 332 MV	1 x M 32		426 460 518
with two threaded holes with two collars with two cable glands	**T 713 332 00** T 713 332 00 MS T 713 332 00 MV	2 x M 32		421 455 513

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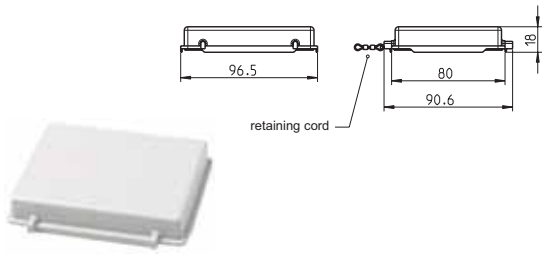
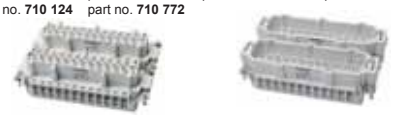
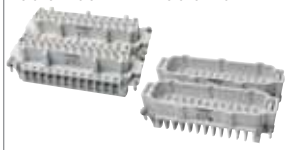
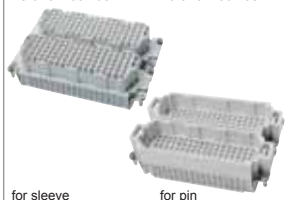
Description	Part no.	M	Housings for series B 32, BA 12, BB 64, D 80, DD 144, 2 x MOB 16	9
Protective cover: plastic				
for housings with double locking system, with retaining cord	**710 911**			10 34

Specifications of „size 10“ housings and short overview of installation possibilities for series B 48, BB 92, D 128, DD 216 and 2 x MOB 24

Housings

Material:	Aluminium die-casting
Surface:	Powder coated
Locking levers:	Zinc-plated steel
Housing gasket:	NBR
Temperature range:	- 40 °C to + 125 °C (depending on cable gland)
Protection degree DIN EN 60 529:	IP 65 (in locked condition)

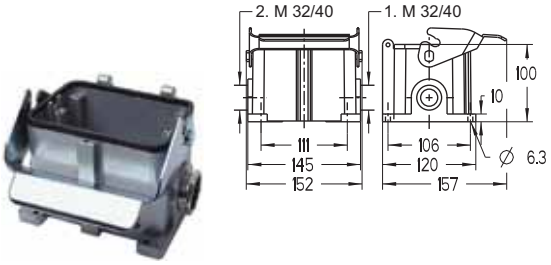
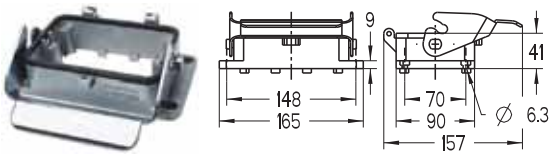
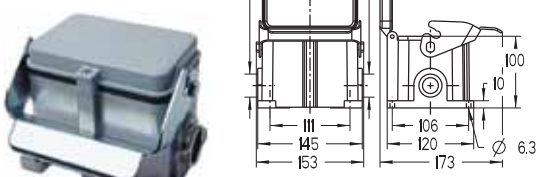
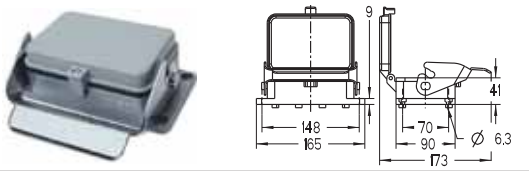
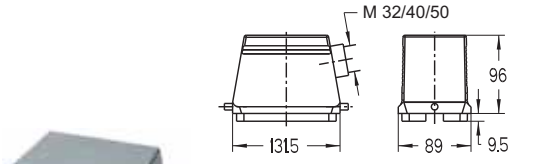
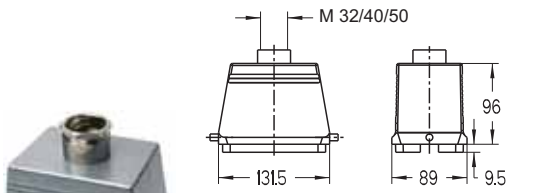
The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Push in inserts
B 48 ▸ p. 36	Female insert, screw terminal: with wire protection 1-24, part no. **710 124** Female insert, screw terminal: without wire protection, part no. **710 772** Male insert, screw terminal: with wire protection 1-24, part no. **710 224** Male insert, screw terminal: without wire protection, part no. **710 776**  with wire protection 25-48 part no. **710 148** without wire protection, part no. **710 861** with wire protection 25-48, part no. **710 248** without wire protection, part no. **710 862**	Crimp contact carrier, for sleeve contacts 1-24 Part no. **710 324** Crimp contact carrier, for pin contacts 1-24 Part no. **710 424**  for sleeve contacts 25-48 Part no. **710 348** for pin contacts 25-48 Part no. **710 448**	Female insert IDC terminal 1-24 No. **710 124 01** Male insert IDC terminal 1-24 No. **710 224 01** IDC terminal 25-48 No. **710 148 01** IDC terminal 25-48 No. **710 248 01**	Female insert, push-in contact 1-24 No. **710 124 04** Male insert push-in contact 1-24 No. **710 224 04** push-in contact 25-48 No. **710 148 04** push-in contact 25-48 No. **710 248 04**
BB 92 ▸ p. 37		Crimp contact carrier f. sleeve contacts 1-46 Part no. **710 346** Crimp contact carrier for pin contacts 1-46 Part no. **710 446** for sleeve contacts 47-92 Part no. **710 392** for pin contacts 47-92 Part no. **710 492**		
D 128 ▸ p. 57		Crimp contact carrier for sleeve contacts Part no. **720 364 (2x)** Crimp contact carrier for pin contacts Part no. **720 464 (2x)** 		
DD 216 ▸ p. 70		Crimp contact carrier f. sleeve contacts 1-108 Part no. **750 108** Crimp contact carrier f. pin contacts 1-108 Part no. **750 208**  for sleeve contacts 109-216, Part no. **750 116** for pin contacts 109-216, Part no. **750 216**		
2 x MOB24 ▸ p. 75	Female frame MO B24 for 7 contact carriers for pin and sleeve contacts, with additional female frame (frame coding T - Z) Part no. **770 224** for pin and sleeve contacts (2 x PE) Part no. **770 624** 	Male frame MO B24 for 7 contact carriers for pin and sleeve contacts with additional male frame (frame coding T - Z) Part no. **770 324** for pin and sleeve contacts (2 x PE) Part no. **770 724** 		

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series . . .

B 48: / BB 92: see page 37
D 128: see page 58
DD 216: see page 71
MO: see page 77, 79, 81, 83, 84, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	M	Housings for series B 48, BB 92, BV 20, BV 26, BV 32, D 128, DD 216, 2 x MOB 24	9
Housings: single locking system				
Wall mount housing, height 100 mm with single locking system				1
with collar with cable gland	**T 711 448 MS** T 711 448 MV	1 x M 32		1169 1205
with collar with cable gland	**T 711 548 MS** T 711 548 MV	2 x M 32		1133 1204
with collar with cable gland	**T 711 448 40 MS** T 711 448 40 MV	1 x M 40		1169 1205
with collar with cable gland	**T 711 548 40 MS** T 711 548 40 MV	2 x M 40		1204 1204
Panel housing, height 41 mm with single locking system				1
Panel cutout 120 x 82 mm	**714 348**			546
Wall mount housing, height 100 mm with single locking system, with hinged lid				1
with collar with cable gland	**T 711 648 MS** T 711 648 MV	1 x M 32		1262 1292
with collar with cable gland	**T 711 748 MS** T 711 748 MV	2 x M 32		1219 1291
with collar with cable gland	**T 711 648 40 MS** T 711 648 40 MV	1 x M 40		1262 1262
with collar with cable gland	**T 711 748 40 MS** T 711 748 40 MV	2 x M 40		1219 1219
Panel housing, height 41 mm with single locking system, with hinged lid				1
Panel cutout 120 x 82 mm	**714 448**			632
Hoods, height 96 mm for single locking system, side cable entry				1
with threaded hole with collar with cable gland	**T 712 648** T 712 648 MS T 712 648 MV	1 x M 32		553 587 623
with two threaded holes with two collars with two cable glands	**T 712 648 00** T 712 648 00 MS T 712 648 00 MV	2 x M32		
with threaded hole with collar with cable gland	**T 712 748** T 712 748 MS T 712 748 MV	1 x M 40		561 606 668
with threaded hole with collar with cable gland	**T 710 653** T 710 653 MS T 710 653 MV	1 x M 50		574 631 732
Hoods, height 96 mm for single locking system, top cable entry				1
with threaded hole with collar with cable gland	**T 712 848** T 712 848 MS T 712 848 MV	1 x M 32		565 599 634
with two threaded holes with two collars with two cable glands	**T 712 848 00** T 712 848 00 MS T 712 848 00 MV	2 x M 32		560 594 629
with threaded hole with collar with cable gland	**T 712 948** T 712 948 MS T 712 948 MV	1 x M 40		584 629 690
with threaded hole with collar with cable gland	**T 720 712** T 720 712 MS T 720 712 MV	1 x M 50		574 631 732

Screw-mountable hoods and hoods with bayonet lock

You save ... ☑ **the panel housing** ☑ **additional stock types** ☑ **costs**

The hoods are available in four sizes ...

B 6 B 10 B 16 B 24

... and for three application areas:

Standard
colour grey

for harsh environmental requirements
colour black

for EMC (electromagnetic compatibility)
colour silver

Your advantages:

High protection degree:
IP 67 / IP 68

High housing size:
100 mm

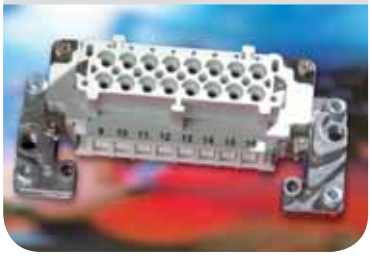
Large cable entry:
M 40 already possible with B 6

High vibration/impact resistance
due to screw locking

Mounting flange set

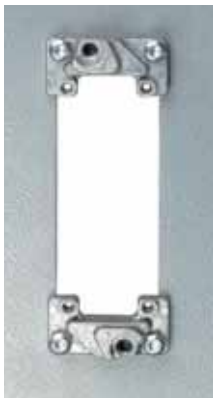
consisting of 2 flanges,
4 self-tapping screws (M 4)
and 4 lock washers.

On standard switch cabinet cutouts the two flanges are fixed with metric screws M 4 or M 5 and matching nuts.



Bayonet lock
(quick lock).
The material is the same for all three housing versions.

Standard switch cabinet cutout with **mounted flange:**



... for screw-mountable hoods

Hoods:

... screw mountable hoods
= protection degree IP 68

Protective caps:

... for screw-mountable hoods

... for hoods with bayonet lock

... with bayonet lock
= protection degree IP 67

... for hoods with bayonet lock

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Screw mountable hoods / hoods with bayonet lock

Specifications

Regulations: DIN VDE 0627, DIN VDE 0110, DIN EN 61 984

Approvals: UR, CSA, SEV, MEIE, EZÜ

Number of poles: 6 - 108 + PE

Electrical data:
See individual series.

Housings grey, standard:

Material:	Aluminium die casting
Surface:	Powder coated
Housing gasket:	NBR
Temperature range:	- 40 °C up to + 125 °C
Protection degree acc. to DIN EN 60 529	
• in screwed condition:	IP 68
• in locked condition (bayonet):	IP 67

Housings silver, electromagnetic compatibility (EMC):

Material:	Aluminium die casting
Surface:	Powder coated
Housing gasket:	NBR conductive
Temperature range:	- 40 °C up to + 125 °C
Protection degree DIN EN 60 529	
• in screwed condition:	IP 68
• in locked condition (bayonet):	IP 67

Housings black, harsh environmental requirements: sea water

Material:	Aluminium die casting
Surface:	Powder coated
Housing gasket:	Viton
Temperature range:	- 40 °C up to + 200 °C
Protection degree acc. to DIN EN 60 529	
• in screwed condition:	IP 68
• in locked condition (bayonet):	IP 67

For all three housing types (grey, silver, black) applies:

Locking screws:	Stainless steel
Bayonet lock:	Metal V2
	Viton gasket
	Plastic V0

Application hint:

Heavy duty connectors are electrical devices which must not be inserted or separated under load!

Page

Screw mountable hoods and hoods with bayonet lock
B 6, BB 10, BHT 6, DD 24, MOB 6 **159**

Screw mountable hoods and hoods with bayonet lock
B 10, BB 18, BHT 10, DD 42, MOB 10 **161**

Screw mountable hoods and hoods with bayonet lock
B 16, BB 32, BHT 16, BA 6, D 40, DD 72, MOB 16 **163**

Screw mountable hoods and hoods with bayonet lock
B 24, BB 46, BHT 24, D 64, DD 108, MOB 24 **165**

Flange sets **158, 160, 162, 164**

Protective caps **159, 161, 163, 165**

Short overview of installation possibilities for series B 6, BB 10, BHT 6, DD 24 and MOB 6 inserts in screw-mountable hoods and hoods with bayonet lock

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Wiring adapters for panel housings
B 6 ▸ p. 26	Female insert screw terminal with wire protection Part no. **710 106** Male insert screw terminal with wire protection Part no. **710 206** without wire protection Part no. **710 769** without wire protection Part no. **710 773**	Crimp contact carrier for sleeve contacts Part no. **710 306** Crimp contact carrier for pin contacts Part no. **710 406**	Female insert, IDC terminal Part no. **710 106 01** Male insert, IDC terminal Part no. **710 206 01**	Wiring adapter female insert earth pin on the right: Part no. **710 657** Wiring adapter male insert earth pin on the right: Part no. **710 665** earth pin on the left: Part no. **710 661** earth pin on the left: Part no. **710 669**
BB 10 ▸ p. 27		Crimp contact carrier for sleeve contacts Part no. **710 311** Crimp contact carrier for pin contacts Part no. **710 411**		
BHT 6 ▸ p. 158	Female insert, screw terminal, with wire protection, Part no. **710 106 HT** Male insert, screw terminal, with wire protection, Part no. **710 206 HT**			
DD 24 ▸ p. 62		Crimp contact carrier for sleeve contacts Part no. **750 124** Crimp contact carrier for pin contacts Part no. **750 224**		
MOB 6 ▸ p. 75	Female frame MO B6 for 2 contact carriers for pin and sleeve contacts (frame coding A-B) Part no. **770 006** for pin and sleeve contacts (2 x PE) Part no. **770 406**		Male frame MO B6 for 2 contact carriers for pin and sleeve contacts (frame coding A-B) Part no. **770 106** for pin and sleeve contacts (2 x PE) Part no. **770 506**	

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series ...

B 6: page 26

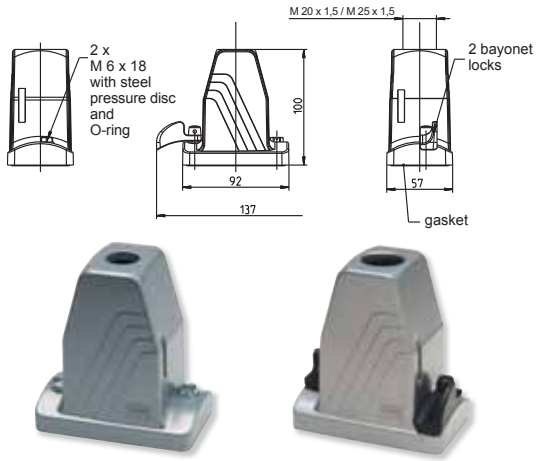
DD 24: page 62

MO: page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

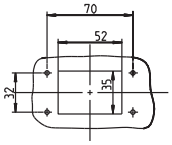
Description	Part no.	Accessories for hoods (screw-mountable / with bayonet lock)	g
Flange sets, zinc			
for screw-mountable hoods with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**717 001 FS**	*similar to picture*	1 52
for hoods with bayonet lock with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**727 001 FS**	*similar to picture*	1 50

Description	Part no.	M
Hoods, screw-mountable		
height 100 mm, **top cable entry**		
grey [1]	**717 106 OV**	1 x M 20
silver [2]	717 106 OVEM	1 x M 20
black [3]	717 106 OVSP	1 x M 20
height 100 mm, **top cable entry**		
grey [1]	**717 206 OV**	1 x M 25
silver [2]	717 206 OVEM	1 x M 25
black [3]	717 206 OVSP	1 x M 25
Hoods with bayonet lock		
height 100 mm, **top cable entry**		
grey [1]	**727 106 OV**	1 x M 20
silver [2]	727 106 OVEM	1 x M 20
black [3]	727 106 OVSP	1 x M 20
height 100 mm, **top cable entry**		
grey [1]	**727 206 OV**	1 x M 25
silver [2]	727 206 OVEM	1 x M 25
black [3]	727 206 OVSP	1 x M 25
Hoods, screw-mountable		
height 100 mm, **side cable entry**		
grey [1]	**717 506 OV**	1 x M 20
silver [2]	717 506 OVEM	1 x M 20
black [3]	717 506 OVSP	1 x M 20
height 100 mm, **side cable entry**	*Thread M 32 or M 40 on request*	
grey [1]	**717 606 OV**	1 x M 25
silver [2]	717 606 OVEM	1 x M 25
black [3]	717 606 OVSP	1 x M 25
Hoods with bayonet lock		
height 100 mm, **side cable entry**		
grey [1]	**727 506 OV**	1 x M 20
silver [2]	727 506 OVEM	1 x M 20
black [3]	727 506 OVSP	1 x M 20
height 100 mm, **side cable entry**	*Thread M 32 or M 40 on request*	
grey [1]	**727 606 OV**	1 x M 25
silver [2]	727 606 OVEM	1 x M 25
black [3]	727 606 OVSP	1 x M 25
Protective caps		
for screw-mountable hoods for mounting side and hood, for snapping on, IP50	**717 698**	
for mounting side, with screw lock, with retaining cord, IP65	**717 702**	
for hoods with bayonet lock for mounting side, with bayonet lock, with retaining cord, IP65	**727 624**	

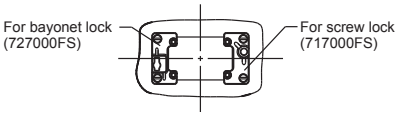
Hoods (screw-mountable / with bayonet lock), for series B 6, BB 10, BHT 6, DD 24, MOB 6

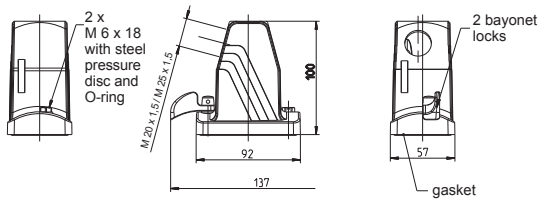


Panel cutout:

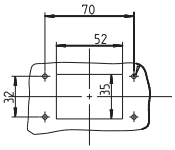


Flange mounting:
1 **flange set** has to be ordered separately:
717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)

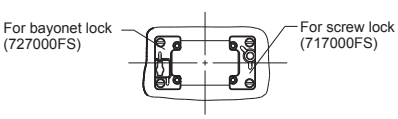




Panel cutout:



Flange mounting:
1 **flange set** has to be ordered separately:
717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)



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[1] grey = standard [2] silver = EMC *(electromagnetic compatibility)* [3] black = harsh environmental conditions

Short overview of installation possibilities for series B 10, BB 18, BHT 10, DD 42, MOB 10 inserts in screw-mountable hoods and hoods with bayonet lock

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Wiring adapters for panel housings
B 10 ▸ p. 28 to 29	Female insert screw terminal with wire protection Part no. **710 110** without wire protection Part no. **710 770** Male insert screw terminal with wire protection Part no. **710 210** without wire protection Part no. **710 774**	Crimp contact carrier for sleeve contacts Part no. **710 310** Crimp contact carrier for pin contacts Part no. **710 410** 	Female insert, IDC terminal Part no. **710 110 01** Male insert, IDC terminal Part no. **710 210 01** 	Wiring adapter female insert earth pin on the right: Part no. **710 658** earth pin on the left: Part no. **710 662** Wiring adapter male insert earth pin on the right: Part no. **710 666** earth pin on the left: Part no. **710 670**
BB 18 ▸ p. 29		Crimp contact carrier for sleeve contacts Part no. **710 318** Crimp contact carrier for pin contacts Part no. **710 418** 		
BHT 10 ▸ p. 160	Female insert, screw terminal, with wire protection, Part no. **710 110 HT** Male insert, screw terminal, with wire protection, Part no. **710 210 HT** 			
DD 42 ▸ p. 63		Crimp contact carrier for sleeve contacts Part no. **750 142** Crimp contact carrier for pin contacts Part no. **750 242** 		
MOB 10 ▸ p. 75	Female frame MO B10 for 3 contact carriers for pin and sleeve contacts (frame coding A-C) Part no. **770 010** for pin and sleeve contacts (2 x PE) Part no. **770 410** 		Male frame MO B10 for 3 contact carriers for pin and sleeve contacts (frame coding A-C) Part no. **770 110** for pin and sleeve contacts (2 x PE) Part no. **770 510** 	

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series . . .

B 10: page 28

DD 42: page 63

MO: page 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	Accessories for hoods (screw-mountable / with bayonet lock)	g
Flange sets, zinc			
for screw-mountable hoods with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**717 001 FS**	*similar to picture* 	1 52
for hoods with bayonet lock with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**727 001 FS**	*similar to picture* 	1 50

Description	Part no.	M

Hoods, screw-mountable

height 100 mm, **top cable entry**

grey [1]	**717 110 OV**	1 x M 20
silver [2]	717 110 OVEM	1 x M 20
black [3]	717 110 OVSP	1 x M 20

height 100 mm, **top cable entry** — *Thread M 32 or M 40 on request*

grey [1]	**717 210 OV**	1 x M 25
silver [2]	717 210 OVEM	1 x M 25
black [3]	717 210 OVSP	1 x M 25

Hoods with bayonet lock

height 100 mm, **top cable entry**

grey [1]	**727 110 OV**	1 x M 20
silver [2]	**727 110 OVEM**	1 x M 20
black [3]	**727 110 OVSP**	1 x M 20

height 100 mm, **top cable entry** — *Thread M 32 or M 40 on request*

grey [1]	**727 210 OV**	1 x M 25
silver [2]	**727 210 OVEM**	1 x M 25
black [3]	**727 210 OVSP**	1 x M 25

Hoods, screw-mountable

height 100 mm, **side cable entry**

grey [1]	**717 510 OV**	1 x M 20
silver [2]	717 510 OVEM	1 x M 20
black [3]	717 510 OVSP	1 x M 20

height 100 mm, **side cable entry** — *Thread M 32 or M 40 on request*

grey [1]	**717 610 OV**	1 x M 25
silver [2]	717 610 OVEM	1 x M 25
black [3]	717 610 OVSP	1 x M 25

Hoods with bayonet lock

height 100 mm, **side cable entry**

grey [1]	**727 510 OV**	1 x M 20
silver [2]	**727 510 OVEM**	1 x M 20
black [3]	**727 510 OVSP**	1 x M 20

height 100 mm, **side cable entry** — *Thread M 32 or M 40 on request*

grey [1]	**727 610 OV**	1 x M 25
silver [2]	**727 610 OVEM**	1 x M 25
black [3]	**727 610 OVSP**	1 x M 25

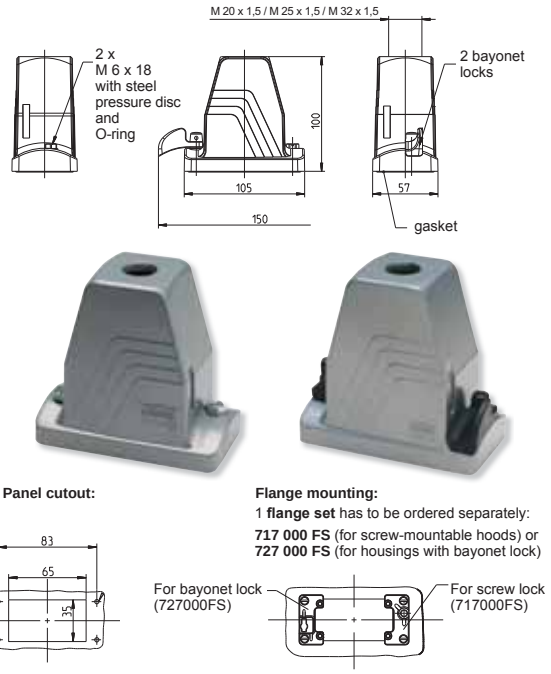
Protective caps

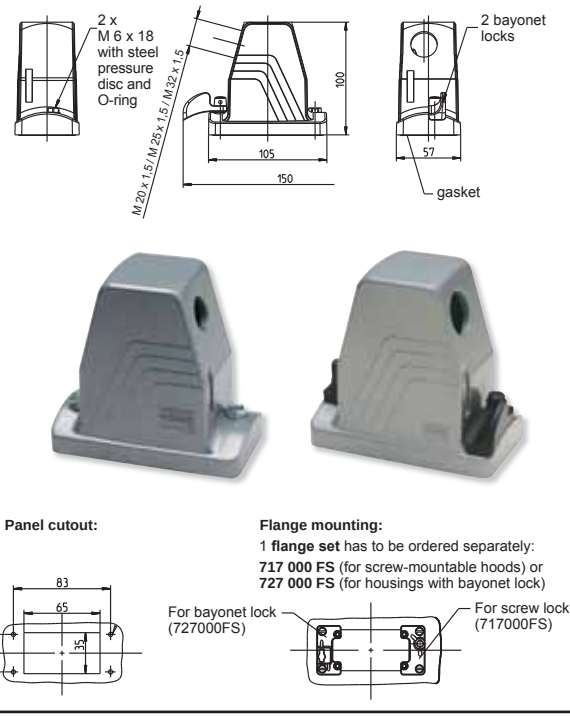
for screw-mountable hoods
for mounting side and hood, for snapping on, IP50 — **717 699**

for mounting side, with screw lock, with retaining cord, IP65 — **717 703**

for hoods with bayonet lock
for mounting side, with bayonet lock, with retaining cord, IP65 — **727 625**

Hoods (screw-mountable / with bayonet lock), for series B 10, BB 18, BHT 10, DD 42 + MOB 10





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318	310	333
318	310	333
318	310	333
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333	333	333
333	333	333
10	10	10
325	325	325
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318	310	333
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310	310	333
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310	310	333
10	10	10
333	333	333
333	333	333
333	333	333
10	10	10
325	325	325
325	325	325
325	325	325
1	1	1
29	29	29
44	44	44
59	59	59

[1] grey = standard [2] silver = EMC *(electromagnetic compatibility)* [3] black = harsh environmental conditions

Short overview of installation possibilities for series B 16, BB 32, BHT 16, BA 6, D 40, DD 72, MOB 16 inserts in screw-mountable hoods & hoods with bayonet lock

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Wiring adapters for panel housings
B 16 ▸ p. 30 to 31	Female insert, screw terminal, Part no. **710 116** Male insert, screw terminal, Part no. **710 216**	Crimp contact carrier for sleeve contacts, Part no. **710 316** Crimp contact carrier for pin contacts, Part no. **710 416**	Female insert, IDC terminal, Part no. **710 116 01** Male insert, IDC terminal, Part no. **710 216 01**	Wiring adapter female insert earth pin on the right: Part no. **710 659** Wiring adapter male insert earth pin on the right: Part no. **710 667** earth pin on the left: Part no. **710 663** earth pin on the left: Part no. **710 671**
BB 32 ▸ p. 31		Crimp contact carrier for sleeve contacts Part no. **710 333** Crimp contact carrier for pin contacts Part no. **710 433**		
BHT 16 ▸ p. 162	Female insert, screw terminal, Part no. **710 116 HT** Male insert, screw terminal, Part no. **710 216 HT**			
BA 6 ▸ p. 40	Female insert, screw terminal, Part no. **710 620** Male insert, screw terminal, Part no. **710 621**			
D 40 ▸ p. 50 to 51		Crimp contact carrier for sleeve contacts, Part no. **720 340** Crimp contact carrier for pin contacts, Part no. **720 440**		Wiring adapter female insert earth pin on the left: Part no. 720 633 Wiring adapter male insert earth pin on the left: Part no. 720 632
DD 72 ▸ p. 64		Crimp contact carrier, for sleeve contacts, Part no. **750 172** Crimp contact carrier for pin contacts, Part no. **750 272**		
MOB 16 ▸ p. 75	Female frame MO B16 for 5 contact carriers for pin and sleeve contacts (frame coding A - E) Part no. **770 016** for pin and sleeve contacts (2 x PE) Part no. **770 416**		Male frame MO B16 for 5 contact carriers for pin and sleeve contacts (frame coding A - E Part no. **770 116** for pin and sleeve contacts (2 x PE) Part no. **770 516**	

▸ The page reference at the left of the table guides you to the detailed overview of inserts.

Contacts for crimp contact carriers of series . . . B 16: p. 30 / **D 40:** p. 51 / **DD 72:** p. 65 / **MO:** p. 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

Description	Part no.	Accessories for hoods (screw-mountable / with bayonet lock)	g
Flange sets, zinc			
for screw-mountable hoods with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**717 001 FS**	*similar to picture*	1 52
for hoods with bayonet lock with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**727 001 FS**	*similar to picture*	1 50

Description	Part no.	M

Hoods, screw-mountable

height 100 mm, **top cable entry**

grey [1]	**717 216 OV**	1 x M 25
silver [2]	717 216 OVEM	1 x M 25
black [3]	717 216 OVSP	1 x M 25

height 100 mm, **top cable entry** — *Thread M 40 on request*

grey [1]	**717 316 OV**	1 x M 32
silver [2]	717 316 OVEM	1 x M 32
black [3]	717 316 OVSP	1 x M 32

Hoods with bayonet lock

height 100 mm, **top cable entry**

grey [1]	**727 216 OV**	1 x M 25
silver [2]	**727 216 OVEM**	1 x M 25
black [3]	**727 216 OVSP**	1 x M 25

height 100 mm, **top cable entry** — *Thread M 40 on request*

grey [1]	**727 316 OV**	1 x M 32
silver [2]	**727 316 OVEM**	1 x M 32
black [3]	**727 316 OVSP**	1 x M 32

Hoods, screw-mountable

height 100 mm, **side cable entry**

grey [1]	**717 616 OV**	1 x M 25
silver [2]	717 616 OVEM	1 x M 25
black [3]	717 616 OVSP	1 x M 25

height 100 mm, **side cable entry** — *Thread M 40 on request*

grey [1]	**717 716 OV**	1 x M 32
silver [2]	717 716 OVEM	1 x M 32
black [3]	717 716 OVSP	1 x M 32

Hoods with bayonet lock

height 100 mm, **side cable entry**

grey [1]	**727 616 OV**	1 x M 25
silver [2]	**727 616 OVEM**	1 x M 25
black [3]	**727 616 OVSP**	1 x M 25

height 100 mm, **side cable entry** — *Thread M 40 on request*

grey [1]	**727 716 OV**	1 x M 32
silver [2]	**727 716 OVEM**	1 x M 32
black [3]	**727 716 OVSP**	1 x M 32

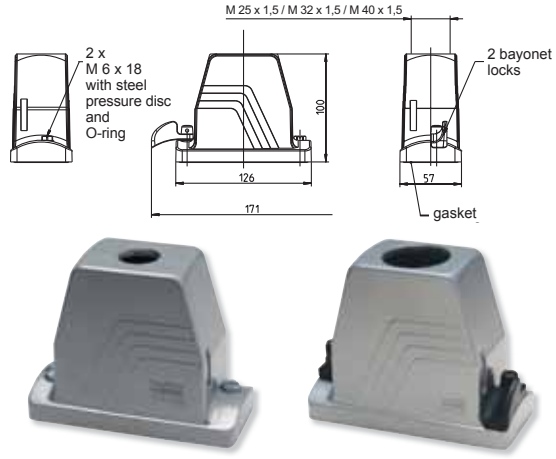
Protective caps

for screw-mountable hoods
for mounting side and hood, for snapping on, IP50 — **717 700**

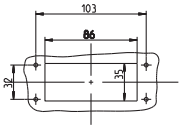
for mounting side, with screw lock, with retaining cord, IP65 — **717 704**

for hoods with bayonet lock
for mounting side, with bayonet lock, with retaining cord, IP65 — **727 626**

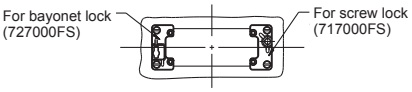
Hoods (screw-mountable / with bayonet lock), for series B 16, BB 32, BHT 16, BA 6, D 40, DD 72, MOB 16

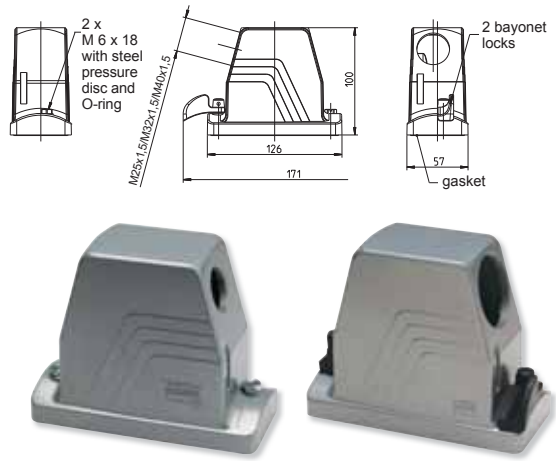


Panel cutout:



Flange mounting:
1 **flange set** has to be ordered separately:
717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)





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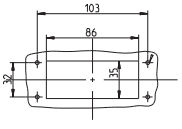
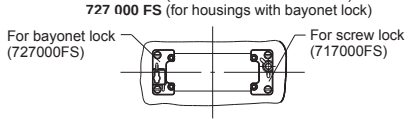


Flange mounting:
1 **flange set** has to be ordered separately:
717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)



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[1] grey = standard [2] silver = EMC *(electromagnetic compatibility)* [3] black = harsh environmental conditions

Short overview of installation possibilities for series B 24, BB 46, BHT 24, D 64, DD 108, MOB 24 inserts in screw-mountable hoods and hoods with bayonet lock

The housings shown on the following pages can be equipped with the inserts listed below:

	Screw terminal inserts	Crimp contact carriers	IDC inserts	Wiring adapters for panel housings
B 24 ▸ p. 32 to 33	Female insert screw terminal with wire protection Part no. **710 124** Male insert screw terminal with wire protection Part no. **710 224** without wire protection Part no. **710 772** without wire protection Part no. **710 776**	Crimp contact carrier for sleeve contacts Part no. **710 324** Crimp contact carrier for pin contacts Part no. **710 424** 	Female insert IDC terminal Part no. **710 124 01** Male insert IDC terminal Part no. **710 224 01** 	Wiring adapter female insert earth pin on the right: Part no. **710 660** Wiring adapter male insert earth pin on the right: Part no. **710 668** earth pin on the left: Part no. **710 664** earth pin on the left: Part no. **710 672**
BHT 24 ▸ p. 164	Female insert, screw terminal, with wire protection, Part no. **710 124 HT** Male insert, screw terminal, with wire protection, Part no. **710 224 HT** 			
BB 46 ▸ p. 33		Crimp contact carrier for sleeve contacts Part no. **710 346** Crimp contact carrier for pin contacts Part no. **710 446** 		
D 64 ▸ p. 53 to 54		Crimp contact carrier for sleeve contacts Part no. **720 364** Crimp contact carrier for pin contacts Part no. **720 464** 		Wiring adapter female insert earth pin on the left: Part no. **720 635** Wiring adapter male insert earth pin on the left: Part no. **720 634**
DD 108 ▸ p. 66		Crimp contact carrier for sleeve contacts Part no. **750 108** Crimp contact carrier for pin contacts Part no. **750 208** 		
MOB 24 ▸ p. 75	Female frame MO B24 for 7 contact carriers for pin and sleeve contacts (frame coding A-G) Part no. **770 024** for pin and sleeve contacts (2 x PE) Part no. **770 424** 		Male frame MO B24 for 7 contact carriers for pin and sleeve contacts (frame coding A-G) Part no. **770 124** for pin and sleeve contacts (2 x PE) Part no. **770 324** 	

▸ **The page reference at the left of the table guides you to the detailed overview of inserts.**

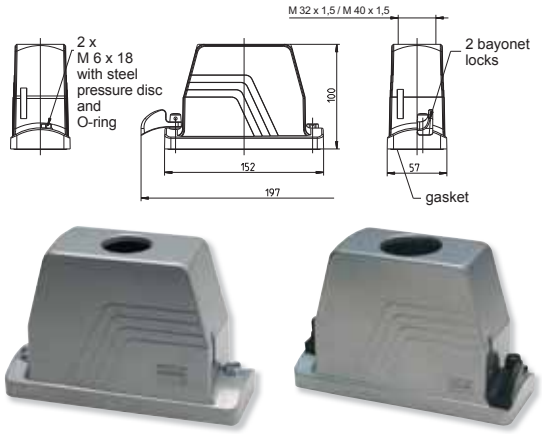
Contacts for crimp contact carriers of series . . . B 24: p. 32 / **D 64:** p. 54 / **DD 108:** p. 67 / **MO:** p. 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101

17

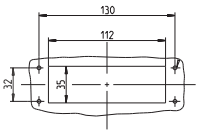
Description	Part no.	Accessories for hoods (screw-mountable / with bayonet lock)	1 g
Flange sets, zinc			
for screw-mountable hoods with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**717 001 FS**	*similar to picture* 	1 52
for hoods with bayonet lock with 2 flanges, 4 screws, 4 serrated lock washers. Male and female insert are mounted directly on the mounting flange - saves the panel housing!	**727 001 FS**	*similar to picture* 	1 50

Description	Part no.	M	g
Hoods, screw-mountable			
height 100 mm, **top cable entry**			
grey [1]	**717 324 OV**	1 x M 32	10
silver [2]	717 324 OVEM	1 x M 32	433
black [3]	717 324 OVSP	1 x M 32	433
			433
height 100 mm, **top cable entry**			
grey [1]	**717 424 OV**	1 x M 40	10
silver [2]	717 424 OVEM	1 x M 40	428
black [3]	717 424 OVSP	1 x M 40	428
			428
Hoods with bayonet lock			
height 100 mm, **top cable entry**			
grey [1]	**727 324 OV**	1 x M 32	10
silver [2]	**727 324 OVEM**	1 x M 32	448
black [3]	**727 324 OVSP**	1 x M 32	448
			448
height 100 mm, **top cable entry**			
grey [1]	**727 424 OV**	1 x M 40	10
silver [2]	**727 424 OVEM**	1 x M 40	443
black [3]	**727 424 OVSP**	1 x M 40	443
			443
Hoods, screw-mountable			
height 100 mm, **side cable entry**			
grey [1]	**717 724 OV**	1 x M 32	10
silver [2]	717 724 OVEM	1 x M 32	443
black [3]	717 724 OVSP	1 x M 32	443
			443
height 100 mm, side cable entry			
grey [1]	**717 824 OV**	1 x M 40	10
silver [2]	717 824 OVEM	1 x M 40	428
black [3]	717 824 OVSP	1 x M 40	428
			428
Hoods with bayonet lock			
height 100 mm, **side cable entry**			
grey [1]	**727 724 OV**	1 x M 32	10
silver [2]	**727 724 OVEM**	1 x M 32	448
black [3]	**727 724 OVSP**	1 x M 32	448
			448
height 100 mm, **side cable entry**			
grey [1]	**727 824 OV**	1 x M 40	10
silver [2]	**727 824 OVEM**	1 x M 40	443
black [3]	**727 824 OVSP**	1 x M 40	443
			443
Protective caps			
for screw-mountable hoods for mounting side and hood, for snapping on, IP50	**717 701**		10 39
for mounting side, with screw lock, with retaining cord, IP65	**717 705**		55
for hoods with bayonet lock for mounting side, with bayonet lock, with retaining cord, IP65	**727 627**		70

Hoods (screw-mountable / with bayonet lock), for series B 24, BB 46, BHT 24, D 64, DD 108 + MOB 24



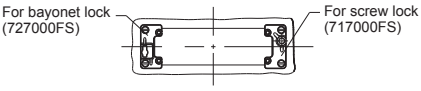
Panel cutout:

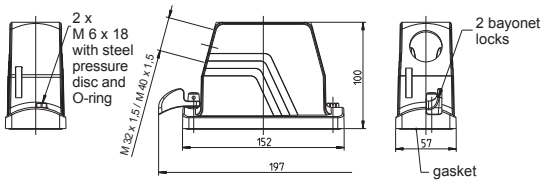


Flange mounting:

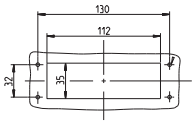
1 **flange set** has to be ordered separately:

717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)





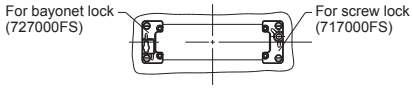
Panel cutout:



Flange mounting:

1 **flange set** has to be ordered separately:

717 000 FS (for screw-mountable hoods) or
727 000 FS (for housings with bayonet lock)



[1] grey = standard [2] silver = EMC *(electromagnetic compatibility)* [3] black = harsh environmental conditions

Series B HT inserts are made of special temperature resistant plastic material, suitable for temperatures up to max. 180 °C incl. self-heating.

The housings of series B HT can also accommodate inserts of other series. This solution is applicable if there are no difficulties with regard to heat but where high quality aluminium die cast has to be used because of harsh environmental application areas.

Series B HT housings are made of sea-water resistant die-cast aluminium alloy.
The seals are made of Viton and are temperature resistant up to 200 °C. The locking levers are made of stainless steel.

Series B HT

Specifications

Regulations:	DIN VDE 0627, DIN VDE 0110, DIN EN 61 984
Number of poles:	6, 10, 16, 24 + PE

Electrical data acc. to DIN EN 61 984:

	16 A	500 V	6 kV	3
Rated current				
Rated voltage				
Rated surge				
Pollution degree				

Material:	high temperature resistant plastic
Temperature range:	up to + 180 °C
Mechanical operating life:	
Mating cycles:	≥ 500

Contacts:

Material:	copper alloy
Surface - hard silver plated:	3 µm Ag
Contact resistance:	< 1 m Ω
Screw type terminal with wire protection:	2,5 mm² (14 AWG)
Torque / testing torque:	0,5 Nm
Wire stripping length:	7 mm

Housings:

Material:	die cast aluminium, sea water resistant
Surface:	powder coated
Double locking levers:	stainless steel
Single locking levers:	stainless steel
Housing seal:	Viton
Temperature range:	up to + 200 °C
Protection degree acc. to DIN EN 60 529 in locked condition:	IP 65

Application advice:

Industrial connectors are electrical devices which must not be connected or disconnected under load!

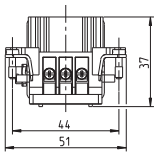
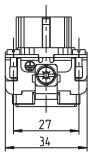
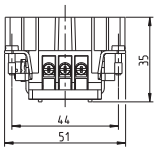
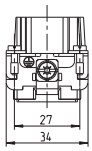
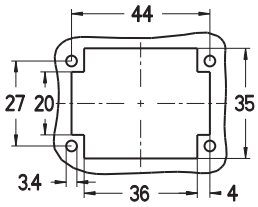
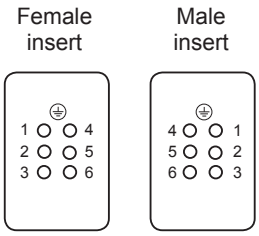
Page

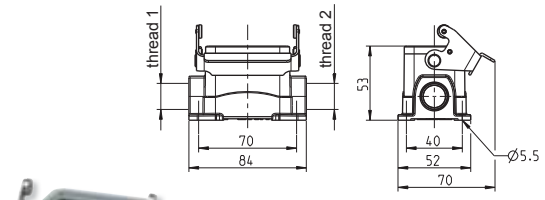
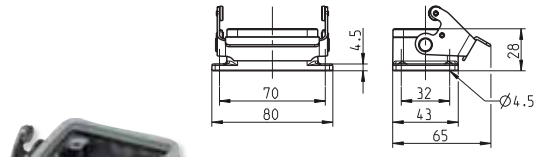
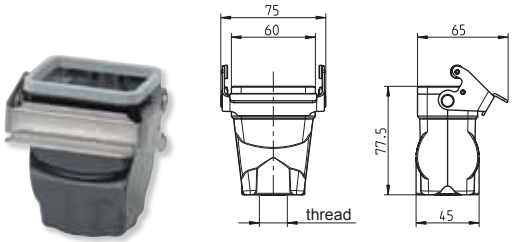
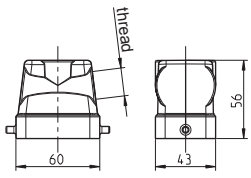
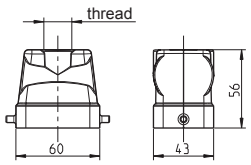
B HT 6 pole + ⏚ 168 - 169

B HT 10 pole + ⏚ 170 - 171

B HT 16 pole + ⏚ 172 - 173

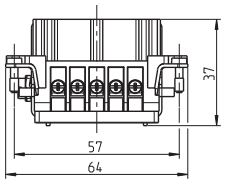
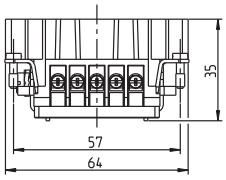
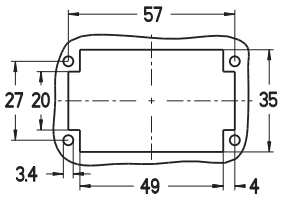
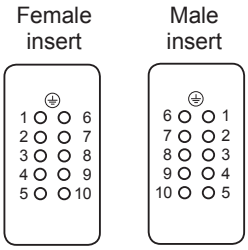
B HT 24 pole + ⏚ 174 - 175

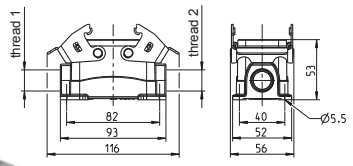
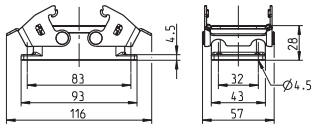
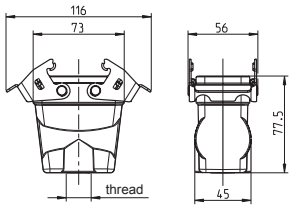
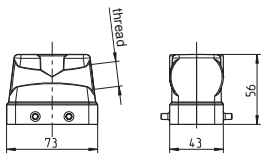
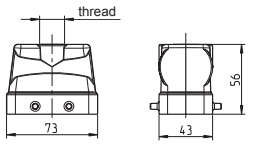
Description	Part no.		Series B HT 6 P + ⏚ 16 A / 500 V	g
Screw terminal inserts B HT 6				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 106 HT**		 	10 54
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 206 HT**		 	10 52
Contact arrangement			Panel cutout  View from termination side 	

Description	Part no.	M	Series B HT 6	g
Housings: single locking system				
Wall mount housing, height 53 mm with single locking system				
with collar	**P 741 406 MS**	1 x M 20		10 226
with collar	**P 741 506 MS**	2 x M 20		226
Panel housing, height 28 mm with single locking system				
Panel cutout 52 x 35 mm	**744 306**			10 135
Coupler hoods, height 77,5 mm with single locking system, top cable entry				
with threaded hole with collar	**P 743 806** P 743 806 MS	1 x M 20		10 188 212
Hoods, height 56 mm for single locking system, side cable entry				
with threaded hole with collar	**P 742 606** P 742 606 MS	1 x M 20		10 110 125
Hoods, height 56 mm for single locking system, top cable entry				
with threaded hole with collar	**P 742 806** P 742 806 MS	1 x M 20		10 110 125

Housings also suitable for inserts / contact carriers of series B 6 and DD 24

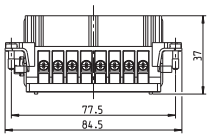
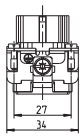
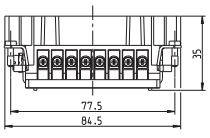
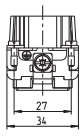
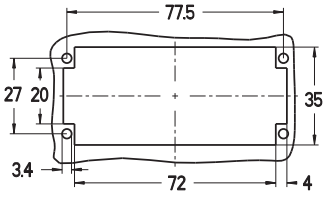
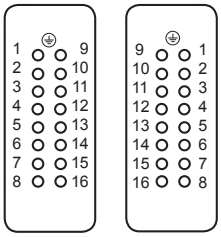
► **Matching screw-mountable hoods see page 159**

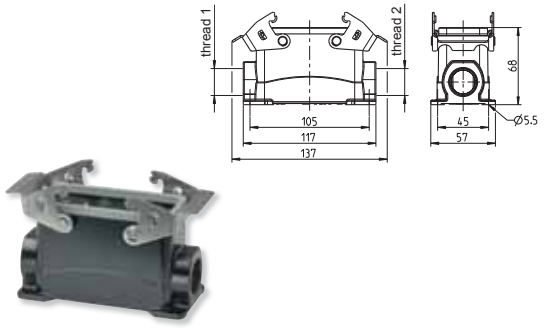
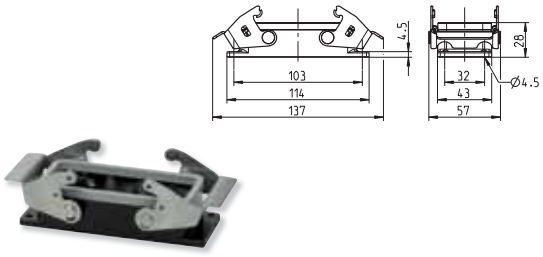
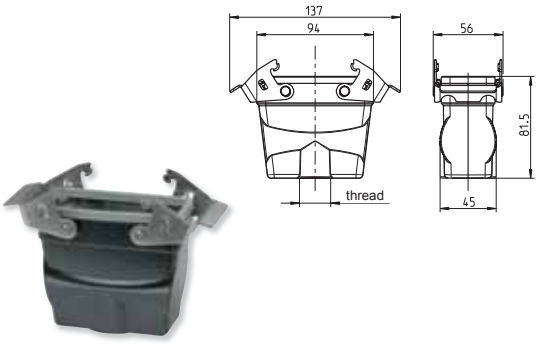
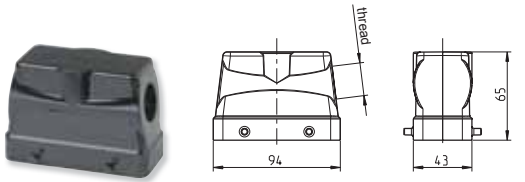
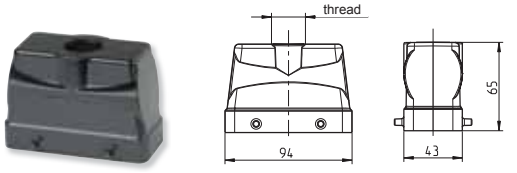
Description	Part no.		Series B HT 10 P + ⏚ 16 A / 500 V	g
Screw terminal inserts B HT 10				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 110 HT**			10 71
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 210 HT**			10 67
Contact arrangement			Panel cutout  View from termination side 	

Description	Part no.	M	Series B HT 10	9
Housings: double locking system				
Wall mount housing, height 53 mm with double locking levers				
with collar	**P 741 010 MS**	1 x M 20		10 260
with collar	**P 741 110 MS**	2 x M 20		259
Panel housing, height 28 mm with double locking levers				10 171
Panel cutout 65 x 35 mm	**744 110**			
Coupler hoods, height 77,5 mm with double locking levers, top cable entry				10 228 243
with threaded hole with collar	**P 743 610** P 743 610 MS	1 x M 20		
Hoods, height 56 mm for double locking system, side cable entry				10 128 143
with threaded hole with collar	**P 742 010** P 742 010 MS	1 x M 20		
Hoods, height 56 mm for double locking system, top cable entry				10 128 143
with threaded hole with collar	**P 742 210** P 742 210 MS	1 x M 20		

Housings also suitable for inserts / contact carriers of series B 10 and DD 42

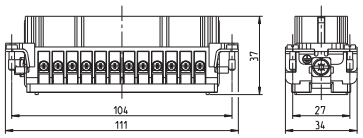
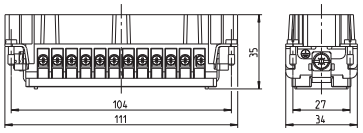
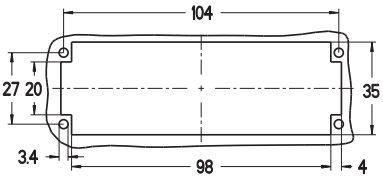
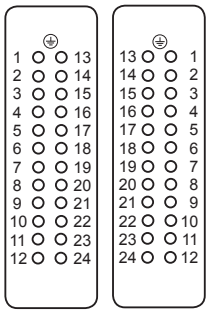
► **Matching screw-mountable hoods see page 161**

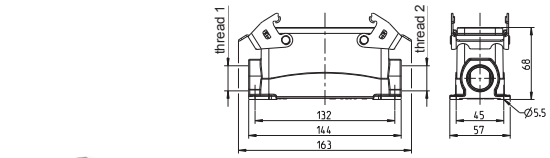
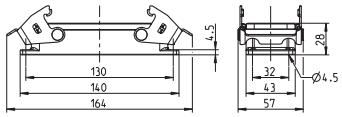
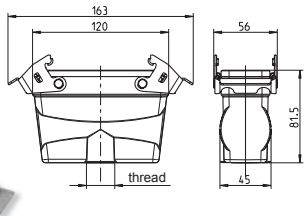
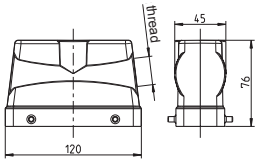
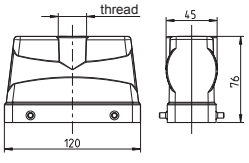
Description	Part no.		Series B HT 16 P + ⏚ 16 A / 400 V	g
Screw terminal inserts B HT 16				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 116 HT**		 	10 96
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 216 HT**		 	10 96
Contact arrangement			Panel cutout  View from termination side 	

Description	Part no.	M	Series B HT 16	9
Housings: double locking system				
Wall mount housing, height 68 mm with double locking levers				10
without threaded hole	**P 741 016 MS**	1 x M 25		370
without threaded hole	**P 741 116 MS**	2 x M 25		368
Panel housing, height 28 mm with double locking levers				10
with recess for labels Panel cutout 86 x 35 mm	**744 116**			189
Coupler hoods, height 81,5 mm with double locking levers, top cable entry				10
with threaded hole with collar	**P 743 616** P 743 616 MS	1 x M 25		261 283
with threaded hole with collar	**P 743 716** P 743 716 MS	1 x M 32		258 291
Hoods, height 65 mm for double locking system, side cable entry				10
with threaded hole with collar	**P 748 016** P 748 016 MS	1 x M 25		164 186
Hoods, height 65 mm for double locking system, top cable entry				10
with threaded hole with collar	**P 748 216** P 748 216 MS	1 x M 25		165 187

Housings also suitable for inserts / contact carriers of series B 16, BA 6, D 40 and DD 72

► **Matching screw-mountable hoods see page 163**

Description	Part no.		Series B HT 24 P + ⏚ 16 A / 400 V	g
Screw terminal inserts B HT 24				
Female insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 124 HT**			10 140
Male insert Screw terminal **with wire protection** 0,5-2,5 mm² (20-14 AWG)	**710 224 HT**			10 120
Contact arrangement			Panel cutout  View from termination side Female insert / Male insert 	

Description	Part no.	M	Series B HT 24	g
Housings: double locking system				
Wall mount housing, height 68 mm with double locking levers				
with collar	**P 741 024 MS**	1 x M 25		10 428
with collar	**P 741 124 MS**	2 x M 25		425
Panel housing, height 28 mm with double locking levers				
with recess for labels Panel cutout 112 x 35 mm	**744 124**			10 202
Coupler hoods, height 81,5 mm with double locking levers, top cable entry				
with threaded hole with collar	**P 743 624** P 743 624 MS	1 x M 25		10 304 326
with threaded hole with collar	**P 743 724** P 743 724 MS	1 x M 32		301 334
Hoods, height 76 mm for double locking system, side cable entry				
with threaded hole with collar	**P 748 024** P 748 024 MS	1 x M 25		10 235 257
with threaded hole with collar	**P 748 124** P 748 124 MS	1 x M 32		230 263
Hoods, height 76 mm for double locking system, top cable entry				
with threaded hole with collar	**P 748 224** P 748 224 MS	1 x M 25		10 236 258
with threaded hole with collar	**P 748 324** P 748 324 MS	1 x M 32		233 266

Housings also suitable for inserts / contact carriers of series B 24, D 64 and DD 108

► **Matching screw-mountable hoods see page 165**

Wieland
230 106
16A 660V~

Series BV

Specifications

Regulations: DIN VDE 0627, DIN VDE 0110, DIN EN 61 984

Approvals: SEV, MEIE, EZÚ

Number of poles: 3, 6, 10, 16, 20 (2 x 10), 26 (1 x 10 + 1 x 16), 32 (2 x 16) + PE

Electrical data acc. to DIN EN 61 984:

	16 A	400/690 V	6 kV	3
Rated current				
Rated voltage conductor - earth				
Rated voltage conductor - conductor				
Rated surge				
Pollution degree				
or	16 A	500 V	6 kV	3

Rated voltage	
Switch contact pins:	250 V
Material:	Glassfibre reinforced polyamide
Temperature range:	- 40 °C up to + 125 °C
Flame class rating acc. to UL 94:	V 0
Mechanical operating life:	
Mating cycles:	≥ 500

Contacts:

Material:	Copper alloy
Surface - hard silver plated:	3 µm Ag
- hard gold plated:	2 µm Au over 3 µm Ni
Contact resistance:	< 1 m Ω
Screw terminal with wire protection:	2,5 mm² (14 AWG)
Torque/Testing torque:	0,5 Nm
Crimp-type terminal:	0,5 - 4 mm² (20 - 12) AWG
Wire stripping length:	7 mm with screw and crimp contacts

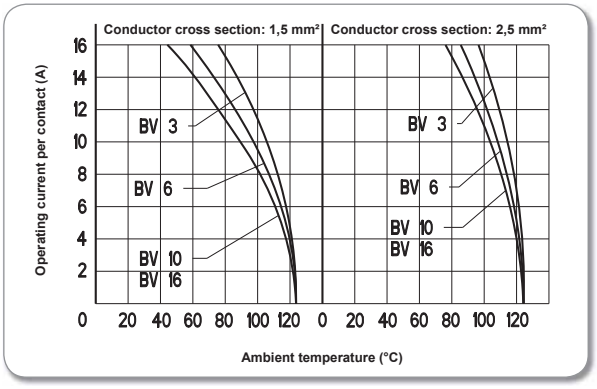
Housings:

Material:	Aluminium die cast
Surface:	Powder coated
Locking levers:	Plastic; locking elements made of stainless steel
Housing seal:	NBR
Temperature range:	- 40 °C up to + 125 °C (depending on cable gland)
Protection degree acc. to DIN EN 60 529:	IP 65 (in locked condition)

Application hint:

Industrial connectors are electrical devices which must not be inserted or separated under load!

The derating diagram (corrected current capacity curve) acc. to DIN IEC 60512 applies to such kind of current which can - depending on ambient temperature and conductor size) circulate through each contact without exceeding the upper limiting temperature.



Page

Inserts
BV 3-pole + ⏚
BV 6-pole + ⏚
BV 10-pole + ⏚
BV 16-pole + ⏚
BV 20-pole + ⏚
BV 26-pole + ⏚
BV 32-pole + ⏚
178

Housings
with double locking levers on housing base
179

Housings
with double locking system on housing top
179

Housings
with single locking system on housing base
179

Series BV - Short Overview

The housings of series BV are no standard housings.

The ribs on the two end walls of the housings have to be removed so that the inserts of series BV (which are provided with a lateral build-in blocking) can be installed.
In addition, there are isolating strips at the inner sides of the long housing walls.

Due to the lateral build-in blocking, the male and female inserts can not be installed in standard housings.

The female inserts are provided with two insertion blockings which prevents plugging with series B inserts.

BV inserts

				Screw terminal inserts		Crimp contact carriers		Female crimp contact (sleeve) Male crimp contact (pin) Crimp contacts acc. to cross sections					
No. of poles	Marked inserts	Volt AC	Ampère	Female inserts	Male inserts	for sleeve contacts	for pin contacts	0,14-0,37 mm²	0,5 mm²	0,75-1 mm²	1,5 mm²	2,5 mm²	4 mm²
				with wire protection		Contacts separately							
3		690 V	16 A	730 103	730 203	730 303	730 403	**Sleeve:** 710 508 **Pin:** 710 518	**Sleeve:** 710 504 **Pin:** 710 514	**Sleeve:** 710 500 **Pin:** 710 510 • 710 515[2)]	**Sleeve:** 710 501 **Pin:** 710 511 • 710 516[2)]	**Sleeve:** 710 502 **Pin:** 710 512 • 710 517[2)]	**Sleeve:** 710 503 **Pin:** 710 513
6				730 106	730 206	730 306	730 406						
10				730 110	730 210	730 310	730 410						
16				730 116	730 216								
20	1 - 10			730 110[1)]	730 210[1)]	730 310[1)]	730 410[1)]						
26	1 - 10			730 110	730 210	730 310	730 410						
	1 - 16			730 116	730 216								
32	1 - 16			730 116[1)]	730 216[1)]								

1) always two inserts required per housing

2) always two shortened switching contact pins required per housing

Dimensions of BV inserts:

of **3-pole** inserts: ▸ see page 28 (B 10-pole)
of **6-pole** inserts: ▸ see page 30 (B 16-pole)
of **10/16-pole** inserts: ▸ see page 32 (B 24-pole)
of **20/26/32-pole** inserts: ▸ see page 36 (B 48-pole)

Series BV - Short Overview

Housings with double locking system on the housing base (HB)

Number of poles	Cable entry	Wall mount housing HB		Panel housing HB		Coupler hoods HB		Hoods HT		Hoods HT	
3	- 1 x M 20 2 x M 20	- P 731 003 MS P 731 103 MS	Height 53	ex stock 734 103 - -	Height 28	- P 733 603 -	Height 61.5	- P 732 003 -	Height 56	- P 732 203 -	Height 56
6	- 1 x M 25 2 x M 25	- P 731 006 MS P 731 106 MS	Height 68	734 106 - -	Height 28	- P 733 606 -	Height 70.5	- P 732 006 -	Height 65	- P 732 206 -	Height 65
10/ 16	- 1 x M 25 2 x M 25 1 x M 32	- P 731 010 MS P 731 110 MS -	Height 68	734 110 - - -	Height 28	- P 733 610 - P 733 710	Height 70.5	- P 732 010 - P 732 110	Height 65	- P 732 210 - -	Height 65

Housings with double locking system on the housing top (HT)

Number of poles	Cable entry	Wall mount housing HB		Panel housing HB		Hoods HT		Hoods HT	
3	- 1 x M 20 2 x M 20	- P 731 203 MS P 731 303 MS	Height 53	734 203 - -	Height 28	- P 733 003 -	Height 56	- P 733 203 -	Height 56
6	- 1 x M 25 2 x M 25	- P 731 206 MS P 731 306 MS	Height 68	734 206 - -	Height 28	- P 733 006 -	Height 65	- P 733 206 -	Height 65
10/ 16	- 1 x M 25 2 x M 25 1 x M 32	- P 731 210 MS P 731 310 MS -	Height 68	734 210 - - -	Height 28	- P 733 010 - P 733 110	Height 65	- P 733 210 - P 733 310	Height 65

Housings with single locking system on the housing base (HB)

Number of poles	Cable entry	Wall mount housing HB		Wall mount housing HB		Panel housing HB		Coupler hoods HB		Hoods HT		Hoods HT	
3	- 1 x M 20 2 x M 20	- P 731 403 MS P 731 503 MS	Height 53	- P 731 603 MS P 731 703 MS	Height 53	734 403 - -	Height 28	- P 733 803 -	Height 61.5	- P 732 603 -	Height 56	- P 732 803 -	Height 56
6	- 1 x M 25 2 x M 25	- P 731 406 MS P 731 506 MS	Height 68	- P 731 606 MS P 731 706 MS	Height 68	734 406 - -	Height 28	- P 733 806 -	Height 70.5	- P 732 606 -	Height 65	- P 732 806 -	Height 65
10 16	- 1 x M 25 2 x M 25 1 x M 32	- P 731 410 MS P 731 510 MS -	Height 68	- P 731 610 MS P 731 710 MS -	Height 68	734 410 - - -	Height 28	- P 733 810 - P 733 910	Height 70.5	- P 732 610 - P 732 710	Height 65	- P 732 810 - -	Height 65
20 26 32	- 1 x M 32 2 x M 32 1 x M 40	- - - -		- - - -		714 448 - - -	Height 41	- - - -		- - - -		- - - -	

Housing dimensions:

of housings for **3-pole** inserts: ▸ see series B 10 (from page 125 on)
of housings for **6-pole** inserts: ▸ see series B 16 (from page 133 on)
of housings for **10/16-pole** inserts: ▸ see series B 24 (from page 143 on)
of housings for **20/26/32-pole** inserts: ▸ see series B 48 (from page 155 on)

Housings with new design also available with:

- **Cable gland** (part no. + MV, e.g. P 731 003 MV)
- **Collar** (part no. + MS, e.g. P 731 003 MS)

Special versions

WALTHER offers individual solutions for special applications.

PROCON industrial connectors offer a great variety of different sizes and numbers of cable entries. Cable entries can either be made from top, side or front.

For special applications, WALTHER PROCON hoods are also available without drilled holes.

Hoods in different heights offer enough space for various solutions.

Protective caps in standard version as well as those especially made for individual applications help to protect the contact carriers against dirt and the contacts against corrosion (silver oxide = non-conductor).

For the use of PROCON industrial connectors with compensation cables for temperature measurements, WALTHER offers the reliable series B crimp contacts made of constantan or iron.

Our sales assistants will be pleased to give you any further assistance you may require.

Accessories

Cable glands

p. 182 - 183

NPT adapters, adapters, labels (clips)

p. 184

Coding accessories, coding possibilities

p. 185

Instructions for connection wit POF cable

p. 186

Thermal crimp contacts

Protective caps

p. 187

Crimping pliers, tools

p. 188

Accessories for series A and B

p. 189 - 190

Wire-through housings

p. 191

Description	Part no.	Pg / M	Accessories	10 g
Cable glands				
Gasket ring to be peeled acc. to diameter, with pressure rings	**710 701** **710 702** **710 703** **710 704** **710 705** **710 706** **710 707** **717 621** **717 622** **717 623** **717 624** **717 625**	Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20 M 25 M 32 M 40 M 50		3 4 5 6 11 22 24 5 6 11 22 24
Gasket ring for flat cable, with pressure rings	**710 708** **710 709** **710 710** **710 711** **710 712**	Pg 16 Pg 21 Pg 29 Pg 36 Pg 42		13 16 21 38 47
Pressure glands brass, nickel-plated	**710 713** **710 714** **710 715** **710 716** **710 717** **710 718** **710 719** **710 720** **717 630** **717 631** **717 632** **717 633** **717 634** **717 635**	Pg 11* Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20* M 20 M 25 M 32 M 40 M 50		3 6 7 9 13 23 37 64 3 6 13 23 37 64
Pressure glands with gasket ring, to be peeled acc. to diameter, with pressure rings	**710 552** **710 542** **710 543** **710 544** **710 545** **710 546** **710 547** **710 548** **717 636** **717 637** **717 638** **717 639** **717 640** **717 641**	Pg 11* Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20* M 20 M 25 M 32 M 40 M 50		4 9 10 13 19 34 60 86 4 9 19 34 60 86
Complete cable glands brass, nickel-plated	**710 572** **710 562** **710 563** **710 564** **710 565** **710 566** **710 567** **710 568** **717 642** **717 629** **717 630** **717 631** **717 632** **717 633**	Pg 11* Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20* M 20 M 25 M 32 M 40 M 50		10 17 22 28 42 73 127 183 10 10 42 73 127 183

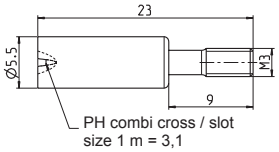
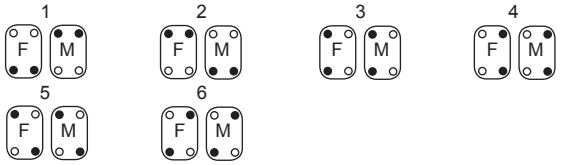
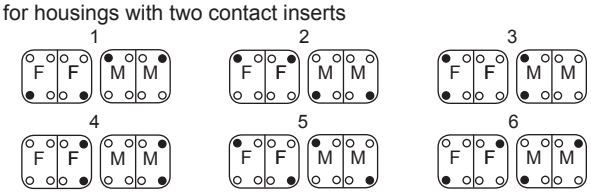
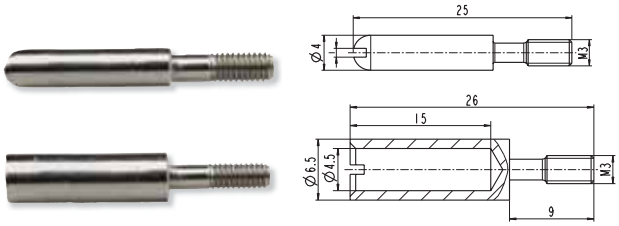
* plastic

Description	Part no.	Pg / M	Accessories	g
Cable glands				
Special cable glands brass, nickel-plated	**710 728** **710 729** **710 730** **710 731** **710 732** **710 733** **710 734** **717 648** **717 649** **717 650** **717 651** **717 652**	Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20 M 25 M 32 M 40 M 50		10 25 32 46 62 92 154 223 32 62 92 154 223
Pressure glands with strain relief, brass, nickel-plated	**710 673** **710 674** **710 675** **710 676** **710 677** **710 678** **710 679** **710 673 20** **710 676 25** **710 677 32** **710 678 40** **710 679 50**	Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20 M 25 M 32 M 40 M 50		10 20 24 37 63 92 136 217 24 63 92 136 217
Blanking plugs brass, nickel-plated	**710 721** **710 722** **710 723** **710 724** **710 725** **710 726** **710 727** **717 658** **717 659** **717 660** **717 661** **717 662** **717 663**	Pg 11 Pg 13,5 Pg 16 Pg 21 Pg 29 Pg 36 Pg 42 M 20* M 20 M 25 M 32 M 40 M 50		10 9 13 19 22 42 55 74 9 13,5 22 42 55 74
EMC cable glands brass, nickel-plated	**750 672** **750 673** **750 674** **750 675** **717 653** **717 654** **717 655** **717 656** **717 657**	Pg 13,5 Pg 16 Pg 21 Pg 29 M 20 M 25 M 32 M 40 M 50		10 27 34 48 64 34 48 64 88 124

* plastic

Accessories

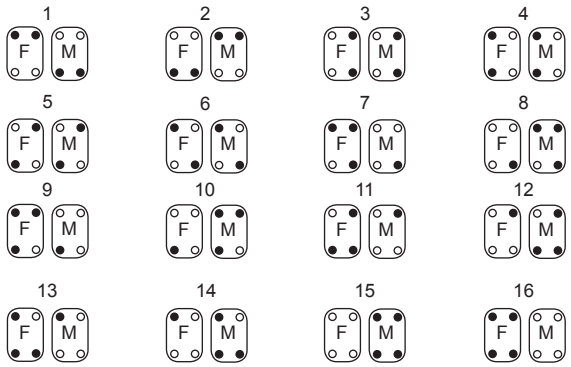
Description	Part no.		10 g
NPT adapters			
Adapters from Pg to NPT thread			
Pg 11 → ⅜ inch	**710 646**		23
Pg 11 → ½ inch	**710 647**		25
Pg 13,5 → ½ inch	**710 648**		36
Pg 16 → ½ inch	**710 649**		37
Pg 21 → ¾ inch	**710 650**		53
Pg 29 → 1 inch	**710 651**		110
Pg 29 → 1¼ inch	**710 857**		171
Pg 36 → 1¼ inch	**710 652**		158
Pg 36 → 1½ inch	**710 858**		170
Pg 42 → 2 inches	**710 863**		160
Pg 48 → 1½ inch	**710 864**		137
Adapters from M to NPT - thread			
M 20 → ⅜ inch	**717 688**		23
M 20 → ½ inch	**717 689**		36
M 25 → ¾ inch	**717 690**		53
M 32 → 1 inch	**717 691**		110
M 32 → 1¼ inch	**717 692**		171
M 40 → 1¼ inch	**717 693**		158
M 40 → 1½ inch	**717 694**		170
M 50 → 1¼ inch	**717 695**		160
M 50 → 2 inches	**717 696**		155
M 63 → 1½ inch	**717 697**		137
Adapters			
Adapters from M to M thread			
M 20 → M 25	**717 664**		10
M 25 → M 32	**717 665**		19
M 32 → M 40	**717 666**		31
		Picture similar	43
Adapters from Pg to M thread			
Pg 11 → M 16	**717 667**		10
Pg 16 → M 20	**717 668**		13
Pg 16 → M 25	**717 669**		32
Pg 21 → M 25	**717 670**		23
Pg 21 → M 32	**717 671**		30
Pg 29 → M 40	**717 672**		41
		Picture similar	90
Adapters from M to Pg thread			
M 16 → Pg 11	**717 673**		10
M 20 → Pg 16	**717 674**		13
M 25 → Pg 21	**717 675**		20
M 32 → Pg 29	**717 676**		28
			60
		Picture similar	

Description	Part no.		Accessories	g
Coding				
Coding pin	**710 600**	ex stock		100 280
Coding examples			for housings with one contact insert  for housings with two contact inserts  ● Coding pin ○ Fixing screw	
F = Female insert M = Male insert				
Guiding pins and sleeves			 Guiding pins and sleeves largely prevent the connector from being inserted / withdrawn at an angle. Inclined position acc. to EN DIN 175301-801 in lengthwise direction ± 5 °. This value is adhered to with the elements.	
Guiding pin	**710 601**			100 280
Guiding sleeve	**710 602**	ex stock		300
Coding examples				

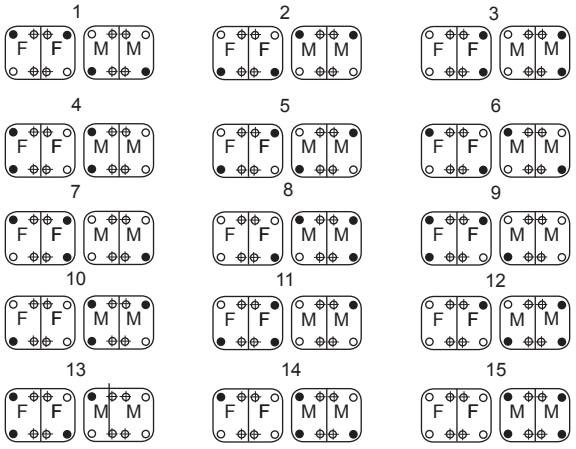
F = Female insert
M = Male insert

● Guiding pin ○ Guiding sleeve ⊕ Fixing screws

for housings with one contact insert / MO retaining frame



for housings with 2 contact inserts / MO retaining frames

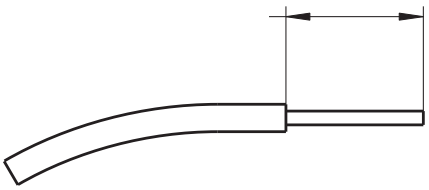


Description	Part no.	Accessories	g
Accessories for POF* conductors			
Crimping plier for lightwave cable made of polymer optical fibre (POF) Ø 1 mm	**720 611**		1 408
Cutting and stripping tool for lightwave cable made of polymer optical fibre (POF) Ø 1 mm	**720 612**		1 511
Safety cutter for WALTHER tool 720 612	**720 614**		1 120

POF* cable: handling instructions

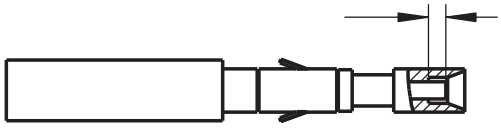
Strip 1,0 mm POF* cable on
min. 14 mm for sleeve contacts and
min. 19 mm for pin contacts.

for sleeve contacts min. 14 mm
for pin contacts min. 19 mm

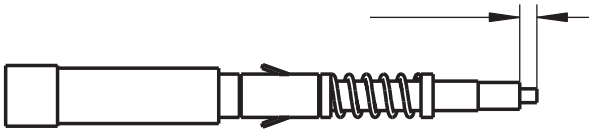


Insert the stripped POF* cable into the sleeve or pin contact as far as it will go.
The fibre should then stick approx. 1 mm out of the contact.

sleeve contact approx. 1,0 mm



pin contact approx. 1,0 mm



*POF = Polymer Optical Fibre

Description	Part no.	Accessories	g

Thermal crimp contacts

- Connectors for temperature measurement cables
- Suitable for crimp contact inserts of series B
- Inserts can be equipped with different contacts:
  Inside inserts, thermal crimp contacts can be combined with standard contacts of series B.

Sleeve contact	**Iron (Fe):**		Conductor size:		100
crimp-type,	**710 504 FE**		0,5 mm²	20 AWG	65
solid, turned	**710 500 FE**		0,75 mm²	18 AWG	68
Material iron: surface gold-plated	**710 501 FE**		1,5 mm²	16 AWG	70
Material isotan: surface uncoated	**Isotan (CuNi):**				
Marking acc. to DIN IEC 584 type J	**710 504 CU**		0,5 mm²	20 AWG	65
Contact resistance ≤ m Ω	**710 500 CU**		0,75 mm²	18 AWG	68
(weight per 100)	**710 501 CU**		1,5 mm²	16 AWG	70
Pin contact	**Iron (Fe):**				100
crimp-type,	**710 514 FE**		0,5 mm²	20 AWG	65
solid, turned	**710 510 FE**		0,75 mm²	18 AWG	68
Material iron: surface gold-plated	**710 511 FE**		1,5 mm²	16 AWG	70
Material isotan: surface uncoated	**Isotan (CuNi):**				
Marking acc. to DIN IEC 584 type J	**710 514 CU**		0,5 mm²	20 AWG	65
Contact resistance ≤ m Ω	**710 510 CU**		0,75 mm²	18 AWG	68
(weight per 100)	**710 511 CU**		1,5 mm²	16 AWG	70

Protective caps

for hoods with double locking system: with latch pins for double levers, gasket and retaining cord				
	Series			10
Plastic	**B 10**	**710 756**		20
	B 16	**710 757**		25
	B 24	**710 758**		31
	B 32	**710 912**		38
Aluminium	**B 10**	**710 756 AL**		60
	B 16	**710 757 AL**		76
	B 24	**710 758 AL**		90
f. hoods w. latching pins f. double locking system: w. double locking levers, gasket + retaining cord				10
Plastic	**B 10**	**710 759**		80
	B 16	**710 760**		85
	B 24	**710 761**		91
	B 32	**710 913**		112
Aluminium	**B 10**	**710 759 AL**		120
	B 16	**710 760 AL**		136
	B 24	**710 761 AL**		150
f. hoods with latch pins f. single locking system: with single locking lever, gasket + retaining cord.				10
Plastic	**B 6**	**710 762**		54
	B 10	**710 763**		61
	B 16	**710 764**		84
	B 24	**710 765**		105
Aluminium	**B 6**	**710 762 AL**		96
	B 10	**710 763 AL**		107
	B 16	**710 764 AL**		138
	B 24	**710 765 AL**		166

Description	Part no.		Accessories	g
Crimping				
Crimping plier for turned contacts 1,5 - 10 mm² 4 indents	**710 610**			1 663
WALTHER crimping plier for conductor sizes of 0,14 - 4,0 mm² only for turned contacts replacement jaws	**710 611** **710 873**			1 510 57
Insertion tool	**710 613**			1 17
Removal tool for D contacts (not suitable for CEPro devices)	**710 614**			1 30
Removal tool for D contacts	**719 612**			1 2
Removal tool for series BB 10 - BB 92	**719 619**			1 34

Crimping machines for drilled contacts on request

Accessories for series A & B

Description	Size	Part no.
PE screws		
for series A 10, A 16, D 15, D 25	M 3,5	**709 001**
for series B, BB, DD, MO, BV, D 40 and D 64	M 4	**719 001**
for series BA 6 - BA 12	M 5	**719 002**
Contact screw		
for series A 3 and A 4	M 3	**709 002**
Fixing screw		
for series A 3, A 4, A 5, D 7 and D 8 Protection degree IP 65	M 3	**700 728**
Locking screw		
with O-ring and pressure disc for screw-mountable hoods for series B 6 - B 24	M 6	**719 003**
Single locking lever		
Plastic, black for series A 3		**709 003**
Plastic, black		
for series B 6	ex stock	**719 016**
for series B 10	ex stock	**719 017**
for series B 16	ex stock	**719 018**
for series B 24	ex stock	**719 019**
Double locking lever		
Plastic, black		
for series B 10, B 16 and B 24	ex stock	**719 015**
Bearing bracket, plastic		
for plastic spring covers, series A and B		**719 004**

Accessories for series A & B

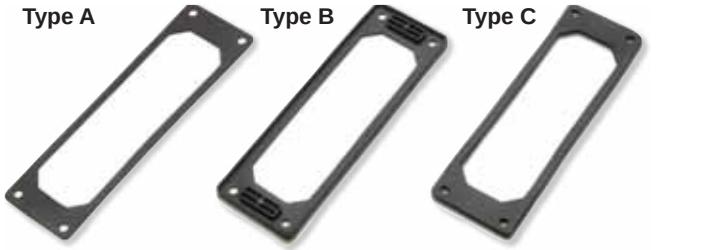
Description	Part no.
Plastic flap lid for bearing bracket	
for series A 10	709 005
for series A 16	709 006
for series A 32	709 007
for series B 6	719 005
for series B 10	719 006
for series B 16	719 007
for series B 24	719 008
for series B 32	719 009

Bearing bracket, aluminium	
for aluminium flap lid series B	719 010

Aluminium flap lid f. bearing bracket	
for series B 6	719 011
for series B 10	719 012
for series B 16	719 013
for series B 24	719 014

Flange gaskets

for series A 3			709 008
for series A 10			709 009
for series A 16			709 010
for series A 32			709 011
	Type A:	**Type B:**	**Type C:**
for series B 6	719 020	719 020 01	719 020 02
for series B 10	719 021	719 021 01	719 021 02
for series B 16	719 022	719 022 01	719 022 02
for series B 24	719 023	719 023 01	719 023 02
for series B 32	719 024		719 024 02
for series B 48	719 025		719 025 02



Standard Neoprene | **for new housing design, profiled** | **for uneven surfaces, sponge rubber/cellular rubber**

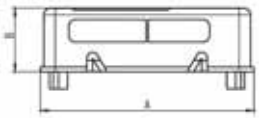
Profile gaskets

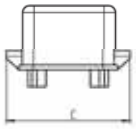
for series A 3	709 012
for series A 10	709 013
for series A 16	709 014
for series A 32	709 015
for series B 6	719 026
for series B 10	719 027
for series B 16	719 028
for series B 24	719 029
for series B 32	719 030
for series B 48	719 031

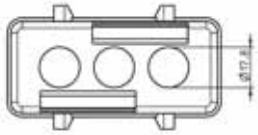
Moulded gaskets
for screw-mountable hoods and hoods with bayonet lock

for series B 6	Standard	719 032
for series B 10		719 033
for series B 16		719 034
for series B 24		719 035
for series B 6	EMC (electromagnetic compatibility)	719 036
for series B 10		719 037
for series B 16		719 038
for series B 24		719 039
for series B 6	for harsh environmental requirements	719 040
for series B 10		719 041
for series B 16		719 042
for series B 24		719 043

Wire-through housings







	A	B	C	Cable entries
750 628	94	28	56	3
750 629	120	28	56	4

Technical data

Wire-through housings
polycarbonate, UL 94 V-O

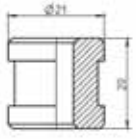
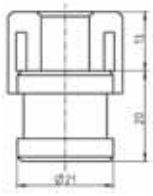
Grommets
Thermoplastic caoutchouc, UL listed

Temperature range
-40 up to +125°C

Protection degree
Protection degree in locked condition,
if correct type of grommets is used: IP 54

Wire-through options
750 628: 3 cable entries
750 629: 4 cable entries

Cable diameter
3 - 16 mm

Description	Cable Ø	Part no.		g
Housings				
Wire-through housings				
3 wire-through options, size B 16		750 628		1 38
4 wire-through options, size B 24		750 629		49
Panel housings				10
Series B 16, B HT 16, BA 6, BV 6, D 40, DD 72	ex stock	714 116		165
Series B 24, B HT 24, BV 10, BV 16, D 64, DD 108	ex stock	714 124		178
Grommets				
Please order separately				10
From 10 mm Ø with strain relief through cable ties (maximum width 8 mm)	3 - 4	750 630		5
	4 - 5	750 631		5
	5 - 6	750 632		5
	6 - 7	750 633		5
	7 - 8	750 634		4
	8 - 9	750 635		4
	9 - 10	750 636		4
	10 - 11	750 637		5
	11 - 12	750 638		5
	12 - 13	750 639		4
	13 - 14	750 640		4
	14 - 15	750 641		3
	15 - 16	750 642		3
For ASI cable	-	750 643		5
Blanking plug	-	750 644		4

CEPro Plugs and Sockets - Power and Control in One Unit

This avoids influence by switching impulses from the power section and a good damping of interference from the outside is achieved.

The application is suitable for a temperature range of - 30 up to + 80 °C with flexing cable, but the flexing radius should not be lower than 7.5 x cable diameter.

The wires in the cables are tested against each other and the power current section is tested to the control part with 3500 V. The outside coating is made of polyurethane.

CEPro plugs and sockets in connection with CEPro cable ensure a safe power and signal transmission, guaranteeing the requirements of a „safe connection“ according to VDE 0100 T 410.

Power contact section

The CEPro plugs and sockets system is similar to the CEE system, the power contacts are arranged in a circle. In CEPro devices, however, phase, neutral and earth positions are arranged at a different angle, which prevents incorrect mating between the CEE and CEPro system.

Control contact section

The pins and sleeves to be used here are from the widely used and tested WALTHER PROCON range of industrial connectors (series B).

The protective collar around the control contacts prevents a voltage flashover, even in highly ionised atmosphere.

Termination method inside the control contact section

The wires are connected to the control contact cross sections by means of crimping. An important advantage of the crimping technique is that a gastight connection can be set up between contact and cable conductor, thereby establishing a constantly low contact resistance.

The crimp contacts engage automatically in the contact chambers and can be detached with a removal tool.

Scope of delivery

CEPro devices are provided with screw terminal power contacts. The control contact section comes without pins and sleeves so that it can be equipped by the user himself with the required crimp contacts.

For the safe contacting, all devices are supplied with bayonet lock, with degree of protection IP 67.

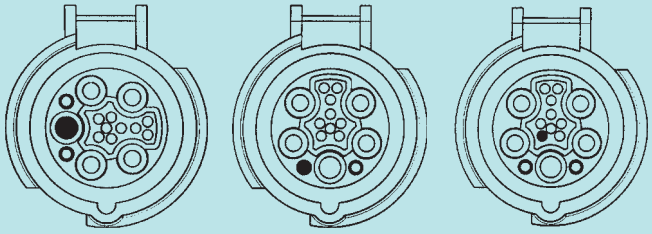
WALTHER CEPro cable

In addition to the CEPro plugs and sockets, WALTHER also offers special hybrid cables which guarantee safe transmission of power and control signals.

All cables consist of fine wire copper strands. The wires are twisted together and shielded in pairs.

CEPro coding

In installations where several CEPro sockets are in close proximity but performing different functions, the sockets and plugs have to be made unmistakeable. This is achieved either by mechanical or electronical coding.



• 9 hour position **• key pin** **• blind sleeve**

Mechanical coding:

- Use of screwable key pins in connection with blanking plugs
- Allocation of different hour positions
- Snapping-in of blind sleeves in the control contact section.

Electronic coding:

Electrical connections are only established in dependence on a programmed control (PLC).
Since the complete control contact section lags behind the power contact section when the plug is inserted, there is a large number of different electrical locking options, already by the mere occupying with different control contact pairs.

CEPro plugs and sockets can transmit both power and control signals simultaneously within one compact system. CEPro devices can be plugged and withdrawn under load.

One plug and socket system instead of two - a **compact solution**.

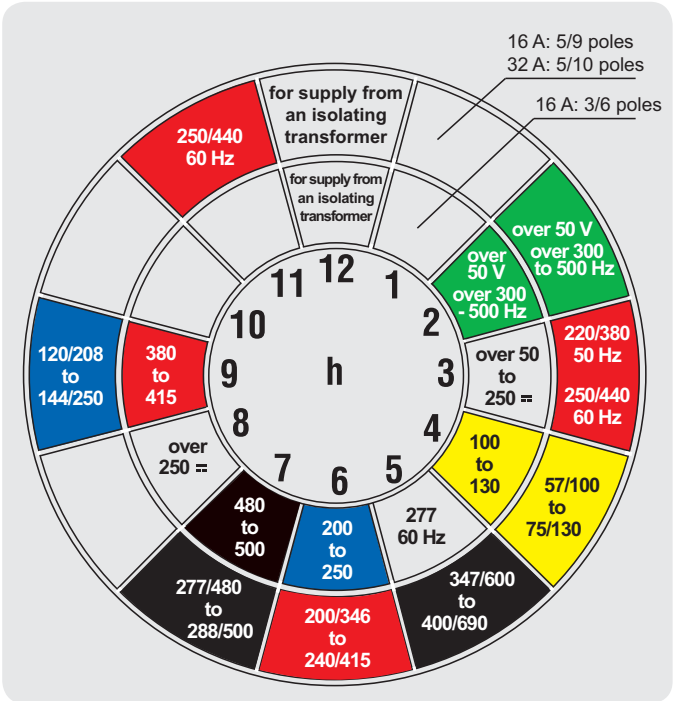
CEPro devices can be plugged and withdrawn under load.

Application areas

This system is ideal for installations and machines which operate or utilise both power and control systems: e.g. production planning systems (PPS) or computer integrated manufacturing (CIM). Other applications are for example connection to end-users with netware backed-up systems, like:

- crane controls
- light- and stage control
- container control etc.

WALTHER CEPro clock



The power voltage coding was adopted from IEC/EN 60 309 and is indicated by the position of the earth contact in relation to the hour position of the keyway and the corresponding colour, as well as the first-to-mate / last-to-break earth contact connection when plugging/withdrawing.

Operating and testing data p. 194-195
Optical waveguide (POF) connection p. 196
POF cable connection p. 197

Sockets
16 and 32 A
p. 199

Plugs
16 and 32 A
p.199

Appliance inlets
16 and 32 A
p. 199

Couplers
16 and 32 A
p. 199

Panel sockets
16 and 32 A
p. 199-201

Contacts for control contact section p. 200
Tools and coding parts p. 201

Accessories for POF conductors p. 202
CEPro cables p. 202

Specifications

Conductor sizes in power contact section

Ratings of the plug and socket device		internal terminals				External terminals if available	
Voltage V	Rated current A	Flexible cables for plugs and couplers, single- or multiple wire cables for appliance inlets		single or multiple-wire cables for socket outlets			
	Series I/II	mm²	AWG	mm²	AWG	mm²	AWG
over 50	16/20	1 - 2,5	17 - 13	1,5 - 4	16 - 11	6	9
	32/30	2,5 - 6	13 - 9	2,5 - 10	13 - 7	10	7

Table 107

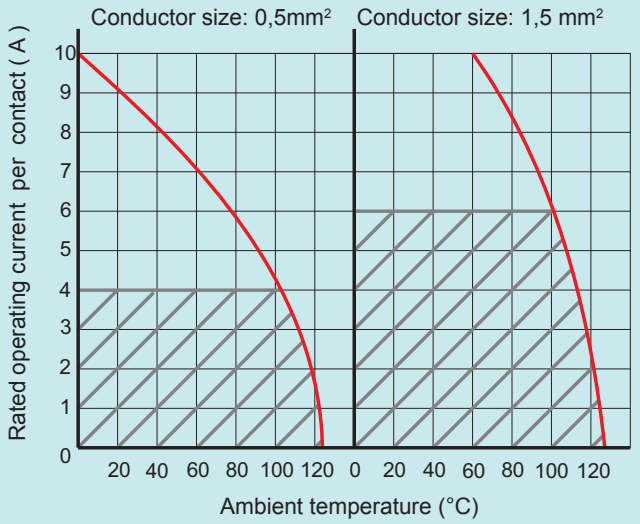
Cross sections and sizes of connection cables (extract)

Source: EN 60309-2,1992

Conductor sizes in control contact section

	z	Conductor sizes marked with „z“	
Sleeve and pin contacts crimp type	1	0,14 - 0,37 mm²	26 - 22 AWG
	2	0,5 mm²	20 AWG
	3	0,75 - 1 mm²	19 - 18 AWG
	4	1,5 mm²	16 AWG
	5	2,5 mm²	14 AWG
Sleeve and pin contact glass fibre cable		POF Ø 1 mm	

Derating diagram for CEPro control contact section



breaking capacity

Operational and test data for CEPro plugs and sockets with CEPro cable

	2 P + ⏚, 16 A + 6 control contacts		3 P + N + ⏚, 16 A + 9 control contacts		3 P + N + ⏚, 32 A + 10 control contacts	
	Power	**Control**	**Power**	**Control**	**Power**	**Control**
Cable: **CEPro cable**	3 x 2,5 mm²	+ 3 x (2 x 0,5 mm²)	5 x 2,5 mm²	+4 x (2 x 0,5 mm²) +1 x 0,5 mm²	5 x 4 mm²	+5 x (2 x 0,5 mm²)
Conductor Resistances R	7,98 Ω / km	39 Ω / km	7,98 Ω / km	39 Ω / km	4,95 Ω / km	39 Ω / km
U_{Rated}	up to 690 V AC	up to 250 V AC	up to 690 V AC	up to 250 V AC	up to 690 V AC	up to 250 V AC
I_{Rated} without breaking capacity	16 A	10 A	16 A	10 A	32 A	10 A
I_{Rated} with breaking capacity	16 A	6 A with 1,5 mm²	16 A	6 A with 1,5 mm²	32 A	6 A with 1,5 mm²
I_{Rated} with breaking capacity	16 A	4 A with 0,5 mm²	16 A	4 A with 0,5 mm²	32 A	4 A with 0,5 mm²
Breaking capacity test ratings						
U_{Test}	750 V AC	250 V AC	750 V AC	250 V AC	750 V AC	250 V AC
I_{Test}	20 A	4 A with 0,5 mm²	20 A	4 A with 0,5 mm²	40 A	4 A with 0,5 mm²
cosφ	0,6	0,9	0,6	0,9	0,6	0,9
Insertions	50	50		50		
Insertions/min	7,5	7,5		7,5		
Normal Use						
Insertions	5000 under load		5000 under load		2000 1000 x under load 1000 x without load	
I_{Rated}	16 A	4 A with 0,5 mm²	16 A	4 A with 0,5 mm²	32 A	4 A with 0,5 mm²
High voltage testing						
U_{Test}	3000 V AC	2000 V AC	3000 V AC	2000 V AC	3000 V AC	2000 V AC
Power contact section against control contact section	3500 V AC		3500 V AC		3500 V AC	
Crosstalk attenuation between power + control contact section						
100 KHz	82 - 96 dB		82 - 96 dB		82 - 96 dB	
500 MHz	15 - 22 dB		15 - 22 dB		15 - 22 dB	
Crosstalk attenuation between control contacts (pair to pair)	90 - 96 dB		90 - 96 dB		90 - 96 dB	
Signal transmission loss per pair (max.)						
100 KHz		0,001 dB		0,001 dB		0,001 dB
500 MHz		1,000 dB		1,000 dB		1,000 dB
Operating capacity						
Wire/wire		120 nF/km		120 nF/km		120 nF/km
Wire/screen		160 nF/km		160 nF/km		160 nF/km

Tests:
Power contact sections acc. to IEC / EN 60309-1; 1997, section 20, 21, 22
Control contact sections acc. to IEC / EN 60309-1; 1997, section 20, 21, 22, VDE 0627, draft 91

CEPro with Optical Waveguide (POF) Connection

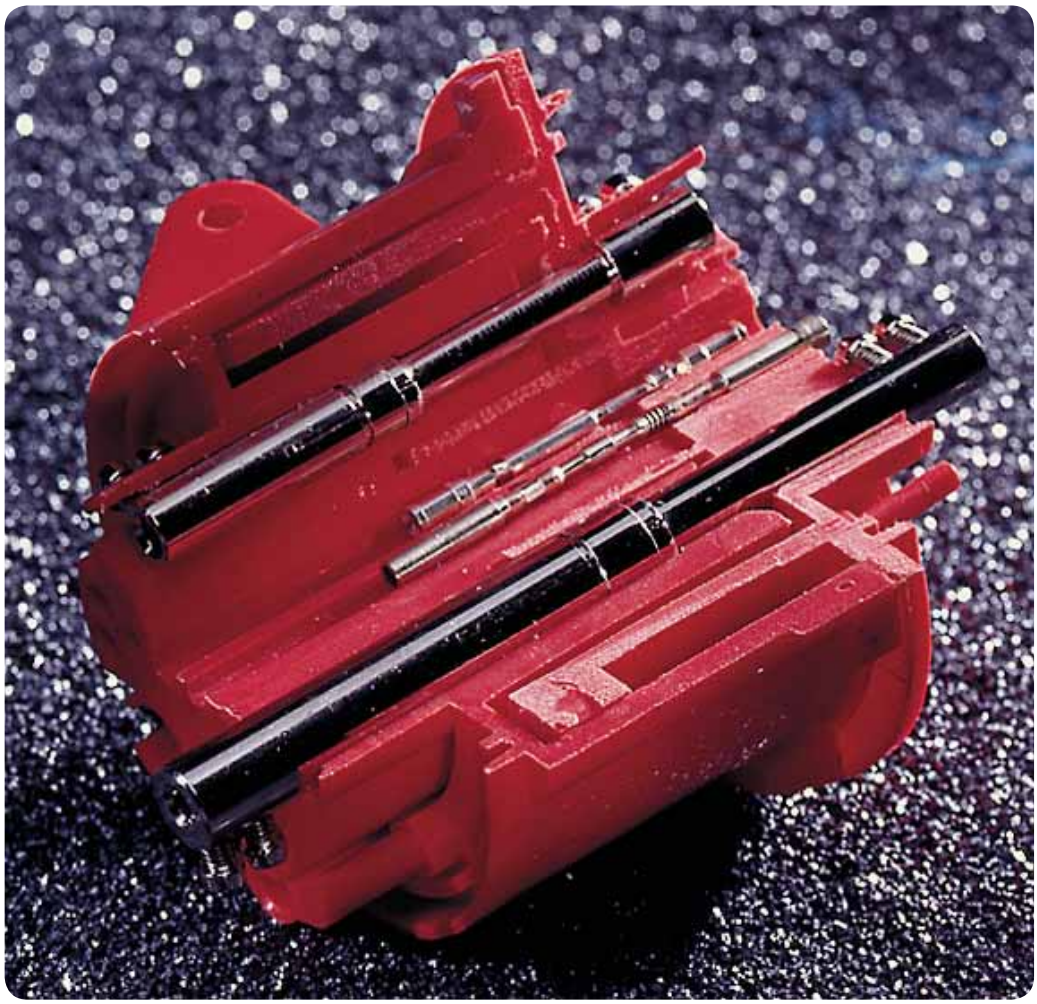
Decentralization and automation require pluggable connections. Master-slaves take over peripheral tasks from plant parts which not only have to be provided with power but which also must have a data connection to the control centre.

The use of glass fibre cables guarantees the maximum transfer of bulk data quantities.

Therefore many control techniques - like fieldbus systems - are increasingly using optocouplers for glass fibre cable transmission. Fieldbus structures may be divided into

- line wiring
- ring wiring
- star wiring
- tree wiring.

For glass fibre cable applications preferably star wiring is used in order to prevent signal losses..



For optical data transmission in plants, polymer optical fibres (POF) are very suitable.

The attenuation is about 0.3 dB/m at a wave-length of 660 nm. With a transmission rate of 93.75 K Bit/s up to 1.5 M Bit/s the usual bus requirements are completely covered.

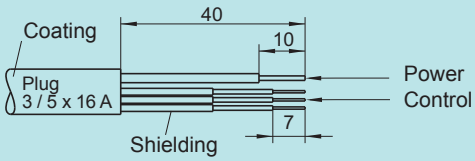
Advantages of
POF connections:

- galvanic isolation
- no potential compensating currents
- no crosstalk or adjacent current interference
- high transmission rate and speed
- highest safety in the explosion-proof sector
- no interference through external magnetic fields
- small cable diameter and low weight

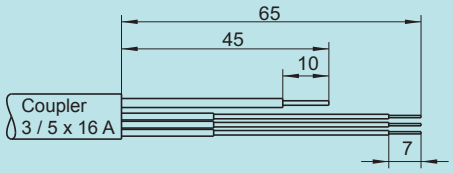
Connection with POF cable

Stripping of copper conductors for CEPro cable without POF:

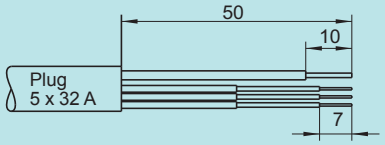
Plug connection
2 P + ⏚
3 P + N + ⏚ **16 A**



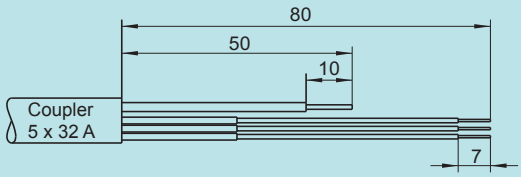
Coupler connection
2 P + ⏚
3 P + N + ⏚ **16 A**



Plug connection
3 P + N + ⏚ **32 A**



Coupler connection
3 P + N + ⏚ **32 A**



Instructions for connection with POF cable

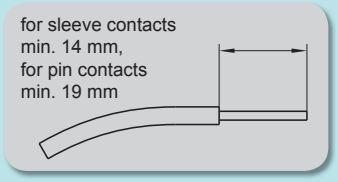
1) Before crimping the POF-cable (Ø 1 mm) to the glass fibre cable contact, the end of the fibre has to be polished.

   Stick the end of the POF-cable into the polishing tool and grind on a plane surface (e.g. a glass plate)..

   Wipe off any residues after polishing

   The best optical damping values are achieved with the wet-polishing procedure.

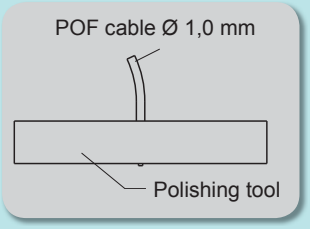
2) Strip the POF cable (Ø 1 mm) on min. 14 mm for glass fibre cable sleeve contacts and on min. 19 mm for glass fibre cable pin contacts.

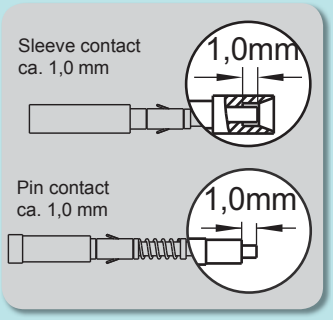


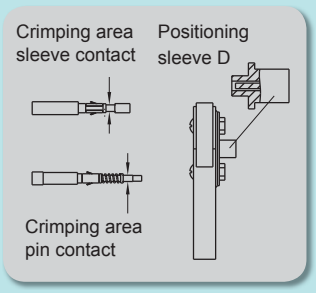
3) Insert stripped POF cable into the sleeve or pin contacts as far as it will go. The fibre should then stick about 1 mm out of the contact.

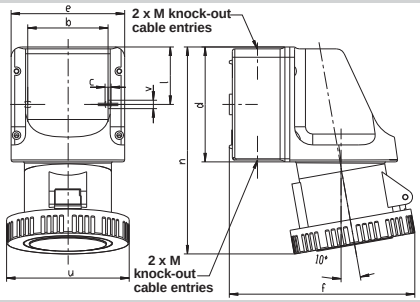
4) Fibre crimping:
   Adjust the positioning sleeve into the corresponding inlet of the crimping tool with the stop screw at 1,45 mm (if necessary check with gauge pin, Ø 1,45 mm, with closed crimping tool).

   Insert the glass fibre cable contact together with the POF cable through the crimp opening of the crimping tool into the positioning sleeves. By imposing pressure on the contact, the fibre inside the contact will be locked in the right position for fibre crimping. Continue to apply pressure until the release mechanism is heard.



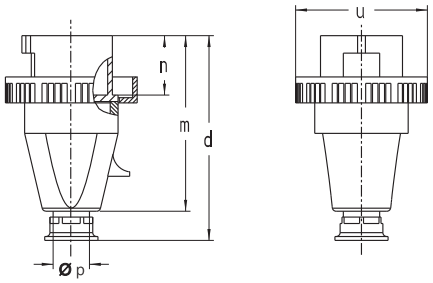






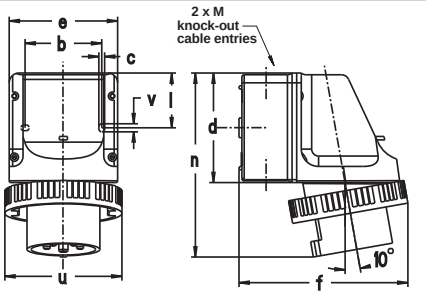
Amp.	16		32
Poles	3	5	5
b	66,5	66,5	66,5
c	5	5	5
d	96	96	96
e	95	95	95
f	140	147	156
l	47,5	47,5	47,5
n	164	164	176
u	72	88	103
v	7	7	7
M	20/25	20/25	20/25

Wall sockets,
internal fixing means,
2 knock-out cable entries on top and bottom,
IP 67



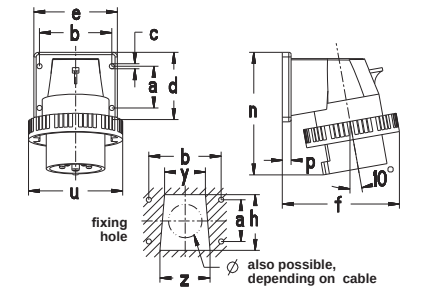
Amp.	16		32
Poles	3	5	5
d	126	139	166
m	110	114	135
n	37	37	46
u	72	88	103
Øp	7,5-12,5	10-19,5	18-24,5

Plugs,
gland entry,
IP 67



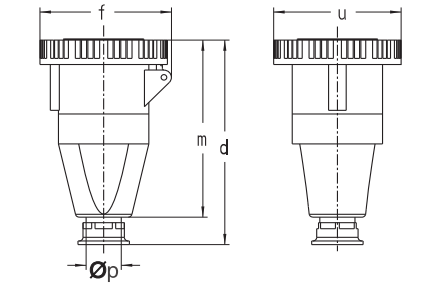
Amp.	16		32
Poles	3	5	5
b	66,5	66,5	66,5
c	5	5	5
d	96	96	96
e	95	95	95
f	140	140	150
l	47,5	47,5	47,5
n	154	154	164
u	72	88	103
v	7	7	7
M	20/25	20/25	20/25

Wall mount appliance inlets,
internal fixing means,
2 knock-out cable entries on top and bottom,
IP 67



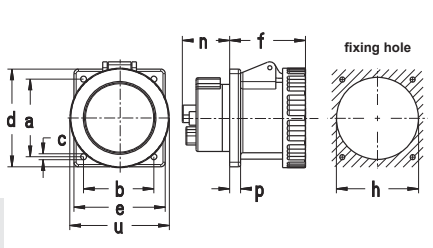
Amp.	16		32
Poles	3	5	5
a	30	40	45
b	55	68	78
c	5,5	5,5	5,5
d	52	66	75
e	65	80	90
f	81	103	117
h	38	52	60
n	98	113	131
p	9,5	9,5	9,5
u	72	88	103
y	30	38	44
z	36	46	54

Panel mount appliance inlets, angled,
with screwed flange housing,
IP 67



Amp.	16		32
Poles	3	5	5
d	136	150	177
f	78	91	105
m	121	126	149
u	72	88	103
Øp	7,5-12,5	10-19,5	18-24,5

Couplers,
gland entry,
IP 67

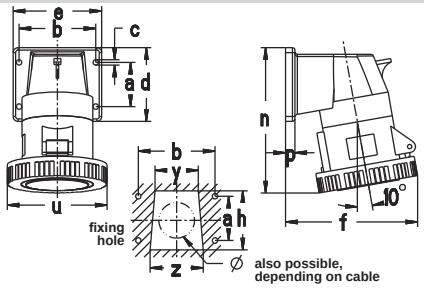


Amp.	16		32
Poles	3	5	5
a	47	60	60
b	47	60	60
c	5,5	5,5	5,5
d	62	80	80
e	62	80	80
f	57	59	70
h	46	67	71
n	22	22	23
p	8,5	8,5	8,5
u	72	88	103

Panel sockets, straight,
with screwed screwed flange housing,
IP 67

2P+E / 3P+N+E	Ampère	Poles	Control contacts maximum	110 V 50 a. 60 Hz 3-pole 4 h	110 V 50 a. 60 Hz 5-pole 4 h	230 V 50 a. 60 Hz 3-pole 6 h	230 V 50 a. 60 Hz 5-pole 9 h	400 V 50 a. 60 Hz 3-pole 9 h	400 V 50 a. 60 Hz 5-pole 6 h	440 V 60 Hz 5-pole 11 h	500 V 50 a. 60 Hz 3-pole 7 h	500 V 50 a. 60 Hz 5-pole 7 h		g
				Part numbers										
Pic. 7119	16	3	6 pcs.*	7 119 304		**7 119 306**		7 119 309					5	407
	16	5	9 pcs.*	7 119 504		7 119 509		**7 119**		7 119 511	7 119 507		5	470
	32	5	10 pcs.*	7 139 504		7 139 509		**7 139**		7 139 511	7 139 507		5	549
Pic. 7219	16	3	6 pcs.*	7 219 304		**7 219 306**		7 219 309					10	137
	16	5	9 pcs.*	7 219 504		7 219 509		**7 219**		7 219 511	7 219 507		10	207
	32	5	10 pcs.*	7 239 504		7 239 509		**7 239**		7 239 511	7 239 507		10	314
Pic. 7618	16	3	6 pcs.*	7 618 304		**7 618 306**		7 618 309					5	312
	16	5	9 pcs.*	7 618 504		7 618 509		**7 618**		7 618 511	7 618 507		5	406
	32	5	10 pcs.*	7 638 504		7 638 509		**7 638**		7 638 511	7 638 507		5	479
Pic. 7618	16	3	6 pcs.*	7 619 304		**7 619 306**		7 619 309					5	161
	16	5	9 pcs.*	7 619 504		7 619 509		**7 619**		7 619 511	7 619 507		5	234
	32	5	10 pcs.*	7 639 504		7 639 509		**7 639**		7 639 511	7 639 507		5	335
Pic. 7319	16	3	6 pcs.*	7 319 304		**7 319 306**		7 319 309					10	178
	16	5	9 pcs.*	7 319 504		7 319 509		**7 319**		7 319 511	7 319 507		10	270
	32	5	10 pcs.*	7 339 504		7 339 509		**7 339**		7 339 511	7 339 507		10	384
Pic. 7419	16	3	6 pcs.*	7 419 304		**7 419 306**		7 419 309					10	159
	16	5	9 pcs.*	7 419 504		7 419 509		**7 419**		7 419 511	7 419 507		10	247
	32	5	10 pcs.*	7 439 504		7 439 509		**7 439**		7 439 511	7 439 507		10	320

* Please order crimp and POF contacts separately



Amp.	16		32
Poles	3	5	5
a	30	40	45
b	55	68	78
c	5,5	5,5	5,5
d	52	66	75
e	65	80	90
f	88	108	123
h	38	52	60
n	109	123	145
p	9,5	9,5	9,5
u	72	88	103
y	30	38	44
z	38	46	54

Panel sockets, angled,
with screwed flange housing,
IP 67

Amp.	16		32
Poles	3	5	5
k	70	86	99
n	41	42	52
u	60	76	89

Protective caps
for plugs and appliance inlets, IP 67
with cord

Contacts for control part:

Sleeve contacts
crimp-type
solid, turned

Pic. 720506

silver-plated	gold-plated	Conductor sizes			Weight per 100:
720 506	**720 686**	0,14 - 0,37 mm²	26 - 22 AWG	100	65
****720 507**	**720 687**	0,5 mm²	20 AWG	100	68
720 508	**720 688**	0,75 - 1 mm²	19 - 18 AWG	100	70
720 509	**720 689**	1,5 mm²	16 AWG	100	72
720 502	**720 690**	2,5 mm²	14 AWG	100	62

Pin contacts
crimp-type
solid, turned

Pic. 720 516

silver-plated	gold-plated	Conductor sizes			Weight per 100:
720 516	**720 691**	0,14 - 0,37 mm²	26 - 22 AWG	100	60
****720 517**	**720 692**	0,5 mm²	20 AWG	100	63
720 518	**720 693**	0,75 - 1 mm²	19 - 18 AWG	100	65
720 519	**720 694**	1,5 mm²	16 AWG	100	67
720 512	**720 695**	2,5 mm²	14 AWG	100	70

Sleeve contact
for POF* connection,
solid, turned

Pic. 720520

				Weight per 100:
720 520	POF* Ø 1 mm		100	89

Pin contact
for POF* connection,
solid, turned

Pic. 720530

				Weight per 100:
720 530	POF* Ø 1 mm		100	74

** for existing CEPro cables

* POF = Polymer Optical Fibre

2P+E / 3P+N+E	Ampère	Poles	Control contacts maximum	110 V 50 a. 60 Hz 3-pole 4 h	110 V 50 a. 60 Hz 5-pole 4 h	230 V 50 a. 60 Hz 3-pole 6 h	230 V 50 a. 60 Hz 5-pole 9 h	400 V 50 a. 60 Hz 3-pole 9 h	400 V 50 a. 60 Hz 5-pole 6 h	440 V 60 Hz 5-pole 11 h	500 V 50 a. 60 Hz 3-pole 7 h	500 V 50 a. 60 Hz 5-pole 7 h		g
				Part numbers										
Pic. 7518	16	3	6 pcs.*	7 518 304		**7 518 306**		7 518 309					5	207
	16	5	9 pcs.*	7 518 504		7 518 509		**7 518**		7 518 511	7 518 507		5	299
	32	5	10 pcs.*	7 538 504		7 538 509		**7 538**		7 538 511	7 538 507		5	412
Pic. 613300	16	3		**613 300**									10	34
	16	5		**613 500**									10	54
	32	5		**633 500**									10	89
				Tools and coding parts:										
Pic. 710 610	**Crimping tool**					**710 610**		for turned contacts 1,5 - 10 mm² 4 indent crimping tool					1	663
Pic. 710 611	**WALTHER crimping tool**					**710 611**		0,14 - 4 mm² - for turned contacts -					1	510
Pic. 720 613	**Insertion tool**					**720 613**							1	35
Pic. 719 612	**Removal tool**					**719 612**							1	55
	Mechanical coding parts:													
Pic. 720696	**Blind sleeve**					**720 696**							1	1
Pic. 720697	**Coding pin for sockets**					**720 697**							1	1
Pic. 720698	**Coding pin for plugs**					**720 698**							1	1

* Please order crimp and POF contacts separately

Accessories for POF connection and CEPro cables

POF connection

Crimping tool

for lightwave cable
made of polymer optical fibre (POF*)
Ø 1 mm

720 611

1 | 408

Cutting and stripping tool

for lightwave cable
made of polymer optical fibre (POF*)
Ø 1 mm

720 612

1 | 511

Safety cutter

for WALTHER tool 720 612

720 614

1 | 120

	Designation	Part no.	
Pic. 7952509	**CEPro cable** 5 x 2,5 mm² + 9 x 0,5 mm²	**795 25 09**	Li 12 Y 5 x 2.5 mm² + Li 12 Y 1 x 0.5 + Li 12 Y 4 x (2 x 0.5 D) - 11 Y 0.6/1 KV Test voltage 3500 V Flexing radius 7.5 x D with frequent flexing. D = outside diameter 16.5 mm. Temperature range -30 up to +80 °C with flexing cable. Control contact section twisted and shielded in pairs, thus high damping of interference from the outside. The PUR coating is microbe and hydrolysis-resistant and has a very high abrasion and impact resistance.
Pic. 7954010	**CEPro cable** 5 x 4 mm² + 10 x 0,5 mm²	**795 40 10**	Li 12 Y 5 x 4 mm² + Li 12 Y 5 x (2 x 0,5 D) - 11 Y 0.6/1 KV Test voltage 3500 V Flexing radius 7.5 x D with frequent flexing. D = outside diameter 19.5 mm. Temperature range -30 up to +80 °C with flexing cable. Control contact section twisted and shielded in pairs, thus high damping of interference from the outside. The PUR coating is microbe and hydrolysis-resistant and has a very high abrasion and impact resistance.
Pic. 7932506	**CEPro cable** 3 x 2,5 mm² + 6 x 0,5 mm²	**793 25 06**	Li 12 Y 3 x 2,5 mm² + Li 12 Y 3 x (2 x 0,5 D) - 11 Y 0,6/1 KV Test voltage 3500 V Flexing radius 7.5 x D with frequent flexing. D = outside diameter 12.5 mm. Temperature range -30 up to +80 °C with flexing cable. Control contact section twisted and shielded in pairs, thus high damping of interference from the outside. The PUR coating is microbe and hydrolysis-resistant and has a very high abrasion and impact resistance

On request: CEPro cable with power and control section
5 x 2,5 mm² + copper wire + optical waveguide (POF)*
5 x 4 mm² + copper wire + optical waveguide (POF)*
3 x 2,5 mm² + copper wire + optical waveguide (POF)*

POF = Polymer Optical Fibre

Information

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The PROCON Industrial Connectors System

The rapid economic development in the fifties of the past century - especially in the construction of machines and industrial plants - required a so far unknown flexibility.

Permanent adaptation to the latest developments in technology demanded modified or new devices. It soon became obvious that only automated plants could provide the necessary precision and quality. Automated processes within machines and plants required equipment which was able to permanently control the processes and update the measuring data. The wiring systems used previously were no longer able to meet these requirements.

This led to the development of rectangular heavy duty connectors. This type of construction offers the best possible use of space for different contact arrangements which determine the different series. In addition the rectangular form is ideal for an easy and space-saving assembly in machine recesses, in profile steels and switch cabinets.

To receive a complete connector, the following components have to be ordered:

Female insert

with screw or crimp terminals *(please order contacts separately)*, insulation displacement connection or push-in terminals (spring clamps).

Male insert

with screw or crimp terminals *(please order contacts separately)*, insulation displacement connection or push-in terminals (spring clamps).

Hood

High or low version, with top or side cable entry, with 1 or 2 locking levers.

Housing base

- Panel housing, with or without cover, plastic or metal, with 1 or 2 locking levers.
- Wall mount housing, high or low version, with or without cover, plastic or metal, with 1 or 2 locking levers and 1 or 2 cable entries
- Coupler hood for flying connections

Accessories

Different cable glands, separately available protective caps, coding pins and sleeves as well as guiding pins and sleeves for coding.

Within the PROCON industrial connector system, one housing is not only assigned to one series. It can accommodate male or female inserts of different series. Instead of plugs and sockets, housings for female or male contact carriers are used. Thus, the electrical designer can always apply the potential to a sleeve contact in case of reverse voltage danger in open controllers.

The PROCON series differ regarding their rated electrical characteristics. Specifications like rated current, rated voltage, rated surge, pollution degree, contact resistance and temperature range are determined by the construction of the contact carriers. For details please refer to the specification sheets of the individual series.

Basic similarities are the termination methods, which apply to all series.

Regulations and Approvals

PROCON industrial connectors are produced in compliance with:

DIN VDE 0627
DIN VDE 0110
IEC 60 664-1
DIN EN 61 984
DIN EN 60 529
DIN EN 175 301-801
DIN/IEC 512.

Most of the indicated PROCON industrial connectors have the following approvals, some of them valid for several countries:

CE marking

According to the European Commission, PROCON industrial connectors as electronic components do not have to be identified with the CE mark (Guidelines on the Application of Council Directive 73/23/EEC - July 1997).

Advantages of PROCON Industrial Connectors

- easy operation due to ingenious locking system
- ergonomically designed handles
- large wiring space - due to different housing sizes
- clearly legible black contact numbers on the inserts
- open, captive screws for easy mounting of inserts
- housings with high-quality powder coating
- easy and space-saving assembly in machine recesses, profile steels and switch cabinets
- fixing dimensions indicated on the housing base
- plant components can be mounted independently at different locations and then be assembled on the spot. Then all electric connections only have to be plugged together
- various coding possibilities available with PROCON industrial connectors of matching series and number of poles prevent the risk of wrong connections.
- parts of a system can be easily removed for maintenance or for testing at other locations and can be quickly replaced if required.
- with PROCON industrial connectors, the putting into operation of systems on-site can be realized exactly on schedule.
- quality assurance acc. to DIN EN ISO 9001
- made in Germany

Application Areas of PROCON Industrial Connectors

PROCON industrial connectors are used in process measuring and control technology as well as in machinery and plant engineering. They are used both for current supply and control functions and are ideal for light engineering and stage technology.

PROCON industrial connectors also serve as interfaces for PCs and diagnostic equipment to transmit operating or monitoring data during operation.

e.g. Switch Cabinet Construction

Screw mountable hoods

This alternative saves the panel housing. Two inexpensive mounting flanges are attached to the switch cabinet wall by means of two screws.
Then the inserts is mounted into the flanges. The mounted hood is then put on the flanges and is fixed with two M6 screws. Protection degree IP 68. Available either with top or side cable entry.

Adapter and cover plates

Standardization in the switch cabinet sector has also involved new developments in the sector of industrial connectors. The advantage of the plug-in system can be ensured only if the panel can be removed from the switch cabinet. Therefore it is necessary that all connections can be easily disconnected from the panel and that the designations on the panels are clearly defined (interfaces, e.g. V 24, RS 485). For this purpose, adapter plates for subminiature connectors are used, which make it possible to mount the contact carriers into the PROCON housing. The disconnectable outlets from the switch cabinets are carried out with panel housings. The switch cabinets have side walls with pre-punched rectangular cutouts for the panel housing B 24. If panel housings of other series are required, they can be adapted to the existing cutout by means of adapter plates. Additionally cover plates can be used, which enable a later upgrade of the switch cabinet.

Wiring adapters, combi snap element

Special contact carriers with wiring adapters are available for the panel housings.

They allow direct measuring during operation, are clear to mark and easily accessible. Together with the combi snap element, the wiring adapters can be mounted on DIN rails and are therefore suitable for use in switch cabinets.

Snap-on mounting adapters

Snap-on mounting adapters replace terminal blocks at those locations where the exits lead to peripheral sub-assemblies or components. Like terminal blocks they can be mounted on DIN rails. In particular the swing-type mounting plate for contact carriers offers many advantages as it allows easy access to the terminals and therefore measuring during operation. In addition, the base of the snap-on mounting adapter offers enough space to accommodate assigned electronic units like optocouplers, protective diodes, filters and similar functions.

The biggest advantage is a disconnectable but nevertheless safe connection of male and female insert.

Housings

PROCON housings can be divided into:

► **Permanently installed housings:**

- Wall mount housings with one or two cable entries
- Panel housings with a bottom opening for installation in switch cabinets

► **Independent housings:**

- Hoods
- Coupler hoods

The user can choose from a great variety of housing heights. They offer enough wiring space for large conductor sizes and provide better heat dissipation because of their larger surface.

Double width Procon housings (series A 32, B 32 and B 48) for universal applications allow the accommodation of two contact inserts/carriers - e.g. two series BA 6 inserts or one series DD 72 insert - together in one housing.
This allows for example the simultaneous transmission of 6 x 35 A power and 72 x signal or control impulses.

Locking systems

Within the different series, PROCON housings are also available with various locking systems. So the user can choose the suitable locking systems for his requirements. These locking systems are available:

- double locking system, IP 65
- single locking system, IP 65
- central locking system, IP 65
- screw locking, IP 68
- bayonet locking, IP 67

The levers of the double and single locking system can be attached at the housing bases. Housing bases with double locking system can only be covered with loose protective caps.

On housing bases with single locking system, the protective cap (plastic or aluminium) can be fixed with hinges and it can be closed tightly with a single locking lever if the connection is separated.

On the housings with central locking system, the locking lever is mounted on the top part - this saves space and is ideal for side-by-side arrangements. No protective covers are available here.

Screw-mountable hoods are fixed with two M 6 screws. Protection degree is IP 68. Unauthorized opening of hoods is made more difficult since tools have to be used. Here, protective covers are available, both for the switch cabinet and the hoods.

On housing tops, also double locking levers can be attached. These can be snapped onto the latch pins of the housing bases.

Furthermore, protective covers can be fixed with hinges on the housing bases. These covers, however, are not lockable.

Termination methods

Screw terminal with wire protection

prevents the slipping out and cutting off of wires in a flexible cable.

Screw terminal without wire protection

is used in installations with prewired cables with pin cable lugs or crimp type pin terminals.

The screw terminal is quick and easy to operate and therefore the most widely used.

The quality of the connection, however, depends very much on the thoroughness of the user. In addition, strong vibrations can also influence the quality of the screw connection.

Crimp terminal

At present, the most perfect way to establish electrical connections is with crimp technique.

Conductors and contacts are exactly coordinated to each other, the crimping tool can be adjusted exactly to the conductor size. Therefore an electrical connection which is constant, reproducible and independent from the user can be established. The crimping spot is gastight, so that no oxygen can get in at the point of current passage. As a result, corrosion can be prevented and a constantly low contact resistance can be guaranteed.

Crimp connections can be established manually, semi or fully automatically. There are crimp contacts without stop spring, meaning that the stop spring is mounted into the contact carrier, and crimp contacts with stop spring, meaning the stop spring is mounted on the contact.

Crimping tools
see page 186

Insulation displacement technique

When using series B inserts with insulation displacement technique, you simply insert the **unstripped** cable into the opened contact sleeve and push back the bladed slide with a screw driver - **ready**.

Coding

In addition to the known coding systems there is a simple and inexpensive plug-in coding part available.

Depending on the size of the pin or sleeve insert, you can use 2, 4 or 8 coding parts.

Advantages

- no stripping of wires
- no wire end ferrules
- no screws

Saves up to 60 % connection time

- Testing point inside the slide
- No splitting of wires with flexible cables
- Compatible with series B screw or crimp inserts

Push-in terminal

The new inserts with push-in terminals have a square wire entry (not rectangular), thus the wire can be introduced in either way.

Flexible wires with wire end ferrule or rigid wires can be plugged directly into the push-in contact inserts, without any tools.

Coding

As with the IDC inserts, coding is also made with the simple and inexpensive plug-in coding part.

Advantages

- Square wire entry
- 2 mm testing point
- reduced expenditure of time for line connection
- easy, quick and inexpensive coding
- stainless steel screws (V2A)

Glass fibre cable connections

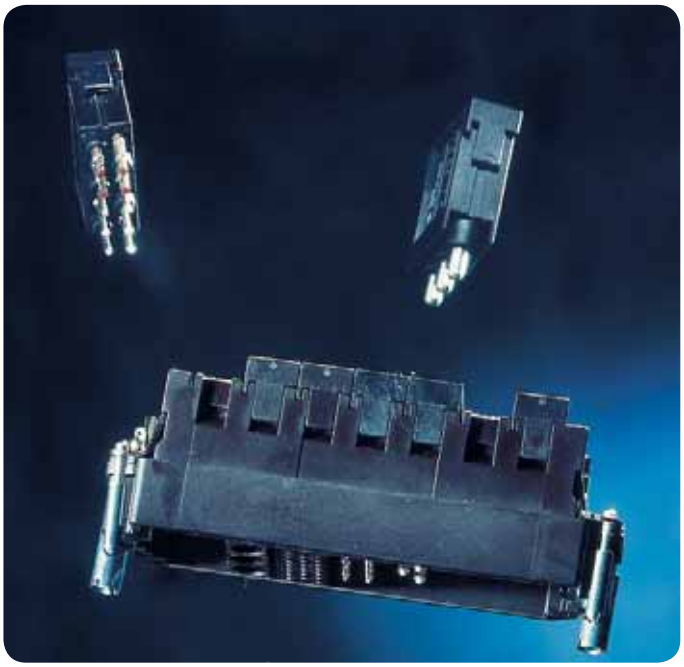
For industrial and plant automatization, the decentralization in an integrated system also requires easily disconnectable power and control circuits.

Master slaves take over peripheral tasks from plant parts which do not only have to be provided with power but which also must have a data connection to the control centre.

There are considerable environmental influences along the data line when data is transferred. Data must not be distorted or get lost. The use of glass fibre cables guarantees the maximum transfer of bulk data quantities.

Many control techniques - like fieldbus systems - are increasingly using optocouplers for glass fibre cable transmission. Fieldbus structures may be divided into line, ring, star or tree wiring. For glass fibre cable applications, preferably star wiring is used in order to prevent signal losses.

With PROCON industrial connectors, the periphery can be integrated in a disconnectable network of power and control, making it possible to transmit power and control in one unit, the control signals either via copper conductor and/or with glass fibre connection. **One unit for multiple systems!**



For the optical data transmission in plants, Polymer Optical Fibres (POF) are suitable. The attenuation is about 0,3 dB/m at a wave length of 660 nm. By comparison: pure quartz glass has 0,007 dB/m at a wavelength of 850 nm. This is due to the significantly higher inhomogeneity of the plastic fibre.

With a transmission rate of 93,75 k bit/s to 1,5 M bit/s, the usual bus requirements are completely covered. In view of electromagnetic compatibility and for short distances, there is a wide range of application possibilities, especially for glass fibre cables.

Special features of transmissions with glass fibre cables

- galvanic isolation
- no equipotential bonding currents
- no interference or crosstalk
- high transmission rate and speed
- highest safety in the explosion-proof sector
- not influenced by external magnetic fields
- small cable diameter and low weight
- very easy stripping of POF conductors

Generally

The choice of connectors is not only determined by considering the current or voltage ratings, but also by their functionality and number of contacts. Importance is rather attached to the area of application and the prevailing installation conditions.

This means that depending on the installation conditions acc. to the standardization, there can be different voltage and current indications for one connector.

Technical terms

► Clearance

Shortest distance in the air between two conducting parts (see DIN VDE 0110-1, section 1.3.2). The clearances are predetermined by the rated surge.

► Creepage distance

Shortest distance along the surface of an insulating material between two conducting parts (see DIN VDE 0110-1, section 1.3.3).

The creepage distances depend on the rated voltage, the pollution degree and the properties of the insulating material.

Creepage distance

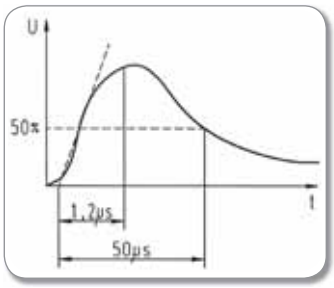
Clearance

► Rated voltage

Fixed voltage value which working value and power value are referenced to. A connector may have more than one value or one rated voltage range.

► Rated surge

The rated surge is determined by means of the surge category and the rated voltage of a mains. It directly determines the value of the rated surge withstand capability tests of a connector *(voltage in wave form in 1,2/50 µs acc. to IEC 60 060-1).*



► Rated current

Fixed current (preferably at an ambient temperature of 40 °C) which a connector can permanently carry (without interruption) and which flows simultaneously through all its contacts which are connected to the largest possible conductors specified, whereas the upper limiting temperature is not being exceeded.

The dependence of the rated current on the ambient temperature is shown in the respective derating diagrams.

► Transient surges

Short-period surges with a duration of some milliseconds or less, oscillating or non-oscillating, normally highly damped (see DIN VDE 0110-1, section 1.3.7.2).

The surge can be caused by a failure, a switching operation, a lightning discharge, or it can be an intentionally generated surge which is necessary for the functioning of a device, respectively component.

► Power frequency withstand voltage

Is a surge as alternating voltage (50/60 Hz). For voltage proof tests it is applied for one minute. The test values in context with the rated surge are shown in the excerpt of table 8, DIN EN 61 984.

► Test voltages (DIN EN 61 984, excerpt from sheet 8)

Impulse withstand voltage kV (1,2/50 µs)	Power frequency withstand voltage kV (50/60 Hz)
0,5	0,37
0,8	0,50
1,5	0,84
2,5	1,39
4	2,21
6	3,31
8	4,26
12	6,6

► CTI value (Comparative Tracking Index)

This value informs about the conductivity of insulating materials and affects the default value of creepage distances. The CTI value has an influence on the creepage distance. The higher the value, the shorter the creepage distance can turn out. By means of the CTI value, plastics can be divided into insulation material groups.

Allocation of insulation material groups:

I	600 ≤ CTI
II	400 ≤ CTI < 600
IIIa	175 ≤ CTI < 400
IIIb	100 ≤ CTI < 175

► Protection degree acc. to IEC 60 529

The protection degree describes the proofness of housings, e.g. of electrical facilities and ranges from IP 00 up to IP 68. The standard protection degree of WALTHER industrial connectors is IP 65.

► Derating diagram acc. to DIN IEC 60 512

The diagrams show the maximum current capacity of components. Display format is a curve showing the current in dependence of the ambient temperature. The current capacity is limited by the thermal properties of both contacts and insulating parts, having an upper limiting temperature which should not be exceeded.

► Pollution degree

The rating of appliances depends on the ambient conditions. Possibly occurring pollutions affect their potential conductivity, combined with humidity they affect the insulating capacity of their surfaces. Over the creepage distance, the pollution degree has an influence on the component construction. For open, unprotected insulations, the pollution degree is defined by means of the ambient conditions.

WALTHER industrial connectors are per default laid out for pollution degree 3.

Pollution degree 1:

In air-conditioned or clean and dry rooms, e.g. computing machinery and measuring devices.

Pollution degree 2:

In residential areas, sales rooms and other business premises, fine mechanical workshops, laboratories, test facilities and medicinally utilized rooms. Due to occasional condensation, a temporary conductivity of the pollution has to be expected.

Pollution degree 3:

In industrial, commercial and agricultural premises, unheated storerooms, workshops, boiler houses and the electrical equipment of assembly machines or machine tools.

Pollution degree 4:

In outdoor places, e.g. devices on wagon roofs of locomotives or tramways.

Excerpt of DIN VDE 0110-1 resp. IEC 60 664-1, section 2.5.1:

Pollution degree 1:

No pollution or only dry, non-conducting pollution is occurring. The pollution has no influence.

Pollution degree 2:

Only non-conducting pollution is occurring. Occasionally, however, temporary conductivity caused by condensation has to be expected.

Pollution degree 3:

Conductive pollution or dry, non-conducting pollution is occurring, which becomes conductive because condensation has to be expected.

Pollution degree 4:

The pollution leads to permanent conductivity caused by conductive dust, rain or snow.

► Surge category

The surge category depends on the mains voltage and the mounting place of a device. It describes the maximum surge withstand capability of the device during a failure in the power supply system, e.g. in case of a lightning stroke.

Via the clearance, the surge category has an influence on the component dimensioning. According to standardization, there are 4 surge categories.

Devices for industrial use, e.g. WALTHER industrial connectors, fall in surge category III.

Excerpt of DIN VDE 0110-1 bzw. IEC 60 664-1, Abs. 2.2.2.1.1

Surge category I:

Devices which are meant for connection to the fixed installation of a building. Outside the device, measures have been taken to limit the transient surges to the respective value, either inside the fixes installation or between the fixed installation and the device.

Surge category II:
Devices which are meant for connection to the fixed electrical installation of a building; e.g. household appliances, portable tools and similar consumers.

Surge category III:
Devices which are part of the fixed installation and devices for which a higher degree of availability is expected.
Examples: distribution boards, power switches, distributions (IEV 826-06-01, including cables, busbars, distribution boxes, switches, sockets) in the fixed installation and devices for industrial use as well as stationary motors which are permanently connected to the fixed installation.

Surge category IV:
Devices which are determined for the use on or near the supply into the electrical installation of buildings, seen from the main distribution towards the mains.
Examples: electricity meters, overcurrent switches and ripple control devices.

Rated surges (DIN EN 61 984, table 5)

Rated voltage of the power supply system (≤ Rated insulation voltage of the equipment)					Preferred values for the rated surge in kV (1,2/50 µs)			
					Surge category			
					I	II	III	IV
Voltage phase-earth, deduced from the rated voltages of the mains for the alternating voltage (effective value) or DC voltage	Effective value of the DC voltage	Effective value of the alternating voltage	Effective value of the alternating voltage, DC voltage	Effective value of the alternating voltage, DC voltage	Special protected levels	Levels for electrical devices (household devices and others)	Levels for distribution circuits	Levels on the input of the system
V	V	V	V	V				
100	66/115	66	60	–	0,5	0,8	1,5	2,5
150	120/208; 127/220	115;120; 127	110;120	220-110; 240-120	0,8	1,5	2,5	4
300	220/380; 230/400; 240/415; 260/440; 277/480	220; 230; 240; 260; 277	220	440-220	1,5	2,5	4	6
600	347/600; 380/660; 400/690; 415/720; 480/830	347; 380; 400; 415; 440; 480; 500; 577; 600	480	960-480	2,5	4	6	8
1000		660; 690; 720; 830; 1000	1000	–	4	6	8	12

► Current-carrying capacity (Derating curve)

The checking of the current-carrying capacity of electrical-mechanical components is prescribed in the DIN IEC 512 T3. Each contact of the component must be able to withstand the specified current for 5 hours with the specified conductor size and a conductor length of at least 500 mm, without hereby exceeding the specified temperature rise compared with the ambient temperature.

The materials used determine the upper limit temperature. Thereby you get a parabolic base curve. Due to variations of both components and material properties, this base curve has to be multiplied with correction factor 0.8.

The connected conductor size determines the maximum permissible current.

The curves shown in the catalogue are already corrected curves. With these curves you can find out the permissible current which may flow simultaneously through each of the contacts.

In practice, however, rarely all of the contacts are loaded equally. Thus it is possible to occasionally let flow higher currents, if less than 20 % of the entirety is loaded.

► Contact resistance

When connectors are used under maximum rating conditions, the influence of the contact resistance is relatively low. Even extremely corroded silver-plated male and female contacts rarely cause any contact problems.

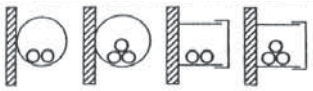
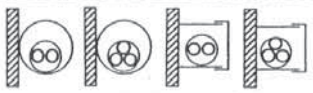
It is different with very small currents under extreme environmental conditions, like e.g. in electroplating works, tunnels, or when cellulose is being processed. The silver oxide layer on the surface of the contacts builds an electric resistance with capacitive, inductive and ohmic shares, and thus distorts the signal curves to such an extent that the subsequent receiver can no longer recognize the signals - considerable and hardly locatable troubles are the result. In such cases gold-plated contacts are recommendable.

With currents < 4 mA and voltages - 5 V gold-plated contacts should generally be used.

► Short circuit strength and high starting currents

Series	Short circuit current (A)					
	Overload duration (s)					
	0,1	0,25	0,5	1	2,5	5
D, DD	380	220	170	120	75	55
A3, 4	800	480	320	230	140	95
A, B, BV	1100	710	590	360	230	165
BA	3100	1700	1200	800	540	360

► Current carrying capacity of copper conductors (in A)

Installation type ▼ / Cross section (mm²) ►	0,25	0,34	0,5	0,75	1	1,5	2,5	4	6	10
 **B 1 Conductors in protective conduits and installation channels**	-	-	-	7,6	10,4	13,5	18,3	25,0	32,0	44,0
 **B 2 Cables and lines in protective conduits or installation channels**	-	-	-	-	9,6	12,0	16,5	23,0	29,0	40,0
C Cables and lines on walls	4,0	5,0	7,1	9,1	11,7	15,2	21,0	28,0	36,0	50,0
E Cables and lines on cable trays	4,0	5,0	7,1	9,1	11,5	16,1	22,0	30,0	37,0	52,0

► Special provision for connectors

If certain preconditions are considered, the standard for connectors offers the possibility to apply a lower pollution degree than that of the entire installation; i.e. that in an environment with pollution degree 3, connectors with the electrical data acc. to pollution degree 2 may be used. Basis hereof is DIN EN 61 984, section 6.19.2.2.

Excerpt from DIN EN 61 984, section 6.19.2.2

In case of a connector with minimum protection degree IP 54 acc. to IEC 60 529, the isolating parts inside the encapsulation may be rated for a lower pollution degree.

This applies also for connectors whose encapsulation is ensured by the connector housing and which are only separated for test/maintenance purposes.

The conditions are fulfilled by:

- a connector with minimum protection degree IP54 (IEC 60 529)
- a connector built into a housing which is only separated for test/maintenance purposes as it is described in the standard.
- a connector built into a housing which in separated condition is protected by a protective cap with at least IP 54.
- a connector inside a switch cabinet with at least IP 54.

A separated connector being exposed to industrial atmosphere for an undefined period of time does not belong to these conditions.

Please note that pollution can also act on the connector from inside a system.

► Choosing protection degree 2 for connectors 2

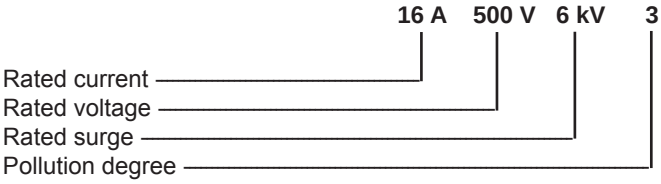
Application examples:

- Connector on a motor drive which is only separated, once a defective motor is being exchanged, even if pollution degree 3 would otherwise be required for the system.
- Connectors on a modular built-up machine, which are only opened for transport and which serve for quicker mounting and safe putting into operation. During transport, the connectors must be protected against pollution by means of protective caps, resp. by an adequate packaging of the system.
- Connectors within an IP 54 switch cabinet. Here you can even do without an IP 54 housing for the connector.

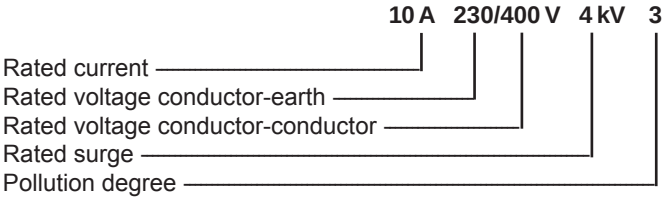
► Specifications of electrical data

The specifications of electrical data for connectors are made acc. to DIN EN 61 984.

Example of an identification for use in an unearthed mains or earthed delta mains (see page 193, table 5 of the DIN EN 61 984):



Example of an identification for exclusive use in earthed mains (see page 193, table 5 of the DIN EN 61 984):



► PG to M changeover

Basis for the changeover of our housings from the PG to the metric system is the international metric standard **DIN EN 50 262:** The PG range **PG 7 up to PG 48** is replaced by the metric range **M 12 up to M 63**.

The outside diameters of the threads do now correspond to the system measures of the mentioned standard - this means a considerable simplification: Now the thread designation concretely indicates the outside diameter in mm - M 20 for example stands for 20 mm outside diameter of the thread.

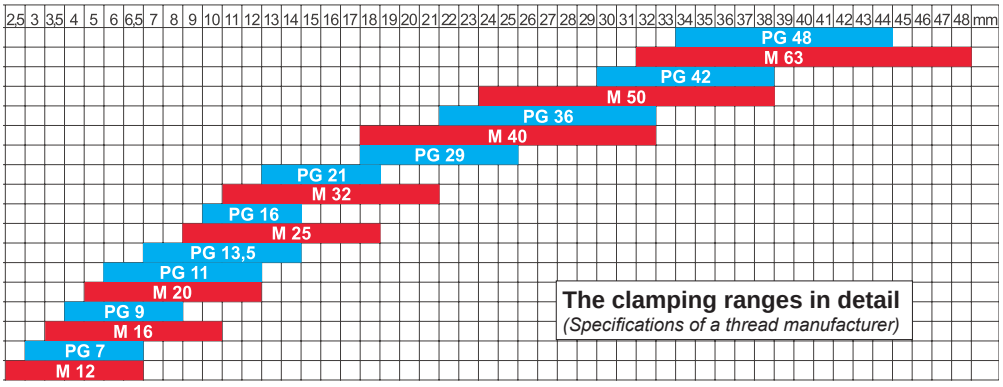
Housings with metric threads can be identified by the Ⓜ on the surface.

The following cross reference table from PG to M threads results from the given housing dimensions.

Cross reference table

PG	M
PG 11	
PG 13,5	M 20
PG 16	
PG 21	M 25
PG 29	M 32
PG 36	M 40
PG 42	M 50

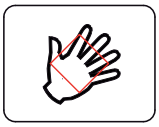
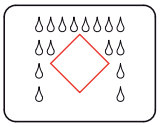
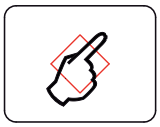
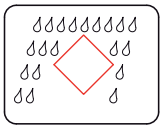
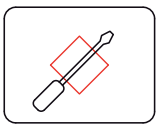
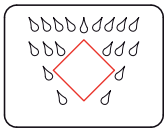
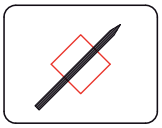
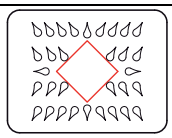
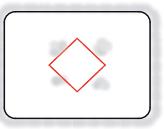
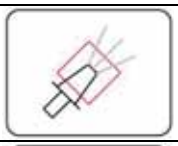
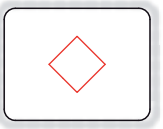
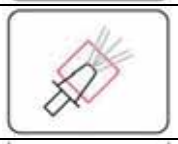
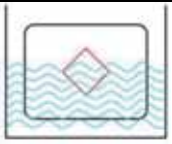
As a result of the cross reference, the maximum connectable cable diameters are becoming smaller due to the use of metric threads.



IP Protection Degrees

Code Letters (International Protection) **First Index Figure** (Protection against solid foreign bodies) **Second Index Figure** (Protection against water)

IP **6** **5**

Index figure	Degree of protection			Index figure	Degree of protection		
0	No protection		No protection against accidental contact, no protection against foreign bodies	**0**	No protection against water		No protection against water
1	Protection against large foreign bodies		Protection against contact with a large area by hand and against foreign bodies Ø > 12 mm	**1**	Drip proof		Protection against vertical water drips
2	Protection against medium sized foreign bodies		Protection against contact with fingers and against foreign bodies Ø > 12 mm	**2**	Drip proof		Protection against diagonally falling water drops (at any angle, up to 15 ° to the vertical)
3	Protection against small foreign bodies		Protection against tools, wires, or similar objects with Ø > 2,5 mm and against foreign bodies Ø > 12 mm	**3**	Spray proof		Protection against spray water from any angle, up to 60 ° to the vertical
4	Protection against grain-shaped foreign bodies		As indicated in index figure 3, but with Ø > 1 mm	**4**	Splash proof		Protected against splashed water from all directions
5	Protection against deposits of dust		Protection against contact, protection against interior dust deposits	**5**	Hose proof		Protection against water jets (nozzle) from all directions
6	Protection against ingress of dust		Total protection against contact, protection against penetration of dust	**6**	Protection against powerful water jets		Protection against powerful water jets from all directions
				7	Protection against immersion		Protected against the ingress of water when temporarily immersed
				8	Protection against submersion		Protected against water pressure when continuously submersed

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Declaration of the Manufacturer

The manufacturer

WALTHER-WERKE
Ferdinand Walther GmbH
Ramsener Straße 6
67304 Eisenberg

herewith declares at his own responsibility that the below listed product

PROCON Heavy Duty Connectors

complies with the following standard:

- DIN EN 61984; VDE 0627:2002-09; VDE 0110

Eisenberg, 05.08.2014

WALTHER-WERKE
Ferdinand Walther GmbH

Managing Director

Quality Management

Customer:
Customer No.:
Order No.:
Part No.:

Remark:
Since they are basic component parts the above mentioned products do not require conformity with the Low Voltage Directive 2006/95/EG, the EMC Directive 89/336/EWG or the Machinery Directive 98/37/EG.

Walther
Elektrotechnische Systeme

Walther-Werke · Ferdinand Walther GmbH · D-67304 Eisenberg

Walther-Werke · Ferdinand Walther GmbH
Ramsener Straße 6 · D-67304 Eisenberg · Germany

CONFIRMATION

We herewith declare that neither our product series CEEtyp nor Procon nor our "E-Mobility" charging devices contain any substances nor exceed the limit values according to the Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), which are prohibited or restricted.

Our products are not affected by the amendments to the RoHS Directive dated 01.07.2008.

Our product series are not concerned by the Directive 2002/96/EC on waste electrical or electronic equipment (WEEE).

Our product series CEEtyp is only concerned by Directive 2002/96/EC (WEEE) for application in categories 1 – 8, but in relation herewith it is not considered as a device as defined by the Directive.

The present declaration has been issued on the base of the currently valid laws and regulations as well as to our best knowledge and to our current state of information. We recommend the addressee or the recipient of this declaration to ask for updates in regular intervals.

The present declaration replaces all previous declarations regarding this issue and it is valid for goods produced from January 2005 on.

Best regards

WALTHER-WERKE
Ferdinand Walther GmbH

Kai Kalthoff

Eisenberg, 05.08.2014

Walther-Werke · Ferdinand Walther GmbH · D-67304 Eisenberg

Walther-Werke · Ferdinand Walther GmbH
Ramsener Straße 6 · D-67304 Eisenberg · Germany

EC Declaration of Conformity

regarding directive 2006/122/EG (**PFOS** and **PAK**) and 1907/2006 (**REACH**)

The manufacturer

WALTHER-WERKE
Ferdinand Walther GmbH
Ramsener Straße 6
67304 Eisenberg

declares that the products that have been delivered to you:

CEEtyp plugs and sockets including switched sockets

CEEtyp socket combinations

AutoboxX consumer boxes

PROCON heavy duty connectors

CEPro plugs and sockets for power and control signals

EIBoxX automation technique

Assemblies for construction sites and other distributors for outside areas

E-Mobility Products

do – to the best of our knowledge – not contain any substances in concentrations whose bringing into circulation is prohibited according to the directives pertaining to these products.

All information is given to the best of our knowledge and belief. It complies with the current state of technology. This statement is no legally bound guarantee.

We hope to have answered your questions to your complete satisfaction and are at your disposal in case you should have any further queries.

WALTHER–WERKE
Ferdinand Walther GmbH

Managing Director

Quality Management

General Conditions

for the supply of products and services of the Electrical and Electronical Industry for Export

I. GENERAL

1. The scope of deliveries and/or services (hereinafter referred to as „Supplies“) shall be determined by the written declarations of both Parties. General terms and conditions of the Purchaser shall apply only if and when expressly accepted by the supplier or the provider of services (hereinafter referred to as „Supplier“) in writing. Verbal agreements are only binding with a written confirmation by us.
2. The Supplier herewith reserves any industrial property rights and/or copyrights pertaining to its cost estimates, drawings and other documents (hereinafter referred to as „Documents“). The Documents shall not be made accessible to third parties without the Supplier's prior consent and shall, upon request, be returned without undue delay to the Supplier if the contract is not awarded to the Supplier. Sentences 1 and 2 shall apply mutatis mutandis to documents of the Purchaser; these may, however, be made accessible to third parties to whom the Supplier may rightfully transfer Supplies.
3. The Purchaser shall have the non-exclusive right to use standard software, provided that it remains unchanged, is used within the agreed performance parameters, and on the agreed equipment. The Purchaser may make one back-up copy without express agreement.
4. Partial Supplies shall be allowed, unless they are unreasonable to accept for the Purchaser.

II. PRICES AND TERMS OF PAYMENT

1. Prices indicated in the trade price list are gross prices per unit in EURO ex works and exclude packaging; value added tax shall be added at the then applicable rate. We reserve the right to invoice prices as valid on the day of shipment.
2. Packaging will be charged at cost. Reusable boxes, frames etc. will be credited at two thirds of the invoiced amount by us in case of carriage paid return. According to law the German Supplier is associated with a packaging re-using system on the territory of the Federal Republic of Germany which disposes the packaging at the location of the commercial enterprises, agencies, manufacturers and craftsmen of the German electrical industry. The name of the disposal association is indicated on the packaging. The disposal system can be used by the German Purchaser. The Purchaser gets information on this system from the supplier.
3. Delivery dates will be fixed to the best knowledge, but are without guarantee. Any claims due to delays in delivery will not be accepted.
4. Payments have to be made in EURO within 30 days net after date of the invoice free at Supplier's paying office. For payments within 10 days we grant 3 % cash discount on the net value. Bank charges, especially for payments from foreign countries, have to be paid by the customer.
5. The Purchaser may set off only those claims that are undisputed or against which no legal recourse is possible.

III. RETENTION OF TITLE

1. Items pertaining to the Supplies („Retained Goods“) shall remain the property of the Supplier until each and every claim the Supplier has against the Purchaser on account of the business connection has been fulfilled. If the combined value of the security interests of the Supplier exceeds the value of all secured claims by more than 20 %, the Supplier shall release a corresponding part of the security interest if so requested by the Purchaser.
2. For the duration of the retention of title, the Purchaser may not pledge the Retained Goods or use them as security, and resale shall be possible only for resellers in the ordinary course of their business and only on condition that the reseller receives payment from its customer or makes the transfer of property to the customer dependent upon the customer fulfilling its obligation to effect payment.
3. The Purchaser shall inform the Supplier forthwith of any seizure or other act of intervention by third parties.
4. Where the Purchaser fails to fulfil its duties, including failure to make payments due, the Supplier shall be entitled to cancel the contract and take back the Retained Goods in the case of continued failure following expiry of a reasonable time set by the Supplier; the statutory provisions that a time limit is not needed remain unaffected. The Purchaser shall be obliged to surrender the Retained Goods.

IV. TIME FOR SUPPLIES; DELAY

1. Times set for Supplies can only be observed if all Documents to be supplied by the Purchaser, necessary permits and releases, especially concerning plans, are received in time and if agreed terms of payment and other obligations of the Purchaser are fulfilled. Unless these conditions are fulfilled in time, times set shall be extended appropriately; this shall not apply where the Supplier is responsible for the delay.
2. If non-observance of the times set is due to force majeure such as mobilization, war, rebellion or similar events, e. g. strike or lockout, such time shall be extended accordingly.
3. If the Supplier is responsible for the delay (hereinafter referred to as „Delay“) and the Purchaser demonstrably suffered a loss therefrom, the Purchaser may claim a compensation as liquidated damages of 0.5 % for every completed week of Delay, but in no case more than a total of 5 % of the price of that part of the Supplies which because of the Delay could not be put to the intended use.
4. Purchaser's claims for damages due to delayed Supplies as well as claims for damages in lieu of performance exceeding the limits specified in No. 3 above shall be excluded in all cases of delayed Supplies even upon expiry of a time set to the Supplier to effect the Supplies. This shall not apply in cases of mandatory liability based on intent, gross negligence, or due to injury of life, body or health. Cancellation of the contract by the Purchaser based on statute shall be limited to cases where the Supplier is responsible for the delay. The above provisions do not imply a change in the burden of proof to the detriment of the Purchaser.
5. At the Supplier's request the Purchaser shall declare within a reasonable period of time whether the Purchaser cancels the contract due to the delayed Supplies or insists on the Supplies to be carried out.
6. If dispatch or shipment is delayed at the Purchaser's request by more than one month after notice of the readiness for dispatch was given, the Purchaser may be charged, for every month commenced, storage costs of 0.5 % of the price of the items of the Supplies, but in no case more than a total of 5 %. The parties to the contract may prove that higher or, as the case may be, lower storage costs have been incurred.

V. TRANSFER OF RISK

1. Even where delivery has been agreed freight free, the risk shall pass to the Purchaser as follows:
   a) if the Supplies do not include assembly or erection, at the time when the Supplies are shipped or picked up by the carrier. Upon request of the Purchaser, the Supplier shall insure the Supplies against the usual risks of transport at the expense of the Purchaser;
   b) if the Supplies include assembly or erection, at the day of taking over in the own works or, if so agreed, after a fault-free trial run.
2. The risk shall pass to the Purchaser if dispatch, shipping, the start or performance of assembly or erection, the taking over in the own works or the trial run is delayed for reasons for which the Purchaser is responsible or if the Purchaser has otherwise failed to accept the Supplies.

VI. SPECIAL VERSIONS

CEEtyp socket outlet combinations, assemblies for construction sites , distribution ACS for festival grounds and market places as well as transformer compact stations are special versions according to customer's requirements. Taking back is not possible.

VII. RECEIVING OF SUPPLIES

The Purchaser shall not refuse to receive Supplies due to minor defects.

VIII. DEFECTS AS TO QUALITY

The Supplier shall be liable for defects as to quality *(„Sachmängel“*, hereinafter referred to as „Defects“,) as follows:

1. All parts or services where a Defect becomes apparent within the limitation period shall, at the discretion of the Supplier, be repaired, replaced or provided again free of charge irrespective of the hours of operation elapsed, provided that the reason for the Defect had already existed at the time when the risk passed.
2. Claims based on Defects are subject to a limitation period of 12 months. This provision shall not apply where longer periods are prescribed by law according to Sec. 438 para. 1 No. 2 (buildings and things used for a building), Sec. 479 para. 1 (right of recourse), and Sec. 634a para. 1 No. 2 (defects of a building) German Civil Code („BGB“), as well as in cases of injury of life, body or health, or where the Supplier intentionally or grossly negligently fails to fulfil its obligation or fraudulently conceals a Defect. The legal provisions regarding suspension of expiration *(„Ablaufhemmung*“), suspension *(„Hemmung*“) and recommencement of limitation periods remain unaffected.
3. The Purchaser shall notify Defects to the Supplier in writing and without undue delay.
4. In the case of notification of a Defect, the Purchaser may withhold payments to a reasonable extent taking into account the Defect occurred. The Purchaser, however, may withhold payments only if the subject-matter of the notification of the Defect occurred is justified beyond doubt. Unjustified notifications of Defect shall entitle the Supplier to have its expenses reimbursed by the Purchaser.
5. The Supplier shall first be given the opportunity to supplement its performance *(„Nacherfüllung*“) within a reasonable period of time.
6. If supplementary performance is unsuccessful, the Purchaser shall be entitled to cancel the contract or reduce the remuneration, irrespective of any claims for damages it may have according to Art. XI.
7. There shall be no claims based on Defect in cases of insignificant deviations from the agreed quality, of only minor impairment of usefulness, of natural wear and tear or damage arising after the transfer of risk from faulty or negligent handling, excessive strain, unsuitable equipment, defective workmanship, inappropriate foundation soil or from particular external influences not assumed under the contract, or from non-reproducible software errors. Claims based on defects attributable to improper modifications or repair work carried out by the Purchaser or third parties and the consequences thereof shall be likewise excluded.
8. The Purchaser shall have no claim with respect to expenses incurred in the course of supplementary performance, including costs of travel and transport, labour, and material, to the extent that expenses are increased because the subject-matter of the Supplies was subsequently brought to another location than the Purchaser's branch office, unless doing so complies with the intended use of the Supplies.
9. The Purchaser's right of recourse against the Supplier pursuant to Sec. 478 BGB is limited to cases where the Purchaser has not concluded an agreement with its customers exceeding the scope of the statutory provisions governing claims based on Defects. Moreover, No. 8 above shall apply mutatis mutandis to the scope of the right of recourse the Purchaser has against the Supplier pursuant to Sec. 478 para. 2 BGB.
10. Furthermore, the provisions of Art. XI (Other Claims for Damages) shall apply in respect of claims of damages. Any other claims of the Purchaser against the Supplier or its agents or any such claims exceeding the claims provided for in this Art. VIII, based on a Defect, shall be excluded.

IX. INDUSTRIAL PROPERTY RIGHTS AND COPYRIGHT; DEFECTS IN TITLE

1. Unless otherwise agreed, the Supplier shall provide the Supplies free from third parties' industrial property rights and copyrights (hereinafter referred to as „IPR“) with respect to the country of the place of destination. If a third party asserts a justified claim against the Purchaser based on an infringement of an IPR with respect to the Supplies made by the Supplier and then used in conformity with the contract, the Supplier shall be liable to the Purchaser within the time period stipulated in Art. VIII No. 2 as follows:
   a) The Supplier shall choose whether to acquire, at its own expense, the right to use the IPR with respect to the Supplies concerned or whether to modify the Supplies such that they no longer infringe the IPR or replace them. If this would be unreasonable to demand from the Supplier, the Purchaser may cancel the contract or reduce the remuneration pursuant to the applicable statutory provisions.
   b) The Supplier's liability to pay damages shall be governed by Art. XI.
   c) The above obligations of the Supplier shall only apply if the Purchaser (i) immediately notifies the Supplier of any such claim asserted by the third party in writing, (ii) does not concede the existence of an infringement and (iii) leaves any protective measures and settlement negotiations to the dis-cretion of the Supplier. If the Purchaser stops using the Supplies in order to reduce the damage or for other good reason, it shall be obliged to point out to the third party that no acknowledgement of the alleged infringement may be inferred from the fact that the use has been discontinued.
2. Claims of the Purchaser shall be excluded if it is itself responsible for the infringement of an IPR.
3. Claims of the Purchaser shall also be excluded if the infringement of the IPR is caused by specifications made by the Purchaser, to a type of use not foreseeable by the Supplier or to the Supplies being modified by the Purchaser or being used together with products not provided by the Supplier.
4. In addition, with respect to claims by the Purchaser pursuant to No. 1 a) above, Art. VIII Nos. 4, 5, and 9 shall apply mutatis mutandis in the event of an infringement of an IPR.
5. Where other defects in title occur, Art. VIII shall apply mutatis mutandis.
6. Any other claims of the Purchaser against the Supplier or its agents or any such claims exceeding the claims provided for in this Art. IX, based on a defect in title, shall be excluded.

X. IMPOSSIBILITY OF PERFORMANCE; ADAPTATION OF CONTRACT

1. To the extent that Supplies are impossible to be carried out, the Purchaser shall be entitled to claim damages, unless the Supplier is not responsible for the impossibility. The Purchaser's claim for damages shall, however, be limited to an amount of 10 % of the value of the part of the Supplies which, owing to the impossibility, cannot be put to the intended use. This limitation shall not apply in the case of mandatory liability based on intent, gross negligence or injury of life, body or health; this does not imply a change in the burden of proof to the detriment of the Purchaser. The right of the Purchaser to cancel the contract shall remain unaffected.
2. Where unforeseeable events within the meaning of Art. IV No. 2 substantially change the economic importance or the contents of the Supplies or considerably affect the Supplier's business, the contract shall be adapted taking into account the principles of reasonableness and good faith. Where doing so is economically unreasonable, the Supplier shall have the right to cancel the contract. If the Supplier intends to exercise its right to cancel the contract, it shall notify the Purchaser thereof without undue delay after having realised the repercussions of the event; this shall also apply even where an extension of the delivery period had previously been agreed with the Purchaser.

XI. OTHER CLAIMS FOR DAMAGES

1. Any claims for damages and reimbursement of expenses the Purchaser may have (hereinafter referred to as „Claims for Damages“), based on whatever legal reason, including infringement of duties arising in connection with the contract or tort, shall be excluded.
2. The above shall not apply in the case of mandatory liability, e. g. under the German Product Liability Act *(„Produkthaftungsgesetz*“), in the case of intent, gross negligence, injury of life, body or health, or breach of a condition which goes to the root of the contract *(„wesentliche Vertragspflichten*“). However, Claims for Damages arising from a breach of a condition which goes to the root of the contract shall be limited to the foreseeable damage which is intrinsic to the contract, unless caused by intent or gross negligence or based on liability for injury of life, body or health. The above provision does not imply a change in the burden of proof to the detriment of the Purchaser.
3. To the extent that the Purchaser has a valid Claim for Damages according to this Art. XI, it shall be time-barred upon expiration of the limitation period applicable to Defects pursuant to Art. VIII No. 2. In the case of claims for damages under the German Product Liability Act, the statutory provisions governing limitation periods shall apply.

XII. VENUE AND APPLICABLE LAW

1. If the Purchaser is a businessperson, sole venue for all disputes arising directly or indirectly out of the contract is Rockenhausen. However, the Supplier may also bring an action at the Purchaser's place of business.
2. Legal relations existing in connection with this contract shall be governed by German substantive law, to the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG).

XIII. SEVERABILITY CLAUSE

The legal invalidity of one or more provisions of this contract shall in no way affect the validity of the remaining provisions. This shall not apply if it would be unreasonable for one of the parties to continue the contract.

walther
Elektrotechnische Systeme

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