

Measuring/Testing

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Introduction

Measuring/Testing

Testing plays a crucial role in setting up, maintaining and repairing electrical installations and devices. Tests are crucial when setting up, servicing and repairing electrical installations and equipment. Please apply and adhere to the accident prevention and safety regulations relevant to your installation, which call for repeat tests after modifications and maintenance work in addition to the tests required before using the installation for the first time.

The person responsible for setting up the installation is required to check that the installation or individual components function perfectly. They must also ensure the compliance with the technological regulations, in particular the VDE regulations and technical connection requirements (TAB) issued by the power supply companies. It is also important to check that all precautionary measures to prevent extremely excessive contact voltage work perfectly in order to guarantee and comply with the necessary safety standard. Using voltage and continuity testers from Weidmüller ensures that all tests are performed according to the relevant regulations.

Testing is very important during the setup, maintenance and repair of electrical facilities and equipment. You can conduct your tests properly with Weidmüller's voltage and continuity testers. The devices comply with all of the relevant standards.



Overview of applications and testing functions

	6 V voltage test – e.g. models		400 V voltage test – 3-phase voltage systems		Semiconductor check
	12 V voltage test – e.g. car batteries		3-48 V measuring range		Frequency check
	24 V voltage test – e.g. HGV batteries		Plug-in test probe		Capacitance check
	50 V – limit of the dangerous voltage range for the human body		Car Check		Resistance check
	120 V voltage test – customary voltage in some countries, e.g. USA		Test probe illumination		Phase sequence check
	230 V/240 V voltage test – customary voltage in the majority of European countries		Polarity check		Continuity check



2-pole voltage testers

The main purpose of the voltage tester is to check the presence or absence of a voltage. The 2-pole voltage tester is an approved testing instrument that satisfies the requirements of the Industrial Safety Act.



Digital clamp-on meters

Digital clamp-on meters and clamp-on meter attachments and adapters are used for measuring AC and DC currents. The important advantage of these devices is that the measurements can be undertaken without interrupting the flow of current.



Digital multimeters

Multimeters are able to measure a number of different parameters. The measuring options for voltage and resistance, plus continuity testing and the diode test are available on every instrument as standard.



Network tester

Network testers enable you to make quick cabling tests and quick diagnoses of cabling errors.

Overview of two-pole voltage testers

Technical specification

	Volt Check 3.1	Car Check	Master Check 3.2	Combi Check 1.3	LSP 3 400 V	LSP 3 690 V	Multi Check 5.2	Digi Check 3.2	Digi Check 5.2
Page number	Page G.10	Page G.10	Page G.9	Page G.9	Page G.8	Page G.8	Page G.7	Page G.6	Page G.6
Order No.	9918950000	9918970000	9918880000	9918860000	9205050000	9205060000	9918920000	9918850000	9918870000
E-No.			983 304 449	983 304 439			983 308 109		983 308 119
Rated voltage range	6 – 400 V AC/DC	3 – 48 V DC	6 – 400 V AC/DC	6 – 690 V AC/DC	12 – 400 V AC/DC	24 – 690 V AC/DC	5 – 500 V AC/DC	5 – 690 V AC/DC	5 – 690 V AC/DC
Display	LED + glow lamp	LED	LED	LED	LED	LED	LCD	LCD	LCD
6 V	x	3 – 48 V	x	x			x	x	x
12 V			x	x	x		x	x	x
24 V			x	x	x	x	x	x	x
50 V	x		x	x	x	x	x	x	x
120 V	x		x	x	x	x	x	x	x
230 V	x		x	x	x	x	x	x	x
400 V	x		x	x	x	x	x	x	x
690 V				x		x		x	x
Polarity (+/-)	x	x	x	x	x	x	x	x	x
Continuity test			x	x	x	x	x	x	x
Acoustic signal tone				x				x	x
Single-pole phase test				x	x	x	x	x	x
One-hand testing			x	x			x	x	x
Illuminated measuring probes				x				x	x
HOLD function							x	x	x
Phase sequence test				x	x	x			x
Capacitance measurement									x
Frequency measurement									x
Resistance measurement									x
Selectable load									Triggers Fl
Power supply		2 x 1.5 V AAA	2 x 1.5 V AAA	Solar cell + rechargeable battery	Solar cell + rechargeable battery	2 x 1.5 V AAA	2 x 1.5 V AAA	9 V battery	
Order no., battery		9201310000	9201310000			9201310000	9201310000	9004810000	
Order no., carry bag	9201520000	9201520000	9201520000	9201520000	9201520000	9201520000	9201520000	9201520000	9201520000

Safety features

Peak resistance voltage	5 kV	4 kV	6 kV	12 kV	12 kV	6 kV	6 kV	5 kV
VDE standard	VDE 0411 part 031	VDE 0682 part 401	VDE 0411					
EN/IEC standard	EN/IEC 61010-031	EN/IEC 61243-3	EN/IEC 61010-1					
Dimensions	190 x 25 x 19	137 x 21 x 18	230 x 55 x 34	231 x 48 x 37	231 x 48 x 37	231 x 48 x 37	225 x 58 x 33	225 x 58 x 33
Weight	70 g	57 g	135 g	135 g	170 g	170 g	142 g	142 g
Protection class	IP40	IP50	IP50	IP65	IP65	IP50	IP50	IP50
Operating temperature	-10 °C...+50 °C	-10 °C...+50 °C	-10 °C...+55 °C					

Overview of digital multimeters

Technical specification

	Temphaser	125S	1037	2606	MG Kit CA 600
Page number	Page G.11	Page G.11	Page G.13	Page G.13	Page G.12
Order No.	9427300000	9425830000	9423580000	9427370000	9427460000
Measurement range					
• DC voltage	0.2 – 600 V	0.32 – 600 V	0.2 – 1000 V	0.4 – 1000 V	0.2 – 600 V
• AC voltage	0.2 – 600 V	0.32 – 600 V	0.2 – 750 V	0.4 – 1000 V	0.2 – 600 V
• DC current				up to 1000 A	0 – 600 A
• AC current			up to 200 A**	up to 1000 A	0 – 600 A
• Resistance	up to 2000 MΩ	up to 30 MΩ	up to 200 kΩ	up to 40 MΩ	up to 2000 MΩ
• Capacitance	20 µF – 20 mF		up to 200 µF	4 nF – 40 µF	20 µF – 20 mF
• Frequency	10 Hz – 40 kHz			0.1 – 400 kHz	10 Hz – 40 kHz
• Temperature	-20 °C to +750 °C				-20 °C to +750 °C
Continuity test	x	x	x	x	x
Diode test	x	x	x	x	x
Phase sequence test	x				x
Selection of measuring range	manual	automatic	manual	automatic/manual	manual
HOLD function			x	x	
MAX/MIN function			x	x	
PEAK measurement				x	
Opening width of pliers			23 mm	57 mm	30 mm
Standard	EN/IEC 61010-1				
Measurement range category	CAT III 600 V	CAT III 600 V	CAT III 1000 V	CAT III 1000 V	CAT III 600 V
Dimensions in mm	147 x 70 x 39	147 x 70 x 39	214.5 x 66 x 44	277 x 102 x 49	178 x 70 x 33

Accessories

	9 V battery	9 V battery	9 V battery	9 V battery	9 V battery
Order no., battery	9004810000	9004810000	9004810000	9004810000	9004810000
Accessories (included)	2 x Test wires with test probe 1 x Test wire with alligator clip 2 x Alligator clip 1 x Temperature probe 1 x Belt clip 1 x Spare fuse	2 x Test wires with test probe 1 x Belt clip	2 x Test wires 2 x Short test probe 2 x Long test probe 2 x Test wire with alligator clip, thin 2 x Test wire with alligator clip, wide 1 x Pliers adapter 1 x Carry case	2 x Test wires with test probe 1 x Carry case	2 x Test wires with test probe 1 x Test wire with alligator clip 2 x Alligator clip 1 x Temperature probe 1 x Belt clip 1 x Spare fuse 1 x Portable case
Order No.	9205260000	9205270000	9205460000	9205270000	9205260000
Accessories test wires (without temperature probe)			(without pliers adapter)		(without temperature probe)

**when connected with pliers adapter* acc. to EN 61243-3, in all low-voltage systems up to 1000 V

Digital voltage testers

Digital voltage testers

- LCD including bar chart
- One-hand testing is possible
- Protection for test probe
- Continuity test
- Low-battery indicator
- HOLD function
- Backlit illumination
- Polarity detection
- Single-pole phase test is possible

Digi-Check 5.2

Digital voltage tester



- Acoustic indicator
- Test probe illumination
- Audible signal tone for voltage and continuity
- Selectable load for residual current test
- Phase sequence indicator

Digi-Check 3.2

Digital voltage tester



- Test probe illumination
- Audible signal tone for voltage and continuity
- Acoustic indicator
- Including batteries



Technical data

Rated voltage

Input resistance, voltage

Peak voltage resistance

Frequency range, min.

Display

Resistance measuring range

Measured capacitance value, min.

Operating temperature, min.

Protection class

Approvals

Weight

Note

DIGI-CHECK 5.2

5...690 V AC/DC

$\geq 300 \text{ k}\Omega$, $+2.5 \text{ k}\Omega$ upon pressing the LOAD key

5 kV

0...2000 Hz

LCD

0.0...2 Ω

1...50 μF

-10...55 °C

IP 50

EN / IEC 61010

162 g

DIGI-CHECK 3.2

5...690 V AC/DC

$\geq 300 \text{ k}\Omega$

6 kV

0...100 Hz

LCD

-10...55 °C

IP 50

EN / IEC 61243-3 (VDE 0682 part 401)

142 g

Ordering data

Version

Type	Qty.	Order No.
DIGI-CHECK 5.2	1	9918870000
DIGI-CHECK 5.2 – 2 mm probes	1	9201580000
Protective case included		

Note

Accessories

Note

Type	Qty.	Order No.
SKAI BAG	1	9201520000
BATTERY 9V	1	9004810000

Type	Qty.	Order No.
SKAI BAG	1	9201520000
BATTERY 1.5V MICRO	2	9201310000

Multi-Check 5.2

Digital voltage tester



- Battery included



G

MULTI-CHECK 5.2

5...500 V AC/DC

≥ 300 kΩ

6 kV

0...100 Hz

LCD

-10...55 °C

IP 50

EN / IEC 61243-3 (VDE 0682 part 401)

142 g

Type	Qty.	Order No.
MULTI-CHECK 5.2	1	9918920000
MULTI-CHECK 5.2 – 2 mm probes	1	9201570000

Type	Qty.	Order No.
SKAI BAG	1	9201520000
BATTERY 1.5V MICRO	2	9201310000

2-pole voltage tester

2-pole voltage tester

- Automatic testing, identification and display of voltage type (AC or DC) and polarity
- Concisely arranged LED display
- Phase testing relative to earth
- Polarity testing
- Continuity testing and semiconductor testing
- Touch protection because of high input resistance
- Large voltage range

LSP 3 - 400 V

2-pole voltage tester



- No battery: maintenance-free and eco-friendly
- Surge proof to 12kV
- Phase sequence indicator
- High-performance solar cell combined with rechargeable lithium battery

LSP 3 - 690 V

2-pole voltage tester



- No battery: maintenance-free and eco-friendly
- Surge proof to 12kV
- Phase sequence indicator
- High-performance solar cell combined with rechargeable lithium battery



Technical data

Rated voltage
Input resistance, voltage
Peak voltage resistance
Frequency range, min.
Display
DC voltage display
AC voltage display
Operating temperature, min.
Protection class
Approvals
Weight

Note

Ordering data

Version

Note

LSP 3 - 400V

12...400 V AC/DC

12 kV

0...2000 Hz

LED

-10...55 °C

IP 65

EN / IEC 61243-3 (VDE 0682 part 401)

170 g

LSP 3 - 690V

24...690 V AC/DC

12 kV

0...2000 Hz

LED

-10...55 °C

IP 65

EN / IEC 61243-3 (VDE 0682 part 401)

170 g

Type	Qty.	Order No.
LSP 3 - 400V	1	9205050000

Type	Qty.	Order No.
LSP 3 - 690V	1	9205060000

Combi-Check 1.3

2-pole voltage tester



- Acoustic indicator
- Phase sequence indicator
- Single-pole phase test
- Batteries included

**Master-Check 3.2**

2-pole voltage tester



- Batteries included

**COMBI CHECK 1.3**

6...690 V AC/DC

6 kV

0...100 Hz

LED

-10...55 °C

IP 50

EN / IEC 61243-3 (VDE 0682 part 401)

135 g

MASTER-CHECK 3.2

6...400 V AC/DC

4 kV

0...100 Hz

LED

-10...55 °C

IP 50

EN / IEC 61243-3 (VDE 0682 part 401)

135 g

Type	Qty.	Order No.
COMBI CHECK 1.3	1	9918860000
COMBI CHECK 1.3 – 2 mm probes	1	9204230000

Type	Qty.	Order No.
MASTER-CHECK 3.2	1	9918880000
MASTER-CHECK 3.2 – 2 mm probes	1	9201260000

Type	Qty.	Order No.
SKAI BAG	1	9201520000
BATTERY 1.5V MICRO	2	9201310000

Type	Qty.	Order No.
SKAI BAG	1	9201520000
BATTERY 1.5V MICRO	2	9201310000

2-pole voltage tester

2-pole voltage tester

Car-Check

2-pole voltage tester for cars



- Test probe
- Pin with sliding mechanism
- 130-cm long cable
- Polarity detection

Volt-Check 3.1

2-pole voltage tester



- LED indicator for voltage and phase
- Polarity detection

G

Technical data

Rated voltage	3...48 V DC
Input resistance, voltage	
Peak voltage resistance	
Frequency range, min.	
Display	LED
DC voltage display	
AC voltage display	
Operating temperature, min.	-10...50 °C
Protection class	
Approvals	
Weight	57 g

Note

Ordering data

Version

CAR-CHECK

3...48 V DC

Volt-Check 3.1

6...400 V AC/DC

5 kV

0...100 Hz

LED

-10...50 °C

IP 40

EN / IEC 61010

70 g

Accessories

Note

Type

CAR-CHECK

Qty.

1

Order No.

9918970000

Type

Volt-Check 3.1

Qty.

1

Order No.

9918950000

Volt-Check 3.2 – 2 mm probes

1

9205190000



Digital multimeters

- Measures voltages up to 600 V
- Resistance measurement and semiconductor test
- Battery status display

Tempphasor**Tempphasor**

- Voltage and resistance measurements
- Capacitance and frequency measurements
- Temperature measurement (including temp. probe)
- Phase sequence measurement

**Multimeter 125S****Digital multimeter**

- Voltage and resistance measurements
- Automatic measuring range selection

**Technical data**

DC voltage measuring range
Degree of accuracy, DC voltage
AC voltage measuring range
Degree of accuracy, AC voltage
Resistance measuring range
Measured capacitance value, min.
Frequency range, min.
Temperature measuring range
Operating temperature, min.
Approvals
Weight

Note**Ordering data****Version****TEMPHASER**

0.2 - 600 V
0.2 - 600 V
0.2...2000 MΩ
20...20 mF
10...40 kHz
-20...750 °C
0...50 °C
EN / IEC 61010
340 g

MULTIMETER 125S

0.32 - 600 V
0.32 - 600 V
0.3...30 MΩ
0...100 Hz
0...50 °C
EN / IEC 61010
323 g

Note**Type**

Type	Qty.	Order No.
TEMPHASER	1	9427300000

Type

Type	Qty.	Order No.
MULTIMETER 125S	1	9425830000

Accessories**Note****Type**

Type	Qty.	Order No.
ZUB TEMPHASER	1	9205260000

Type

Type	Qty.	Order No.
ZUB MULTIMETER	1	9205270000

Ordering information for accessories: temperature sensor not included

Ordering information for accessories: belt clip not included

Digital multimeters and current-measuring clamp-on attachment

Digital multimeters and current-measuring clamp-on attachment

- Measures voltages up to 600 V
- Measures currents up to 600 A with clamp-on attachment
- Resistance measurement and semiconductor test
- Battery status display

MG KIT CA 600

Digital multimeter + clamp-on attachment



- Capacitance measurement
- Frequency measurement
- Temperature measurement
- Phase sequence measurement is possible



Technical data

DC voltage measuring range
Degree of accuracy, DC voltage
AC voltage measuring range
Degree of accuracy, AC voltage
Measured current value, max.
Opening width of current-measuring clamp-on attachment
Resistance measuring range
Measured capacitance value, min.
Frequency range, min.
Temperature measuring range
Operating temperature, min.
Approvals
Weight

MG KIT CA 600

0.2 - 600 V
0.2 - 600 V
600 A
30 mm
0.2...2000 MΩ
20...20 mF
10...40 kHz
-20...750 °C
0...50 °C
EN / IEC 61010
910 g

Note

Ordering data

Version

Type	Qty.	Order No.
MG KIT CA 600	1	9427460000

Note

Accessories

Type	Qty.	Order No.
ZUB TEMPHASER	1	9205260000

Note

Ordering information for accessories: temperature sensor and belt clip not included

Digital multimeter

- Can measure voltages up to 1000 V
- Resistance measurement and semiconductor test
- Capacitance measurement
- MAX/MIN memory
- HOLD function
- Battery status display
- Carry case included

Multimeter 1037**Digital multimeter**

- Voltage measurement
- Current measurement
- Resistance measurement
- Non-contact voltage measurement is possible
- Extensive accessories

**Technical data**

DC voltage measuring range

Degree of accuracy, DC voltage

AC voltage measuring range

Degree of accuracy, AC voltage

Measured current value, max.

Opening width of current-measuring clamp-on attachment

Resistance measuring range

Measured capacitance value, min.

Frequency range, min.

Temperature measuring range

Operating temperature, min.

Approvals

Weight

Note**Ordering data**

Version

Note**Accessories****Note****MULTIMETER 1037**

0.2 - 1000 V

0.2 - 750 V

200 A

23 mm

200.0...200 kΩ

...200 µF

50...500 Hz

0...50 °C

EN / IEC 61010

258 g

Type

Qty. Order No.

MULTIMETER 1037 1 9423580000

Multimeter 2606**Digital clamp-on measuring device**

- Currents up to 1000 A with clamp-on attachment.
- Frequency measurement
- Voltage measurement
- Current measurement
- PEAK function

**MULTIMETER C 2606**

0.4 - 1000 V

± 0.5 %

0.4 - 1000 V

± 0.5 %

1000 A

57 mm

0.4...40 MΩ

40...4 µF

0.1...400 kHz

0...50 °C

EN / IEC 61010

540 g

Type

Qty. Order No.

MULTIMETER C 2606 1 9427370000

Type

Qty. Order No.

ZUB TEMPHASER 1 9205270000

BATTERY 9V 1 9004810000

Ordering information for accessories: carrying case not included

Accessories

The accessories for our measuring instruments meet the same demanding standards for quality and safety as those used for our instruments.

ZUB Tempphasor

Included in delivery	Qty.	Order No.
Test wire with test probe	2	
Test wire with alligator clip	1	
Alligator clip	2	
ZUB TEMPHASER		9205260000

ZUB Multimeter 1037

Test wire	2	
Short test probe	2	
Long test probe	2	
Test wire with alligator clip, thin	2	
Test wire with alligator clip, wide	2	
ZUB MULTI 1037		9205460000

PS ZQV test adapter

PS ZQV set: test wire with test probe	2	
PS ZQV: test probe	2	
PS_ZQV_SET		1116710000
PS_ZQV		1121740000

ZUB Multimeter

Test wire with test probe	2	
ZUB MULTIMETER		9205270000

SKAI pouch

Pouch for 2-pole voltage tester	1	
SKAI POUCH		9201520000



Cable tester**LAN USB****IE-CT****Technical data**

Functionality

Device for testing

Ethernet cables for:

line interruption

core interruption

short-circuits

examination of the twist

LED display

max. 1000 m

9 V battery (Art. Nr.- 9004810000)

RJ 45; USB TypA; USB TypB

174 g

65 x 135 x 27 mm

30 g

65 x 28 x 27 mm

Error display play
External voltage
Testable cable length
Supply type
Connection for core
Weight basic device
Dimensions basic device
Remote box weight
Remote box dimensions
Weight testbox
Dimensions testbox

Device for testing

Ethernet cables for:

interference voltage

line interruption

core interruption

short-circuits

crossed wires

examination of the twist

7-segment display

80 V AC / DC

max. 1000 m

9 V battery

RJ45

185 g

70 x 140 x 36 mm

31 g

30 x 68 x 23 mm

Ordering data

Type	Qty.	Order No.
LAN USB TESTER	1	9205400000

Type	Qty.	Order No.
IE-CT	1	8808420000

Note

Battery, accessories and bag included in delivery

9 V battery included

Accessories**Note**

