

# GOOD TO KNOW EXACT DETAILS.

Greenlee testing and measuring devices help you solve so many questions in a short time. No matter whether wiring diagrams, short circuits or broken cables - you receive detailed information.



# Testing and measuring instruments

Voltage testers	576
Digital multimeter	580
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Temperature measuring devices	594



# IMMEDIATELY TO HAND – VOLTAGE TESTERS

Greenlee voltage testers - whether contactless or two-pole - are practically immediately to hand. Always to hand in pocket format, they measure voltages from 5 V to 1000 V AC and 12 V to 750 V AC/DC. If voltage is present, the tester emits an acoustic or optical signal as a warning. Ergonomically-shaped handles ensure the best grip, even when used outdoors. Stay safe with our Greenlee brand.



#### In brief

- ▶ Practical pocket format
- ▶ Automatic warning signals when voltage is present
- ▶ Also for contactless detecting
- ▶ Suitable for outdoor use



#### ► Contactless measuring with the GT-16

The GT-16 is the practical pen-shaped voltage tester. Automatic signalling in case of voltage and an integrated self-test make the GT-16 a tester with maximum user safety.

- Readily detects broken cables
- Maximum safety through CAT IV 1000 V
- Integrated self-test for optimum safety
- Optical and acoustic signal in case of voltage
- Select from various voltage levels via adjustable sensitivity
- Ergonomic handle
- Limited Lifetime Warranty



#### ► Two-pole measuring with the GT-85NE

The Greenlee GT-85NE is the ideal solution for voltages from 12 V to 750 V AC/DC. Able to withstand adverse operating conditions.

- Wider AC and DC voltage measurement range
- Acoustic signal with voltages maximises safety
- Automatic phase sequence indicator
- Water and dust proof
- Drop-resistant from 1 m
- Suitable for outdoor use
- Limited Lifetime Warranty



#### GT-12A Contactless voltage tester 50 - 1000 V



##### Characteristics

- Contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- Fast, easy replacement of batteries
- Automatic self test

##### Technical data

Frequency range	50 - 500 Hz
Voltage range	50 - 1000 V AC
Measuring category	CAT IV 1000 V

Item	Part No.
GT-12A Contactless voltage tester 50 - 1000 V	52063422

Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

#### GT-16 Adjustable, contactless voltage tester 5 - 1000 V



##### Characteristics

- Contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- Optimum handling due to ergonomically-shaped handle
- Fast, easy replacement of batteries
- Automatic self test
- Adjustable sensibility by rotary switch

##### Technical data

Frequency range	50 - 500 Hz
Voltage range	5 - 1000 V AC
Measuring category	CAT IV 1000 V

Item	Part No.
GT-16 Adjustable, contactless voltage tester 5 - 1000 V	52033580

Scope of supply	Part No.	Page
Battery 1 x 1.5 V AAA		

## GT-55NE Bipolar voltage tester with LED display



### Characteristics

- LED Display 12, 24, 50, 120, 230, 400, 750 V AC/DC
- Power LED for measuring point illumination
- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Drop proof from 1 m
- Polarity indicator, loud beeper
- IP2X contact protection
- IP65 - splash water proof and dust tight

Technical data		
Frequency range	45 - 65 Hz	
Voltage range	12 - 750 V AC/DC	
Measuring category	CAT III 1000 V, CAT IV 600 V	
Item	Part No.	
GT-55NE Bipolar voltage tester with LED display	<b>52049408</b>	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		
Accessories	Part No.	Page
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	593
Replacement tips	52034234	

## GT-85NE Bipolar voltage tester with LCD display



### Characteristics

- LC display with backlit display
- Resistance measurement to 2 K $\Omega$
- Power LED for measuring point illumination
- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Drop proof from 1 m
- Polarity indicator, loud beeper
- IP2X contact protection
- IP65 - splash water proof and dust tight

Technical data		
Voltage range	12 - 750 V AC/DC	
Resistance	0 - 2 K $\Omega$	
Frequency measurement	30 - 999 Hz	
Measuring category	CAT III 1000 V, CAT IV 600 V	
Item	Part No.	
GT-85NE Bipolar voltage tester with LCD display	<b>52049407</b>	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		
Accessories	Part No.	Page
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	593
Replacement tips	52034234	



# VERSATILE IN USE – DIGITAL MULTIMETER

Greenlee multimeters are highly versatile. The functions are geared to your tasks in low-voltage systems. The multimeters measure on phase shift controllers, test conductors for breaks and indicate results in measurement categories CAT II, III and IV. To evaluate and archive the measurements, connect the devices to your PC via a USB cable. Select one multimeter for all tasks.



## In brief

- ▶ Can be used in low-voltage systems in measurement categories CAT II, III and IV
- ▶ Automatic warning signals
- ▶ Also for true RMS measurements
- ▶ Contactless voltage testing



### ► Basic: Multimeter DM-510A

The DM-510A performs all elementary functions. This is the basic meter for every qualified electrician.

- Suitable for industrial electricians and in building installations
- Integrated contactless voltage tester for locating broken cables
- Temperature measurement function via a thermocouple type K (included in the scope of supply) for checking air-conditioning systems in control cabinets or buildings
- Elementary functions for trouble shooting



### ► Industrial application: Multimeter DM-820A

Equipped with true RMS measurement (TRMS function), the DM-820A can also measure non-sinusoidal voltages and currents precisely and reliably. The multimeter knows immediately if measuring lines are incorrectly connected and sends a warning signal and error message on the display.

- Can be used in all low-voltage systems in measurement category CAT IV 1000 V
- Measurements on frequency converters, phase shift controls and mains units without disruptions by voltage peaks
- Integrated TRMS function for measuring non-sinusoidal voltages and currents
- Automatic “Beep Jack” warning signal and optical signal on the display when measuring lines are incorrectly connected



### ► For dual displays: Multimeter DM-860A

Perfect for troubleshooting in electrical systems:

The DM-860A allows you to measure and display two measurements at the same time. Saving time and providing an overview. All values are easily legible on the large white display. The DM-860A withstands voltage peaks of up to 12,000 V.

- Extra large display for easy reading
- Dual display: Two measurements can be displayed at the same time
- Measurement category CAT IV 1000 V offers the best-possible safety
- Loop current function: Displays faults in measurement and control equipment





### PDMM-20 Pocket digital multimeter



#### Characteristics

- AC/DC voltage measurement
- Resistance measurement
- Acoustic continuity check
- Contactless voltage testing

Technical data		
Dimension	113 x 53 x 13 mm	
Weight	0.08 kg	
Display	LCD, 6000	
Capacitance	up to 100 $\mu$ F	
Voltage measurement	1 mV - 450 V	
Resistance	0.001 k $\Omega$ - 6 M $\Omega$	
Frequencymeasurement	10 Hz - 30 kHz	
Measuring category	CAT II 450 V, CAT III 300 V	
Item	Part No.	
PDMM-20 Pocket digital multimeter	50116894v2	
Scope of supply	Part No.	Page
Protective cover		
Test leads		
Battery 3V button cell		

### DM-200A Digital multimeter



#### Characteristics

- Contactless voltage testing
- Automatic and manual range selection
- Large, background lit LC display
- Auto off
- Analogue bar chart
- Optical and acoustic warning in the event of incorrect handling

Technical data		
Dimension	161 x 80 x 50 mm	
Weight	0.34 kg	
Display	LCD, 6000	
Voltage measurement	0.01 mV - 1000 V AC/DC	
Current measurement	0.1 $\mu$ A - 8 A AC/DC	
Resistance	0.1 $\Omega$ - 60 M $\Omega$	
Frequencymeasurement	10 Hz - 50 kHz sinus wave; 5 Hz - 1 MHz square wave logic level	
Measuring category	CAT II 1000 V, CAT III 600 V, CAT IV 300 V	
Interface	R>S232, USB	
Item	Part No.	
DM-200A Digital multimeter	52047801V2	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Protective cover		
Battery 2 x 1.5 V AAA		

DM-210A Digital multimeter for temperature measurement -50 °C up to +1000 °C



Characteristics

- Includes thermoelement
- Automatic and manual range selection
- Large, background lit LC display
- Automatic shut-off
- Analogue bar chart
- Optical and acoustic warning in the event of incorrect handling

Technical data		
Capacitance	60 nF - 3000 µF	
Voltage measurement	0.01 mV - 1000 V AC/DC	
Current measurement	0.1 µA - 8 A AC/DC	
Resistance	0.1 Ω - 60 MΩ	
Frequencymeasurement	10 Hz - 50 kHz sinus wave; 5 Hz - 1 MHz square wave logic level	
Measuring category	CAT II 1000 V, CAT III 600 V, CAT IV 300 V	
Temperature measurement	-50 °C up to +1000 °C	
Item	Part No.	
DM-210A Digital multimeter for temperature measurement -50 °C up to +1000 °C	<b>52047802V2</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Protective cover		
Battery 2 x 1.5 V AAA		

# SAFETY FIRST !

Think about your safety and protect yourself from overvoltages  
in electrical systems!

Wear safety gloves to  
DIN EN 60903 and safety glasses!  
(page 518)





### DM-510A Digital multimeter, True RMS



#### Characteristics

- Autocheck function permits the automatic selection of AC V / DC V or resistance with low impedance for ghost-voltage removal
- Contactless voltage detection
- Frequency, temperature and capacity measurement
- Automatic and manual range selection
- Large, background lit LC display
- Max / Min value memory
- Analogue bar chart
- Optical and acoustic warning in the event of incorrect handling

Technical data			
Frequency range	50 Hz - 400 Hz		
Capacitance	60 nF - 3000 µF		
Voltage measurement	0.01 mV - 1000 V AC/DC		
Current measurement	0.1 µA - 8A AC/DC		
Resistance	0.1 Ω - 60 MΩ		
Frequencymeasurement	5 Hz - 1 MHz		
Measuring category	CAT III 600 V; CAT II 1000 V; CAT IV 300 V		
Temperature measurement	-50 °C up to +1000 °C		
Item		Part No.	
DM-510A Digital multimeter, True RMS		<b>52047803V2</b>	
Scope of supply		Part No.	Page
TSG-3 test leads		50120344	
Temperature sensor, bright finish			
Battery 2 x 1.5 V AAA			
Accessories		Part No.	Page
TC-20 Nylon carrying case for measuring instruments with carrying strap		50075357	587

## DM-810A Digital multimeter, True RMS



### Characteristics

- Automatic and manual range selection
- Large, background lit LC display
- Two measured values at a glance
- TRMS AC + DC
- Optical and acoustic warning in the event of incorrect handling

Technical data		
Capacitance	0.01 nF - 25 mF	
Voltage measurement	0.01 mV - 1000 V AC/DC	
Current measurement	0.1 $\mu$ A - 10 A AC/DC	
Resistance	0.1 $\Omega$ - 60 M $\Omega$	
Frequencymeasurement	5 Hz - 1 MHz	
Measuring category	CAT IV, 1000 V	
Item	Part No.	
DM-810A Digital multimeter, True RMS	<b>52047805V2</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case for measuring instruments with carrying strap	50075357	587
Battery		

## DM-820A Digital multimeter, True RMS



### Characteristics

- Contactless voltage detection
- Recording of peak value (5 ms peak hold) max, min and max/min results
- Automatic and manual range selection
- Large, background lit LC display
- Automatic shut-off
- TRMS AC + DC
- Optical and acoustic warning in the event of incorrect handling

Technical data		
Capacitance	0.01 nF - 25 mF	
Voltage measurement	0.01 mV - 1000 V AC/DC	
Current measurement	0.1 $\mu$ A - 10 A AC/DC	
Resistance	0.1 $\Omega$ - 60 M $\Omega$	
Frequencymeasurement	5 Hz - 1 MHz	
Measuring category	CAT IV, 1000 V	
Temperature measurement	-50 °C up to +1000 °C	
Item	Part No.	
DM-820A Digital multimeter, True RMS	<b>52047806V2</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case for measuring instruments with carrying strap	50075357	587
Battery		
Temperature sensor, bright finish		





DM-860A Industrial digital multimeter, True RMS



Characteristics

- Capturing Max, Min and Max-Min results
- Recording of peak value (5 ms peak hold) max, min and max/min results
- Carrying out frequency, temperature and capacity measurements as well as diode tests and continuity checks
- Display of the relative measured value offset for checking the relative measured value changes
- Automatic range selection
- Analogue 41-segment bar chart
- Large, background lit LC display
- Temperature measurements to 1000 °C

Technical data		
Capacitance	50 nF - 9999 µF	
Voltage measurement	500 mV - 1000 V	
Current measurement	500 µA - 10 A	
Resistance	500 Ω - 50 MΩ	
Frequency measurement	5 Hz - 200 kHz sinus wave; 5 Hz - 2 MHz square wave logic level	
Measuring category	CAT IV 1000 V	
Temperature measurement	Type-K, -50 °C up to +1000 °C (-58 °F up to +1832 °F)	
Item	Part No.	
DM-860A Industrial digital multimeter, True RMS	52056268V2	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case for measuring instruments with carrying strap	50075357	587
Temperature sensor, bright finish		

TC-20 Nylon carrying case with carrying strap for measuring instruments



Characteristics

- With inner pocket for test leads

Suitable for

- Series 200, Series 500 and Series 800 measuring instruments

Item	Part No.
TC-20 Nylon carrying case for measuring instruments with carrying strap	50075357



# CONTACTLESS MEASUREMENTS - DIGITAL CLAMP METERS

Quality evident in use. In practice, not every current circuit can be disconnected. Greenlee clamp meters measure currents and voltages without contact. AMP-TIP™ technology permits precise measurements even in confined areas. Numerous functions - one quality.



#### In brief

- ▶ Measure without disconnecting the cable
- ▶ Suitable for confined areas
- ▶ Easily legible display
- ▶ Contactless measurements to 600 A

#### ► For alternating currents to 600 A

The CM-660 is a real lightweight. 185 g lies firmly in the hand thanks to a good grip. Convenient readily legible measurements.

- Contactless measurement of alternating currents up to 600 A
- Sensor for contactless voltage tests
- Lightweight construction saves weight in the tool case
- Built-in deep-pass filter for the most accurate measurements
- Hand grip guarantees very good handling



#### Expanded functions

The CM-960 is the model that performs several functions. It measures alternating and direct current to 600 A, also non-sinusoidal currents and voltages thanks to the TRMS function (true root mean square).

- Contactless measurement of alternating and direct currents up to 600 A
- Detect voltages without contact
- AMP-Tip technology for precise measurements up to 16 mm<sup>2</sup> conductor cross-section
- The backlit display guarantees very good legibility





### CM-450 Digital clamp meter



#### Characteristics

- Compact, ergonomic design for measuring in tight spaces
- Data hold function for recording important measurement results
- Acoustic continuity check

Technical data		
Display	LCD	
Current measurement	0.01 A - 400 A AC	
Measuring category	CAT III 600 V	
Jaw size	26 mm	
Item	Part No.	
CM-450 Clamp multimeter	52033579V2	
Scope of supply	Part No.	Page
Battery 3 V button cell		
Test leads		

### CM-660 Digital clamp meter



#### Characteristics

- Contactless voltage testing
- AMP TIP™
- Data hold function for recording important measurement results
- Intelligent Automatic Power OFF (APO)
- Record mode for Max/Min/Average

Technical data		
Display	LCD	
Continuity test	yes	
Voltage measurement	0 V - 600 V AC/DC	
Current measurement	0.1 A - 600 A AC	
Resistance	0.1 $\Omega$ - 60 k $\Omega$	
Measuring category	CAT III 600 V, CAT IV 300 V	
Jaw size	30 mm	
Item	Part No.	
CM-660 Digital clamp meter	52066379	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Battery 2 x 1.5 V AAA		

## CM-860 Digital clamp meter



### Characteristics

- Particularly suitable for measurements on frequency converters
- Measurement of alternating voltage and alternating current
- Illuminated display
- Longer battery life due to intelligent automatic power-off

Technical data		
Display	LCD	
Voltage measurement	0 V - 600 V AC/DC	
Current measurement	0.1 A - 600 A AC	
Resistance	0.1 - 60 kΩ	
Measuring category	CAT III 600 V, CAT IV 300 V	
Jaw size	30 mm	
Item	Part No.	
CM-860 Digital clamp meter	52066378	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Battery 2 x 1.5 V AAA		

## CM-960 Digital clamp meter



### Characteristics

- Jaw opening 51 mm
- Current measurement AC/DC
- Easy-to-read backlit display for poor lighting conditions
- Peak hold and data hold function for recording measurement results
- Automatic range selection
- Relative zero point mode
- Use of bright conductor

Technical data		
Display	LCD	
Voltage measurement	0 - 600 V AC/DC	
Current measurement	0 - 600 A AC/DC	
Frequency measurement	5 Hz - 999 Hz	
Measuring category	CAT III 600 V, CAT IV 300 V	
Jaw size	35 mm	
Item	Part No.	
CM-960 Digital clamp meter	52066376	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Battery 2 x 1.5 V AAA		



### CM-1360 Digital clamp meter



#### Characteristics

- True RMS actual effective value for the most precise measurements
- Illumination of the measuring point
- Easy-to-read backlit display for poor lighting conditions
- Acoustic continuity check
- Longer battery life due to intelligent automatic power-off
- Data hold function for recording measurement results

#### Technical data

Display	LCD
Voltage measurement	0 - 1,000 V AC/DC
Current measurement	0 - 1,000 A AC/DC
Resistance	0.1 - 60 k $\Omega$
Measuring category	CAT III 1,000 V, CAT IV 600 V
Jaw size	51 mm

Item	Part No.	
CM-1360 Digital clamp meter	52066374	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	593
Battery 2 x 1.5 V AAA		

### CM-1560 Digital clamp meter



#### Characteristics

- Jaw opening 51 mm
- True RMS actual effective value for the most precise measurements
- Particularly suitable for measurements on frequency converters
- Easy-to-read backlit display for poor lighting conditions
- Diode test
- Acoustic continuity check
- Illumination of the measuring point

#### Technical data

Display	LCD
Voltage measurement	0 - 1,000 V AC/DC
Current measurement	0 - 1,000 A AC/DC
Frequency measurement	5 Hz - 999 Hz
Measuring category	CAT III 1,000 V, CAT IV 600 V
Jaw size	51 mm

Item	Part No.	
CM-1560 Digital clamp meter	52066372	
Scope of supply	Part No.	Page
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	
TSG-3 test leads	50120344	593
Battery 2 x 1.5 V AAA		

**TC-30 Nylon carrying case for measuring instruments with belt loop**

**Suitable for**

- CM-1360 / CM-1560
- Voltage tester GT-55NE / GT-85NE



Item	Part No.
TC-30 Nylon carrying case for measuring instruments with belt loop	<b>50075365</b>



# THERMAL MEASUREMENTS FROM A DISTANCE - TEMPERATURE GAUGES

Greenlee temperature gauges are ideal for preventive maintenance. Infra-red sensors measure without contact, even in confined areas. This allows the temperatures of motors and electrical connections to be measured and read from a safe distance. The measurements are used to identify fault sources in the electrical system.



## In brief

- ▶ Contactless measurements, even in confined areas
- ▶ Limit values can be set
- ▶ Automatic warning signals when values deviate
- ▶ Single or dual laser to focus on the measuring range

### ► Accuracy counts

The TG-1000 can be used for temperatures from -60 °C to 550 °C. When the minimum and maximum values are entered, the user automatically receives an acoustic and optical warning signal if the values are overrun or underrun. Even from a distance of 1.2 m, the TG-1000 measures to an accuracy of 10 cm.

- Optimised measuring range for maintenance tasks
- Single laser for focussing on the measuring point
- Visual resolution 12:1 (measures from 1.2 m away at an accuracy of 10 cm)
- Acoustic and optical warning signal when set values for monitoring limit values are reached



### ► Double focus for the measuring range

The TG-2000 measures with more accuracy. It clearly marks your measuring range with the dual laser. The visual resolution of 16:1 ensures exact values. Even at a distance of 3.2 m, the temperatures of objects and conductors can be accurately measured to a range of 20 cm. As a result, the TG-2000 guarantees the optimum safe distance to the object being measured.

- Optimum measuring range for maintenance and fault analysis in electrical systems
- Dual laser for focussing on the measuring range
- Acoustic and optical warning signal when defined limit values are reached
- Connection point for thermocouple type K for temperature measurements with contact
- Emission ratio of all standard materials included in the operating instructions



#### TG-1000 Infrared thermometer



##### Characteristics

- Lower / upper limit values adjustable
- Display with background illumination for comfortable read-off in all work areas
- Temperature display selectable in Celsius (°C) or Fahrenheit (°F)
- Maximum/minimum temperature, difference and average measurements
- Twin laser for identification of the approximate diameters of the target measuring area
- Bush for type K thermocouple

##### Suitable for

- Preventative maintenance of switching devices, motors and electrical connections

Technical data	
Monitor	LCD
Optical resolution	12:1
Temperature measurement	-60 °C up to +550 °C
Item	Part No.
TG-1000 Infrared thermometer	52059365

#### TG-2000 Dual laser infrared thermometer



##### Characteristics

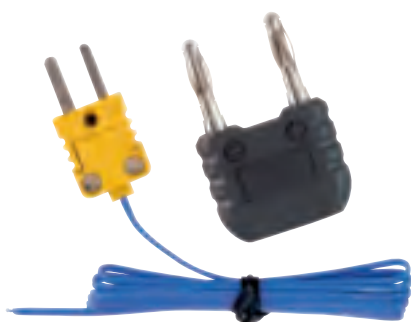
- Lower / upper limit values adjustable
- Display with background illumination for comfortable read-off in all work areas
- Temperature display selectable in Celsius (°C) or Fahrenheit (°F)
- Maximum/minimum temperature, difference and average measurements
- Twin laser for identification of the approximate diameters of the target measuring area
- Bush for type K thermocouple

##### Suitable for

- Preventative maintenance of switching devices, motors and electrical connections

Technical data	
Monitor	LCD
Optical resolution	16:1
Temperature measurement	-60 °C up to +625 °C
Item	Part No.
TG-2000 Dual laser infrared thermometer	52059364

#### TPB Temperature probe for temperatures of -40 °C to +204 °C



Technical data	
Sensor length	1 m ±5 mm (39.4" ±0.2")
Temperature measurement	-40 °C up to +204 °C (-40 °F up to +399 °F)
Thermoelement	Thermocouple type K
Item	Part No.
TPB Temperature probe for temperatures of -40 °C to +204 °C	50075926