



**Complete  
Product Catalog**  
2019-2020 Vol. #1



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## Beha-Amprobe, Evolution of the brand

Nearly 70 years ago, in 1948, the very first inductive clamp meter named "Amprobe" was invented in the United States by Pyramid Instrument Company. Soon after, the Amprobe name became so synonymous in the US with clamp meters that in 1960 the company name was formally changed to Amprobe Instrument Corporation.

Fourteen years later in Glottertal, Germany, Christian Beha invented the V1X, a continuity tester designed to replace his previous model after it failed on the job. An immediate success, the V1X ushered in a period of rapid growth for the company. By the mid-90s, Beha was a respected name in the electrical industry.

Recognizing the strength and quality of each brand, Danaher Corporation bought Beha and Amprobe in 2003 and 2006 respectively. Today, our combined legacies span over 100 years of bringing safety, speed and ease to the HVAC and electric professional with high-quality test and measurement tools.

From multimeters to voltage detectors, we are always improving on our designs to provide you with the very best quality in tools and support.

## Innovative Testing Tools for Electricians

Our products are sold by a global network of trusted partners with a professional support team at your service, making Beha-Amprobe the natural choice. Whether you need test and measurement tools for industrial, commercial or residential applications, Beha-Amprobe offers innovative test equipment to fit your needs.

Every tool undergoes rigorous testing in our lab and by certified third-parties to ensure the rugged durability, quality and safety you've come to expect from us.



# See the Newest Products!



**UAT-620-EUR**  
Underground  
Utilities Locator



**AF-600-EUR**  
A-Frame  
Ground Fault  
Locator



**AT-6030-EUR**  
Advanced Wire  
Tracer Kit



## **ALC-110-EUR** Current Leakage Clamp

Detect, document and compare leakage current readings over time to prevent unplanned downtime. Identify intermittent RCD/RCCB trips, without downtime or switching equipment off.







**EV-520**  
**Test Adapter Kit**  
**for Electric Vehicle**  
**Charging Stations**

Get access to the outlet of a charging station to perform safety and functional tests, while simulate presence of an electrical vehicle

**ADPTR-PE-EUR,**  
**ADPTR-SCT-EUR**  
**Socket-Check Adapters**

Safe, reliable testing with optimal contact to outlet.



**IRC-120-EUR**  
**Point-and-shoot thermal**  
**imaging technology for the**  
**professional**

Get quick and accurate identification of temperature related issues. Perform preventative maintenance and troubleshoot issues with electrical connections, HVAC, mechanical and automotive environments.





4mm test probe extension (screwable) .....

Test probe protector cover GS38 .....



Torch light

NCV/EF detection area

LED Panel for:  
· Phase rotation indication  
· continuity test  
· Single-pole phase test  
· polarity  
· voltage indicator

LCD screen

Push buttons for switchable load and RCD trip test

2100-Gamma



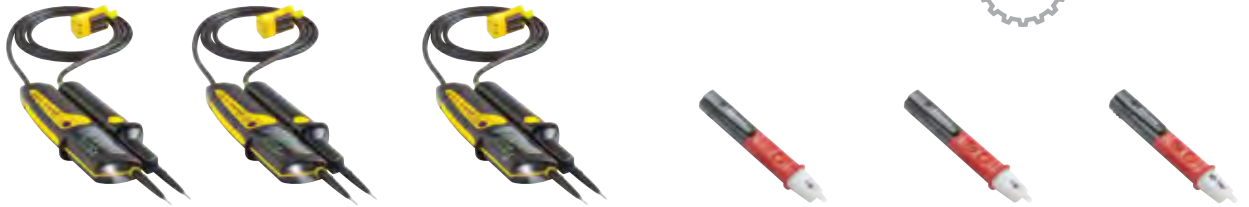
Test probe protector cover with accessory probe and cap storage

# Electrical testing equipment

Our range of electric testing equipment covers standard equipment for any electrician, including the latest voltage detectors, non-contact voltage testers in a compact pen design, continuity phase rotation indicators for safely establishing the phase sequence and motor rotation direction.



## Voltage Detectors



	2100-ALPHA	2100-BETA	2100-GAMMA	NCV-1020-EUR VOLTfix	NCV-1030-EUR VOLTfix	NCV-1040-EUR MAGNO-VOLTfix
<b>Voltage Test</b>						
Voltage range / LED indication	±12, 24 V AC/DC: green LEDs 50, 120, 230 V AC/DC: yellow LEDs 400, 690 V AC/DC: red LEDs		±12, 24 V AC/DC: green LEDs 50, 120, 230 V AC/DC: yellow LEDs 400, >690 V AC/DC: red LEDs	50-1000 V AC	12-50 V AC, 50-1000 V AC	12-50 V AC, 50-1000 V AC
Voltage range / LCD	–	6...690 V AC/DC	6...1000 VAC, 6...1200 VDC	–	–	–
LED tolerances	acc. to EN 61243-3:2014			–	–	–
Acoustic indication	≥50 V AC, ≥120 V DC			•	•	•
Current I	≤3.5 mA AC/DC at 690 V AC/DC		≤3.5 mAAC at 1000 VAC / ≤4.5 mADC at 1200 VDC"	–	–	–
Internal load	Approximately 2.4 W at 690 V AC/DC		Approximately 3.5 W at 1000 VAC / Approximately 5.4 W at 1200 VDC"	–	–	–
Test current switchable load	≤250 mA AC/DC at 690 V AC/DC		≤350 mAAC at 1000 VAC / ≤420 mADC at 1200 VDC"	–	–	–
Switchable load	Approximately 170 W at 690 V AC/DC		Approximately 350 W at 1000 VAC / Approximately 500 W at 1200 VDC"	–	–	–
Measurement category	CAT IV / 600V, CAT III / 690V	CAT IV / 600V, CAT III / 690V	CAT IV / 600V, CAT III / 1000V	CAT IV 1000V	CAT IV 1000V	CAT IV 1000V
Voltage AC/DC testing	•	•	•	AC only	AC only	AC only
Voltage and range detection	Automatic	Automatic	Automatic	–	manual	manual
Non contact cable break detector / electric field (NCV/EF)	–	–	•	•	•	•
Voltage detection sensitivity	–	–	•	LED and buzzer indications at approximately 5 mm (0.20 in) distance from a wire carrying 230 Vac		
<b>Frequency Range</b>						
Voltage test	DC, 16 2/3 Hz...1000 Hz			50-400 Hz	50-400 Hz	50-400 Hz
Single Pole Phase Test	40 Hz...70 Hz			–	–	–
Phase Rotation Indication	40...70 Hz			–	–	–
<b>Trip Test of RCD (earth leakage circuit breaker)</b>						
Test current switchable load (load buttons activated)	>30 mAAC at 230 VAC			–	–	–
<b>Single Pole Phase Test</b>						
Voltage range	100...690 VAC against earth		100...1000 VAC against earth	–	–	–
Indication	Acoustic + red LED			–	–	–
<b>Continuity Test (Rx) / Diode Test</b>						
Range	0...500 kΩ			–	–	–
Test current	<5 μA			–	–	–
Indication	Acoustic + yellow LED			–	–	–
<b>Phase Rotation Indication</b>						
Voltage range	170...690 V AC phase to phase		170...1000 V AC phase to phase	–	–	–
Indication	Acoustic + green LED for Right/Left			–	–	–
<b>Resistance Measurement (Ω)</b>						
Range on LCD	–	–	0...1999 Ω	–	–	–
Low resistance indication	–	–	Acoustic indication <10...50 Ω	–	–	–
<b>General Specifications</b>						
Magnetic solenoid detection	–	–	–	–	–	•
Voltage detection sensitivity	–	–	•	LED and buzzer indications at approximately 5 mm (0.20 in) distance from a wire carrying 230 Vac"		
Operating temperature	-15°C to +55°C			–		
Operation / Recovery time	30 s / 240 s			Continuous		
Protection degree	IP 64			IP65		
Safety regulations	IEC 61243-3:2014, EN 61243-3:2014, DIN VDE 0682-401:2015			IEC 61010-1 3rd Ed., UL 61010-1 3rd Ed., UL 61010-2-030, CAN/CSA-C22.2 No.61010-1-12, CAN/CSA-C22.2 No. 61010-2-030-12 to CAT IV 1000 V		
Power Supply	Battery 2x 1.5V (AAA/ IEC LR03)			Battery 2 x 1.5V (AAA/ IEC LR03)		
Dimensions (L x W x H)	280 x 78x 35 mm (11.0 x 3.1 x 1.4 in)			156.2 x 23.5 x 27.5 mm (6.14 x 0.92 x 1.08 in)		
Weight	Approximately 320 g (0.71 lb)			Approx. 58 g (0.12 lb)	Approx. 60 g (0.13 lb)	Approx. 62 g (0.136 lb)



2100-ALPHA

Article no. 4312495



## 2100-ALPHA

### Voltage tester with continuity measurement and phase sequence indication

#### Functions

- **Voltage test by colored LED**  
Display: 12 ... 690V AC / DC
- **Automatic AC/DC voltage detection** with polarity indication
- **Optical and acoustic continuity** and voltage test
- **Two pole phase rotation indication** with indicator for right and left rotation, no 3rd hand required
- **Single pole test** to check phase polarity

#### Product information

- **Patented Phase Rotation Indication**; no "3rd hand required". Two Indications for "R" and "L"-phase rotation
- **Switchable load** and 10 mA or 30 mA RCD trip test with two push buttons

- **Safety rated** CAT IV 600 V / CAT III 690 V
- **Robust, double insulated cable** with wear indication shows when the test leads are excessively worn or damaged and need replacement
- **Audible indication** when detected voltages above 50 V AC and 120 V DC
- **IP 64**, water and dust-resistant
- Integrated probe-tip protection for reducing the danger of injuries
- **Fully functional voltage indicator** even without batteries or if batteries are empty

#### Product highlights

- **Fixed test probe protector cover** to reduce the risk of injury
- **Battery indication**
- **Colored LED display** to make different voltage levels more visible

- **No unintentional triggering** of RCD/FI circuit breakers
- **Fast single-handed testing** of power sockets with 19 mm contact clearance, without the probe coming away from the unit
- **Test probe protector cover** with accessory probe and cap storage
- **Extremely robust construction** with doubly insulated wires
- **Torch light** / measurement area illumination for working in poorly lit areas/lit wires
- **Built according to voltage tester standard** EN 61243-3:2014 and is GS approved



2100-BETA

Article no. 4312508



## 2100-BETA

### Voltage tester with continuity measurement and phase sequence indication

#### As the 2100-ALPHA, also with:

- **Digital LCD** 6...690 V AC/DC
- **Data Hold**
- **Backlight**



Test probe protector cover with accessory probe and cap storage



2100-GAMMA

Article no. 4709243



## 2100-GAMMA

### Voltage tester with continuity measurement, phase sequence indication, resistance and NCV

#### As the 2100-BETA, also with:

- **Voltage test** up to 1000 V, alternating current and 1200 V direct current
- **Digital LCD** 6...1000 V AC/1200 V DC
- **Non-contact voltage (NCV/EF)** detection
- **Measures** resistance up to 1999 Ohm
- **Low resistance continuity measurement** <10...50 Ohm with acoustic indication

**Included:** 1x 2100-ALPHA or 1x 2100-BETA or 1x 2100-GAMMA, 2x probe cover (GS38), 2x 4-mm-probe extenders (screwable), 2x batteries 1.5 V, IEC LR 03 (AAA), Micro, 1x user manual

**Accessories:** 2100-ACCS (spare part): 4mm probe extenders and probe tip covers



## NCV-1020-EUR VOLTfix Non-Contact Voltage (NCV) tester

### Functions

- **Non-contact voltage detection** from 50V to 1000V AC
- **Audible and visual** voltage indication
- **Detection of AC voltage** in cables, circuit breakers, wall sockets, junction boxes, fuses, extension cords
- **Identification of cable breaks** in wires, cords and lightning systems connected in series
- **Voltage test through wire insulation**

### Product information

- **Compact**, handy design that fits in any pocket
- **Audible (buzzer) and visual (LED)** voltage indication
- Water and dust resistant - **IP65** rated

### Device highlight

- On/off switch

Included: 1x NCV-1020-EUR VOLTfix, 2x battery 1.5 V, IEC LR03, 1x user manual



NCV-1020-EUR  
VOLTfix

Article no. 4918072

## NCV-1030-EUR VOLTfix Non-Contact Voltage (NCV) tester with built-in worklight

As the NCV-1020-EUR VOLTfix, also with:

- **Non-contact voltage detection**
- **Default:** 50-1000 V.
- **High Sensitivity:** 12-50 V
- **NCV LOW range** (>12 V AC)
- **Auto power off**
- **Built-in work light**
- **Low battery indication**

Included: 1x NCV-1030-EUR VOLTfix, 2x battery 1.5 V, IEC LR03, 1x user manual



NCV-1030-EUR  
VOLTfix

Article no. 4918085

## NCV-1040-EUR MAGNO-VOLTfix Non-contact voltage probe with magnetic field detection

As the NCV-1030-EUR VOLTfix, also with:

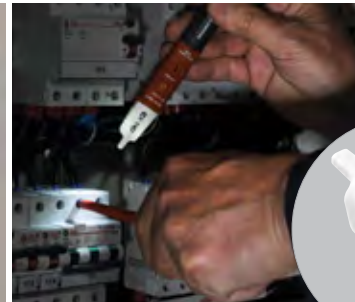
- **Magnetic solenoid testing**

Included: 1x NCV-1040-EUR MAGNO-VOLTfix, 2x battery 1.5 V, IEC LR03, 1x user manual



NCV-1040-EUR  
MAGNO-VOLTfix

Article no. 4918097



## LT-10-EUR Pocket-sized Lamp Tester - tests bulbs, pins, and voltage

### Functions

- **Testing fluorescent lamps** of various types
- **Non-contact voltage detection**
- **Direct testing** of lamp contacts

### Product information

- **Simple single-hand/1-button** operation
- **Extremely compact** - pocket-size design
- **Compatible with the most**

### common fluorescent lamps:

- T2, T4, T5, T8, T9, T10, T12
- energy-saving fluorescent lamps
- **Including sodium vapour lamp antenna for testing additional lamps:**
  - Sodium vapour low-pressure lamps
  - Sodium vapour high-pressure lamps
  - Fluorescent tubes
  - Mercury vapour lamps
  - Halogen metal vapour lamps

### Product highlights

- **Integrated, highly-sensitive 122 cm antenna** (can be removed and inserted) enables testing of both lamp and voltage without a conductor

### Technical specifications

Display	1 LED
Test voltage (with new battery)	approx. 3 kV / 280 kHz
Non-Contact Field strength:	Approx. 100 µV/m at 260 - 300 kHz
Voltage test:	AC 90 V to AC 600 V, 50/60
Overall Safety cert.:	EN61010/IEC61010
Measurement category	CAT II/300 V, CAT I/600 V
Pollution Degree	2
Protection category	IP 40
Power supply	1x battery 9V, 6LR61

Included: 1x LT-10-EUR, 1x antenna - 122cm, 1x adapter plate for fluorescent tubes, 1x antenna for sodium vapour lamps, 1x carrying case, 1x user manual



LT-10-EUR

Article no. 4386345



**9023 TESTFIX**  
Article no. 2147430

## 9023 TESTFIX Continuity and circuit tester with flashlight function

### Functions

- Acoustic continuity tester (summer)
- Optical continuity display (lamp)

### Product highlights

- Flashlight function with continuous light

### Product information

- Low-resistance continuity tester
- For testing light bulbs, fuses, etc.
- Test wiring and grid networks

### Technical specifications

Continuity test	0...10 Ω (optical), 0...100 Ω (acoustic)
Test current	Approx. 200 mA (optical), Approx. 40 mA (acoustic)
Test voltage	< 4.5 V
Power supply	3 x battery 1.5 V, IEC LR6
Dimensions	130 x 75 x 35 mm
Weight	approx. 180 g

**Included:** 1x TESTFIX without batteries, 1x spare lamp, 1x carrying case, 2x uninsulated crocodile clips, 1x user manual



**9072-D Ohmtest**  
Article no. 3454373

## 9072-D Ohmtest Continuity tester

### Functions

- Continuity tester with buzzer
- Optical continuity display
- External voltage display >50 V

### Product highlights

- Voltage-proof up to 600 V

### Product information

- Range of applications: Resistance, semi-conductor, and polarity testing, light-bulbs, fuse, etc.

### Technical specifications

Continuity test	0...500 kΩ
Test current	approx. 5 μA
Test voltage	< 9 V
External voltage indicator	50...600 V
Protection category	IP 40
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	110 x 58 x 24 mm
Weight	approx. 150 g

**Included:** 1x Ohmtest, 1x battery 9 V, IEC 6LR61, 1x crocodile clip, 2x probes, 1x user manual



**1150 Carrying Case**  
Article no. 2145755

## BAT-250-EUR Battery tester

### Functions

- Test standard and rechargeable batteries
- Direct display of state of charge
- Analog display with colored areas

### Product highlights

- Ergonomic design, sliding contact for one-handed operation
- V-shaped battery holder on the side
- High-quality connections for 9 V block batteries
- No batteries required to operate

### Product information

- Testing of Mignon (AA), Micro (AAA), Baby (C), and Mono (D) battery types
- Testing of 1.5 V button cells
- Testing of 9 V block batteries

### Technical specifications

Display	Analog display with colored areas Replace (REPLACE), Low (LOW), Good (GOOD)
Test current (typical)	1.5 V: 375 mA, 9 V: 40 mA (at limit of measurement range)
Nominal load (typical)	1.5 V: 4 Ω, 9 V: 215 Ω
Battery types	9 V block battery, Micro (AAA), Mignon (AA), Baby (C), Mono (D) and 1.5 V button cells
Dimensions	approx. 110 x 74 x 29 mm
Weight	approx. 50 g

**Included:** 1x BAT-250-EUR, 1x user manual



**BAT-250-EUR**  
Article no. 4620297



## PRM-5-EUR Phase Rotation Tester

### Functions

- Phase sequence display with LEDs
- Display of a missing or incorrectly connected outer conductor

### Product information

- Fast detection of phase sequence in three-phase supply
- Voltage range from 100 to 700 V, Frequency range 16 to 400 Hz

### Product highlights

- No battery needed
- Robust housing with rubber protective cover
- Securely connected test leads Measurement category CAT IV, 600 V

### Technical specifications

Display	LED for anticlockwise, clock-wise, faulty connection
Voltage range	100 ... 700 V
Frequency range	16 ... 400 Hz
Test current	≤3,5 mA
Safety cert	DIN VDE 0411/EN 61010-1/DIN VDE 0413-7, EN 61557-7
Measurement category	CAT IV / 600 V
Power supply	from test object
Dimensions	137 x 65 x 33 mm
Weight	approx. 253 g

Included: 1x PRM-5-EUR, 3x probes, 1x crocodile clip, 1x carrying case, 1x user manual



PRM-5-EUR

Article no. 4375961

## PRM-6-EUR Motor and Phase Rotation Tester

### Functions

- Phase sequence display with LCD
- Display of a missing or incorrectly connected outer conductor
- Non-contact motor rotation indicator when the motor is running
- De-energised identification of motor connections (U, V, W) via a manual drive

### Product information

- Fast detection of phase sequence in three-phase supply
- Voltage range from 40 to 700 V, Frequency range 16 to 400 Hz

### Product highlights

- Robust housing with rubber protective cover
- Detachable test leads

- Measurement category CAT IV, 600 V
- Back light
- Testing rotary field direction possible without batteries, or with empty batteries

### Technical specifications

Display	LCD
Phase sequence indication	40...700 V / 16...60 Hz, 50...700 V / 60...400 Hz
Non-Contact Motor rotation indicator	16...400 Hz
Detection of motor connections	>0.65 V / 2...100 Hz
Test current	≤3,5 mA
Safety cert	DIN VDE 0411/EN 61010-1/DIN VDE 0413-7, EN 61557-7
Measurement category	CAT IV / 600 V
Power supply	2x batteries 1.5 V, IEC LR 03 (AAA), Micro
Dimensions	137 x 65 x 33 mm
Weight	approx. 170 g

Included: 1x PRM-6-EUR, 2x batteries 1.5 V, IEC LR 03, 3x test leads, 3x probes, 3x crocodile clips, 1x carrying case, 1x user manual



PRM-6-EUR

Article no. 4633222

### Recommended Accessories

See accessory section for more details.



Crocodile clips for conductor rails

Model 391511 (red)

Article no. 2146861



1324 Unidreh accessory set

allows a perfect and easy connection to CEE 16 A and CEE 32 A sockets, safety cert.: CAT II, 1000 V

Article no. 2146183



1150 Carrying Case

Article no. 2145755



TL-PRM-6 test lead set for PRM-6-EUR

Article no. 4692870

Model 391512 (black)

Article no. 2146877



Terminals for CP signal output to check communication protocol

EVC-20 test cable for type 2 with socket outlet or fixed cable with vehicle connector

Proximity Pilot (PP) state selector

Control Pilot (CP) state selector

PE Pre-Test to check if possible hazard touch voltage is present

Error simulation for "E" and PE error

Measuring terminals to check safety and function of charging station

## Sustainable energy

A transition to sustainable energy is necessary to meet the growing energy demand and to address the threat of climate change. Sustainable energy sources like solar power or switching to driving electric vehicles requires equipment testing to make sure relatively new power sources are safe to use and deliver according their standards. As an innovating company we are extending our range of electric testing equipment to fit the world's new energy landscape.



## EV-500 Series

# Test Adapter Kits for Electric Vehicle Charging Stations

Get access to the socket-outlets of a charging station to perform safety and functional tests, while simulate presence of an electrical vehicle

The EV-500 Series Test Adapter Kits are designed to test function and safety of charging stations mode 3 for AC charging. The Adapter Kit allows you to conduct tests in combination with appropriate test instruments like an installation tester (for example the Beha-Amprobe ProInstall Series).

### Functions

- PE Pre-Test: With this safety feature the PE conductor can be tested for possible presence of dangerous voltage against earth.
- Proximity Pilot (PP) state "Cable Simulation": With PP State rotary switch the adapter can simulate various current capabilities of charging cables.
- Control Pilot (CP) state "Vehicle Simulation": With CP State rotary switch selector various charging states can be simulated.
- Simulation of CP error "E"
- Simulation of PE error (Earth fault)

### Product information

- Suitable to vehicle charging stations with charging mode 3
- EV-connectors for type 2 and type 1
- Measuring terminals L1, L2, L3, N and PE to connect test device like installation tester to perform safety and functional tests.
- Terminals for CP signal output to check communication between adapter (=simulated electrical vehicle) and charging station.

### Product highlights

- Separate phase indication by three LED lamps for easy check if voltage is present.

- Mains socket offering the possibility to connect an external load to check if the electric power meter works and counts in the right manner.
- IP 54 rating - Dust and splashing water protected

### Technical specifications

Outputs (for test purpose only)	
Measuring terminal L1, L2, L3, N and PE	Max. 250/430 V, CAT II 300 V, max. 10 A
Mains socket	Max. 250 V, CAT II 300 V, allowed current max. 10 A
CP Signal output terminals	PWM communication protocol, approx. max. $\pm 12$ V
Input voltage	Up to 250 V (single phase system) up to 430 V (three phase system), 50/60 Hz, max 10 A
Dimensions (W x H x L)	110 x 45 x 220 mm (length without connection cable and connector)
Weight	Approx. 1 kg (Adapter EVA-500-x + EV-connector EVC-20)
Safety	IEC/EN 61010-1:2010, IEC/EN 61010-2-030:2010

### EV-500 Ordering Information:

Select correct model for your country

Version	Country	Article no.
EV-500-D	(with Schuko socket (CEE 7/3) for EU countries except for UK, Switzerland and CEE)	5008532
EV-500-UK	(with UK socket) for UK/Ireland only	5022810
EV-500-CH	(with Swiss socket type 13) for Switzerland only	5022805
EV-500-F	(with French socket type E) for Central and Eastern Europe (using a socket type E)	5022822

Included in KIT: 1x EVA-500-D/UK/CH/F Test Adapter, 1x EVC-20 Test Cable for EV charging station type 2 with socket outlet or fixed cable with vehicle connector, 1x User Manual, 1x Soft Carrying Bag



EV-500-UK

#### Accessories:

EVC-13 test cable for EV charging station type 1 with fixed cable and vehicle connector

Article no. 5008580

## SOLAR-100

# Solar Power Meter

### Functions

- Measuring solar radiation
- Establishing light transparency of windows and panes (g-factor)

- Manual range selection
- Integrated measurement memory (data hold)
- MAX/MIN function
- Manual zero adjustment

### Product information

- Display switchable between  $W/m^2$  or  $BTU / (ft^2 \times h)$

### Technical specifications

Display	LCD, 3 1/2 digit, 1999 digits
Measurement ranges	0...200, 2000 $W/m^2$ ; 0...634 $BTU / (ft^2 \times h)$
Resolution	0.1, 1 $W/m^2$ ; 0.1, 1 $BTU$
Accuracy	$\pm 10 W/m^2$ ( $\pm 3 BTU$ ) or $\pm 5 \%$
Power supply	1x battery 9 V, IEC 6F22
Dimensions	130 x 63 x 38 mm (unit) 80 x 55 x 29 mm (sensor)
Weight	approx. 230 g

Included: 1x SOLAR-100, 1x battery 9 V, IEC 6F22, 1x carrying case, 1x user manual



SOLAR-100

Article no. 3474979





.....**Large LCD Display** .....>  
with auto backlight  
for clear viewing in  
full sunlight

Locate  
underground  
utilities up to  
100 ft. ....>



<.....**Intuitive  
Transmitter**  
automatically  
chooses the  
correct locating  
function

## Underground Utilities Locators and Wire Tracers

Cable locators are useful for tracing and finding wires and cables. This means that sockets and fuses can be assigned to circuits, hidden sockets and junction boxes in walls, floors, and ceilings can be traced, and interruptions in cables and short circuits can be located.

Targeted locating of cables in walls, as well as interruptions and short circuits in cables

- Locating of fuses/machines and assignment to circuits
- Locating of accidentally concealed sockets and distribution boxes
- Locating of interruptions and short circuits in unshielded underfloor heating
- Tracing wires in ceilings and walls
- Tracing cables in soil



# Wire Tracers and Underground Utilities Locators

Known for speed, reliability, and accuracy, Amprobe wire tracers and Underground Locator kits set the standard for precision and usability, and help you get the job done quickly and accurately.

## Wire Tracers



	AT-6010	AT-6020	AT-6030	AT-7020	AT-7030	SF100
<b>Measurement Category</b>	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT IV 300 V	CAT IV 300 V	CAT III 300 V
<b>Traces energized and de-energized wires</b>	•	•	•	•	•	•
<b>Locates energized and de-energized breakers and fuses</b>	•	•	•	•	•	•
<b>Receiver "Breaker Identification" mode</b> to instantly identify the correct breaker	–	•	•	•	•	–
<b>Finds shorts and opens</b>	•	•	•	•	•	–
<b>Transmitter "Loop" mode</b> for closed loop de-energized circuits	–	•	•	•	•	–
<b>Non-contact voltage detection</b>	–	•	•	•	•	•
<b>Two frequency modes</b> for optimal tracing in energized (6 kHz) and de-energized (33 kHz) circuits	•	•	•	•	•	–
<b>Transmitter Operating Voltage</b>	0 to 600 V AC/DC	0 to 600 V AC/DC	0 to 600 V AC/DC	9 to 300 V AC/DC	9 to 300 V AC/DC	100...250 V AC
<b>Receiver Display</b>	B&W 2.5 in LCD	Color 2.5" LCD	Color 2.5" LCD	Color 3.5" LCD	Color 3.5" LCD	2 LEDs and 7-segment display for letters
<b>Rechargeable Batteries</b>	–	–	•	–	•	–
<b>Signal clamp attachment</b> to induce signal	(optional accessory)	(optional accessory)	•	(optional accessory)	•	–

## Underground Utilities Locators



	AT-3500	UAT-610	UAT-620
<b>Measurement Category</b>	–	CAT IV 600 V	CAT IV 600 V
<b>Locates energized/de-energized wires, cables, pipes</b>	•	•	•
<b>Passive tracing - 50/60 Hz</b>	•	•	•
<b>Passive tracing - Radio</b>	•	•	•
<b>Active Tracing</b>	33 kHz	33 kHz (de-energized) 8kHz (energized system)	33 kHz (de-energized) 8kHz (energized system)
<b>Active tracing - Induction mode (33kHz)</b>	•	•	•
<b>Depth measurement</b>	Up to 4.9 m (16 ft)	100 m (30 ft)	100 m (30 ft)
<b>Signal Clamp accessory</b>	(optional accessory)	(optional accessory)	•
<b>A-Frame accessory</b>	(optional accessory)	(optional accessory)	(optional accessory)
<b>Null and peak tracing options</b>	–	•	•
<b>Display</b>	LCD	LCD	LCD
<b>Sonde capable</b>	•	•	•
<b>Auto display backlight sensing (Receiver)</b>	–	•	•





**AT-7030** Advanced Wire Tracer Kit



## AT-7000-EUR series Multi-function Advanced Wire Tracer Kits

### Functions

- Targeted locating of cables in walls, as well as interruptions and short circuits in cables
- Locating fuses/machines and assignment to circuits
- Locating accidentally concealed sockets and distribution boxes
- Locating interruptions and short circuits in unshielded underfloor heating
- Tracing metallic water and heating pipes

### Product information

- Set consisting of transmitter and receiver in a stable, shock-proof case

- Display of sender signal
- Clear, easy-to-follow instruction manual with application examples

### Product highlights

- All application areas (live or de-energised) are covered without the need for additional devices
- Receiver with high-resolution 8.9 cm (3.5") TFT-LCD color screen
- Display of position and direction of wire on LC screen
- Receiver with two antennas - "Smart Sensor™" and "Tip Sensor"
- Transmitter with two switchable transmission frequencies (6 kHz and 33kHz)

- Connection for optional current clamp to feed in a signal without direct connection to the wire.

**Included AT-7020:** 1x AT-7000-RE Receiver, 1x Transmitter AT-7000-TE, 3 test leads, 2x crocodile clips, 2x probes, 10x batteries 1.5 V, IEC LR 06 (AA), Mignon, 1x carry case, 1x user manual

**Included AT-7030:** 1x AT-7000-RE Receiver, 1x Transmitter AT-7000-TE, 1x SC-7000-EUR Current clamp, 1x BR-7000-T power pack, 1x Hanging strap HS-1, 3 test leads, 2x crocodile clips, 2x probes, 10x batteries 1.5 V, IEC LR 06 (AA), Mignon, 1x carry case, 1x user manual

### Accessories:



Current clamp SC-7000-EUR

Article no. 4542825



Hanging strap for transmitter HS-1

Article no.4594135



Power pack for transmitter

Article no.4467296



Battery charger

Article no.4544583



TL-7000-25M

Article no.4634011



**AT-7020** Advanced Wire Tracer Kit

Article no. 4542794



**AT-7030** Advanced Wire Tracer Kit

Article no. 4542782

## New AT-8000-EUR Series Advanced Wire Tracer Coming Soon.



## AT-6000-EUR Series Multi-function Advanced Wire Tracer Kits

The AT-6000-EUR Series, available in two different kits (AT-6020-EUR and AT-6030-EUR), combines a receiver and powerful transmitter to locate energized and de-energized wires, breakers, and fuses.

The AT-6000-RE Receiver detects the signal in wires and cables using two methods: active tracing method (with the Transmitter) and passive tracing method (without the Transmitter). In hard-to-reach areas, the Receiver's Tip Sensor can be used to trace wires in corners, tight spaces and junction

boxes. The AT-6000-TE Transmitter works on Energized and Deenergized circuits up to 600 V AC/DC in Category I through Category III electrical environments and features high signal, low signal, and loop modes. The Breaker Identification feature eliminates confusion of multiple false positives, common with older technology tracing tools, by identifying the one correct breaker or fuse with the highest recorded signal.

### Functions

- Quick Scan Wire Tracing: quick wire detection at a longer distance
- Precision Wire Tracing: precisely pinpoints wires or faults located behind walls, floors, or ceilings
- Breaker Identification: automatic sensitivity feature that allows for quick and easy breaker locating without the guesswork
- Non-Contact Voltage Detection: utilizes passive tracing without the transmitter to verify if a wire is Energized

### Product information

- Clear, easy-to-follow instruction manual with application examples
- CT-400-EUR signal clamp (included in AT-6030-EUR kit, optional for AT-6020-EUR kit) to improve accuracy and performance when there is no access to bare conductors

### Product highlights

- Receiver with full color TFT display
- Transmitter with High Signal Mode, Loop Mode and Low Precision Mode
- Receiver with Tip sensor, also for wire tracing in tight spaces

- Transmitter with transmission mode indicator and volume adjustment button.



AT-6000-R Receiver,  
AT-6000-T Transmitter  
CT-400 Signal Clamp

**Included AT-6020:** 1x AT-6000-R Receiver, 1x AT-6000-T Transmitter, 1x TL-7000 Test Lead and Accessory Kit, 1x ADPTR-SCT-xxx Socket-Check Adapter, 1x CC-6000 Hard Carrying Case, 1x User Manual, 1x Rechargeable Batteries 12X, 1x Battery Chargers 3X

**Included AT-6030:** 1x AT-6000-R Receiver, 1x AT-6000-T Transmitter, 1x TL-7000 Test Lead and Accessory Kit, 1x ADPTR-SCT-xxx Socket-Check Adapter, 1x CC-6000 Hard Carrying Case, 1x User Manual, 1x Rechargeable Batteries 12X, 1x Battery Chargers 3X, 1x CT-400-EUR Signal Clamp



AT-6020-EUR  
Advanced Wire  
Tracer Kit  
Article no. 4868002



AT-6030-EUR  
Advanced Wire  
Tracer Kit  
Article no. 4868016

## AT-6010-EUR Advanced Wire Tracer

### Functions

- RCD-protected circuit wire tracing
- Find breaks, openings, and shorts
- Trace wires in metal conduit
- Trace non-metallic pipes and conduits
- Trace shielded wires
- Trace underground wires
- Trace low voltage wires and data cables
- Sort bundled wires
- Map circuits using test leads connection
- Trace breakers/fuses on system with light dimmers

### Product information

- CT-400-EUR signal clamp (optional accessory) to improve accuracy and performance when there is no access to bare conductors
- Clear, easy-to-follow instruction manual with application examples

### Product highlights

- Transmitter with High Signal Mode, Loop Mode and Low Precision Mode
- Receiver with Tip sensor, also for wire tracing in tight spaces
- Transmitter with transmission mode indicator and volume adjustment button.

**Included AT-6010:** 1x AT-6010-RE Receiver, 1x AT-6010-TE Transmitter, 1x TL-6000-INTL Test Lead and Accessory Kit, 1x CC-6010-EUR Soft Carrying Case, 1x User Manual, 12x 1.5 V AA (IEC LR6) Battery



AT-6010-R Receiver  
AT-6010-T Transmitter



AT-6010-EUR  
Advanced Wire  
Tracer Kit  
Article no. 5044669



UAT-600-RE Receiver

UAT-600-TE Transmitter



SC-600-EUR Signal Clamp

## UAT-600-EUR Series Underground Cable/Pipe Locator System

### Functions

- Multiple tracing modes allow you to locate and trace energized and de-energized utilities in a variety of applications
- Identify any point of leakage around a cable
- Locate cable and wire ground faults, sheath faults or pipeline coating defects, where the utility is in direct contact with the ground
- Find the exact point where metal is touching the ground and power is leaking, ie, a shield is rusted or a rubber buffer is broken, creating noise on a cable

### Product information

- The intuitive Transmitter automatically chooses the correct locating function based on the connected accessory and includes selectable 8/33 kHz frequencies
- Rated CAT IV 600 V, ensuring safety when working with energized cables

- Semi-automatic gain control quickly detects tracing signal and allows precise adjustment of the receiver sensitivity
- Advanced technology and digital signal processing makes pinpointing process fast, accurate and clear:
  - Compass guidance with numeric fault field strength indicates the direction of the fault
  - Distance sensitive left and right arrows guides the user to precisely follow the path of the buried utility
  - Automatic gain control quickly detects tracing signal and precisely adjusts the A-Frame sensitivity
  - Adjustable volume control

### Product highlights

- The Receiver's high-contrast display allows for clear viewing in full sunlight and features an automatic backlight for shaded and dark areas
- Accurate depth measurement to 6 meters, detect and trace utilities buried

- up to 30 meters deep
- Rugged, durable construction: water and dust resistant to IP54 and drop proof to 1 meter
- Ground fault locating with the optional A-Frame accessory
- Comes as a complete kit, ready for use
- Use the Signal Clamp to induce a signal without making electrical contact

**Included UAT-610-EUR:** 1x UAT-600-RE Receiver, 1x UAT-600-TE Transmitter, 1x CC-UAT-600-EUR Carrying Case, 1x TL-UAT-600 Test Leads Kit, 2x FP-UAT-600 Replacement Fuse, 1x User Manual, 1x Quick Reference Guide, 6x 1.5 V AA (IEC LR6) Batteries (Receiver) 8 8

**Included UAT-620-EUR:** 1x UAT-600-RE Receiver, 1x UAT-600-TE Transmitter, 1x CC-UAT-600-EUR Carrying Case, 1x TL-UAT-600 Test Leads Kit, 2x FP-UAT-600 Replacement Fuse, 1x User Manual, 1x Quick Reference Guide, 6x 1.5 V AA (IEC LR6) Batteries (Receiver), 8x 1.5 V D (IEC LR20) Batteries (Receiver), 1x SC-600-EUR Signal Clamp

### Accessories

**AF-600-EUR A-Frame** ground fault locator to pinpoint ground faults where current is leaking to ground

**BR-600-R** Rechargeable battery for Receiver

**BR-600-T** Rechargeable battery for Transmitter

**EPS-UAT-600** 2-port charger for Receiver and Transmitter batteries

**TL-600-25M** Extension test lead, 25 m (80')



UAT-610-EUR  
Article no. 4994541



UAT-620-EUR  
Article no. 4994565

## AF-600-EUR A-Frame Ground Fault Locator

Set up the UAT-600-TE Transmitter to apply a fault find signal to the utility under test, the AF-600-EUR A-Frame receives the signal and locates the place of the fault. The AF-600-EUR will pinpoint where a cable metal conductor (either a sheath or a metallic conductor of the wire) touches the ground and can also detect other conductors to ground faults such as pipeline coating defects.

### Functions

- Identify any point of leakage around a cable
- Locate cable and wire ground faults, sheath faults or pipeline coating defects, where the utility is in direct contact with the ground
- Find the exact point where metal is touching the ground and power is leaking, ie, a shield is rusted or a rubber buffer is broken, creating noise on a cable

### Product information

- Advanced technology and digital signal processing makes pinpointing process fast, accurate and clear:
  - Compass guidance with numeric

- fault field strength indicates the direction of the fault
- Distance sensitive left and right arrows guides the user to precisely follow the path of the buried utility
- Automatic gain control quickly detects tracing signal and precisely adjusts the A-Frame sensitivity
- Adjustable volume controls

### Product highlights

- Clearly view the auto back light LCD display in bright sunlight and all other outdoor conditions
- The AF-600-EUR A-Frame comes complete with batteries and a carrying case



AF-600-EUR  
A-Frame Ground Fault Locator

Article no. 4994583

**Included:** 1x A-Frame Receiver, 6x 1.5 V AA (IEC LR6) Batteries, 1x Carrying Case, 1x User Manual



## AT-3500 Underground Cable/Pipe Locator System

With the AT-3500 cable locator you can ensure that productivity remains high, whilst costs remain low. AT-3500 is a robust, cost-effective solution for locating live and de-energised wires, cables and pipes in soil. The cable locator is, for example, suitable for car park and airport lighting, and shows the location of cables and pipes immediately on a digital, backlit multi-segment display, complete with acoustic indicators. The AT-3500 cable locator functions at the frequency of 33 kHz, which is proven for the majority of tracing applications. In order to avoid wires on construction sites, the device also provides a highly-sensitive current mode and a radio mode. Depth measurements can be carried out by pressing the button.

### Functions

- Locating and tracing cables and pipes in the ground
- Simplified tracing function enables location of cable or pipe damage
- Determining the location, depth, and alignment of metal cables
- Optical and acoustic display

### Product information

- Set consists of transmitter, receiver, and measuring accessories
- Various measurement functions allow for high levels of accuracy:

**Included:** Receiver, transmitter, connection cables, ground stake, carrying case, user manual, batteries (installed)

- Passive via network frequency
- Passive via radio signals
- Active via signal generator
- Transmitter with voltage-proof output
- Comprehensive range of accessories available

### Product highlights

- Large display with simple menu navigation and back light
- Robust construction for use in inclement weather and harsh environments



AT-3500  
Article no. 3435058

### Accessories:



MLS55-3,  
Pipe transmitter for AT-3500  
Article no. 3435099

## SF100 Fuse finder for live circuits

### Functions

- Fast and accurate locating of fuses and assignment to circuits
- Locating and tracing of cables beneath plaster

### Product information

- Set consisting of transmitter and receiver in a robust carry case
- Transmitter signal is indicated optically and acoustically on the receiver

- Transmitter with built-in Schuko plug for simple contacting with the Schuko or UK socket
  - Simple switching between fuse and cable search function
  - Continuous sensitivity adjustment of receiver
  - Coded signal enables precise identification from the receiver
- \* only available in countries using Schuko plug



SC-3500, Current clamp for AT-3500  
Article no. 3435073

### Technical specifications

Receiver display	2 LEDs and 7-segment display for letters for displaying the code from the transmitter
Tracing depth	Function fuse 0...10 cm, Function wire 0...40 cm
Voltage range	100...250 V AC (50...60 Hz)
Measurement category	CAT III/300 V
Pollution degree	2
Safety cert.:	EN 61010-1/IEC 61010
Power supply	1x battery 9 V, IEC 6LR61 (receiver), network supply (transmitter)
Dimensions	180 x 120 x 45 mm (case)
Weight	approx. 250 g (set)

**Included:** 1x fuse finder transmitter, 1x fuse finder receiver, 1x battery 9 V, IEC 6LR61, 1x carry case, 1x user manual



SF100  
Article no. 3454312

## LAN-1 LAN Cable Tester

### Functions

- Testing wiring faults of LAN cables
- Detection of cable breaks, short circuits, reversed and split pairs
- Check of shielding

### Product information

- Test pin configuration for:
  - 10/100 base
  - 10 base-2 cables

- RJ45 cables
- AT&T 258A cables
- EIA / TIA 568A/568B cables
- Token ring cables
- Testing installed cable on wall plate or the patch panels by using an external coding plug
- Testing a cable loop or remote testing with a coding plug
- Acoustic error display

### Product highlights

- Automatic and manual test procedure
- Recognition of split pairs

### Technical specifications

Display	2x 9 LED segments for cable occupation green output, red input
Connection	RJ45 and BNC
Max. cable length	>300 m
Power supply	battery 1x 9 V, IEC 6F22
Dimensions	130 x 56 x 38 mm
Weight	approx. 600 g

**Included:** 1x fuse finder transmitter, 1x fuse finder receiver, 1x battery 9 V, IEC 6LR61, 1x carry case, 1x user manual



LAN-1  
Article no. 3052401



←..... **Backlit dual display** for readability in low-light conditions

←..... **Measures AC/DC voltage** up to 1000V, ac/dc current

←..... **Dual thermocouples** for differential temperature measurements

AM-555-EUR Industrial Digital Multimeter

## Digital Multimeters

Multimeters are measuring devices that can measure many variables. Our product portfolio ranges from compact multimeters for simple applications (e.g. troubleshooting) up to multimeters for more demanding situations such as in development or within industry, with a variety of functions and measurement options. This means that regardless of the application, we have the right multimeter offering excellent value for the money.



## Digital Multimeters



	AM-500-EUR	Hexagon 110	Hexagon 120	Hexagon 340	37xR-A	38xR-A
Display Digits	3 1/2 digit, 1999 digits	3 3/4 digit, 4000 digits	3 3/4 digit, 4000 digits	3/4 digit, 5000 digits	4 digit, 9999 digits	4 digit, 9999 digits
True-RMS measurement	-	-	-	AC	AC	AC+DC
Bar graph	-	-	-	•	•	•
<b>Ranges</b>						
Voltage AC	1 mV... 600 V	0.1 mV... 1000 V	0.1 mV... 1000 V	0.01 mV... 1000 V	0.1 mV... 750 V	0.1 mV... 750 V
Basic Accuracy*	(1.0% + 3 D)	(1.5% + 5 D)	(1.5% + 5 D)	(0.5% + 3 D)	(1.2% + 10 D)	(1.2% + 10 D)
Frequency	45...400 Hz	50...500 Hz	50...500 Hz	40 Hz...20 kHz	45 Hz...2 kHz	45 Hz...2 kHz
Voltage DC	1 mV... 600 V	0.1 mV... 1000 V	0.1 mV... 1000 V	0.01 mV... 1000 V	0.1 mV... 1000 V	0.1 mV... 1000 V
Basic Accuracy*	(0.8% + 3 D)	(0.3% + 4 D)	(0.3% + 4 D)	(0.08% + 2 D)	(0.1% + 5 D)	(0.25% + 5 D)
Current AC	0.1 µA...10 A	0.1 µA...10 A (20A for 30 s)	0.1 µA...10 A (20A for 30 s)	0.1 µA...10 A (20A for 30 s)	0.01 µA... 10 A	0.01 µA... 10 A
Basic Accuracy*	(1.5% + 3 D)	(1.5% + 4 D)	(1.5% + 4 D)	(0.6% + 3 D)	(1.5% + 10 D)	(1.5% + 20 D)
Frequency	45...400 Hz	50 Hz...500 Hz	50...500 Hz	40 Hz...1 kHz	45 Hz...1 kHz	45 Hz...1 kHz
Current DC	0.1 µA...10 A	0.1 µA...10 A (20A for 30 s)	0.1 µA...10 A (20A for 30 s)	0.1 µA...10 A (20A for 30 s)	0.01 µA... 10 A	0.01 µA... 10 A
Basic Accuracy*	(1.2% + 3 D)	(1.2% + 3 D)	(1.2% + 3 D)	(0.2% + 4 D)	(0.5% + 10 D)	(0.5% + 10 D)
Resistance	1Ω...20 MΩ	0.1Ω...40 MΩ	0.1Ω...40 MΩ	0.01Ω...50 MΩ	0.1Ω...40 MΩ	0.1Ω...40 MΩ
Diode and continuity test	•	•	•	•	•	•
Capacitance	-	0.01 nF...3000 µF	0.01 nF... 3000 µF	0.01 nF... 9999 µA	0.01 nF... 400.0 µF	0.01 nF... 400.0 µF
Frequency	-	5 Hz...1 MHz	5 Hz...1 MHz	5 Hz...125 kHz	3.00Hz...10MHz	3.00Hz...10MHz
Temperature	-	-	-20...+300 °C	-50...+1000 °C	-	-20...+1300°C
<b>Range selection</b>						
Automatic	•	-	-	•	•	•
Manual	•	-	-	•	•	•
Data Hold	•	-	-	•	•	•
Min/max value memory	-	Max Hold	Max Hold	•	•	•
Peak Hold	-	-	-	•	•	•
Relative measurement	-	•	•	•	•	•
Data logger/interface	-	-	-	- / RS-232	- / RS-232	- / RS-232
Auto Power Off	-	•	•	•	•	•
Battery	1x 9 V	2x 1.5 V	2x 1.5 V	1x 9 V	1x 9 V	1x 9 V
Measurement Category	CAT III/600 V	CAT III/600V, CAT II/1000 V	CAT III/600 V, CAT II/1000 V	CAT IV/600 V, CAT III/1000 V	CAT III/600V, CAT II/1000V	CAT III/600V, CAT II/1000V
Features	Battery test, 1.5 V/9 V	Acoustic warning signal for incorrect jack connection	Acoustic warning signal for incorrect Jack connection incl. temperature probe	RS-232 interface Illuminated display Calibration and adjustment without opening the device Software optionally available	Inductance measurement Acoustic warning signal in case of incorrect jack connection logic test Magnetic hanger (MagneGrip™)	Current loop measurement (4...20mA) Software optionally available Magnetic hanger (MagneGrip™)

\* = Basic accuracy figures are with regard to the best level of accuracy of the relevant measurement function

# Digital Multimeters



	HD 110C	HD 160C	AM-510-EUR	AM-520-EUR	AM-535-EUR	AM-540-EUR	AM-555-EUR
Display Digits	4 digit, 9999 digits	4 digit, 9999 digits	3¾ digit, 3999 digits	3¾ digit, 3999 digits	3¾ digit, 3999 digits	3¾ digit, 5999 digits	3¾ digit, 5999 digits
True-RMS measurement	–	AC	–	–	•	–	•
Bar graph	–	–	•	•	–	•	•
<b>Ranges</b>							
Voltage AC	0.1 mV... 1000 V	0.1 mV... 1000 V	0.1 mV... 600 V	0.1 mV... 600 V	0.1 mV... 600 V	0.1 mV... 1000 V	0.1 mV... 1000 V
Basic Accuracy*	(1.2% + 10 D)	(1.2% + 10 D)	(1.0% + 3 D)	(1.0% + 3 D)	(1.0% + 3 D)	(1.0% + 3 D)	(1.0% + 3 D)
Frequency	45...2 kHz	45...2 kHz	45...400 Hz	45...400 Hz	45...400 Hz	45 Hz...1 kHz	45 Hz...1 kHz
Voltage DC	0.1 mV... 1500 V	0.1 mV... 1000 V	0.1 mV... 600 V	0.1 mV... 600 V	0.1 mV... 600 V	0.1 mV... 1000 V	0.1 mV... 1000 V
Basic Accuracy*	(0.1% + 5 D)	(0.1% + 5 D)	(0.8% + 1 D)	(0.8% + 1 D)	(0.8% + 1 D)	(0.5% + 2 D)	(0.5% + 2 D)
Current AC	0.01 µA... 2 A	0.01 µA... 2 A	0.1 µA... 10 A	0.1 µA... 10 A	0.1 µA...20A**	0.1 µA... 10 A	0.1 µA...20A**
Basic Accuracy*	(0.8% + 4 D)	(0.8% + 4 D)	(1.2% + 2 D)	(1.2% + 2 D)	(1.2% + 2 D)	(1.2% + 2 D)	(1.2% + 2 D)
Frequency	45...1 kHz	45...1 kHz	45...400 Hz	45...400 Hz	45...400 Hz	45 Hz...1 kHz	45 Hz...1 kHz
Current DC	0.01 µA... 2 A	0.01 µA... 2 A	0.1 µA... 10 A	0.1 µA... 10 A	0.1 µA...20A**	0.1 µA... 10 A	0.1 µA...20A**
Basic Accuracy*	(1.5% + 10 D)	(1.5% + 10 D)	(1.0% + 2 D)	(1.0% + 2 D)	(1.0% + 2 D)	(1.0% + 2 D)	(1.0% + 2 D)
Resistance	0.1 Ω...40 MΩ	0.1 Ω...40 MΩ	0.1 Ω...40 MΩ	0.1 Ω...40 MΩ	0.1 Ω...40 MΩ	0.1 Ω...60 MΩ	0.1 Ω...60 MΩ
Diode and continuity test	•	•	•	•	•	•	•
Capacitance	–	0.01 nF...400.0 µF	10 pF... 100.0 µF	10 pF... 4000 µA	10 pF... 4000 µA	60.00 nF... 60 mF	60.00 nF... 60 mF
Frequency	–	0.01 Hz...10 MHz	0.01 Hz...10 MHz	0.01 Hz...10 MHz	0.01 Hz...10 MHz	0.01 Hz...600.0 kHz	0.01 Hz...600.0 kHz
Temperature	–	-20...+1300°C	–	-40...+1000 °C	-40...+1000 °C	-40...+1000 °C	-40...+1000 °C
<b>Range selection</b>							
Automatic	•	•	•	•	•	•	•
Manual	•	•	•	•	•	•	•
Data Hold	•	•	•	•	•	•	•
Min/max value memory	–	•	–	•	•	•	•
Peak Hold	–	–	–	–	–	•	•
Relative measurement	•	•	–	–	–	–	–
Auto Power Off	•	•	•	•	•	•	•
Battery	1x 9 V	1x 9 V	1x 9 V	1x 9 V	1x 9 V	1x 9 V	1x 9 V
Measurement Category	CAT IV/1000 V	CAT IV/1000 V	CAT III/600 V	CAT III/600 V	CAT III/600 V	CAT IV/600V, CAT III/1000V	CAT IV/600V, CAT III/1000V
Features	Highest levels of safety CAT IV/1000 V, Auto Power Off	Highest levels of safety CAT IV/1000 V, Illuminated display Auto Power Off	Non-contact voltage detection, battery test, duty cycle function	Non-contact voltage detection, min/max value memory	Non-contact voltage recognition, True RMS measurement (TRMS)	Low pass filter Dual display Duty cycle function Peak value measurement (crest)	Low pass filter True-rms reading Dual display Duty cycle function Peak value measurement (crest)

\* = Basic accuracy figures are with regard to the best level of accuracy of the relevant measurement function

> 10 to 20A: measure up to 30 seconds, 10 minutes off minimum between measurements

\*\*Max duration of measurement:  
8 to 10A: measure up to 20 minutes, 10 minutes off minimum between measurements



## LCR55A LCR Meter

### Functions

- Measuring resistance
- Capacitance measurement
- Inductance measurement
- Transistor and diode measurement

- Shock-proof and impact-resistant thanks to standard protective holster
- Auto Power Off

### Product highlights

- Large, clear display

### Product information

- Manual range selection
- Integrated measurement memory (data hold and MAX hold)

### Technical specifications

Display	LCD, 3½ digit, 1999 digits
Ranges	
Resistance	0,01 Ω...20 MΩ
Basic accuracy	±(0.5% rdg + 5 digits)
Continuity	R < 30 Ω
Inductance	1 μH...200 H
Basic accuracy	±(3.0% rdg. + 20 digits)
Capacitance	1 pF...2000 μF
Basic accuracy	±(1.0% rdg. + 3 digits)
Diode test	0...3 V
Accuracy	±(1.5% rdg. + 1 digit)
Transistor test	(NPN, PNP) hfe, I <sub>ceo</sub>
Test current:	approx. 1 mA
Test voltage:	3.0 V DC typical
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	183 x 79 x 38 mm
Weight	approx. 311 g (incl. battery)

Included: 1x LCR55A, 2x test leads, 2x crocodile clips, 1x battery 9 V, IEC 6LR61, 1x user manual



LCR55A

Article no. 3026976



### Accessories:

Soft Case  
Model CC-ACDC

Article no. 2732643

## AM-500-EUR Compact digital multimeter

### Functions

- Voltage, current and resistance measurement
- Diode and acoustic continuity test

- Shock-proof and impact-resistant thanks to standard protective holster
- μA measurement range
- Auto Power Off

### Device information

- Automatic and manual range selection
- Integrated measurement memory (data hold)

### Product highlights

- 1.5 V and 9 V battery test

Included: 1x AM-500-EUR, 2x test leads, 2x battery 1.5 V, LR3, 1x user manual



AM-500-EUR

Article no. 4102332



### Accessories:

Safety set Model 370003

Article no. 2146666

Carrying case for devices with protective holster Model 1150

Article no. 2145755

# AM-500 Series Digital Multimeters

Best-in-class autoranging, digital multimeters with features for residential, commercial electrical, industrial and HVAC applications. Features include True-RMS, dual thermocouples for measuring temperature differential, low impedance to detect stray voltage, low pass filter to accurately measure variable frequency drives and a built-in flashlight.



**AM-510-EUR**  
Article no. 4102344



**AM-520-EUR**  
Article no. 4131281

**AM-535-EUR**  
Article no. 4701027

**AM-540-EUR**  
Article no. 4131308



**AM-555-EUR**  
Article no. 4701030



## AM-510-EUR

### Functions

- Voltage, current and resistance measurement
- Capacitance and frequency measurement
- Diode and acoustic continuity test
- Battery test 1.5 V and 9 V

### Product information

- Automatic and manual range selection
- Integrated measurement memory (data hold)
- Illuminated display
- Relative measurement
- Auto Power Off

### Product highlights

- Non-contact voltage detection
- Built-in LED flashlight

## AM-520-EUR

### As AM-510-EUR, but with:

- Temperature measurement

### Product information

- Additional bar graph display (61 segments)
- MIN/MAX hold
- Carry case included

## AM-535-EUR

### As AM-520-EUR, but with:

- Measures AC and DC current up to 20A (> 10 to 20A: measure up to 30 seconds, 10 minutes off minimum between measurements)
- True RMS measurement (TRMS) (only AM-535-EUR and AM-555-EUR)

## AM-540-EUR

### As AM-535-EUR, but with:

- Low pass filter
- Peak value measurement

### Product highlights

- Two temperature inputs
- Duty cycle function
- Measurement category CAT IV / 600V, CAT III / 1000V

## AM-555-EUR

### As AM-540-EUR, but with:

- Measures AC and DC current up to 20A (> 10 to 20A: measure up to 30 seconds, 10 minutes off minimum between measurements)
- True RMS measurement (TRMS) (only AM-535-EUR and AM-555-EUR)

### Included with AM-500 series:

1x AM-510-EUR, AM-520-EUR, AM-535-EUR, AM-540-EUR, AM-555-EUR

2x test leads

1x temperature probe (only AM-520-EUR, AM-535-EUR)

2x temperature probes

(only AM-520-EUR, AM-535-EUR)

1x temperature adapter (only AM-535-EUR, AM-540-EUR, AM-555-EUR)

1x hanging strap (only AM-520-EUR, AM-540-EUR)

1x battery 9 V, IEC 6LR61

1x carry case (only AM-520-EUR, AM-535-EUR, AM-540-EUR, AM-555-EUR)

1x user manual



## Recommended Accessories

See accessory section for more details.



**Safety set**  
Model 370003  
Article no. 2146666



**2x temperature probes with adapter.** For AM-540-EUR and AM-555-EUR, Model TPK-62  
Article no. 4160703



**Carrying case**  
Model VC221B  
Article no. 3068271



## Hexagon® 110

### Digital multimeter with extra large display

#### Functions

- Voltage, current and resistance measurement
- Capacitance and frequency measurement
- Diode and acoustic continuity test

- Integrated measurement memory (Data Hold) and Max Hold
- Relative measurement
- Auto Power Off
- Shock-proof and impact-resistant thanks to standard protective holster

- Acoustic warning signal and display message in case of incorrect jack connections (Hexagon 110 and 120 only)

#### Product information

- Automatic and manual range selection

#### Product highlights

- Digital multimeter with extra large display

## Hexagon® 120

### As Hexagon 110, but with:

- Temperature measurement

#### Included with the Hexagon Series:

- |  |                                      |
|--|--------------------------------------|
| 1x Hexagon 110, 120 or 340                       | 1x battery 9 V                       |
| 1x protective holster                            | IEC 6LR61 (340)                      |
| 2x test leads                                    | 2x battery 1.5 V IEC LR03 (110, 120) |
| 1x temperature probe (0° C...+400° C) (120, 340) | 1x user manual                       |

## Hexagon® 340A

### As Hexagon 120, but with:

- True RMS measurement (TRMS)
- Electrically isolated IR/RS-232 interface (software with adapter as option)
- 0.08 % best level of basic accuracy
- Additional analog bar graph with zoom function for evaluating trends
- Illuminated display

#### Recommended Accessories

See accessory section for more details.



**Safety set Model 370003**  
Article no. 2146666



**For all Hexagon models**  
Carrying case Model 1150  
Article no. 2145755



**For Hexagon 340:**  
Software Model 1332  
Article no. 3313506



**Hexagon® 340A**  
Article no. 3454491



**Hexagon® 110**  
Article no. 3454478

**Hexagon® 120**  
Article no. 3454484

## PM51A

### Pocket multimeter with frequency and capacitance measurement

#### Functions

- AC/DC voltage measurement
- Measuring resistance
- Diode and acoustic continuity test
- Capacitance and frequency measurement

#### Product information

- Automatic range selection
- Integrated measurement memory (data hold)
- With securely connected test leads
- Auto Power Off

#### Product highlights

- Compact digital multimeter in card format
- Large, clear display

**Included:** 1x PM51A, 1x battery 3 V, IEC CR2032, 1x user manual



**PM51A**  
Article no. 2727700



## PM55A

### Pocket multimeter with non-contact voltage detection (VolTect™) and automatic function selection (AutoTect™)

#### Functions

- Voltage and resistance measurement
- Diode and acoustic continuity test
- Voltage measurement (AC/DC µA range)
- Capacitance and frequency measurement
- Non-contact voltage detection (VolTect™)

#### Product information

- Automatic range selection
- Includes rubber protective cover
- Auto Power Off

#### Product highlights

- Compact digital multimeter in card format
- Large, clear display
- Automatic function selection of voltage and resistance (AutoTect™)



**PM55A**  
Article no. 2727721



#### Technical specifications

	PM51A	PM55A
Display	LCD, 33/4 digit, 4000 digits	LCD, 33/4 digit, 6000 digits
<b>Ranges</b>		
AC voltage	0.001 V...600 V	0.001 V...600 V
Basic accuracy	±(2.0% rdg. + 5 digits)	±(1.5% rdg. + 5 digits)
Frequency range	50 Hz...500 Hz	50 Hz...60 Hz
DC voltage	0.1 mV...600 V	0.001 V...450 V
Basic accuracy	±(1.0% rdg. + 2 digits)	±(0.5% rdg. + 3 digits)
Input resistance	10 MΩ	-
Resistance	0.1 Ω...40 MΩ	0.1 Ω...6,000 MΩ
Basic accuracy	±(1.5 % rdg. + 6 digits)	±(1.2 % rdg. + 6 digits)
Continuity	R < 65 Ω	R < 175 Ω
Frequency	5 Hz...1 MHz	10 Hz...30.00 kHz
Basic accuracy	±(0.5% rdg. + 4 digits)	±(3.5 % rdg. + 6 digits)
Capacitance	0.1 nF...3000 µF	0.1 nF...100.0 µF
Basic accuracy	±(3.5 % rdg. + 6 digits)	±(3.5 % rdg. + 6 digits)
Pollution degree	2	2
Measurement category	CAT III/300V, CAT II/600V	CAT III/300V, CAT II/600V
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1x battery 3 V, IEC CR2032	1x battery 3 V, IEC CR2032
Dimensions	113 x 53 x 10 mm	113 x 53 x 10 mm
Weight	approx. 78 g (incl. battery)	approx. 78 g (incl. battery)

**Included:** 1x PM55A, 1x battery 3 V, IEC CR2032, 1x case, 1x user manual



**Soft Case Model VC30A**  
Article no. 3099130



**HD160C**  
Article no. 2670787



**HD110C**  
Article no. 2670779

## HD160C Heavy-duty digital multimeter (TRMS)

### Functions

- Voltage, current and resistance measurement
- Diode and acoustic continuity test
- Capacitance and frequency measurement
- Temperature measurement

### Product information

- Automatic and manual range selection
- Integrated measurement memory (data hold)
- MIN/MAX, relative and average value

- measurement
- Illuminated display
- Shock-proof and impact-resistant thanks to standard protective holster
- Auto Power Off

### Product highlights

- True RMS measurement (TRMS)
- Highest safety rating of CAT IV/1000 V
- High voltages (1000 V AC and 1500 V DC)
- Protection category: IP67

## HD110C Robust multimeter for industrial applications

### Functions

- Voltage, current and resistance measurement
- Diode and acoustic continuity test

### Product information

- Manual range selection
- Integrated measurement memory (data hold)

- Shock-proof and impact-resistant thanks to standard protective holster
- Auto Power Off

### Product highlights

- Highest safety rating of CAT IV/1000 V
- High voltages (1000 V AC and 1500 V DC)
- Protection category: IP67

**Included:** 1x HD160C, 2x test leads, 1x magnetic holder, 1x temperature probe, 1x battery 9 V, IEC 6LR61, 1x user manual

### Accessories:



Professional test lead set with silicone insulation  
Model 1306  
Article no. 3313458



**DM73C**  
Article no. 2727739



## DM73C Pen Type Digital Multimeter

### Functions

- Voltage and resistance measurement
- Diode and acoustic continuity test

### Product information

- Automatic range selection
- Integrated measurement memory

- (data hold)
- Additional bar graph display
- Auto Power Off

### Product highlights

- Compact multimeter in pen design

### Technical specifications

Display	LCD, 3 3/4 digit, 3400 digits
Ranges	
AC voltage	0.001 V...600 V
Basic accuracy	±(1.5% rdg. + 8 digits)
Frequency range	50 Hz...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	±(0.5% rdg. + 2 digits)
Input resistance	10 MΩ
Resistance	0.1 Ω...34 MΩ
Basic accuracy	±(1.0 % rdg. + 4 digits)
Continuity	R < 35 Ω
Pollution degree	2
Measurement category	CAT III/300V, CAT II/600V
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	2x battery 1.5 V, IEC LR44
Dimensions	198 x 29 x 35 mm
Weight	approx. 150 g (incl. battery)



**Accessories:**  
Carrying case Model VC30A  
Article no. 3068280





**Mechanical lock;** .....>  
 tight clamp for higher accuracy, avoiding disturbance from measured wires and magnetic fields

**Finger guard** .....>  
 for safe usage

**Large digital display with** .....>  
 bar graph and filter function

<.. **Robust, strong rubber housing** for easy grip

<..... **Large digital display** with bar graph and filter function



# Clamp Meters

Our clamp meters and clamp adapters are suitable for measuring currents without interruption of the current flow. They enable current measurements in units and systems from 1 mA up to 3000 A. Our leakage current clamps, which enable a resolution of 0.01 mA AC, are ideal for troubleshooting insulation faults in systems and in equipment tests.

ALC-110-EUR  
 Leakage current clamp meter

# Facts to know about current clamps and clamp adapters

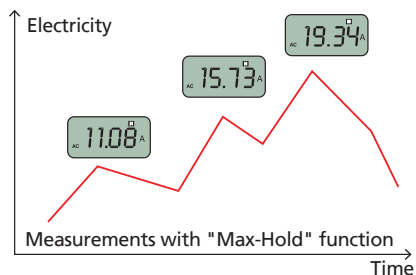
**Current clamps and clamp adapters are suitable for measuring AC and DC currents on units and systems without interrupting the current flow.**

## Safety

Only use current clamps or clamp adapters that are suitable for the stated measurement category for the desired measurement. If, for example, you wish to carry out a measurement in a distribution cabinet within a building, then a multimeter with at least a measurement category of III (CAT III) must be used. A detailed description of the measurement categories can be found on page 106.

## Peak value memory (Peak Hold)

Some clamp meters are equipped with a peak value memory (or measurement of inrush current). Due to the shorter response time it is possible to record current spikes in motors upon ignition, for example.



Readout Clamp with activated "MAX-HOLD" function

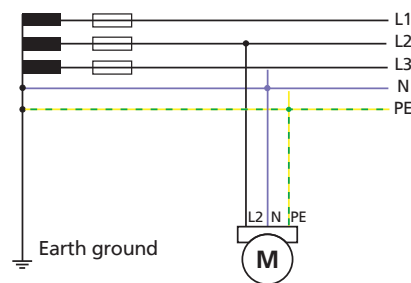
## True-RMS measurement

True-RMS measurement is necessary for the most precise recording of an alternating or mixed current.

The effective value plays an important part, especially with non-sinusoidal currents, e.g. phase angle control. The average value displayed by traditional current clamps is lower than the current that is actually available. Further information regarding the effective value can be found in "Things to know about multimeters".

## Measuring current without interruptions

Switching off systems or individual units in order to separate the circuit is not generally possible in practice and is largely avoided. All hazards, such as, for example, the appearance of hazardous contact voltages or a potential polarity reversal upon closing the circuit can be effectively prevented.



Measurement of current usage "Max-Hold" function of a single-phase motor

## Power clamp meters

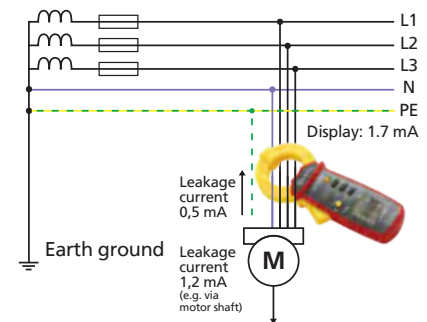
Measurement of apparent, active, reactive power and power factor  $\cos \phi$  is quick and simple with the BEHA-AMPROBE range of power clamp meters. Power consumers with load currents up to 1000 A can be measured.

## Clamp adapters

Clamp adapters are suitable for applications which are solely aimed at recording measurements. Depending on the type of evaluating circuit, the primary flowing current can be converted into a considerably lower, safe secondary current or a voltage. Applications: e.g. switch cabinet construction, laboratory measurement circuits.

## Stray current measurement (leakage current measurement)

High-resolution current clamps for leakage currents over 10  $\mu\text{A}$  are indispensable, particularly for troubleshooting or for testing units and systems in accordance with the Ordinance on Industrial Safety and Health (DGUV Regulation 3). Currents that do not flow back via an electrical conductor (e.g. N) can be quickly, simply, and safely measured by covering all active conductors (e.g. L1, L2, L3, N, or L1, N).



Differential current measurement with leakage current clamp

## Simple to use

Our current clamps and clamp adapters are characterized by being simple and intuitive. The individual conductor is fully surrounded by the current clamp. The measured value appears on the digital display and can be read off immediately.



## TRMS Current Clamps



	AMP-25-EUR	AMP-210-EUR	AMP-220-EUR	AMP-310-EUR	AMP-320-EUR	AMP-330-EUR
Max. current	300 A	600 A	600 A	600 A	600 A	1000 A
Current type	AC/DC	AC	AC/DC	AC	AC/DC	AC/DC
True RMS measurement	•	•	•	•	•	•
Display	3 ¾ digit, 6000 digits	3 ¾ digit, 6000 digits	3 ¾ digit, 6000 digits	3 ¾ digit, 6000 digits	3 ¾ digit, 6000 digits	3 ¾ digit, 6000 digits
Current AC	60.00 / 300.0 A	60.00 / 600.0 A	60.00 / 600.0 A	60.00 / 600.0 A	60.00 / 600.0 A	60.00 / 1000 A
Basic Accuracy*	1.5% + 5 counts	2.2 % + 7 counts	2.2 % + 7 counts	2.2 % + 7 counts	2.2 % + 7 counts	1.8% + 5 counts
Frequency	50...400 Hz	50...400 Hz	50...400 Hz	50...400 Hz	50...400 Hz	40...400 Hz
Current DC	60.00 / 300.0 A	–	60.00 / 600 A	–	60.00 / 600 A	60.00 / 1000 A
Basic Accuracy*	1.5% + 5 counts	–	2.0 % + 5 counts	–	2.0 % + 5 counts	1.8% + 5 counts
Voltage AC	–	0.1...600.0 V	0.1...600.0 V	0.1...600.0 V	0.1...600.0 V	0.1...1000 V
Basic accuracy*	–	1.0% + 5 counts	1.0% + 5 counts	1.0% + 5 counts	1.0% + 5 counts	0.8% + 5 counts
Frequency	–	50...60 Hz	50...60 Hz	50...60 Hz	50...60 Hz	20...400 Hz
Voltage DC	–	–	0.1...600.0 V	–	0.1...600.0 V	0.1...1000 V
Basic Accuracy*	–	–	1.2% + 7 counts	–	1.2% + 7 counts	0.8% + 5 counts
Resistance	–	0.1 Ω...60,00 kΩ	0.1 Ω...60,00 kΩ	0.1 Ω...60,00 kΩ	0.1 Ω...60,00 kΩ	0.1 Ω...60,00 kΩ
Basic Accuracy*	–	1% + 5 counts	1% + 5 counts	1% + 5 counts	1% + 5 counts	1% + 5 counts
Continuity test	–	R < 10 Ω	R < 10 Ω	R < 10 Ω	R < 10 Ω	R < 10 Ω
Frequency verification	–	5.00 Hz...999.9 Hz	5.00 Hz...999.9 Hz	5.00 Hz...999.9 Hz	5.00 Hz...999.9 Hz	5.00 Hz...999.9 Hz
Power measurement	–	–	–	–	–	–
Data Hold	•	•	•	•	•	•
MIN/MAX/Peak Hold	•	•	•	•	•	•
Capacitance measurement	–	•	•	•	•	•
Jaw opening	25 mm	30 mm	35 mm	30 mm	35 mm	51 mm
Power supply	2x 1.5 V IEC LR44	2x 1.5 V IEC LR03	2x 1.5 V IEC LR03	2x 1.5 V IEC LR03	2x 1.5 V IEC LR03	2x 1.5 V IEC LR6
Auto Power Off	•	•	•	•	•	•
Measurement category	CAT III/600V	CAT III/600V	CAT III/600V	CAT III/600V	CAT III/600V	CAT IV 600V, III 1000V
Safety cert.	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010
Dimension	147 x 60 x 32 mm	219 x 77x 37 mm	224 x 77x 37 mm	219 x 77x 37 mm	224 x 77x 37 mm	258 x 94 x 44 mm
Weight	140 g	208 g	254 g	208 g	254 g	420 g

## Current Clamps



	ACD-10 PLUS	ACD-14-PRO-EUR	ACD-23SW	CHB 15	CHB 35	ACDC-100	ACDC-100 TRMS
Max. current	600 A	600 A	400 A	200 A	400 A	800 A AC/1000 A DC	800 A AC/1000 A DC
Current type	AC	AC	AC	AC/DC	AC/DC	AC/DC	AC/DC
True RMS measurement	–	–	•	–	•	–	•
Display	3¾ digit, 4000 digits	3¾ digit, 4000 digits	3¾ digit, 3999 digits	3¾ digit, 3999 digits	3¾ digit, 3999 digits	3¾ digit, 4000 digits	3¾ digit, 4000 digits
Current AC	0.01 A... 600 A	0.01 A... 600 A	0.01 A... 400 A	0.01A...200 A	0.001 A...400 A	0.1 A...800 A	0.1 A...800 A
Basic Accuracy*	1.5% + 8 digits	1.9% + 8 digits	2% + 6 digits	2% + 4 digits	2% + 3 digits	1.5% + 5 digits	1.5% + 5 digits
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	40Hz...1kHz	40Hz...1kHz	40...200 Hz	40...200 Hz
Current DC	–	–	–	0.01 A...200 A	0.01 A...400 A	0.1 A...1000 A	0.1 A...1000 A
Basic Accuracy*	–	–	–	2% + 2 digits	2% + 2 digits	1.5% + 4 digits	1.5% + 4 digits
Voltage AC	0.001 V... 600 V	0.001 V... 600 V	1 mV... 600 V	0.1 V...400 V	–	0.1 mV...600 V	0.1 mV...600 V
Basic Accuracy*	1.5% + 5 digits	1.5% + 5 digits	1.2% + 5 digits	2% + +2	–	1% + 4 digits	1% + 4 digits
Frequency	50...500 Hz	50...400 Hz	50...500 Hz	40Hz...1kHz	–	50...500 Hz	50...500 Hz
Voltage DC	0.1 mV... 600 V	0.1 V... 600 V	0.1 mV... 600 V	0.1 V...400 V	–	0.1 mV...600 V	0.1 mV...600 V
Basic Accuracy*	0.5 % + 3 digits	0.5 % + 3 digits	0.5 % + 2 digits	2% + +2	–	0.5 % + 3 digits	0.5 % + 3 digits
Resistance	0.1 Ω...40.00 MΩ	0.1 Ω... 40.00 MΩ	0.1Ω...40.00 MΩ	0.1 Ω...400 Ω	–	0.1 Ω...40 MΩ	0.1 Ω...40 MΩ
Basic Accuracy*	1.0% + 4 digits	0.8% + 6 digits	1.0% + 4 digits	2% + 2 digits	–	0.8% + 6 digits	0.8% + 6 digits
Continuity test	R < 120 Ω	R < 120 Ω	R < 25 Ω	R < 40 Ω	–	R < 120 Ω	R < 120 Ω
Frequency verification	0.001Hz...100kHz	0.001Hz...100kHz	–	0.01 Hz...50 kHz	0.01 Hz...9.99 kHz	R < 120 Ω	R < 120 Ω
Power measurement	–	–	–	–	–	–	–
Data Hold	•	•	•	•	•	–	•
MIN/MAX/Peak Hold	•	•	–	•	•	–	–
Capacitance measurement	•	•	•	–	–	–	–
Jaw opening	25 mm	26 mm	30 mm	23 mm	23 mm	50 mm	50 mm
Power supply	1x 3V, IEC/CR2032	2x 3 V, IEC/CR2032	2x 1.5 V, IEC LR03	2x 1.5 V, IEC LR6	2x 1.5 V, IEC LR6	2x 1.5 V, IEC LR03	2x 1.5 V, IEC R03
Auto Power Off	•	•	•	–	–	•	•
Measurement Category	CATIII/600 V	CATIII/600 V	CATIII/600 V	CATII/600 V	CATII/600 V	CATIII/600 V	CATIII/600 V
Safety cert.	DIN VDE 0411/ EN 61010/IEC 61010	DIN VDE 0411/ EN 61010	DIN VDE 0411/ EN 61010/IEC 61010	DIN VDE 0411/ EN 61010/IEC 61010	DIN VDE 0411/ EN 61010/IEC 61010	EN 61010/ IEC 61010	EN 61010/ IEC 61010
Dimension	190 x 63 x 32 mm	219 x 77x 37 mm	240 x 70 x 41 mm	183 x 64 x 36 mm	183 x 64 x 36 mm	227 x 78 x 40 mm	227 x 78 x 40 mm
Weight	150 g	208 g	220 g	190 g	190 g	290 g	290 g

\* = Basic accuracy figures are with regard to the best level of accuracy of the relevant measurement function



## Current Clamp Meters:

AC/DC Current measurement  
Power Quality  
Leakage Current



	ACD-52NAV	ACD-54NAV	ACDC-3400 IND	ALC-110-EUR	CHB 5	LH41A
Max. current	600 A	1000 A AC/DC	1000 A	60 A	50 A	40 A
Current type	AC/DC	AC/DC	AC/DC	AC	AC	AC/DC
True RMS measurement	•	•	•	•	•	–
Leakage current measurement	–	–	–	• acc. IEC 61557-13	•	–
Display	3½ digit, 4000 digits	3½ digit, 4000 digits	3½ digit, 6600 digits	6000 counts	4 digit, 9999 digits	4 digit, 4000 digits
Current AC	0.01... 600 A	0.01... 1000 A	0.1 A...1000 A	0.01 mA...60 A	0.5 mA...50 A	0.001...40 A
Basic Accuracy*	1.5% + 5 digits	1.5% + 5 digits	2% + 10 digits	5.0% + 5 digits... 2.0% + 5 digits	1.5% + 5 digits	1.3% + 5 digits
Frequency	50 Hz...400 Hz	50 Hz...400 Hz	50 Hz...1 kHz	15 Hz...1 kHz	45 Hz...1 kHz	40...400 Hz
Current DC	0.1 A...600 A	0.1 A...1000 A	0.1 A...1000 A	–	–	0.001 A...40 A
Basic Accuracy*	1.5% + 5 digits	1.5% + 5 digits	2% + 5 digits	–	–	1.3% + 5 digits
Voltage AC	0.01 V... 1000 V	0.01 V... 1000 V	0.1 mV...750 V	–	0.1 mV...600 V	–
Basic Accuracy*	1% + 5 digits	1% + 5 digits	1.5% + 8 digits	–	0.5% + 5 digits	–
Frequency	50 Hz...500 Hz	50 Hz...500 Hz	50 Hz...1kHz	–	50 Hz...1kHz	–
Voltage DC	0.01... 1000 V	0.01... 1000 V	0.1 mV...1000 V	–	–	–
Basic Accuracy*	0.7 % + 2 digits	0.7 % + 2 digits	0.5 % + 2 digits	–	–	–
Resistance	1 Ω...99.99 kΩ	1 Ω...99.99 kΩ	0.1 Ω...66.00 MΩ	–	–	–
Basic Accuracy*	1% + 3 digits	1% + 3 digits	1% + 5 digits	–	–	–
Continuity test	R < 30 Ω	R < 30 Ω	R < 30 Ω	–	–	–
Frequency verification	20.00 ...9,999 kHz	20.00 ...9,999 kHz	0.01 Hz...1000 MHz	–	45 Hz...65 Hz	–
Power measurement	0...600 kW	0...999 kW	–	–	–	–
Data Hold	•	•	•	•	•	•
MIN/MAX/Peak Hold	•	•	•	•	•	–
Capacitance measurement	0.01...4000 µF	0.01...4000 µF	0.001 nF...6.6 mF	–	–	–
Jaw opening	42 mm	42 mm	51 mm	30 mm	30 mm	19 mm
Power supply	9 V, IEC 6F22	9 V, IEC 6F22	1x 9 V, IEC 6F22	2x 1.5 V, IEC LR03 AAA	2x 1.5 V, IEC LR6	1x 9 V, IEC 6LR61
Auto Power Off	•	•	•	•	•	•
Measurement Category	CAT IV / 600 V CAT III / 1000 V	CAT IV / 600 V CAT III / 1000 V	CAT III / 1000 V CAT IV / 600 V	CAT III 600 V	CAT II / 600 V CAT III / 300 V	CATIII / 300 V
Safety cert.	DIN VDE 0411/ EN 61010/IEC 61010	DIN VDE 0411/ EN 61010/IEC 61010	EN 61010/IEC 61010	IEC 61010-1, IEC 61010-2-032, IEC 61557-13	DIN VDE 0411/ EN 61010/IEC 61010	DIN VDE 0411/ EN 61010/IEC 61010
Dimension	260 x 80 x 40 mm	260 x 80 x 40 mm	218 x 105x 53 mm	221 x 89 x 48 mm	210 x 62x 36 mm	184 x 71x 31 mm
Weight	480 g	480 g	560 g	410 g	200 g	235 g

\* = Basic accuracy figures are with regard to the best level of accuracy of the relevant measurement function

Pocket-sized  
14,7 cm height



**AMP-25-EUR**  
Article no. 4588268

## AMP-25-EUR TRMS Mini current clamp (AC/DC)

### Functions

- True RMS current measurement
- Low pass filter
- Measurement of inrush current
- Non-contact voltage detection

### Product information

- Automatic range selection
- Zero adjustment

- Integrated measurement memory (data hold)
- Jaw opening 25 mm
- Auto Power Off

### Product highlights

- Very compact design
- Illuminated display

Included: 1x AMP-25, 2x Batteries 1.5V, IEC LR 44, 1x Carrying case, 1x User manual



**AMP-210-EUR**  
Article no. 4560581

## AMP-210-EUR TRMS Current clamp (AC)

### Functions

- Current, voltage and resistance measurement
- Capacitance and frequency measurement
- Continuity beeper
- Low pass filter
- Measurement of inrush current
- Non-contact voltage detection

### Product information

- Automatic range selection
- Zero adjustment, relative value measurement

- Integrated measurement memory (Data Hold, MIN/MAX)
- Jaw opening 30 mm
- Auto Power Off

### Product highlights

- Precise measurement of smaller currents (Amp-Tip)
- Illuminated display
- Diode test



**AMP-220-EUR**  
Article no. 4560596

## AMP-220-EUR TRMS Current clamp (AC)

### As AM-210-EUR, but with:

- DC Current Function
- Display of mixed currents AC+DC (TRMS)

- Display of mixed voltages AC+DC (TRMS)
- Jaw opening 35 mm

Included: 1x AMP-210-EUR or AMP-220-EUR, 2x Test leads, 2x Batteries 1.5 V, IEC LR 03, 1x Carrying case, 1x User manual



Safety set  
Model 37003  
Article no. 2146666



## AMP-200 and AMP-300 Series TRMS and Motor Maintenance Current Clamp Meters

The AMP-200 and -300 Series True-RMS Clamp Meters offer a complete range of measurement functions for modern electrical environments, motor testing and HVAC applications. All models feature True-RMS sensing, low pass filters and fast response processors for quick, error-free measurements. The new Amp-Tip function allows for precise measurement of current down to the tenth of an Amp, and a third input jack on the AMP-300 Series enables motor rotation and 3-phase sequence testing. These clamps are surprisingly versatile, designed to eliminate the need for multiple tools and provide all-in-one measurement capabilities.

### AMP-310-EUR TRMS Motor maintenance current clamp (AC)

#### Functions

- Current, voltage and resistance measurement
- Capacitance and frequency measurement
- Measurement of ionization current ( $\mu\text{A}$  DC range)
- Temperature measurement
- Continuity beeper
- Low pass filter
- Measurement of inrush current
- Non-contact voltage detection

#### Product information

- Automatic range selection
- Zero adjustment, relative value measurement
- Integrated measurement memory (Data Hold, MIN/MAX)
- Jaw opening 30 mm
- Auto Power Off

#### Product highlights

- Precise measurement of smaller currents (Amp-Tip)

- Displays rotary field direction and motor rotation direction
- Measurement of ionization current ( $\mu\text{A}$  DC range) in heating systems
- Thermometer  $-40^{\circ}\text{C}$  to  $400^{\circ}\text{C}$
- Illuminated display



**AMP-310-EUR**  
Article no. 4560603

### AMP-320-EUR TRMS Motor maintenance current clamp (AC/DC)

#### As AMP-310-EUR, but with:

- DC Current Function
- Display of mixed voltages AC+DC (TRMS)
- Jaw opening 35 mm



**AMP-320-EUR**  
Article no. 4560615

### AMP-330-EUR TRMS Motor maintenance current clamp (AC/DC)

#### As AMP-320-EUR, but with:

- Voltage measurement up to 1000 AAC/DC
- AC and DC voltage measurements to 1000 V
- Measurement categories CAT IV 600 V, CAT III 1000 V
- Flashlight function
- Jaw opening 51 mm

**Included:** 1x AMP-310-EUR or AMP-320-EUR, 2x Test leads, 2x Crocodile clips, 1x Temperature probe, 2x Battery 1.5 V, IEC LR 03 (or IEC LR 06), 1x Carrying case, 1x User manual



**AMP-330-EUR**  
Article no. 4560626



Safety set  
Model 370003  
Article no. 2146666





**ACD-10 PLUS**  
Article no. 3037808

## ACD-10 PLUS Current clamp (AC)

### Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Diode test
- Capacitance and frequency measurement
- Measurement of inrush current (30 ms)

### Product information

- Automatic range selection
- Integrated measurement memory (Data hold and MAX hold)
- Jaw opening 25 mm
- Auto Power Off

### Product highlights

- Narrow jaws

**Included:** 1x ACD-10 PLUS, 2x Test leads, 1x Battery 3 V, IEC CR2032, 1x Carrying case, 1x User manual



**ACD-14-PRO-EUR**  
Article no. 4718989

## ACD-14-PRO-EUR Current clamp with dual display (AC)

### Functions

- True RMS current measurement
- Voltage and resistance measurement
- Capacitance and frequency measurement
- Temperature measurement
- Continuity beeper
- Low pass filter
- Measurement of inrush current
- Non-contact voltage detection

### Product information

- Automatic range selection
- Integrated measurement memory (data hold)
- Jaw opening 30 mm
- Auto Power Off

### Product highlights

- Dual display with illumination
- Precise measurement of small AC currents (Amp-Tip)

- Measurement of ionization current (2000  $\mu$ A DC range) in heating systems
- True RMS measurement (TRMS)

**Included:** 1x ACD-14-PRO-EUR, 2x Test leads, 1x Temperature probe, 2x Batteries 1.5 V, IEC LR 03, 1x Carrying case, 1x User manual



**ACD-23SW**  
Article no. 3804941

## ACD-23SW Swivel clamp meter TRMS (AC)

### Functions

- Current, voltage and resistance measurement
- Audible continuity and diode test
- Capacitance and temperature measurement

- Jaw opening approx. 30 mm
- Auto Power Off

### Product highlights

- Clamp head swivels up to 180°
- Non-contact voltage detection
- True RMS measurement (TRMS)

### Product information

- Automatic and manual range selection
- Integrated measurement memory (data hold)

**Included:** 1x ACD-23SW, 2x Test leads, 2x Battery 1.5V, IEC LR03, 1x Temperature probe, 1x Carrying case, 1x User manual



Safety set  
Model 370003  
Article no. 2146666

## CHB15 Current clamp (AC/DC)

### Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Frequency verification

### Product information

- Manual range selection
- Integrated measurement memory (data hold)

- MIN/MAX and relative value measurement
- Additional bar graph display
- Jaw opening 23 mm

### Product highlights

- AC/DC clamps are also suitable for automotive applications, emergency power supplies and solar technology.

**Included:** 1x CHB15, 2x Test leads, 2x Battery 1.5 V, IEC LR6, 1x Carrying case, 1x User manual



**CHB15**  
Article no. 3454457

## CHB35 TRMS current clamp (AC/DC)

### Functions

- Current measurement
- Frequency measurement (non-contact)

### Product information

- Manual range selection
- Integrated measurement memory (data hold)
- MIN/MAX and relative value measurement

- Additional bar graph display
- Jaw opening 23 mm

### Product highlights

- AC/DC clamps are also suitable for automotive applications, emergency power supplies and solar technology.
- True RMS measurement (TRMS)

**Included:** 1x CHB35, 2x Battery 1.5 V, IEC LR6, 1x Carrying case, 1x User manual



**CHB35**  
Article no. 3454469

## ACDC-52NAV CAT IV Navigator™ power clamp meter 600 A (AC/DC) TRMS

### Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Capacitance and frequency measurement
- Measurement of active power
- Measuring the power factor cos
- Harmonics measurement for current and voltage values (up to the 25th harmonic)
- Measurement of total harmonic distortion (THD)
- Measurement of inrush current for motors

### Product information

- Automatic and manual range selection
- Integrated measurement memory (MIN/MAX and Data Hold)
- Peak value memory (Peak Hold)
- Rotary field measurement
- Low pass filter for measurement of frequency converters
- Large digit display with backlit display and analog bar graph
- Jaw opening 42 mm
- Auto Power Off

### Product highlights

- AC/DC true RMS measurement (TRMS)
- Automatic flashlight function on opening the jaws
- Non-contact voltage detection
- Functions can be selected via a joystick

**Included:** 1x ACDC-52NAV, 2x Test leads, 1x Battery 9 V, IEC 6F22, 1x Carrying case, 1x User manual



**ACDC-52NAV**  
Article no. 3729961

## ACDC-54NAV CAT IV Navigator™ power clamp meter 1000 A (AC/DC) TRMS

### Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Capacitance and frequency measurement
- Temperature measurement
- Measurement of active power
- Measuring the power factor cos
- Harmonics measurement for current and voltage values (up to the 25th harmonic)
- Measurement of total harmonic distortion (THD)
- Measurement of inrush current for motors

### Product information

- Automatic and manual range selection
- Integrated measurement memory (MIN/MAX and Data Hold)
- Peak value memory (Peak Hold)
- Rotary field measurement
- Low pass filter for measurement of frequency converters
- Large digit display with backlit display and analog bar graph
- Jaw opening 42 mm
- Auto Power Off

- Non-contact voltage detection
- Functions can be selected via a joystick

**Included:** 1x ACDC-54NAV, 2x Test leads, 1x Temperature probe, 1x Battery 9 V, IEC 6F22, 1x Carrying case, 1x User manual



**ACDC-54NAV**  
Article no. 3729989



Safety set  
Model 370003  
Article no. 2146666



## Leakage Current Measurement

High-resolution current clamps for leakage currents over 10  $\mu\text{A}$  are indispensable, particularly for troubleshooting or for testing units and systems in accordance with the Ordinance on Industrial Safety and Health (DGUV Regulation 3). Currents that do not flow back via an electrical conductor (e.g. N) can be quickly, simply, and safely measured by covering all active conductors (e.g. L1, L2, L3, N, or L1, N).



### ACDC-3400 IND

## CAT IV TRMS clamp meter for industrial applications up to 1000 A (AC/DC)

#### Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Frequency verification
- Capacitance measurement
- Peak value measurement
- Duty cycle function

#### Product information

- Automatic and manual range selection
- Integrated measurement memory (Data hold and Peak hold)
- Additional bar graph display
- Illuminated display
- Auto Power Off
- Relative value measurement
- Jaw opening: 51 mm

#### Product highlights

- True RMS measurement (TRMS)

**Included:** 1x ACDC-3400 IND, 2x Test leads, 1x Battery 9 V, IEC 6F22, 1x Carrying case, 1x User manual



### CHB5

## Digital leakage current clamp with harmonics measurement TRMS (AC)

#### Functions

- Leakage test
- Stray current measurement (leakage current measurement) TRMS
- Voltage measurement (TRMS)
- Frequency verification
- Harmonics measurement for current and voltage values (up to 99th harmonic)

#### Product information

- Integrated measurement memory (data hold)
- MIN/MAX value measurement
- Jaw opening 30 mm
- Auto Power Off

#### Product highlights

- Minimum resolution: 0.01 mA
- Harmonics measurement up to 99th peak value measurement

- Range of applications: Measurement of leakage currents, e.g. stray or residual currents, current consumption of units in service or customer service sector without interruption to circuit

**Included:** 1x CHB5, 2x Test leads, 2x Battery 1.5 V, IEC LR6, 1x Carrying case, 1x User manual



## ALC-110-EUR Leakage current clamp meter

### Functions

- True-rms measurements for accuracy when measuring complex, non-sinusoidal waveforms
- Max readings and hold function
- Measurement of earth leakage current
- Measurement of differential leakage currents
- Measurement of leakage current through the earth (PE) conductor
- Tracing the source of earth leakage current
- Measurement of current consumption of appliances in service or customer service sector without interruption to the circuit

### Product information

- Low influence of external low frequency magnetic fields: = 30 A/m, operating class 2 @IN: 3.500 mA – 600.0 mA

- Mechanical lock of the jaw; jaw opening 30 mm (1.2 in)
- Highest resolution of 0.001 mA, measure up to 60 A
- Selectable limits: 0.25mA, 0.5mA, 3.5mA, 10mA, 12mA
- Selectable filters:
  - - Low Pass Filter Function for appliance measuring (acc. IEC/EN 61557-16 amendment A)
  - - 50/60 Hz filter
  - - no filter

### Product highlights

- Following the standard for leakage current clamps IEC/EN 61557-13
- Selectable filter function removes unwanted noise
- Broad frequency range 15 Hz to 1 kHz which makes this clamp ideal for a wide range of applications including industrial and railway application

- High safety rating: CAT III 600 V
- Auto power-off to save battery life
- Backlit display; auto backlight off and auto power off for extended battery life

**Included:** 1x ALC-110-EUR, 2x Battery (IEC LR03, Alkaline (AAA)), 1x Soft carrying case, 1x User manual



**ALC-110-EUR**  
Article no. 4930890



### Recommended Accessories

#### Accessories for all Leakage Current Clamp Meters:

See accessory section for more details.



Adapters for stray current measurements:

Schuko/Schuko\*  
Model 1233

Article no. 2145900

\* only for countries with Schuko plug



CEE 5-pole 16 A  
Model 1235

Article no. 2145921

CEE 5-pole 32 A  
Model 1236

Article no. 2145939



Safety set  
Model 370003

Article no. 2146666



Test lead set with crocodile clips  
Model TL36A

Article no. 3034444



LH41A

Article no. 3030898



## LH41A Digital current clamp (AC/DC)

### Functions

- Current measurement from 1 mA AC and DC

- Integrated 5 s measurement memory (data hold)
- Auto Power Off

### Product information

- Manual range selection
- Jaw opening 19 mm
- Automatic zero-point (DC measurement range)

### Product highlights

- Minimum resolution: 1 mA
- Shielded against external interference

### Technical specifications

Display	LCD, 4 digit, 4000 digits
Ranges	
Current AC/DC	0.001...40 A
Basic accuracy	±(1.3 % rdg. + 5 digits)
Frequency range	40...400 Hz
Pollution degree	2
Measurement category	CAT III / 300 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 19 mm
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	184 x 71 x 31 mm
Weight	approx. 235 g

Included: 1x LH41A, 1x Battery 9 V, IEC 6LR61, 1x User manual



CT235A

Article no. 3026809



## CT235A Current clamp adapter (AC/DC)

### Functions

- Clamp adapter for extending the AC and DC ranges of multimeters up to 1000 A AC/DC

- Output Signal: 1 mV corresponds to 1 A test current
- Jaw opening 32 mm
- Fixed test leads
- Zero adjustment

### Product information

- Can be used with all common multimeters; also compatible with TRUE RMS multimeters and analogue recorders

## CT237B Current clamp adapter (AC/DC)

### Functions

- Clamp adapter for extending the AC and DC ranges of multimeters up to 200 A AC/DC

- Output Signal: 10 mV corresponds to 1 A test current
- Jaw opening 20 mm
- Fixed test leads
- Zero adjustment

### Product information

- Can be used with all common multimeters; also compatible with TRUE RMS multimeters and analogue recorders



CT237B

Article no. 3511514



### Technical specifications

	CT235A	CT237B
Ranges		
Current AC/DC	200 A, 1000 A	20 A, 200 A
Basic accuracy	± (1 % + 0.5 A)	± (1.2 % + 0.03 A)
Output voltage	1mV/A	10 mV/A (20 A measurement range) 1 mV/A (200 A measurement range)
AC frequency range	50 Hz ... 10 kHz	50 Hz ... 1 kHz
Pollution degree	2	2
Measurement category	CAT III/300 V	CAT III/300 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 32 mm	approx. 20 mm
Length of connection cable	approx. 1.5 m	approx. 1.5 m
Power supply	1x battery 9 V, IEC 6F22	1 x battery 9 V, IEC 6F22
Dimensions	approx. 195 x 70 x 30 mm	approx. 185 x 70 x 30 mm
Weight	approx. 300 g	approx. 280 g

Included: 1x CT237B or 1x CT235A, 1x Battery 9 V, IEC 6F22, 1x User manual





Large backlight  
LCD-display

Rotary switch:

- Continuity
- Insulation resistance
- Loop impedance - High current trip mode and No trip mode
- RCD trip time and level
- Volts
- Phase rotation
- Earth resistance

**TELARIS® ProInstall-200**  
Multifunction Installation Tester  
w/type-B RCD & Earth Test

## Test and Measurement equipment in accordance with (inter)national standards

Measurement and test equipment in accordance with DIN/VDE and EN 61557 are used to check electrical safety in order to establish safety for people and objects. Our measurement and test equipment is divided into three groups in accordance with the tests that are to be performed:

- Testing electric machines (stationary) in accordance with DIN VDE 0100/0105 and EN 61557
- Testing electric equipment (portable) in accordance with DIN VDE 0701-0702 and EN 61557
- Testing electric machines in accordance with DIN VDE 0113 and EN 61557

This equipment was developed in accordance with the user's requirements and standards in order to carry out tests in a fast, simple, and safe manner.

Most of our measurement and test equipment also provide an integrated measurement memory for creating a measurement report to make logging along with our software packages much more effective.



**\*Products are available only in UK**



**KMP7010**  
Article no. 3730256

## KMP7010 Ground Resistance Tester according to BS7671 IEE 17th Edition regulations

### Functions

- Measures Earth ground resistance
- Measure resistance of the grounding systems to verify that the system has low enough resistance to provide protection for people, equipment and structures

- Voltage measurement prevents false measurements
- Built-in memory to store 20 measurements
- Safety CAT III 600V

- Test leads, auxiliary electrodes are included for a complete instrument

### Product highlights

- Designed to allow testing to BS7671 IEE 17th Edition regulations, BS EN 61010-1 BS EN 61557-1, BS EN 61557-5, BS EN 61326-1 (EMC)

### Product information

- Measures Earth ground resistance 3 point (fall of potential) or 2 point tests

### Technical specifications (At 23°C ± 5°C. 45% to 75% RH)

Earth Resistance	0.00Ω ~ 40.00Ω	± (2% rdg + 20 LSD)
Measurement	0.0Ω ~ 40.00Ω	± (2% rdg + 3 LSD)
	0Ω ~ 40.00Ω	± (2% rdg + 3 LSD)
Voltage Measurement	0Vac ~ 400Vac	± (1% rdg + 6 LSD) @ 50/ 60 Hz
Operating Temperature	+5°C to +40°C. ≤80% RH, no condensation	
Storage Temperature	-20°C to +60°C. ≤90% RH, no condensation (without batteries)	
Power Supply	1.5V Alkaline Battery (AA Battery) x 6 pcs	
Dimensions (L x W x H)	160 x 101 x 71 mm (6.3 x 3.98 x 2.79 in)	
Product Weight	Approx. 500g (1.1 lb) with batteries installed	
Regulation Compliance	Designed to allow testing to BS7671, IEE 17th Edition regulations BS EN 61010-1 CAT III 400V, BS EN 61557-1. BS EN 61557-5, BS EN 61326-1 (EMC)	

**Included:** 1x Test lead set for 3 point test, 1x Auxiliary ground rods, 1x Test lead set for 2 point test, 1x Batteries (6x AA), 1x User manual, 1x Strap and carrying case



**KMP7021**  
Article no. 3730301

## KMP7021 Digital RCD Tester according to BS7671 IEE 17th Edition regulations

### Functions

- Designed to check for correct operation of RCD devices

- Phase switch selection 0° and 180° for positive and negative semi-cycle testing
- Large display
- Safety CAT III 300 V

- Designed to allow testing to BS7671 IEE 17th Edition regulations, BS EN 61010-1 CAT III 300V, BS EN 61557-1, BS EN 61557-3, BS EN 61326-1 (EMC)

### Product information

- Three levels of trip currents (x1/2, x1, x5) for complete range of testing applications: Fast Trip Function and Ramp Test

### Product highlights

- 3-LED proper connection indicator  
Displays mains voltage before test

### Technical specifications

Specifications (At 23°C ± 5°C. 45% to 75% RH)

Operating Voltage	230Vac, 50 Hz	+10% to -15%
Trip current @ X½	10/20/30/100/300/500mA (trip time 0 to 2000ms)	Trip current tolerance: -10% to +10% Trip time: ± (2% rdg + 2 LSD)
Trip current @ X1	10/20/30/100/300mA (trip time 0 to 10000ms) 500mA (trip time 0 to 300ms)	Trip current tolerance: 0% to +10% Trip time: ± (2% rdg + 2 LSD)
Trip current @ X5	10/20/30mA (trip time 0 to 40ms)	Trip current tolerance: 0% to +10% Trip time: ± (2% rdg + 2 LSD)
Fast Trip Current	250mA (trip time 0 to 40ms) (KMP7021)	Trip current tolerance: 0% to +10% Trip time: ± (2% rdg + 2 LSD)
Ramp Test (KMP7021)	10/20/30/100/300/500mA -10% to +10%, Ramp increase by 10% Default nominal residual currents from 20% to 110%, Maximum measuring time 300ms x 10 times	
Operating Temperature	+0°C to +40°C. ≤80% RH, no condensation	
Storage Temperature	-20°C to +60°C. ≤90% RH, no condensation	
Power Supply	AC mains 230V + 10% - 15%, 50 Hz	
Dimensions (L x W x H)	160 x 101 x 71 mm (6.3 x 3.98 x 2.79 in)	
Product Weight	Approx. 450g (0.99 lb)	
Regulation Compliance	Designed to allow testing to BS7671, IEE 17th Edition regulations BS EN 61010-1 CAT III 300V, BS EN 61557-1. BS EN 61557-6, BS EN 61326-1 (EMC)	

**Included:** 1x 3-Wires mains test cord, 1x Test lead set with leads/probes/alligator clips, 1x User manual, 1x Strap and carrying case



**\*Products are available only in UK**

## KMP7030

### Loop Impedance Tester according to BS7671 IEE 17th Edition regulations

#### Functions

- Non Trip Loop test
- Loop testing is a quick, convenient, and highly specific method of evaluating an electrical circuit for its ability to engage protective devices (circuit breakers, fuses, RCDs)
- A ground loop determines the effectiveness of protective devices, therefore it is crucial to be able to measure it, in order to detect and correct problems

#### Product information

- Fast testing
- Instant reading
- Loop measurement ranges: 20, 200 & 2000Ω
- PSC measurement up to 20kA
- Backlight display
- Low Battery Indication
- CAT III 300V

#### Product highlights

- Displays mains voltage before test
- Instant correct wiring status check

- Designed to allow testing to BS7671 IEE 17th Edition regulations, BS EN 61010-1 CAT III 300V, BS EN 61557-1, BS EN 61557-3, BS EN 61326-1 (EMC)



**KMP7030**

Article no. 3842833

#### Technical specifications Specifications (At 23°C ± 5°C. 45% to 75% RH)

Operating Voltage	230Vac, 45Hz ~ 65 Hz	+10% to -15%
Loop Impedance 20/200/2000Ω	0 ~ 19.99 / 199.9 / 1999 Ω	±(3% rdg + 4 LSD)
AC Test Current	25A Nominal at 20Ω	
AC Test Period	10ms at 20Ω	
No Trip Loop Impedance 20 / 200Ω	0 ~ 19.99 / 199.9 Ω	± (3% rdg + 6 LSD)
PSC Measurement 200A / 2000A / 20kA	0.0 ~ 1999.9 / 1999 / 19.9kA	PSC accuracy derived from measured loop impedance specification and measured voltage specification ± (2% rdg + 4 LSD), @ 50/60Hz
Voltage Measurement	100Vac ~ 300Vac	
Operating Temperature	0°C to +40°C. ≤85% RH, no condensation	
Storage Temperature	-20°C to +60°C. ≤90% RH, no condensation (without batteries)	
Power Supply	1.5V Alkaline Battery (AA Battery) x 8 pcs	
Dimensions (L x W x H)	189 x 168 x 85 mm (7.43 x 6.65 x 3.35 in)	
Product Weight	Approx. 450g (0.99 lb)	
Regulation Compliance	Designed to allow testing to BS7671, IEE 17th Edition regulations, BS EN 61010-1 CAT III 300V	

**Included:** 1x Mains test cord, 1x Test lead set with IEC connector, 1x Test probe set, 1x Alligator clip set, 1x batteries (8x AA), 1x User manual, 1x Strap and carrying case

## KMP7036

### Insulation-Continuity Tester according BS7671 IEE 17th Edition regulations

#### Functions

- Tests insulation of wires, cables, transformers and electrical motors

#### Product information

- Selectable test voltages 250V, 500V and 1000V
- Test button hold to perform the Dielectric Absorption Ratio Test
- Continuity test at 200mA short-circuit
- Built in voltmeter and red light warning for live circuit indication
- Automatic discharge of test object after completion of measurement

- Test lead resistance zero facility
- Safety CAT III 600V

#### Product highlights

- Designed to diagnose the breakdown of the insulation in various parts of the electrical system such as wires, transformers and motors
- Three testing voltages covering wide range of commercial and residential applications
- The quality of insulation is critical to assure proper, uninterrupted and safe functioning of electrical circuits

- Designed to allow testing to BS7671 IEE 17th Edition regulations BS EN 61010-1 CAT III 600V, BS EN 61557-1 / -2 / -4 / -10, BS EN 61326-1 (EMC)



**KMP7036**

Article no. 3730274

#### Technical specifications Specifications (At 23°C ± 5°C. 45% to 75% RH)

Insulation Resistance @ 250V/500/1000V (Test Current ≥1mA)	0.00MΩ ~ 4.99MΩ	± (3% rdg + 5 LSD) for
	5.0MΩ ~ 49.9MΩ	0.00MΩ ~ 99.9MΩ
	50MΩ ~ 999Ω	± (5% rdg + 5 LSD) for
	1.00GΩ ~ 1.99GΩ	100MΩ ~ 1.99GΩ
	(Buzzer threshold: 4MΩ)	
Continuity @ IN ≥200mA, Uo=5Vdc (Nominal)	0.00MΩ ~ 9.99MΩ	± (2% rdg + 3 LSD) @ 50/ 60 Hz
Operating Temperature	0°C to +35°C. ≤75% RH, no condensation	
Storage Temperature	-20°C to +60°C. ≤80% RH, no condensation (without batteries)	
Power Supply	1.5V Alkaline Battery (AA Battery) x 6 pcs	
Dimensions (L x W x H)	160 x 101 x 71 mm (6.3 x 3.98 x 2.79 in)	
Product Weight	Approx. 450g (0.99 lb) with batteries installed	
Regulation Compliance	Designed to allow testing to BS7671, IEE 17th Edition regulations, BS EN 61010-1 CAT III 600V, BS EN 61557-1 / -2 / -4 / -10, BS EN 61326-1 (EMC)	

**Included:** 2x Test leads, 2x Test probes, 2x alligator clips 1x batteries (8x AA), 1x User manual, 1x Strap and carrying case

#### Recommended Accessories

See accessory section for more details.

#### Accessories for Ground KMP7000 Series:

Standard test lead set for KMP7030

model SL7030

Article no. 4160744

Single function tester kit carry bag model KP1700

Article no. 4160759



ProInstall-75 available only in UK

## Multifunction Installation Testers



	Proinstall-75	Proinstall-100	Proinstall-200
Voltage & frequency display	•	•	•
Wiring polarity checker	•		
Low Ohm resistance		•	•
Insulation resistance	•	•	•
Continuity & resistance	•	•	•
Loop/line impedance	•	•	•
Loop impedance without tripping RCDs	•	•	•
PSC (short-circuit current)	•	•	•
RCD trip time	•	•	•
RCD trip current (ramp function)	•	•	•
Automatic RCD test sequence	•		•
Test AC and pulsed AC sensitive RCDs (Type AC, type A, type F, type G/R)	Type A	•	•
Test smooth DC sensitive RCDs (Type B, B+)	–	–	•
Earth resistance with rods	–	–	•
Phase sequence test	•	•	•
Illuminated display	LCD, 4 digit, 9999 digits	•	•
Memory	approx. 400 readings	approx. 400 readings	approx. 1000 readings
<b>Display range / resolution</b>			
Voltage	50...500 V / 0.1V AC	50...500 V / 0.1V AC	50...500 V / 0.1V AC
Frequency	45...65 Hz	–	–
Loop impedance	10 Ω / 0.001 Ω 20 Ω / 0.01 Ω 200 Ω / 0.1 Ω 2000 Ω / 1 Ω	0-20 Ω / 0.01 Ω 200 Ω / 0.1 Ω 2000 Ω / 1 Ω	0-20 Ω / 0.01 Ω 200 Ω / 0.1 Ω 2000 Ω / 1 Ω
Input voltage range	100...500 V 50/60 Hz	100...500 V 50/60 Hz	100...500 V 50/60 Hz
Insulation resistance	50 V -10kΩ-50MΩ / 0.01 MΩ 100V -100kΩ-20MΩ / 0.01 MΩ -20MΩ-100MΩ / 0.1 MΩ 250V -10kΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1 MΩ 500V -10kΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1 MΩ -200MΩ-500MΩ / 1MΩ 1000V -100kΩ-200MΩ / 0.01 MΩ -200MΩ-1000MΩ / 1 MΩ	100V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-100MΩ / 0.1 MΩ 250V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1MΩ 500V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1 MΩ -200MΩ-500MΩ / 1MΩ 1000V -0MΩ-200MΩ / 0.01 MΩ -200MΩ-1000MΩ / 1 MΩ	100V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-100MΩ / 0.1 MΩ 250V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1MΩ 500V -0MΩ-20MΩ / 0.01 MΩ -20MΩ-200MΩ / 0.1 MΩ -200MΩ-500MΩ / 1MΩ 1000V -0MΩ-200MΩ / 0.01 MΩ -200MΩ-1000MΩ / 1 MΩ
Test voltage	50, 100, 250, 500, 1000 V	100, 250, 500, 1000 V	100, 250, 500, 1000 V
Low Ohm resistance	–	0-20 Ω / 0.01 Ω 200 Ω / 0.1 Ω 2000 Ω / 1 Ω	0-20 Ω / 0.01 Ω 200 Ω / 0.1 Ω 2000 Ω / 1 Ω
RCD/FI rated residual currents	10, 30, 100, 300, 500, 1000 mA	10, 30, 100, 300, 500, 1000 mA	10, 30, 100, 300, 500, 1000 mA
Factors	x0.5, x1, x5 and AUTO	x0.5, x1, x5 and AUTO	x0.5, x1, x5 and AUTO
RCD/FI types	Standard AC, selective, pulsating, B-type	Standard AC, selective, pulsating	Standard AC, selective, pulsating, B-type
Phase rotation test - input voltage range	100...500 V	100...500 V	100...500 V
Earth resistance	–	–	0-200 Ω / 0.1 Ω 2000Ω / 1 Ω
Safety Certification	EN61010-1, EN61557-1, EN61557-2, EN61557-3, EN61557-4, EN61557-6, EN61557-7, EN61557-10, BS7671	EN61010-1, EN/IEC 61010-031:2002+A1:2008, VDE0411, EN61557-1, EN61557-2, EN61557-3, EN61557-4, EN61557-5, EN61557-6, EN61557-7, EN61557-10	EN61010-1, EN/IEC 61010-031:2002+A1:2008, VDE0411, EN61557-1, EN61557-2, EN61557-3, EN61557-4, EN61557-5, EN61557-6, EN61557-7, EN61557-10
Measurement category	CAT III 500 V / CAT IV 300 V	CAT III 500 V / CAT IV 300 V	CAT III 500 V / CAT IV 300 V
Protection degree	IP40	IP40	IP40
Power supply	6x 1.5 V batteries type IEC LR6 (AA) (supplied) , usable with 6x 1.2 V NiMH rechargeable batteries (not supplied)		
Size (L x W x H)	100 x 250 x 125 mm	115 x 255 x 130 mm	115 x 255 x 130 mm
Weight	1300 g	1450 g	1450 g

### ProInstall Ordering Information:

Select correct ProInstall model for your country

Version	Country	Model	Article no.
100-D	Germany, Austria only	ProInstall-100-D	4373971
200-D	Germany, Austria only	ProInstall-200-D	4373980
100-DK	Denmark only	ProInstall-100-DK	4399247
100-CH	Switzerland only	ProInstall-100-CH	4374484
200-CH	Switzerland only	ProInstall-200-CH	4374491
100-EUR	EU countries (except UK, Germany, Austria, Switzerland and Denmark)	ProInstall-100-EUR	4374504
200-EUR	EU countries (except UK, Germany, Austria, Switzerland and Denmark)	ProInstall-200-EUR	4374519
75-UK	UK/Ireland only	ProInstall-75-UK	4826466



ProlInstall-100



ProlInstall-200

## TELARIS® ProInstall-100

### Combined installation measurement equipment

#### Functions

- Measurement of loop resistance
- Measurement of internal network resistance
- Measurement of short circuit current
- Low resistance and continuity measurement
- Insulation test
- RCD/FI measurement (contact voltage, trip time, trip current - increasing current)
- Voltage and frequency measurement

#### Product information

- Memory for approx. 400 readings with 3 levels for assignment of distribution list numbers and circuit numbers

- IR/USB interface for transferring the stored measurement values to a PC
- Software for logging is optionally available for printing out a test report
- Integrated socket test with contact electrode for identification of incorrectly connected sockets or missing protective earth
- Easy-to-read, large LC display with back lighting and an especially large viewing angle
- Auto Power Off

#### Product highlights

- Compact, robust construction enables work to take place even in harsh environments (weighs only 1500g)

- A simple to use and intuitive user interface enables you to work immediately and efficiently
- Probe with test button

#### Included

- Measurement of loop resistance and short circuit current without tripping RCD/FI

## TELARIS® ProInstall-200

### Combined installation measurement equipment

#### as the ProlInstall-100, also with:

- Testing of AC/DC-sensitive RCD/FI (type B)
- Memory for approx. 1000 readings

- Earth measurement (optionally with probes)
- RCD/FI analysis for testing all RCD/FI parameters

#### Included:

- 1x ProlInstall-100 or 200
- 3x test leads
- 3x crocodile clips
- 3x probes
- 1x probe with test button
- 1x protective holster (integrated)
- 1x hanging strap
- 1x carrying case
- 6x battery 1.5 V, IEC LR6

- 1x quick start guide
- 1x user manual on CD-ROM
- 1x Schuko input line cord

## ProInstall-75-UK

### Multifunction Installation Tester

#### Functions

##### Measurement of:

- Voltage & Frequency
- Wiring polarity checker
- Insulation Resistance
- Continuity & Resistance
- Loop & Line Resistance
- Prospective Earth Fault Current (PEFC/IK)
- Prospective Short-Circuit current (PSC/IK)
- RCD switching time, tripping level (ramp test), variable current
- Automatic RCD test sequence
- Test pulse current sensitive RCDs (Type A)
- Phase Sequence Indicator

#### Product information

- Compact, lightweight and comfortable to wear
- Simple operation for fast, easy testing

#### Included:

- 1x ProlInstall-75
- 1x Test lead set
- 1x ProlInstall-TL-UK (LC38 AMP-MFT, mains test cord)
- 1x Alligator clips
- 1x Test probe
- 1x ProlInstall-TL-KIT (Remote test probe and probe tips)
- 1x ProlInstall-CC (Soft case with carrying strap)

- Self-test
- Illuminated display

#### Product highlights

- Fast high current loop test (high current mode)
- Advanced loop testing prevents RCDs from tripping
- Variable RCD current mode for customized settings
- Zero adapter for easy test lead compensation
- PASS/FAIL indicator takes the guesswork out of RCD testing
- Insulation test voltages for a variety of applications
- Select voltage measurement quickly and easily between L-N, L-PE, and N-PE
- Dual display gives simultaneous readout of mains voltage and frequency

- 1x TL-75 (Fused test probe, red/blue/green with lantern spring, cap and tip cover)
- 1x Zero-Adapter
- 1x Statement of calibration
- 1x Batteries
- 1x Quick reference guide
- 1x Carry strap for neck/waist
- 1x CD-ROM (User manual)

- Time saving auto-null feature subtracts lead resistance from measurements, and stores it in memory even after powering down
- High resolution measurements down to 0.01 ohm for a high level of accuracy
- Detachable leads for easy replacement


 ProlInstall-75-UK  
 \* Available only in UK



**DGC-1000 A**  
Article no. 2731217

## DGC-1000 A Clamp meter for earth loop measurement

### Functions

- Earth loop measurement range: 0.025–1500 Ω
- Stray current measurement range: 0.2...1000 mA
- Current measurement range: 0.2–30 A

- Recording interval 1...255 s
- Limit adjustment with alarm function
- Data hold function
- Jaw opening 23 mm
- Calibration loop included

### Product information

- Measurement memory for 116 readings

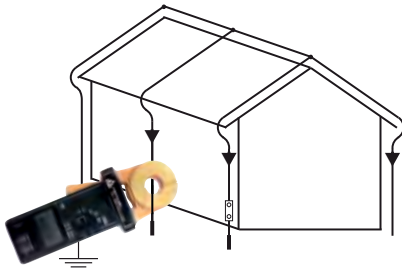
### Product highlights

- Earth measurement in closed earthing systems without setting of earth stakes
- TRMS current measurement

### Technical specifications

Display	LCD, 4 digit, 9999 digits
Display ranges/ Resolution	
Earth resistance	0.025 ...1500 Ω
Stray current	0.2...1.000/10.00/100.0/1000mA, 0.001/0.01/0.1/1 mA
Current	0.2 A...4.000 A/30 A, 0.001/0.01 A
Measurement memory for 116 readings	
Recording interval	1 ... 255 s
Overall	
Crest factor	< 3
Pollution degree	2
Measurement category	CAT III/300 V, CAT II/600 V
Safety cert.:	DIN VDE 0411/IEC 61010
Jaw opening	approx. 23 mm
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	257 x 100 x 47 mm
Weight	approx. 640 g

**Included:** 1x DGC-1000A, 1x Battery 9 V, IEC LR6, 1x User manual, 1x Calibration loop, 1x Case



## Earth loop measurement with a clamp meter

In the case of earthing systems with earths connected to each other that create a closed loop (e.g. the lightning protection system on a house), the earth resistance of every earth loop can be quickly and safely determined by means of a clamp meter for earth loop measurement (DGC-1000A).

The DGC-1000A clamp meter is a clamp with two current clamps in practical terms, which are installed within a housing. This clamp combines the two current clamps needed to perform the stakeless ground loop test in one compact and easy to use instrument.

A measurement current is induced in the earth loop with a current clamp, whilst the current running through the earth is measured with a second clamp in order to derive the resistance of the earth loop for the relevant earth.



**Schuko-Test FI/RCD**  
Article no. 3530534

## Schuko-Test FI/RCD Socket tester with RCD/FI tripping

### Functions

- Fast and effective testing of 30 mA RCD/FI
- Testing for correct/incorrect wiring
- Connection test for individual conductors (L-N-PE)
- PE fault detection

### Product information

- True PE fault detection via LCD and contact electrode
- Detection of wiring faults with classic protective earthing

### Product highlights

- Clear and reliable indication of PE faults via LCD screen

### Technical specifications

Nominal voltage	230 V AC ±10%
Frequency range	50...60 Hz
RCD/FI test current	30 mA
RCD/FI test time	< 300 ms
Contact voltage with break-off at monitoring	20...25 V AC/DC
PE fault detection response threshold	25 V AC
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010
Measurement category	CAT II/300 V
Pollution degree	2
Power supply	from mains voltage
Dimensions	70 x 55x 86 mm
Weight	approx. 75 g

**Included:** 1x Schuko test FI/RCD, 1x User manual, \*Tester is available for countries with a Schuko plug only



## Socket test

FI/RCD testers contain a display for testing the pin assignment specifically intended for testing an earthed socket. With all RCD/FI testers, the contact voltage is monitored and any PE faults are clearly displayed.



# 93530 Megohmmeter

## Functions

- Insulation test
- Voltage measurement
- Resistance and continuity measurements with beeper

- Lock function enables continuous operation
- Zero adjustment with resistance measurement
- Backlit display
- Additional bar graph display

## Product information

- Built-in measurement memory for 9 readings

## Technical specifications

Display	LCD, 4 digit; 9999 digits
Display range/resolution	
Insulation resistance	0...999.9 kΩ/0.1kΩ, 9.999 MΩ/0.001 MΩ, 99.99 MΩ/0.01 MΩ, 999.9 MΩ/0.1 MΩ, 9.999 GΩ/0.001 GΩ (at >250V)
Test voltage	100, 250, 500, 1000 V
Test current	>1 mA
Voltage AC/DC	0...600 V / 1 V
Continuity measurement	0...999.9 Ω/0.1 Ω (sound at <40 Ω)
Resistance measurement	0...9999 Ω/1 Ω
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010, DIN VDE 0413, T. 2/EN 61557-2/IEC 61557-2
Measurement category	CAT III/600 V
Pollution degree	2
Power supply	6x battery 1.5 V, IEC LR6
Dimensions	200 x 95 x 48 mm
Weight	approx. 500 g

**Included:** 1x Insulation tester 93530, 2x Test leads, 1x Crocodile clip, 1x Probe, 1x Carrying case, 6x Battery 1.5 V, IEC LR6, 1x User manual



KMP7030

Article no. 3454416

## Important to know about insulation measurement

One of the most important measurements of an electrical system is insulation measurement. It is the only measurement for fire and touch protection, amongst others. If electrical cables are energised then residual currents flow, which generate heat or electrolytic material migrations. If a limited residual current flows between two cables due to an insulation fault, then the current can lead to warming and in extreme cases to fire.

These residual currents are generally so small that preset protection systems such as RCD/FI protection systems or fuses do not detect them. The DIN VDE allows for a residual current with a heat output of 1mA/kW. The values that are measured in practice on a new unit are, however, considerably lower.

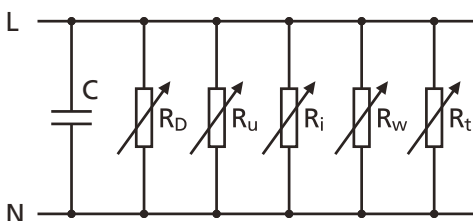
Insulation measurement is a measurement that does not require a mains connection and can therefore take place early, before, for example, a faulty wire is plastered in and where fault detection or elimination can be very demanding. If the readings are logged, then if a fault appears later on, it can be shown whether it was caused by other tradespeople involved with construction.

Insulation resistance is a complex form of resistance, comprising several different individual resistances and capacitances.

The inflow from capacitor C is switched off when the measurement is carried out with direct current or direct voltage. In order to obtain a meaningful, comparable reading, the test voltages and the test currents

are established so that the inflow of the current or voltage-dependent resistances ( $R_u$ ,  $R_i$ ) remain identical.

The resistance ( $R_D$ ) of the dielectric is affected by moisture and the time-dependent resistance ( $R_t$ ) is affected by the aging of the materials used ( $R_w$ ), which can lead to different results for readings at different times. Measurement of the insulation resistance must be carried out between every active conductor and earth upon initial testing.



Replacement circuit diagram of the insulation resistor from L to N

## Portable Appliance Testers



	GT-400	GT-650	GT-900
Display range / resolution	Graphic LCD	Graphical LCD, 128x 64 pixels	Graphical LCD, 128x 64 pixels
Protective Earth Resistance	0.05 ... 2Ω / 0.01 Ω	0.00 ... 11.00 Ω / 0.01 Ω	0.00 ... 11.00 Ω / 0.01 Ω
Test current / voltage	> ± 200 mA DC / > 4 V	> 200 mA / ca. 6 V AC; > 5 A / ca. 6 V AC	> 200 mA / ca. 6 V AC; > 5 A / ca. 6 V AC
Insulation resistance	0.1 ... 9.999 MΩ / 0.001 MΩ 10.00 ... 20.00 MΩ / 0.01 MΩ	Protection class I+II: 0.00 ... 9.99 MΩ / 0.01 MΩ 10.0 ... 49.9 MΩ / 0.1 MΩ 50 ... 100 MΩ / 1 MΩ Protection class III: 0.00 ... 9.99 MΩ / 0.01 MΩ 10.0 ... 20.0 MΩ / 0.1 MΩ	Protection class I+II: 0.00 ... 9.99 MΩ / 0.01 MΩ 10.0 ... 49.9 MΩ / 0.1 MΩ 50 ... 100 MΩ / 1 MΩ Protection class III: 0.00 ... 9.99 MΩ / 0.01 MΩ 10.0 ... 20.0 MΩ / 0.1 MΩ
Test current / voltage	> 500 V DC / > 1 mA	500 V DC / > 1 mA	500 V DC / > 1 mA / 250 V DC / > 1 mA
Substitute leakage current	0.1...20 mA	0,02...20,00 mA / 0.01mA	0,02...20,00 mA / 0.01mA
Test current / voltage	Approximately 32 V AC	approx. 45 V AC / ca. 300 mA	approx. 45 V AC / ca. 300 mA
Earth leakage current (IPE)	–	0,05...20,00 mA / 0.01 mA	0,05...20,00 mA / 0.01 mA
Touch leakage current (ITC)	–	0.01...20.00 mA / 0.01mA	0.01...20.00 mA / 0.01mA
Functional test (P/IPE) Apparent Power	–	0.0 ... 99.9 VA / 0.1 VA 100 ... 999 VA / 1 VA 1.00 ... 5.06 kVA / 10 VA	0.0 ... 99.9 VA / 0.1 VA 100 ... 999 VA / 1 VA 1.00 ... 5.06 kVA / 10 VA
Functional test (P/IPE) Active Power	–	0.0 ... 99.9 W / 0.1 W 100 ... 999 W / 1 W 1.00 ... 5.06 kW / 10 W	0.0 ... 99.9 W / 0.1 W 100 ... 999 W / 1 W 1.00 ... 5.06 kW / 10 W
Load voltage	–	195...253 V / 1 V	195...253 V / 1 V
Load current	–	0.00 ... 0.99 A / 0.01 A 1.0 ... 20.0 A / 0.1 A	0.00 ... 0.99 A / 0.01 A 1.0 ... 20.0 A / 0.1 A
Power factor	–	0.00...1.00	0.00...1.00
Voltage measurement SELV/PELV	–	10,0...100,0 V / 0.1 V	10,0...100,0 V / 0.1 V
External current clamp input	–	–	0.5 ... 20.0mA / 0.1 mA 0.2 ... 60.0 A / 0.1A
Test function PRCD	–	–	only with optional PRCD adapter
PRCD types	–	–	2-pole, 3-pole, type S, type S+, type K, type K+
RCD test (10 and 30 mA)	–	–	Trip time (test with alternating current and pulsating direct current) and trip current (ramp) at IΔN
Measurement storage	–	approx. 500 measurement results	approx. 5,000 measurement results
Database storage	–	approx. 1,000 appliance codes	approx. 10,000 appliance codes
Interface	–	1x for PC; 2x HID compatible for e.g. keyboard, barcode scanner or memory	1x for PC; 2x HID compatible for e.g. keyboard, barcode scanner or memory
Manufactured according to	DIN VDE 0404 DIN VDE 0411/ EN 61010/IEC 61010 DIN VDE 0413/ EN 61557/IEC 61557	DIN VDE 0411-1 / EN 61010-1, DIN VDE 0413 / EN 61557 parts 1, 2, 4, 10, 16	DIN VDE 0411-1 / EN 61010-1, DIN VDE 0413 / EN 61557 parts 1, 2, 4, 10, 16
Measurement category	CAT II/300 V	CAT II/300 V	CAT II/300 V
IP Rating	IP 40	IP 40	IP 40
Power supply	6x 1.5 V Batteries (IEC LR6 (AA) (or 6x 1.2 V NiMH rechargeable batteries)	230 V +10%/-15% 50 Hz	230 V +10%/-15% 50 Hz
Mains connection	–	D: Schuko (CEE 7/7), CH: Type 12	D: Schuko (CEE 7/7), CH: Type 12
Test / mains socket	–	D: Schuko (CEE 7/3), CH: Type 23	D: Schuko (CEE 7/3), CH: Type 23
Dimensions	265 x 110 x 50 mm	300 x 250 x 130 mm	300 x 250 x 130 mm
Weight	700 g	4.5 kg	4.5 kg

## MT204-S Machine tester

### Features

- PE resistance measurement
- Loop / mains impedance measurement
- Insulation resistance measurement
- Residual voltage measurement
- High voltage test

### Product information

- Data memory for approx. 2000 measurement results
- Integrated interface (USB 2.0) for transfer of measurement results to PC
- Separate interface (USB 2.0) for connection of USB barcode reader, USB keyboard or USB memory stick
- Graphic LC-Display for measurement values, limit values and test parameters
- Connection diagrams and limit values in the instrument cover

- One pair of sockets and test leads only for all measurement functions
- Compensation of test lead's resistance for earth bond resistance and loop impedance measurement
- High-voltage test can be locked by using the protection key switch
- Visual and acoustic limit value display
- Residual voltage measurement Display of the discharge voltage / discharge time
- Integrated high-voltage test (can be switched off by means of a key switch)
- Easy operation using the rotary switch and the START/STOP button

### Product highlights

- Earth bond resistance measurement with 10 A AC or 0.2 A AC
- Loop / mains impedance measurement up to 440V
- Display of prospective short circuit current
- Insulation resistance measurement with 250 V to 500 V test voltage (adjustable)

### Technical specifications

Display	Graphic LC-Display 128x 64 Dots
PE (earth bond) resistance (10 A)	0,00...20,00 Ω / 0,01 Ω
Max. Test current / voltage	>10 A / >4 V AC
PE (earth bond) resistance (0,2 A)	0,00...4,00 Ω / 0,01 Ω
Test current / voltage	>0,2 A / >4 V AC
Loop impedance	0,00...20,00 Ω / 0,01 Ω
Test current	20 A (10 ms) at 230V
Voltage range	190...440 V
Short circuit current	11,5 A...23 kA
insulation resistance	0,00...100,0 MΩ 0,01 MΩ, 0,1 MΩ
Test voltage / current	250 V...500 V
residual voltage	
Voltage measuring range	0,0...400 V AC/DC
Measuring time	1s, 5s
Time range	0...300s
High voltage test	
Test voltage / current	1000 V / 50 mA AC
Tripping current	5, 10, 25, 50 mA (adjustable)
General	
Memory	up to 2000 measured values
Interfaces (USB 2.0)	PC, Barcodescanner und Tastatur
Limit value indication	visually and acoustically
Safety Cert.	DIN VDE 0411-1, IEC/EN 61010-1, DIN VDE 0413/EN 61557 Teile 2, 3, 4
Measurement category	CAT IV/300 V, CAT III/600V
Protection category	IP 40
Mains power supply	230 V ±10%, 50 Hz
Size (W x L x H)	340 x 310 x 170 mm
Weight	ca. 7 kg

**Included:** 1x Machinery-Tester MT 204-S, 1x HV function lock key, 1x Mains cord (Schuko), 1x Mains cord (Swiss), 1x Mains cord (UK), 2x Safety test leads 2 m, 2x Safety test lead extensions 10 m, 2x Alligator Clips, 1x USB interface cable, 1x CD with USB drivers and instruction manual, 1x User manual



MT204-S

Article no. 3454632

## New Beha-Amprobe Machine Tester Coming Soon.





GT-400

## GT-400

### Portable equipment tester in accordance with UK code of practice & DIN VDE 0701-0702

#### Features

- Measurement of protective earth resistance
- Insulation resistance measurement
- Measurement of protective earth and touch current (alternative stray current procedure)

- Automatic testing of extension cables, socket strips, and IEC cables
- Clear display via symbols in case of non-adherence to threshold values
- Preset threshold values in accordance with UK Code of Practice DIN VDE 0701-0702

- Simple to use due to a rotary switch and start button

#### Product information

- Automatic test sequence for equipment in protection class I, protection class II/III

#### Product highlights

- Battery-operated - ideal for mobile use
- Suitable for trained people due to the Pass/Fail descriptive function

**Included:** 1x Equipment tester GT-400, 1x Measurement accessories set with safety test line, Safety crocodile clip and safety probe, 6x Battery type AA, 1x IEC power cable 0.5m, 1x Carry case, 1x User manual

#### Recommended Accessories

See accessory section for more details.



Measurement adapter Schuko/ Schuko 1233

Article no. 2145900

Test report 0701-0702 1279

Article no. 3313435

#### GT-400 Ordering Information:

Model	Article no.
GT-400-D	4380998
GT-400-CH	4381001
GT-400-UK	4381012



## GT-650

### Appliance tester for testing in accordance with DIN VDE 0701-0702 and DGUV regulation 3 (BGV A3)

#### Features

- Visual inspection
- Protective earth bond test (RPE)
- Insulation resistance test (RINS)
- Substitute leakage current test (ISUB)
- Earth Leakage Current Test
- Touch Leakage Current Test (ITC)
- Functional test (P/PE) Apparent power (VA), active power (P), line voltage at the tested appliance (U), load current (IPE), power factor (cos φ)

#### Product information

- Convenient software "es control professional" is available with database and logging capability (optional)
- Three storage levels (customer, location, department)
- Easy operation via rotary switch and START/STOP button
- Automatic start and storage function for protective earth bond resistance test allows two-handed measurements on hard-to-reach measuring objects

#### Product highlights

- Easy operation via rotary switch and START/STOP button
- Fast safety and functional testing of IEC cord
- Suitable for technically trained persons, clear ok/not ok indication
- Connection for barcode scanners

**Included:** 1x Portable Appliance Tester GT-650 with permanently connected, mains cable and with removable lid, 1x Test lead, 1.5 m, 600 V CAT IV, black, 1x Alligator clip 32 A, 1000 V, CAT III, black, 1x Test tip 4 mm, 36 A, 1000 V CAT II, black, 1x USB interface cable, 1x CD with USB drivers and user manuals, 1x User's manual in English and German, 1x Accessory bag (fixed to the housing's lid)

#### GT-650 Ordering Information:

Model	Article no.
GT-650-D	4866881
(D version for all countries using the Schuko plug)	
GT-650-CH	5017935
(CH version only for Switzerland)	



GT-650-D



## GT-900

# Appliance tester for testing in accordance with DIN VDE 0701-0702 and DGUV regulation 3 (BGV A3)

### Features

- Visual inspection
- Protective earth bond test (RPE)
- Insulation resistance test (RINS)
- Substitute leakage current test (ISUB)
- Earth Leakage Current Test
- Touch Leakage Current Test (ITC)
- Functional test (P/IPE) Apparent power (VA), active power (P), line voltage at the tested appliance (U), load current (IPE), power factor (cos  $\phi$ )
- Current measurement via external current clamp
- Automatic testing of portable RCDs (PRCD, PRCD-S, PRCD-S+, PRCD-K)

### Product information

- Convenient software "es control professional" is available with database and logging capability (optional)
- Measurement storage for approx. 5,000 test results/appliances
- Three storage levels (customer, location, department)
- Automatic start and storage function for protective earth bond resistance test allows two-handed measurements on hard-to-reach measuring objects

### Product highlights

- Easy operation via rotary switch and START/STOP button
- Database in the tester
- Fast safety and functional testing of IEC cord
- Suitable for technically trained persons, clear ok/hot ok indication
- Connection for barcode scanners

**Included:** 1x Portable Appliance Tester GT-900 with permanently connected, mains cable and with removable lid, 1x PRCD-Adapter, 1x PRCD test finger tip (extension), 1x Test lead, 1.5 m, 600 V CAT IV, black, 1x Alligator clip 32 A, 1000 V, CAT III, black, 1x Test tip 4 mm, 36 A, 1000 V CAT II, black, 1x USB interface cable, 1x CD with USB drivers and user's manuals, 1x User's manual in English and German, 1x Accessory bag (fixed to the housing's lid)

### GT-900 Ordering Information:

Model	Article no.
GT-900-D	4866896
(D version for all countries using the Schuko plug)	
GT-900-CH	4866908
(CH version only for Switzerland)	



GT-900-D



GT-900-D



### Earth measurement set perfect for:

- e.g. Telaris ProInstall-200

#### Included:

- 1x carrying case
- 2x ground spikes (235 x Ø 10 mm)
- 1x test lead, red, 25 m
- 1x test lead, blue, 25 m
- 1x test lead, green, 5 m
- 3x test lead winders
- 3x crocodile clips

#### Earth measurement set

Article no. 4388671



### AC current clamp adapter

- Current measurement from approx. 1 mA to 1000 A
- Jaw opening 48 mm
- Current output, output signal: 1 mA corresponds to 1 A test current
- Fixed test lead
- No batteries required

#### AC current clamp adapter

Article no. 3313401



DAA-16

DAA-32

### DAA-16, DAA-32

#### Three-phase adapter 16 A or 32 A

- Three-phase current plug CEE 16 A or CEE 32 A
- Connections via five separate 4 mm sockets for L1, L2, L3, N and PE
- For quick connection of test devices to three-phase sockets when testing according to DIN VDE 0100

\*with Schuko plug

#### DAA-16

Article no. 2743806

#### DAA-32

Article no. 2743850



Barcode scanner  
BC-1250G



Barcode Sticker  
1063

### Barcode Scanner

- For reading in barcoded sample numbers\*

Model BC-GT07XX for:

- for equipment tester GT-0751

Model BC-1250G for:

- for machine tester MT 204-S (Model 9085)
- for equipment tester GT-650 and GT-900

Barcode Scanner

Article no. 4377939

### Barcode sticker

- Abrasion-resistant numbered barcodes for identifying samples
- Consecutive numbering
- Barcoded (code 39) and clear text
- Size 54 x 15 mm
- For 0701/0702 test equipment
- 250 pcs. on roll

\*for reading in code 39, code 128, code 2/5, EAN, UPC barcodes

Barcode sticker

Article no. 2389952

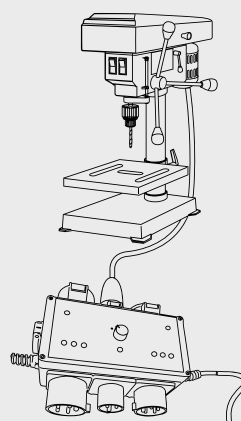


### VLP 5 Three-phase current extension test adapter

- For testing portable equipment and extension cables with the plugs and couplings:
  - 16 A CEE 3-pole
  - 16 A CEE 5-pole
  - 32 A CEE 5-pole
  - IEC power cable and Schuko
- Measurement of protective earth resistance, insulation resistance, function of active conductors (L-N), and rotary field
- Suitable for all test equipment with an earthed socket and test probe

VLP 5 Model: 1343

Article no. 3313514



### KBGE-MT204S USB keyboard

- For convenient entry of client/sample information on site
- For equipment tester GT-650 and GT-900
- For machine tester MT204-S

KBGE-MT204S

Article no. 3504388



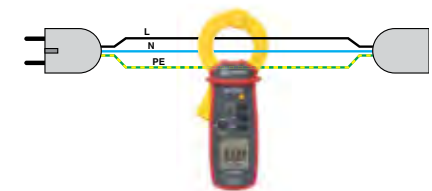
1233  
(Schuko/Schuko)  
Article no. 2145900

1235  
(CEE 5-pole 16 A)  
Article no. 2145921

1236  
(CEE 5-pole 32 A)  
Article no. 2145939

### Measurement adapter for stray current/leakage current measurement

- Measurement adapter for measuring differential current, protective earth current, load current, and neutral conductor current in portable consumers via a leakage current clamp
- All conductors are individually brought out



#### Wiring diagram 1233

Application example for a leakage test under mains voltage (leakage current) e.g. with ALC-110-EUR CHB5 or CHB1



#### Wiring diagram 1235/1236

Application example for a leakage test under mains voltage (leakage current) e.g. with ALC-110-EUR CHB5 or CHB1





### Three-phase adapter 1142

- For testing portable equipment with the plugs: 16 A CEE 3-pole, 16 A CEE 5-pole, and 32 A CEE 5-pole
- Measurement of protective earth resistance and insulation resistance
- Suitable for all test equipment with an earthed socket and test probe

1142

Article no. 3313394



1240/1241

### Three-phase adapter 1240/1241

- For testing portal devices with three-phase current plug 16 A CEE 5-pole (1240) or 32 A CEE 5-pole (1241)
- Measurement of protective earth resistance and insulation resistance
- Suitable for all test equipment with an earthed socket

1240

Article no. 3313412

1241

Article no. 3313420



### CHB1 Leakage current clamp adapter (AC)

#### Functions

- Clamp adapter for measuring leakage currents in conjunction with a multimeter
- Stray current measurement in connection with GT-900

#### Product information

- Current output, output signal: 1 mA corresponds to 1 A test current
- Jaw opening 30 mm
- Fixed test leads
- No batteries required
- Not suitable for earth measurements

#### Technical specifications

Ranges	
Current AC	1 mA ... 50 A
Basic accuracy	± (6 % + 0.5 mA)
Output current	1 mA/A
Frequency range	40 Hz ... 10 kHz
Protection class	IP 30
Pollution degree	2
Measurement category	CAT II/600 V
Safety cert.:	DIN VDE 0411/ EN 61010/IEC 61010
Jaw opening	approx. 30 mm
Length of connection cable	approx. 1.5 m
Dimensions	approx. 140 x 45 x 20 mm
Weight	approx. 75 g

CHB1 1311

Article no. 2390055



### PAT-BRUSH Brush probe

- Measurement of protective earth resistance and touch current
- Enables stray current measurement on moving or rotating parts
- Reduces transition resistance due to multiple contacting
- Simplifies measurement on refined or oxidized surfaces
- Max. test current 0.2 A
- 4 mm plug-in technology
- Total length 190 mm, brush dimensions 60 mm x  $\varnothing$ 20 mm
- With protective packaging for safe storage
- Can be used for all testing equipment

PAT-BRUSH

Article no. 4151667



### PA-1 Adapter for 3-pole plug

- Measurement of protective earth resistance and insulation
- For C5 power cable types (DIN VDE 0623, IEC/EN60320)

PA-1

Article no. 4362289



## Socket-Check Adapters

### Ensure safe and reliable testing

The Socket-Check adapters ensure safe, reliable testing with optimal contact to outlet. This adapter can be used in conjunction with a wide variety of test equipment that uses test leads terminating in 4mm safety connectors.

#### Features

- Ease of use
- Optimal and safe contact to outlets
- Low contact resistance, important for earth bond measurement (UK: R1 and R2 testing)
- Designed in a small robust housing
- 4 mm safety socket
- Maintenance free

#### Applications

- Socket-check adapters are perfect to be used with the following products:
- Installation Testers
  - Portable Appliance Testers (PAT)
  - Wire Tracers

#### Specifications

The Socket-Check Adapters are available with Schuko and UK plug.

The Schuko version is available in two versions, the SCT version is: one with a socket for L, N and PE, and a second one with only PE (protective earth)

#### Ordering Information:

Model	Article no.
ADPTR-PE-EUR	4854900
ADPTR-SCT-EUR	4854899
ADPTR-SCT-UK	4854820
ADPTR-SCT-CH	4969385
ADPT-PE-CH	4969397



## Light-Check Adapters

### Ensure safe and reliable testing

The Light-Check adapters are made to ensure your safety during testing light points. They can be used in conjunction with a wide variety of test equipment that uses test leads terminating in 4 mm safety connectors. The adapters enable a range of tests to be conducted on light fitting terminals eliminating the need to hold test probes in place and ensure a good reliable and safe contact.

#### Features

- Ease of use, one-hand operation
- Optimal and safe contact to light points
- Low contact resistance (important for line resistance measurement)
- Additional safety barrier (finger guard)
- Designed in a small robust housing

- 4 mm safety socket
- Maintenance free

#### Applications

- Light-Check adapters are perfect to be used with the following products:
- Installation Testers
  - Insulation Testers
  - Wire Tracers
  - Voltage Measurement and Monitoring (PQ)

#### Specifications

The Light-Check adapters are available for different fittings: E27, B22, E14, B15, GU10

#### Ordering Information:

Model	Article no.	Article no. (5-Pack Display Box)
ADPTR-E14-EUR	4854864	5017128
ADPTR-E27-EUR	4854847	5017137
ADPTR-B15-EUR	4854873	5017104
ADPTR-B22-EUR	4854858	5017119
ADPTR-GU10-EUR	4854886	5017143
ADPTR-KIT1-EUR	4854835	(contains all 5 adapters in a soft carrying bag)



## Software packages for logging data

Test reports act as evidence of proper performance of the work carried out, and provide the client and the company that has been commissioned clear documentation regarding safety.

Software packages from Beha-Amprobe provide a convenient, practical solution in order to transfer data from measurement and testing equipment by quickly and easily creating a test report and archiving the measurement data.

Compared to manual creation this results in time being saved, particularly with repeat testing services and verifications.



## Test equipment for use with software

	Software			
	es control professional 0100	es control professional 0701-0702/0113	es control professional Complete	Beha-Amprobe Downloader Software
<b>Test equipment:</b>	Model 1312	Model 1314	Model 1316	Model DL-SW-KIT
PROINSTALL-100	•	–	•	•
PROINSTALL-200	•	–	•	•
GT-650	–	•	•	–
GT-900	–	•	•	–
MT 204-S	–	•	•	–
	Article no. 2390062	Article no. 2390081	Article no. 2390735	Article no. 4597359

## DL-SW-KIT Downloader Software

### Key Features

- Software for logging measurement data in accordance with DIN VDE 0100 and 0105. Downloads data from supported meters:
  - Prolnstall-100
  - Prolnstall-200
- Displays downloaded data using form and table view for easy analysis
- Allows saving, retrieving and printing of the downloaded data
- Provides standard form templates to quickly log results with professional quality

- Exports data to other programs such as Microsoft Excel using the CVS format
- Provides utility to clear memory and to change meter setup
- Opto-isolated USB interface for user and computer safety
- Preview of the stored measurement values on the PC using Virtual Meter function

### System requirements

- Operating System:
  - Windows 7, 8 or 10.
- Minimum recommended hardware: Pentium class microprocessor, 32 MB RAM, and up to 70 MB hard disk space (100 MB to install)



DL-SW-KIT  
Article no. 4597359

## es control professional Software Packages

- Convenient, upgradeable software for logging measurement data in accordance with DIN VDE 0100, 0701-0702, 0751, and 0113
- Access authorization/user administration for four different user groups
- Comparison and update of different es control databases (replication)
- Interface to external barcode printing programs (Brother® P-Touch), allowing the sample number and test code to be printed as a barcode
- Result evaluation for tests in accordance with DIN VDE 0100 for quick evaluation of overall test
- Ideal software for all providers of repeat testing services according to BetrSichV (German Ordinance on Industrial Health and Safety) or in the field of facility management
- Interface cable not included in delivery (optional)
- Software in English/German language version available.



	es control professional 0100	es control professional 0701-0702/0113	es control professional Complete
<b>DIN VDE 0100, 0105</b>	•	–	•
<b>DIN VDE 0701-0702, 0751-1/EN 62353 and 0113</b>	–	•	•
<b>Clear and simple hierarchy</b>	•	•	•
<b>Data tree</b> (client, unit, test, distributor, and circuit)	•	•	•
<b>Data tree</b> (customer, location, department, sample, and test)	–	•	•
<b>Transfer</b> of measured values from tester to PC	•	•	•
<b>Automatic creation</b> of new devices under test that are not yet in the database. Tests can be printed out quickly and easily.	•	•	•
<b>Results</b> of a standard test report for electrical systems	•	–	•
<b>Results</b> of a test series can be printed out in a list or individual logs for each DUT	–	•	•
<b>Lists can be exported</b> in text and Excel format	•	•	•
<b>Assistant</b> for reading in data and printing out reports	•	•	•
<b>Access authorization/user administration</b> for four different user groups	•	•	•
<b>Comparison and update</b> of different es control databases (replication)	•	•	•
<b>Result evaluation</b> for tests in accordance with DIN VDE 0100 for quick evaluation of overall test	•	–	•
<b>Data export to external barcode printing programs</b> (Brother® P-Touch), allowing the sample number and test code to be printed as a barcode	–	•	•

**Included:** 1x software on CD-ROM (es control professional 0100, es control professional 0701-0702/0113, or es control professional Complete) 1x user manual



### Recommended configuration for es control software

Operating system	Win XP, Win 7, Win 8/8.1, Win 10
Processor	Pentium IV or similar processor*
RAM	256 MB or higher
Screen	VGA monitor or monitor with higher resolution; Super VGA recommended: Resolution 800 x 600 or greater available
Memory	400 MB
Drive	CD-ROM
Interface	RS232; 9-pole or USB (dependent on tester)

\* Windows 7, 8 and 10 are registered trademarks of the Microsoft Corporation



**Accessories:**  
USB adapter including driver Model 1217  
Article no. 2389965





Selectable °C/°F

Center-point temperature measurement

Hot and cold markers

Adjustable emissivity

Laser sighting



SD card



IRC-120-EUR  
Thermal Camera  
with SD card

## Environmental testing

Temperature, light, sound, humidity, rotational speed

Within the field of environmental testing, we provide a wide range of thermometers and appropriate thermal sensors for every application.

In addition, our range of environmental testing products also features a selection of various meters such as moisture meters, sound level meters, and light meters for measuring illumination, e.g., in the workplace.

## Infrared thermometers



	IRC-110-EUR	IRC-120-EUR	IR-710-EUR	IR-720-EUR	IR-730-EUR	IR-750-EUR	IR608A	IR-450-EUR
Temperature range	-10 °C to 500 °C	-10 °C to 500 °C	-18°C to 380°C	-32°C to 1050°C	-32°C to 1250°C	-50°C to 1550°C	-18 to 400 °C	-30°C to 500°C
Accuracy	± 2 °C or ± 2%	± 2 °C or ± 2%	±2%	±1.8%	±1.8%	±1.8%	±2% or ±2°C	±1.5% or ±1.5°C
Distance to spot	20:1	20:1	10:1	20:1	30:1	50:1	8:1	8:1
Emissivity	Adjustable from 0.10 to 1.00 by 0.01	Digitally adjustable from 0.10 to 1.00 by 0.01	0.95	Adjustable from 0.10 to 1.00	Adjustable from 0.10 to 1.00	Adjustable from 0.10 to 1.00	0.95 (pre-set)	0.95 (pre-set)
Visual image with infrared heat map overlay	Five blending modes (0%, 25%, 50%, 75% and 100%) Fluke Patented Technology	Five blending modes (0%, 25%, 50%, 75% and 100%) Fluke Patented Technology	-	-	-	-	-	-
Display	1.77 in Color TFT	1.77 in Color TFT	LCD, 4 digit	LCD, 4 digit	LCD, 4 digit	LCD, 4 digit	LCD, 4 digit	LCD, 3 digit
Field of view	33° x 33°	33° x 33°	-	-	-	-	-	-
Image palletes	Grayscale (white hot), Hot Iron and Rainbow	Grayscale (white hot), Hot Iron and Rainbow	-	-	-	-	-	-
Center point marker	•	•	-	-	-	-	-	-
Hot and cold marker	•	•	-	-	-	-	-	-
Laser pointer	-	•	•	•	•	•	-	•
Data recording	-	•	-	-	-	•	-	-
Auto / display / data hold	•	•	Display hold: 8s	Display hold: 8s	Display hold: 8s	Display hold: 8s	•	Display hold: 10s
Power supply	3x 1.5 V AA IEC LR6 alkaline batteries	3x 1.5 V AA IEC LR6 alkaline batteries	9V 6F22 alkaline battery or equivalent	9V 6F22 alkaline battery or equivalent	9V 6F22 alkaline battery or equivalent	9V 6F22 alkaline battery or by power adaptor (output DC 6V/450mA)	9V Alkaline or NiCd battery	1x battery 1.5 V, IEC LR03, AAA
Battery life	8 hours	8 hours	10 hours with laser and backlight on 30 hours with laser and backlight off	10 hours with laser and backlight on 30 hours with laser and backlight off	10 hours with laser and backlight on 30 hours with laser and backlight off	10 hours with laser and backlight on 30 hours with laser and backlight off	12 hours	-
Auto power off	•	•	•	•	•	•	•	•
Low battery indication	•	•	•	•	•	•	•	•
Size (H x W x L)	185 x 54x 104 mm	185 x 54 x 104 mm	153 x 108 x 40 mm	169 x 138 x 53 mm	169 x 138 x 53 mm	183 x 147 x 57 mm	152 x 101 x 38 mm	100 x 20 x 29 mm
Weight	260 g	290 g	180 g	290 g	290 g	345 g	227 g	50 g
Flashlight	-	4 LEDs	-	-	-	-	-	•
UV light	-	5 blue LEDs	-	-	-	-	-	-





**IRC-110-EUR**  
Article no. 4909794

**IRC-110-EUR**

**Infrared Camera with point-and-shoot thermal imaging technology for the professional**

**Functions**

- Non-contact temperature measurement

**Product information**

- Infrared heat map image blending
- Three selectable color palettes (grey scale, hot iron and rainbow)

- Center-point temperature measurement
- Distance to Spot ratio 20:1
- Adjustable emissivity from 0.10 to 1.00
- Auto off function
- Selectable °C and °F
- Intuitive joystick navigation

- Hot and cold markers

**Product highlights**

- Handy and compact "pistol grip" design

**IRC-120-EUR**

**Infrared Camera with SD card to capture and download thermal images**

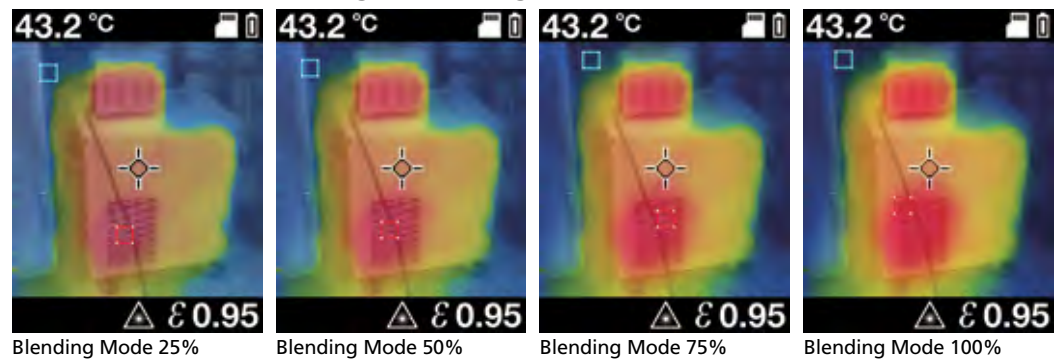
**As IRC-110-EUR, but with:**

- Capture and download thermal images with SD card
- Laser sighting helps pinpoints spot of temperature measurement
- Built-in flashlight illuminates dark areas
- UV light identifies leaks



**IRC-120-EUR**  
Article no. 4989024

**Infrared heat map image blending**





## IR608A Infrared thermometer

### Functions

- Non-contact temperature measurement

### Product information

- Switchable between °C and °F measurement

- Integrated measurement memory (data hold)
- Illuminated display
- Distance to spot size ratio: 8:1
- Auto Power Off

### Product highlights

- Laser-based targeting
- Handy and compact design in pistol format

Included: 1x IR608A, 1x Battery 9 V, IEC 6LR61, 1x User manual



**IR608A**  
Article no. 3015690

## IR-450-EUR Mini infra-red thermometer with flashlight

### Functions

- IR temperature measurement
- LED flashlight

### Product information

- Ratio of spot size to distance 8:1
- °C and °F selectable

- Temperature is displayed for 10 seconds
- With pocket clip

### Product highlights

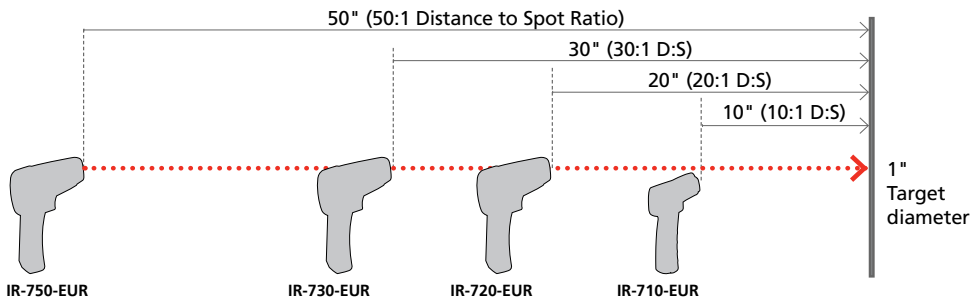
- With laser pointer
- Small and compact

Included: 1x IR-450-EUR, 1x Battery 1.5 V, IEC LR03, AAA, 1x User manual



**IR-450-EUR**  
Article no. 4308539

## IR-700-EUR Series Infrared Thermometers



**IR-710-EUR**  
Article no. 4308480

## IR-710-EUR Infrared Thermometer 10:1

### Functions

- Non-contact temperature measurement

### Product information

- Temperature measurement from -18° to 380°C

- Integrated measurement memory (data hold)
- MIN/MAX measurement memory
- Illuminated display
- Distance to spot size ratio: 10:1
- Very fast response time
- Auto Power Off

### Product highlights

- Laser-based targeting
- Handy and compact "pistol grip" design



**IR-720-EUR**  
Article no. 4308500

## IR-720-EUR Infrared Thermometer 20:1

### As IR-710-EUR, but with:

- Temperature measurement from -32° to 1050°C
- Distance to spot size ratio: 20:1
- Continuously adjustable emissivity
- Integrated thread for tripod
- Measuring the average temperature



**IR-730-EUR**  
Article no. 4308517

## IR-730-EUR Infrared Thermometer 30:1

### As IR-720-EUR, but with:

- Temperature measurement from -32° to 1250°C
- Distance to spot size ratio: 30:1

## IR-750-EUR Infrared Thermometer 50:1

### As IR-730-EUR, but with:

- Temperature measurement from -50° to 1550°C
- Distance to spot size ratio: 50:1
- Adjustable alarm function
- Data memory up to 99 readings
- USB interface for transferring stored measurements to a PC
- Input for K-type test probe

### Includes:

- 1x IR-710-EUR, IR-720-EUR, IR-730-EUR, IR-750-EUR
- 1x Battery 9 V, IEC 6LR61
- 1x Carry case (only for IR-720-EUR, IR-730-EUR, IR-750-EUR)
- 1x User manual
- 1x USB cable (only IR-750-EUR)

- 1x Software on CD (only IR-750-EUR)
- 1x Hard carrying case (only IR-750-EUR)
- 1x K-type wire probe (only IR-750-EUR)



**TMD-50**  
Article no. 3730150

## TMD-50 K-type digital thermometer with dual inputs

### Functions

- Temperature measurement with inputs for two probes
- Measurement of temperature difference
- Product information
- Input for two type K temperature probes
- Switchable between °C and °F measurement
- Integrated measurement memory (data hold)
- MIN/MAX and relative value measurement
- Measuring the average temperature
- Illuminated display
- Auto Power Off

### Product highlights

- T1-T2 (temperature difference)
- Shock-proof and impact-resistant thanks to standard protective holster



**TMD-53**  
Article no. 3730085

## TMD-53 K-type / J-type digital thermometer with dual input

### As TMD-50, but with:

- Connections for two temperature probes (for types K and J)
- Alarm function (optical and acoustic)
- Clear multi-functional display for T1, T2 and T1-T2 (temperature difference)

Included with TMD-50/TMD-53: 1x TMD-50 or TMD-53, 2x K-type wire probe, 4x Battery 1.5 V, IEC R03, AAA, 1x User manual



**TMD-56**  
Article no. 3730138

## TMD-56 Digital thermometer with data logger and USB connection

### As TMD-53, but with:

- Inputs for two temperature probes (of types K, J, T, R/S, N and E)
- Built-in real-time clock and date
- Clear multi-functional display for date, time, T1, T2 and T1-T2 (temperature difference)
- USB interface
- Evaluation software included
- Data logger for 16,000 measurement values (various intervals can be selected)

### Technical specifications

	TMD-50	TMD-53	TMD-56
Display	LCD, 3½ digit, 1999 digits	LCD, 5 digit, 99999 digits	LCD, 4½ digit, 19999 digits
Measurement range	Type K -180...+1350° C (-292...+2462° F)	Type K -180...+1350° C (-292...+2462° F)	Type K -180...+1350° C (-292...+2462° F)
Basic accuracy	±(0.1% v.M.+1°C) at -60°C to 1350°C ±(0.1% v.M.+2°C) at -60°C to 200°C ±(0.1% v.M.+2°F) at -76°F to 1999°F ±(0.1% v.M.+4°F) at -76°F to -328°F	±(0.05% rdg. + 0.3°C) at -50°C to 1350°C ±(0.05% rdg. + 0.7°C) at -50°C to -200°C ±(0.05% rdg. + 0.6°F) at -58°F to 2498°F ±(0.05% rdg. + 1.4°F) at -58°F to -328°F	±(0.05% rdg. + 0.3°C) at -50°C to 1350°C ±(0.05% rdg. + 0.7°C) at -50°C to -210°C ±(0.05% rdg. + 0.6°F) at -58°F to 2501°F ±(0.05% rdg. + 1.4°F) at -58°F to -346°F
Resolution	0.1 °C/°F	0.1 °C/°F	0.1 °C/°F
Power supply	4x battery 1.5 V, IEC R03, AAA	4x battery 1.5 V, IEC R03, AAA	4x battery 1.5 V, IEC R03, AAA
Dimensions	approx. 160 x 85x 30 mm	approx. 160 x 85x 30 mm	approx. 160 x 85x 30 mm
Weight	approx. 280 g	approx. 280 g	approx. 360 g

Included with TMD-56: 1x TMD-56, 2x K-type wire probe, 1x USB cable, 1x Software CD, 4x Battery 1.5 V, IEC R03, AAA, 1x User manual

### Recommended Accessories

See accessory section for more details.



Carrying case Model 1150  
Article no. 2145755



Heat-conducting paste up to 250 °C (30 g) Model 1032  
Article no. 2145689



### TPP1-C1

## Mini pocket thermometer with immersion probe

#### Functions

- Temperature measurement with integrated NTC sensor
- Compact design
- With protective sleeve/holder (TPP1-C1 only)

#### Product information

- Immersion probe
- Measurement memory (data hold)



TPP1-C1  
Article no. 2826634

### TPP2-C1

## Mini pocket thermometer with surface probe

#### As TPP2-C1, but with:

- Surface probe without protective sleeve

#### Technical specifications

Display	LCD, 3½ digit	
Measurement range	-50 to +250°C	
Range	Resolution	Accuracy
-50...+20° C	1° C	±3° C
-19.9 ... +49.9° C	0.1° C	±2° C
+50.0 ... +199.9° C	0.1° C	±(3 % rdg. + 1° C)
+200 ... +250° C	1° C	±(3 % rdg. + 1° C)
Temperature change/response time	> 5 K/s	
Probe dimensions		
TPP1-C1	128 mm x Ø 3.8 mm	
TPP2-C1	125 mm x Ø 13.7 mm (tube Ø 3.8 mm)	
Power supply	1x battery 3 V, IEC 2032	
Dimensions (with protective sleeve):	approx. 40 x 30 x 160 mm	
Weight	approx. 16 g	

Included: 1x TPP1-C1 or TPP2-C1, 1x Battery 3 V, IEC 2032, 1x User manual



TPP2-C1  
Article no. 2826652



Heat-conducting paste up to 250 °C (30 g) Model 1032

Article no. 2145689

### TH-1

## Digital humidity and temperature meter

#### Functions

- Humidity measurement
- Temperature measurement
- Integrated measurement memory (data hold)
- MIN and MAX data hold
- Auto Power Off
- Measurement of wet bulb temperature

#### Product information

- Probe integrated in device
- Switchable between °C and °F measurement

#### Product highlights

- Compact and handy design
- Dew point measurement

#### Technical specifications

Display	Dual LCD
Humidity measurement	
Measurement range	0 to 100% rel. humidity
Resolution	0.1%
Accuracy	± 3% rel. humidity
Temperature measurement	
Measurement range	-20 to +50°C / -4 to +122°F
Resolution	0.1°C / 0.1°F
Accuracy	± 0.6°C / ± 1°F
Power supply	1x battery 3V, CR2032
Dimensions	175 x 42 x 16 mm
Weight	approx. 120 g

Included: 1x TH-1, 1x Battery 3 V, CR2032, 1x User manual



TH-1  
Article no. 3311871





**TH-3**  
Article no. 3027060

### TH-3

## Digital humidity and temperature meter

#### Functions

- Humidity measurement
- Temperature measurement
- Integrated measurement memory (data hold)
- MIN and MAX data hold
- Auto Power Off

#### Product information

- Probe integrated in device
- Switchable between °C and °F measurement

#### Technical specifications

Display	LCD, 3½ digit
Humidity measurement	
Measurement range	5...95% rel. humidity
Resolution	0.1%
Accuracy	± 3% rel. humidity
Response time	< 3 min.
Temperature measurement	
Measurement range	-20...+60°C / -4...+140°F
Resolution	0.1°C / 0.1°F
Accuracy	± 0.8°C / ± 1.6°F
Response time	< 10 sec.
Power supply	1 x battery 9 V, IEC 6LR61 or 6F22
Dimensions	240 x 54 x 34 mm
Weight	approx. 180 g



**THWD-3**  
Article no. 3033042

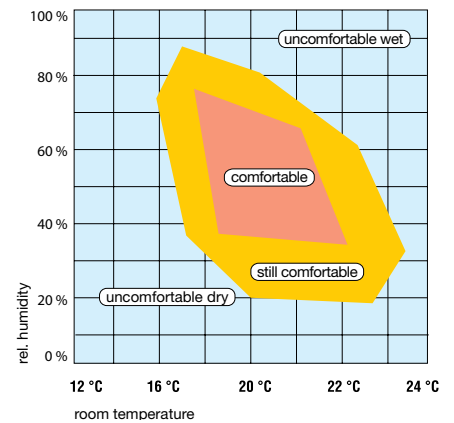
### THWD-3

## Digital humidity and temperature meter

#### As TH-3, but with:

- Dew point measurement
- Measurement of wet bulb temperature

**Included:** 1x TH-3 or THWD-3, 1x Carrying case, 1x Battery 9 V, IEC 6LR61, 1x User manual



### MT-10

## Moisture meter for construction and timber

#### Functions

- Moisture meters for construction and timber
- Temperature measurement
- Back light
- Auto Power Off

#### Product information

- Probe integrated in device
- Switchable moisture measurement for timber or construction materials
- Switchable temperature measurement in °C or °F
- Compact and handy design
- Quick and simple statement regarding the moisture content by means of 3 LEDs:
  - green: air-dry environment
  - yellow: increased moisture
  - red: excessive moisture

#### Technical specifications

Display	LCD, 3½ digit and 3 LEDs
Humidity measurement	
Measurement principle of electric resistance	
Measurement range	
Timber	8...60%
Construction material	0.3...2.0%
Temperature	0...+40°C or +32...+99°F
Resolution	
Timber	0.1%
Construction material	0.01%
Temperature	0.1°C / 0.2°F
Accuracy	
Timber	±2%
Construction material	±0.1%
Temperature	±1°C / ±2°F
Power supply	1x battery 9 V, 6F22
Dimensions	145 x 60 x 31 mm
Weight	approx. 100 g

**Included:** 1x MT-10, 1x Battery 9 V, 6F22, 1x User manual



**MT-10**  
Article no. 3503178



## TR200-A Temperature / RH Data Logger with Digital Display

### Functions

- Temperature measurement
- Relative Humidity measurement
- Data Logger

### Product information

- Wall mountable
- Offers visible LEDs warnings to monitor IAQ condition
- Instrument for monitoring indoor temperature and humidity

- Selection of save slots: 1000, 2000, 4000, 8000, 12000, 16000 max. per function
- Auto shutoff
- Can only be used via PC!

### Product highlights

- USB interface
- IP65 rated for dust and moisture
- Optical limit value display

**Included:** 1x TR200-A, 1x User manual, 1x Battery 3.0 V, IEC CR2, 1x USB cable, 1x CD with software (download suite)



**TR200-A**

Article no. 3477302

### Accessories:

TPK-60, external temperature sensor Model TPK-60

Article no. 3503184

## TR300 Temperature / RH Data Logger with Digital Display

### Functions

- Temperature measurement
- Relative Humidity measurement
- Data Logger
- Dew point display

### Product information

- Instrument for indoor air quality monitoring
- Wall mountable, self-standing or tripod mountable
- Displays temperature, relative humidity

- Air Temperature or Dew Point (DP) display and Celsius/Fahrenheit are selectable
- Offers visible LEDs warnings to monitor IAQ condition
- Small size design
- Selection of save slots: 1000, 2000, 4000, 8000, 12000, 16000
- Extra large digital display
- Alarm function

### Product highlights

- Real time marking (date/time)
- USB interface

### TR200-A Technical specifications

Display	LCD, 3 3/4 digit, 1999 digits
LED display	red: Hi-Lo Alarm: yellow Recording
Measurement ranges Temperature	
Internal probe	-40 °C...+85 °C
External probe	-40 °C...+100 °C
Relative Humidity	0.0...99.9 %
Tolerance	
Temperature	±0.6 °C (-20 °C...+50 °C); otherwise ±1.2 °C
Relative Humidity	±3 % at 25 °C; otherwise 5 %
Resolution temperature	0.1 °C
Resolution RH	0.1 %
Save slots	1000, 2000, 4000, 8000, 12000, 16000
Power supply	1x battery 3.0 V, IEC CR2
Protection category	IP54
Dimensions	75 x 55 x 23 mm
Weight	approx. 200 g

### TR300 Technical specifications

Display	LCD
Ranges	
Temperature range	-20...+70 °C
Relative Humidity	0...100 %
Tolerance	
Temperature	±0.6 °C at 0...50 °C; otherwise ±1.2 °C
Relative Humidity	±3 % at 10...90 %; otherwise ±5 %
Resolution	
Temperature	0.1 °C
Relative humidity	0.1 %
Power supply	4x battery 1.5 V, IEC LR6
Dimensions	175 x 42 x 16 mm
Weight	approx. 200 g

**Included:** 1x TR300, 1x User manual, 4x Battery 1.5 V, IEC LR6, 1x USB cable, 1x CD with software (download suite)



**TR300**

Article no. 3311844

## CM100 Carbon Monoxide Meter

### Functions

- Monitoring carbon monoxide concentrations with an alarm function
- Preset threshold value of 25 ppm for safe recognition of risks

### Product information

- Adjustable threshold values: 25, 30, 35, 45, 50, 70, 100, and 200 ppm

- Display of measured value and maximum value
- Self-test function
- Auto Power Off

### Product highlights

- Display of maximum carbon monoxide concentration
- Illuminated display

### Technical specifications

Display	LC display, 3 digit, 1000 digits
Measurement range/resolution	
Carbon monoxide (CO)	0...999 ppm / 1 ppm
Accuracy	± 20% at 0 – 100 ppm ± 15% at 100 – 500 ppm (at 20 °C +/-5%, 50 +/-20% RH)
Operating temperature range	-10 ... +60°C (5...99% rel. humidity)
Power supply	3x batteries 1.5 V, IEC LR 03 (AAA), Micro
Dimensions	175 x 47 x 28 mm
Weight	approx. 130 g

**Included:** 1x CM100, 3x Batteries 1.5 V, IEC LR 03, 1x Carrying case, 1x User manual



**CM100**

Article no. 3311826

# Temperature sensors and accessories



## TPK-59 Flexible Wire Probe 4 mm Plug

- with 4 mm plug (clearance 19 mm)
- Probe length approx. 0.9 m

### K-type temperature sensor

Temperature range	-46 °C...+316 °C
Accuracy	±1.5 °C

TPK-59

Article no. 2733660



## Type 101 (Model: 5795) K-type surface probe

Temperature range	-50 °C...+450 °C
Response time	approx. 5.5 s (63.2 % of final temperature value)
Accuracy	±1.5 °C
Connection cable	approx. 500 mm spiral cable
Dimensions	130 x 4 mm
Weight	approx. 115 g

Type 101 (Model: 5795)

Article no. 2147199



## Type 104 (Model: 5794) K-type liquid sensor

Temperature range	-50 °C...+1100 °C
Response time	approx. 12.0 s (63.2 % of final temperature value)
Accuracy	±1.5 °C (from 400 °C, 0.48 % rdg.)
Connection cable	approx. 500 mm spiral cable
Dimensions	130 x 3 mm
Weight	approx. 105 g

Type 104 (Model: 5794)

Article no. 2147186



## TPK-60 Temperature Probe

- 2.5 mm jack plug
- Fits the TR100-A and TR200-A
- Cable length 115 mm
- Temperature range (see TR200-A on page 61)

TPK-60

Article no. 3503184



## Type 106 (Model: 5793) K-type immersion probe

Temperature range	-50 °C...+600 °C
Response time	approx. 12.0 s (63.2 % of final temperature value)
Accuracy	±1.5 °C (from 400 °C, 0.48 % rdg.)
Connection cable	approx. 500 mm spiral cable
Dimensions	130 x 3 mm
Weight	approx. 105 g

Type 106 (Model: 5793)

Article no. 3313234



## Type 110 (Model: 5797) K-type fast response surface probe

Temperature range	-50 °C...+900 °C
Response time	approx. 2.3 s (63.2 % of final temperature value)
Accuracy	±1.5 °C (from 400 °C, 0.48 % rdg.)
Connection cable	approx. 500 mm spiral cable
Dimensions	130 x 8 mm
Weight	approx. 112 g

Type 110 (Model: 5797)

Article no. 3313241



## TPK-62 2x temperature probes with adapter

- 4 mm jacks, connection for K-type probe
- Suitable for AM-540-EUR and AMP-555-EUR
- Temperature range (see AM-540-EUR/AM-555-EUR on page 24)

TPK-62

Article no. 4160703



## Type 111 (Model: 5790) K-type flexible wire probe

Temperature range	-50 °C...+400 °C
Response time	approx. 5.0 s (63.2 % of final temperature value)
Accuracy	±1.5 °C
Dimensions	1000 x 2 mm
Weight	approx. 22 g

Type 111 (Model: 5790)

Article no. 3313229



## TM-SWA Data Logging Software and RS232 Cable for TMA10A

- Real-time software logs and displays data from all measurement functions
- Record two channels simultaneously
- Air Flow and Temperature with TMA10 device
- Save results for subsequent analysis
- Automatic calculation of results including maximum, minimum, average, and standard deviation

TM-SWA

Article no. 3027085



## 1032 Heat-conducting paste

- Heat-conducting paste up to 250 °C (30 g)
- Contains silicone

1032

Article no. 2145689



## 93560 Digital Light Meter with Save Function

### Functions

- Illuminance measurement

- Integrated measurement memory (data hold)

### Product information

- Automatic range selection
- Silicon sensor

### Product highlights

- Measurement memory for 99 individual readings

### Technical specifications

Display	LCD, 4 digit
Measurement ranges (Auto range)	0...50 lx, 0...500 lx, 0...5000 lx, 0...50 klx, 0...200 klx
Resolution of the display	0.01 lx, 0.1 lx, 1 lx, 10 lx, 100 lx
Measurement ranges	0...5, 0...50, 0...500, 0...5000 fc, 0...20 kfc
Accuracy	< 10 %
Temperature drift	< 1%/K
Power supply	6x battery 1.5 V, IEC LR03
Dimensions	150 x 72 x 35 mm (unit)
Weight	92 x 60 x 29 mm (sensor) approx. 250 g

Included: 1x 93560, 6x Battery 1.5 V, IEC LR03, 1x Carrying case, 1x User manual



93560  
Article no. 3222543

## LM-100 Digital Lux Meter

### Functions

- Light measurement

(data hold)

- Max data hold (Max)

### Product information

- Manual range selection
- Silicon sensor
- Integrated measurement memory

### Technical specifications

Display	LCD, 3½ digit
Measurement range	0...20 (only LM-120) 0...200, 2000, 20.000, 200,000 Lux
Resolution	0-20, 200, 2000, 20,000 fc 0.1, 1, 10, 100 Lux 0.01, 0.1, 1, 10 Fc
Accuracy	< 10 %
Power supply	1x battery 9 V, IEC 6F22
Dimensions	130 x 63 x 38 mm (unit) 80 x 55 x 29 mm (sensor)
Weight	approx. 220 g

Included: 1x LM-100 or LM-120, 1x Battery 9 V, IEC 6F22, 1x Carrying case, 1x User manual

## LM-120 Digital Lux Meter

### As LM-110, but with:

- Automatic and manual range selection
- Minimum and maximum data hold (min/max)
- Auto Power Off
- Zero adjust knob



LM-100  
Article no. 3052348

LM-120  
Article no. 3052353

## TMULD-300 Ultrasonic leak detector kit

### Functions

- Pressurized air leaks (HGV pressurized air, braking and suspension systems), leaks in refrigeration, air-conditioning and heating systems, leaks in steam lines etc.
- Leaks in door and window seals, roofs
- Leaks in the automobile sector: Windscreens, door seals

### Product information

- Kit consisting of ultrasonic leak detector (ULD-300) and ultrasonic transmitter (UT-300) in robust carrying case
- Leaks indicated optically and acoustically

### Ultrasonic leak detection:

Sounds above 20 kHz cannot be heard by the human ear. Even the smallest leaks in pressurized air and gas systems cause turbulences, which in turn generate ultrasonic sounds.

The ULD-300 detects these sounds and pinpoints the exact location of the leak. The ULD-300 indicates leaks optically (10-stage LED scale) and acoustically (headphones) and features a thumb wheel for setting the device's sensitivity.

### Technical specifications

ULD-300	35 kHz...45 kHz ±6 dB
Power supply	1x battery 9 V, IEC 6LR61 (in any case)
Display	LED
Frequency:	
UT-300	40 kHz
Dimensions:	
ULD-300	65 x 185 x 25 mm
UT-300	65 x 165 x 25 mm
Weight:	
ULD-300	approx. 150 g (incl. battery)
UT-300	approx. 160 g (incl. battery)

Included: 1x Ultrasound leak detector ULD-300, 1x Ultrasonic transmitter UT-300, 1x Headphones, 1x Extension and parabolic attachment, 2x Batteries 9 V, IEC 6LR61, 1x Carrying case, 1x User manual



TMULD-300  
Article no. 2731543

### Accessories:

Ultrasonic Transmitter  
Model UT-300  
Article no. 2734446



**93517**  
Article no. 3313290

## 93517 Digital sound level meter with storage function

### Functions

- Measurement of sound level for a comparison with the guideline values for occupational safety (DGUV Regulation 6)

### Product information

- Measurement according to frequency evaluation filters A and C, with direct display in dB
- Maximum data hold (Max Hold)

- Switchable between fast and slow response times
- Tripod connection

### Product highlights

- DC and AC voltage output for connection to spectrum analyzers, level recorders, or FFT analyzers
- Measurement memory for 99 individual readings

### Technical specifications

Display	LCD, 4 digit, bar graph
Measurement ranges	
Resolution	30...130 dB/0.1 dB
Frequency range	31.5 Hz...8 kHz
Measurement accuracy	Class 2 in accordance with IEC 61672
Response times	FAST (125 ms), SLOW (1s)
Recorder output	AC: 1 Vrms at 5 kΩ, DC: 10 mV/dB at 5 kΩ
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	264 x 68 x 27 mm
Weight	approx. 260 g

Included: 1x 93517, 1x adjusting screwdriver, 1x 3.5 mm jack plug, 1x battery 9 V, IEC 6LR61, 1x carry case, 1x windbreak, 1x user manual



**SM-20A**  
Article no. 3477333

## SM-10 Digital sound level meter

### Functions

- Measurement of sound level

### Product information

- Measurement according to frequency evaluation filters A and C, with direct display in dB
- Integrated measurement memory (data hold, MAX)

- Switchable between fast and slow response times
- Back light

### Technical specifications

	SM-10	SM-20A
Display	LCD, 4 digit	LCD, 4 digit
Measurement range/resolution		
A:	30...130 dB / 0.1 dB	30...30 dB. (resolution: 0.1 dB)
C:	35...130 dB / 0.1 dB	35...130 dB. (Resolution 0.1 dB)
Frequency range	31.5 Hz...8 kHz	31.5 Hz...8 kHz
Tolerance	±1.5 dB	±1.5 dB
Response times	Fast (125 ms); Slow (15 ms)	
Power supply	1x battery 9 V, IEC 6LR61	1x battery 9 V, IEC 6LR61
Dimensions	200 x 55x 38 mm	200 x 55 x 38 mm
Weight	approx. 230 g	approx. 230 g

Included: 1x SM-10 or SM-20A, 1x Battery 9 V, IEC 6LR61, 1x Carry case, 1x Windbreak (SM-10 only), 1x Interface cable (SM-20A only), 1x Software (SM-20A only), 1x User manual

## SM-20A Digital sound level meter

### As SM-10, but with:

- USB interface for PC connection
- Internal data logger for 14,000 readings



**SM-CAL1**  
Article no. 3052382

## SM-CAL1 Sound level calibrator

### Functions

- Calibrator for sound level meters

### Product information

- Two selectable areas: 94 dB and 114 dB
- Appropriate for 1/2" microphones

### Technical specifications

Output signal	94 dB, 114 dB
Accuracy	± 0.5 dB
Frequency	1 kHz (±4 %)
Power supply	1x battery 9 V, IEC 6F22
Dimensions	Ø 48x 125mm
Weight	approx. 285 g

Included: 1x SM-CAL1, 1x 1/2" adapter, 1x Battery 9 V, IEC 6F22, 1x User manual

## TMA5 Mini anemometer

### Functions

- Air velocity measurement (m/s)
- Temperature measurement
- Humidity measurement

### Product information

- Automatic range selection

- Integrated measurement memory (data hold)
- Auto power-off (can be deactivated)

### Product highlights

- External temperature sensor can be connected

- Dew point measurement
- Measurement of wet bulb temperature

### Technical specifications

Display	LCD, 3¼ digit, 3999 digits
Measurement ranges Air velocity	1.1...20.0 m/s, 0.7...72.0 km/h, 0.5...44.7 mph 60...3937 ft/m, 0.4...38.8 KNT, 1...8 BF
Basic accuracy	± 5% rdg or ± 5 digits (the higher value applies)
Temperature (int.)	0°C...50°C, 32°F...122°F
Resolution	0.1 °C/°F
Basic accuracy	± 1°C
Temperature (ext.)	-20°C...70°C, -4°F...158°F
Resolution	0.1 °C/°F
Basic accuracy	± 0.6°C
Humidity	5%...95% relative humidity
Resolution	0.1% relative humidity
Basic accuracy	± 3.5% relative humidity
Power supply	1x battery 3.0 V, IEC CR 2032
Dimensions	136 x 46 x 17 mm
Weight	approx. 135 g

**Included:** 1x TMA5, 1x Temperature probe TPK60, 1x Battery 3.0 V, IEC CR 2032, 1x Carrying case, 1x Strap hanger, 1x User manual



**TMA5**  
Article no. 3503169

## TMA10A Anemometer

### Functions

- Air velocity measurement (m/s)
- Airflow measurement (m<sup>3</sup>/s)
- Temperature measurement

### Product information

- Integrated measurement memory (data hold)
- MIN/MAX and AVG value measurement

- Auto power-off (can be deactivated)
- Ideal for measurements in ventilation, air-conditioning and heating systems
- Flexible precision vane

### Product highlights

- RS-232 interface for PC connection
- TM-SWA software (optional)

### Technical specifications

Display	LCD, 4 digit, 9999 digits
Measurement range (m/s)	0.40...25.00 m/s (resolution: 0.01 m/s)
Basic accuracy	±(3% rdg.)
Volume flow	0.01...99.99 m <sup>3</sup> /s (Resolution 0.01 m <sup>3</sup> /s)
Temperature	0...50 °C or 32...122 °F (Resolution 0.1 °F/°C)
Basic accuracy	± 1.5 °F / 0.8 °C
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	181 x 71 x 38 mm
Weight	approx. 360 g (incl. battery)

**Included:** 1x TMA10A, 1x Carry case, 1x Battery 9 V, IEC 6LR61, 1x User manual



**TMA10A**  
Article no. 2817785



### Accessories:

TM-SWA data logging software and RS232 cable Model TM-SWA  
Article no. 3027085

## TMA-21HW Hot-wire anemometer

### Functions

- Air velocity measurement (m/s)
- Airflow measurement (m<sup>3</sup>/s)
- Temperature and humidity measurement

### Product information

- Integrated measurement memory (data hold)

- MIN/MAX and AVG value measurement
- Auto power-off (can be deactivated)
- Ideal for measurements in ventilation, air-conditioning and heating systems
- Large, illuminated display

### Product highlights

- USB interface for transferring stored measurements to a PC

- 1.2m telescopic probe simplifies measuring
- Integrated data logger for records over a longer timeframe

### Technical specifications

Display	LCD, 4 digit, 9999 digits
Measurement ranges (m/s)	0.1...30.0 m/s (Resolution 0.1 m/s)
Basic accuracy	± (3% rdg.)
Volume flow	0.01...99.99 m <sup>3</sup> /s (Resolution 1 m <sup>3</sup> /s)
Temperature	-20...60 °C (Resolution 0.1 °C)
Basic accuracy	± 0.5 °C
Memory	512KB for 99 datasets
Power supply	6x battery 1.5 V, IEC LR03
Dimensions	150 x 72 x 35 mm (unit)
Weight	approx. 300 g (incl. battery)

**Included:** 1x TMA-21HW, 1x Telescopic probe, 1x Carry case, 6x Battery 1.5 V, IEC LR03, 1x USB cable, 1x Software on CD, 1x User manual



**TMA-21HW**  
Article no. 3730239



## TACH20 Digital tachometer



**TACH20**  
Article no. 3311961

### Functions

- Rotational speed measurement
- Surface speed measurement
- Length measurement

### Product information

- Display of rotational speed
- Display of surface speed in m/min, ft/

min and in/min

- Display of length measurement in m, ft and inch
- Integrated measurement memory
- Display shows last, maximum or minimum value
- Optical (non-contact) or mechanical, adapter-based measurement

- Visible optical measurement performed using infrared beam
- Auto power off after approx. 30 sec (data remains saved)

### Technical specifications

Display	LCD, 5 digit
Ranges	
Rotational speed	1 ... 99,999 1min
Speed	0.1 ... 1,999 m/min
Length	0.02 ... 99,999 m
Tolerance	± 0.2 % ± 0.02 % (rpm)
Measurement time	0.5 s/1 period at low rpm
Measurement distance	max. 350 mm
Power supply	2x battery 1.5 V, IEC LR6
Dimensions	180 x 60 x 25 mm
Weight	approx. 195 g

**Included:** 1x TACH20, 1x Mechanical measurement adapter, 1x Extension, 2x Probes, 2x Measuring wheel, 10x Reflex stickers, 2x Batteries 1.5 V, IEC LR6, 1x Case, 1x User manual

### Accessories:

Reflex stickers  
75 mm long (10 pcs.)  
Model 1154

Article no. 2145762



## TACH-10 Digital tachometer



**TACH-10**  
Article no. 3730008

### Functions

- Rotational speed measurement
- Surface speed measurement

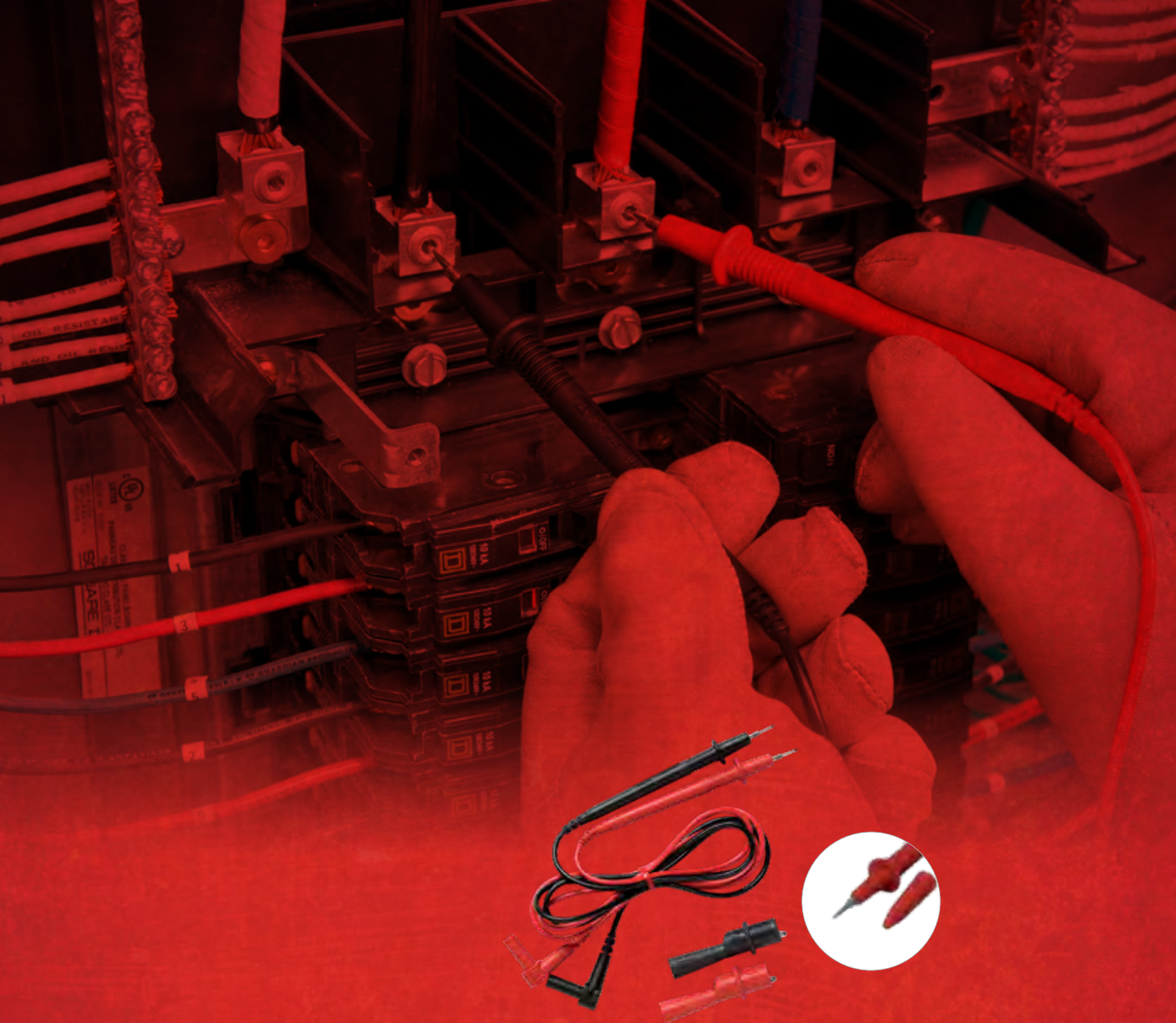
### Product information

- Display of rotational speed
- Display of surface speed in m/min, ft/ min and in/min

- The last value is shown in the display
- Optical (non-contact) or mechanical, adapter-based measurement
- Visible optical measurement performed using infrared beam
- Auto Power Off

### Technical specifications

Display	LCD, 5 digit
Ranges	
Rotational speed	10 ... 99,999 1min
Speed	1.000 ... 9,999 m/min
Tolerance	± (0.1 % rdg. + 2 digits)
Measurement distance	50-300 mm
Power supply	1x battery 9 V, IEC 6LR61
Dimensions	270 x 180 x 30 mm
Weight	approx. 550 g



## Measurement accessories for a secure connection

The right measurement and testing equipment, as well as the appropriate measurement accessories are important components for carrying out measurements in a safe, reliable manner.

The following measurement accessories contain various test leads, probes, and crocodile clips. This ensures that any user can find the necessary tools required for their measurement task.





### Test leads SML 4W 4 mm safety plug-in technology

#### Accessory information

- Safety test lead, flexible 0.8 mm<sup>2</sup>
- Current-carrying capacity 16 A
- Measurement category CAT III / 600 V

#### Design

- PVC insulation
- Two-way safety plugs with onward connection capability in accordance with DIN VDE 0411/ EN 61010/IEC 61010

**307111**  
(red - 1000mm)

Article no. 2146495

**307121**  
(red - 2000mm)

Article no. 2146508

**307112**  
(black - 1000mm)

Article no. 3313550

**307122**  
(black - 2000mm)

Article no. 3313561



### Safety clamp-type test probe SKP 41 set 4 mm plug-in technology

#### Accessory information

- Approx. 155x 49 mm
- Current-carrying capacity 2 A
- Measurement category CAT III/1000 V

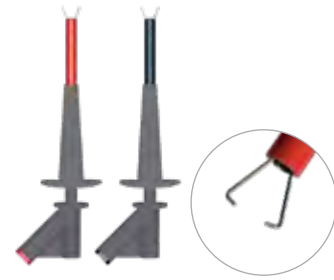
#### Design

- Spring wire grabber with flexible, insulated shaft
- Safety clamp-type test probe with 4-mm safety jack in accordance with DIN VDE 0411/ EN 61010/IEC 61010

Set, consisting of: 1x SKP 41 gray/red, 1x SKP 41 gray/black

**370010**

Article no. 2146701



### High current safety clamp-type test probe HCP 41 set 4 mm plug-in technology

#### Accessory information

- Approx. 160 x 60 mm
- Current-carrying capacity 10 A
- Measurement category CAT III/1000 V

#### Design

- Safety clamp-type test probe with 4-mm safety jack in accordance with DIN VDE 0411/EN 61010/IEC 61010

Set, consisting of: 1x HCP 41 gray/red, 1x HCP 41 gray/black

**370024**

Article no. 2146758



### Probes PSS set of 2

#### Accessory information

- Approx. 100 x 21 mm
- Current-carrying capacity 6 A
- Measurement category CAT III/1000 V

#### Design

- Safety probe with 4-mm safety jack in accordance with DIN VDE 0411/EN 61010/IEC 61010

Set, consisting of:

1x probe PSS 2 gray/red

1x probe PSS 2 gray/black

**370008**

Article no. 2146694



### Probes PSK set of 2 2 mm probe, short version

#### Accessory information

- Approx. 102x 10 mm
- Current-carrying capacity 16 A
- Measurement category CAT III/1000 V, CAT IV/600 V (with cover)
- Measurement category CAT II/1000 V (without cover)

#### Design

- Safety probe with safety jack 4-mm and 2 mm stainless steel probe in accordance with DIN VDE 0411/EN 61010/ IEC 61010

Set, consisting of:

1x probe PSK 2, gray/red (with cover)

1x probe PSK 2, gray/black (with cover)

**370004**

Article no. 2146675



### TL-300 Test lead set with crocodile clips

(red, black, yellow), case, and temperature probe

#### Technical specifications

Current-carrying capacity	10 A
Current-carrying capacity	10 A
Measurement Category	
Probes	CAT IV/1000 V (with cover) CAT II/1000 V (without cover)
Crocodile clips	CAT IV/600 V, CAT III/1000 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/ EN 61010/IEC 61010
Temperature probes	K-type flexible wire probe 4 mm plug (distance 19 mm)
Probe length	approx. 0.9 m
Temperature range	-20 °C...+250 °C
Accuracy	-20...0 °C: ±2.5 °C or ±1.5% rdg. 0...250 °C: ±1.1 °C or ±0.4% rdg.

**TL-300**

Article no. 4588279







**Safety crocodile clip KS 4L set**  
**4 mm plug-in technology**

**Accessory information**

- 94x 42 mm
- Current-carrying capacity 16 A
- Measurement category CAT III/1000 V, CAT IV/600 V
- Opening: approx. 24 mm

**Design**

- Safety crocodile clip with 4-mm safety jack in accordance with DIN VDE 0411/EN 61010/IEC 61010

Set, consisting of: 1x KS4L gray/red, 1x KS4L gray/black

370012

Article no. 2146712



**Crocodile clips for conductor rails**  
**4 mm safety plug-in technology**

**Accessory information**

- 155x 40.5 mm
- Current-carrying capacity 5 A
- For conductor rails up to 30 mm
- Measurement category CAT III/600 V
- Opening: 0...20 mm/10...30 mm

**Design**

- Crocodile clip for secure measurement on conductor rails
- 4 mm safety plug-in technology

391511 (red)

Article no. 2146861

391512 (black)

Article no. 2146877



**Unidreh accessory set**  
**4 mm plug-in technology**

**Accessory information**

- Self-retaining probes with clamping range ø 4...8 mm
- Safe contacting, e.g. in CEE 16 A- and CEE 32 A sockets
- Crocodile clip included

**Technical specifications**

Current-carrying capacity	8 A
Measurement Category	
Probes (Astaco)	CAT III/1000 V
Crocodile clip (KS4L)	CAT III/1000 V, CAT IV / 600 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010



The solution for secure contacts with CES sockets.

1324

Article no. 2146183



**Professional test lead set for multimeters**  
**2 mm safety probes**

**Accessory information**

- Test lead set with 4 mm safety plug-in technology
- Ergonomic handle
- Silicone safety test lead
- Measurement category CAT IV / 1000 V (with cover)
- Measurement category CAT II / 1000 V (without cover)
- 2mm probes

**Technical specifications**

Current-carrying capacity	max. 20 A
Measurement category	CAT IV / 1000 V (with cover) CAT II / 1000 V (without cover)
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 2x test leads, approx. 1 m long, 2 covers

1306

Article no. 3313458



**Professional test lead set for multimeters**  
**4 mm safety probes**

**Accessory information**

- Test lead set with 4 mm safety plug-in technology
- Ergonomic handle
- Silicone safety test lead
- Measurement category CAT IV / 1000 V (with cover)
- Measurement category CAT II / 1000 V (without cover)
- 4mm probes

**Technical specifications**

Current-carrying capacity	max. 20 A
Measurement category	CAT IV / 1000 V (with cover) CAT II / 1000 V (without cover)
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 2x test leads, approx. 1 m long, 2x covers

1307

Article no. 2146176



**Mini crocodile clips**  
**2 mm plug-in technology**  
(fits all 2 mm multimeter probes)

**Accessory information**

- 41.5x 13 mm
- Max. voltage 33 V AC / 70 V DC
- Opening: approx. 7 mm

**Design**

- Miniature crocodile clip

390450 (red)

Article no. 2406492

390451 (black)

Article no. 2406509



### TL36A

## Test lead set with crocodile clips 2 mm safety probes

#### Accessory information

- Test lead set with 4 mm safety technology
- PVC-insulated leads
- Threaded test probes
- Crocodile clips with thread connection, opening approx. 10 mm

#### Technical specifications

Measurement categories	
Test lines	CAT III/1000 V, CAT IV/600 V (with cover) CAT II / 1000 V (without cover)
Current-carrying capacity	10 A
Crocodile clips	CAT III / 1000 V, CAT IV / 600 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 2x test leads, approx. 1 m long, with covers, 2x crocodile clips

TL36A

Article no. 3034444



### TL35B

## Test lead set with safety crocodile clips 2 mm safety probes

#### Accessory information

- Test lead set with 4 mm safety technology
- PVC-insulated leads
- Threaded test probes
- Safety crocodile clips with thread connection, opening approx. 16 mm

#### Technical specifications

Measurement categories	
Test lines	CAT III/1000 V, CAT IV/600 V (with cover) CAT II / 1000 V (without cover)
Current-carrying capacity	10 A
Crocodile clips	CAT III / 1000 V, CAT IV / 600 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 2x test leads, approx. 1 m long, with covers, 2x crocodile clips

TL35A

Article no. 3068232



### EU-200

## Test lead set

#### Accessory information

- Test lead set with 4 mm safety technology
- 4 mm test probes

#### Technical specifications

Measurement categories	
Test leads	CAT III / 1000 V
Probes	CAT IV / 600 V, CAT III / 1000 V (with cover) CAT II / 1000 V (without cover)
Current-carrying capacity	16 A
Crocodile clips	CAT III / 1000 V, CAT IV / 600 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 2x test leads, 2x probes (with covers), 2x crocodile clips

EU-200

Article no. 2745046



## Safety set

#### Accessory information

- Test lead set with 4 mm safety technology

#### Technical specifications

Current-carrying capacity	16 A
Measurement Category	
Safety test leads	
leads	CAT III/1000 V
Probes	CAT III/1000 V, CAT IV / 600 V (with cover) CAT II / 1000 V (without cover)
Crocodile clip	CAT III/1000 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 1x safety test lead, red, 1x safety test lead, black, 1x probe, red, with cover, 1x probe, black, with cover, 1x crocodile clip, red, 1x crocodile clip, black

370003

Article no. 2146666



## Electronics set

#### Accessory information

- Test lead set with 4 mm safety plug-in technology

#### Technical specifications

Current-carrying capacity	2A/6A/16A
Measurement Category	
Safety test leads	CAT III/1000 V
Probes	CAT III/1000 V
Crocodile clip	CAT III/1000 V
Clamp-type test probes	CAT III/1000 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 1x safety test lead, red, 16A, 1s safety test lead, black, 16A, 1x crocodile clip, red, 16A, 1x crocodile clip, black, 16A, 1x safety clamp-type test probe, red, 2A, 1x safety clamp-type test probe, black, 2A, 1x safety probe, red, 6A, 1x safety probe, black, 6A

370001

Article no. 3313577



## Electrician set

#### Accessory information

- Test lead set with 4 mm safety plug-in technology

#### Technical specifications

Current-carrying capacity	6A/10A/16A
Measurement Category	
Safety test leads	
leads	CAT III/1000 V
Probes	CAT III/1000 V
Crocodile clip	CAT III/1000 V
Clamp-type test probes	CAT III/1000 V
Pollution degree	2
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010

Included: 1x safety test lead, red, 16A, 1s safety test lead, black, 16A, 1x safety probe, red, 6A, 1x safety probe, black, 6A, 1x safety clamp-type test probe, red, 10A, 1x safety clamp-type test probe, black, 10A, 1x crocodile clip, red, 16A, 1x crocodile clip, black, 16A

370000

Article no. 2146653





### 1150 Carrying case

- **Material:** Nylon, upholstered, fasteners, Lanyard
- **Internal dimensions:** 200 x 150 x 40 mm

1150

Article no. 2145755



### 1175 Carrying case

- **Material:** Nylon, upholstered, belt loop
- **Internal dimensions:** 295 x 80 x 50 mm

1175

Article no. 2145796



### 1193 Professional carry case

- **Material:** Nylon, upholstered, fasteners, Neck strap
- **Internal dimensions:** 300 x 400 x 65 mm

1193

Article no. 2145812



### VC30A Carrying case

- **Material:** Imitation leather, carrying strap
- **External dimensions:** 200 x 80 x 45 mm

VC30A

Article no. 3068280



### VC221B Carrying case

- **Material:** Imitation leather, carrying strap
- **External dimensions:** 220 x 115 x 60 mm

VC221B

Article no. 3068271



### CC-ACDC Carrying case

- **Material:** Nylon, carrying strap, belt loop
- **External dimensions:** 300 x 120 x 60 mm

CC-ACDC

Article no. 2732643

## Fuses

Model	Item no.	Description
FP100	1990707	Fuse Pack (2x 10 A/1000 V)
FP125	1561550	Fuse Pack (4x 0.1 A/250 V)
FP160	1990718	Fuse Pack (2x 10 A/600 V)
FP200	2095180	Fuse Pack (2x 2 A/1000 V)
FP300	1990688	Fuse Pack (4x 0.315 A/1000 V)
FP375	1561610	Fuse Pack (4x 0.25 A/500 V)
FP400	1561631	Fuse Pack (4x 10 A/600 V)
FP410	3368658	Fuse 11 A/1000V
FP425	1561646	Fuse Pack (2x 20 A/600 V)
FP500	1990695	Fuse Pack (4x 0.5 A/1000 V)
FP520	3157013	Fuse Pack (2x 0.5 A/500 V)
FP600	1565777	Fuse Pack (2x 15 A/600 V)
FP700	2637713	Fuse Pack (2x 2 A/1500 V) for HD160C
FP900	2278800	Fuse Pack (2x 200 mA/600 V)





# Appendix

- Measurement categories
- Product Index

# Things worth knowing about measurement categories, pollution degree, labeling, and symbols

## Measurement categories:

Measurement category was referred to as overvoltage category in an earlier publication of DIN VDE 0411-1:1994.

### 0 – no measurement category:

Several types of testing and measurement circuits are not intended for direct connection to the mains supply. These are circuits, which are not directly connected to the mains, e.g. circuits within devices after the input transformer. No standard values for overvoltage are defined for such circuits.

### CAT II - Measurement category II:

Operating or testing equipment that is connected between the sockets and the consumers. Only small overvoltages through lightning strikes have to be taken into account for CAT II measurement category equipment, although overvoltages caused by switching operations can arise. Short circuit currents of up to 10kA must be expected. Examples for operating equipment within this category include electrical equipment connected to sockets.

### CAT III - Measurement category III:

Operating or testing equipment that is connected between the energy meter and the sockets. In the case of such operating equipment, limited overvoltages can arise through lightning strikes, and short circuit currents of up to 50 kA must be expected. Examples for operating equipment in this category includes building installations, fuses, circuit breakers, residual current devices, switches, sockets, or permanently installed operating equipment.

### CAT IV - Measurement category IV:

Operating or testing equipment that is connected between the source of the low-voltage network outside the building and the energy meter. Stronger overvoltages and lightning strikes must be taken into account with such operating equipment. Examples of operating equipment belonging to measurement category IV include cables in front of the energy meter, service lines, overhead lines, and underground cables. Short circuit currents of over 50 kA must be expected.

## Pollution Degree

The insulation capability of measurement and testing equipment can be severely reduced by surface contamination. Particles of dust and soot, or water can create conductive connections and considerably reduce the surface resistance of the insulation.

### Pollution Degree 1

There is either no contamination, or only dry contamination with no conductivity.

This pollution has no effect.

### Pollution Degree 2

Usually, only non-conductive contamination is found. However, temporary conductivity due to condensation should be expected on occasion.

Operation site, e.g. industrial, or in a laboratory.

### Pollution Degree 3

Either conductive contamination takes place, or there is dry, non-conductive contamination which becomes conductive due to condensation that is expected.

Operation site, e.g. heavy industry, construction sites, brief usage in the open air.

## Labeling and symbols

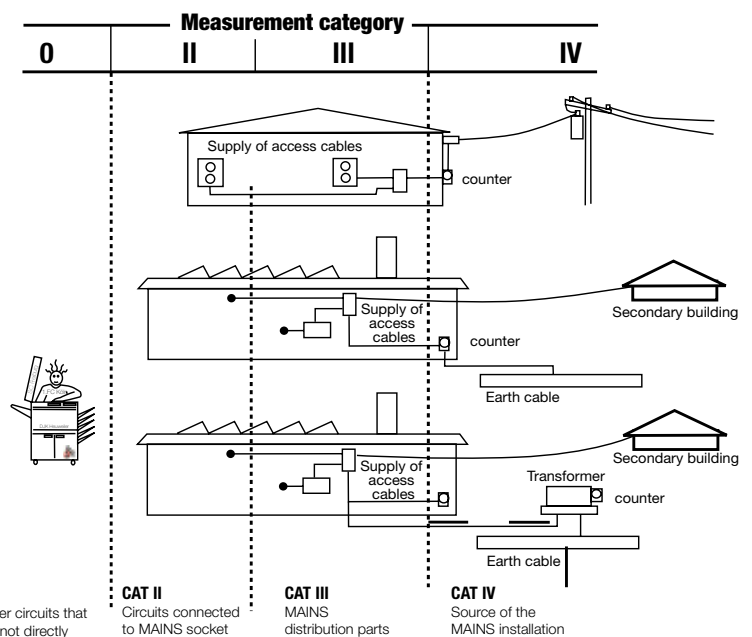
- ⚠ Warning of a hazardous area, observe the instruction manual
- ⚡ Caution! Hazardous voltage, risk of electric shock
- ☐ Double or reinforced insulation in accordance with Class II IEC 61140 (Protection class II)
- CE Conformity mark, confirms adherence to the relevant guidelines and regulations applicable to the respective equipment

## Protection types

In electronic measurement and test devices, and other operating equipment, the protection against foreign bodies (dirt) and water is indicated by two digits after the short form IPxx. The first digit can be from 0 to 6. This indicates the protection against the ingress of foreign bodies. 0 indicates no protection, 6 indicates protection against the ingress of dust. The second digit can be from 0 to 8. This indicates the protection against the ingress of water. 0 indicates no protection, 8 indicates protection against the ingress of water when submerged.

## Protection Levels

- ⊕ Protection class I: Protection via protective earth
- ☐ Protection class II: Protection via protective insulation
- ⚡ Protection class III: Protection via safety extra-low voltage





# Complete Beha-Amprobe Product Index

## Model Item number Description

### Voltage Continuity Testers

2100-ACCS	4736214	4 mm Probe extenders, tip covers for 2100-series
2100-ALPHA	4312495	Two Pole Tester LED
2100-BETA	4312508	Two Pole Tester LCD/LED
2100-GAMMA	4709243	Two Pole Tester 1000V AC/1200V DC, NCV, LCD/LED
9023D	2147430	Continuity-Tester Unitest Testfix
9072-D	3454373	Continuity-Tester Ohmtest
9080D	3530534	Socket Tester Schuko-Test
BAT-250-EUR	4620297	Battery Tester
LT-10-ANT	4357839	Fluorescent & sodium lamp antenna set with carry case for LT-10
LT-10-EUR	4386345	Lamp Tester
NCV-1020-EUR 12PK	5017155	Voltfix, Non-Contact Voltage probe
NCV-1020-EUR VOLTfix	4918072	Non-Contact Voltage (NCV) tester for detecting AC voltage without interrupting electrical systems
NCV-1030-EUR 12PK	5017162	Voltfix, Non-Contact Voltage probe dual range with flashlight
NCV-1030-EUR VOLTfix	4918085	Non-Contact Voltage (NCV) tester Default: 50-1000 V. High Sensitivity: 12-50 V
NCV-1040-EUR 12PK	5017170	MAGNO-Voltfix, Non-Contact Voltage probe dual range with flashlight and magn.sens.
NCV-1040-EUR MAGNO-VOLTfix	4918097	Non-Contact Voltage (NCV) tester Magnetic solenoid testing

### Sustainable Energy

SOLAR-100	3474979	Solar Power Meter
EV-520-CH	5022805	Test Adapter EV Charging Stations+EVC-20 Cable (Swiss/13)
EV-520-D	5008532	Test Adapter EV Charging Stations+EVC-20 Cable (Schuko)
EV-520-F	5022822	Test Adapter EV Charging Stations+EVC-20 Cable (French/E)
EV-520-UK	5022810	Test Adapter EV Charging Stations+EVC-20 Cable (UK Socket)
EVA-500-CH	5022846	Test Adapter EV Charging Stations w/ Swiss Socket Type13
EVA-500-D	5008567	Test Adapter EV Charging Stations w/ SCHUKO Socket
EVA-500-F	5022868	Test Adapter EV Charging Stations w/ French Socket Type E
EVA-500-UK	5022854	Test Adapter EV Charging Stations w/ UK Socket
EVC-13	5008580	Test Cable / Connect Charging Station Cable Type1
EVC-20	5022831	Test Cable / Connect Charging Station Receptacle+Cable Type2

### Cable, Wire Tracers, Locators (and Accessories)

AF-600-EUR	4994583	A-Frame Fault Locator,UAT-600 Series
AT-3500	3435058	Underground Wire Tracer
AT-6000-RE	4909840	Receiver, AT-6000-EUR Wire tracer
AT-6000-TE	4909857	Transmitter, AT-6000-EUR Wire tracer
AT-6010-EUR	5044669	Advanced Wire tracer w/receiver, transmitter, soft carrying case
AT-6010-RE	5044678	Receiver, AT-6010 Wire tracer
AT-6010-TE	5044684	Transmitter, AT-6010 Wire tracer
AT-6020-EUR	4868002	Advanced multi-function wire tracer
AT-6030-EUR	4868016	Advanced multi-function wire tracer. Kit includes CT-400-EUR SIGNAL CLAMP
AT-7000-RE	4542802	Receiver
AT-7000-TE	4542816	Transmitter with LED
AT-7020-EUR	4542794	Advanced Wire Tracer w/Receiver, Transmitter, Hard Case
AT-7030-EUR	4542782	Advanced Wire Tracer with Signal Clamp
BR-7000C	4544583	Li-ION Battery Charger for AT-7000-EUR Transmitter
BR-7000-T	4467296	Battery Rechargeable AT-7000-Series, Li-ION, 7.2V, 2.2 AH
CC-6000-EUR	4909869	Carrying Case, Molded, AT-6000-EUR
CC-6010-EUR	5044691	Carrying Case, Soft, AT-6010-EUR
CC-7000-EUR	4542833	Carrying Case, foam insert for AT-7000-EUR Series
CC-UAT-600EUR	4994620	Carrying case,UAT-600 Series
CT-400-EUR	4868033	Signal Clamp / 400A Current Transducer
FP-UAT-600	4994468	Fuse, 2 pack, UAT-600 Series
LAN-1	3052401	LAN Cable Tester
MLS55-3	3435099	MLS55-3,Pipe Transmitter for AT-3500
SC-3500	3435073	Signal Clamp SC-3500 for AT-3500
SC-600-EUR	4994647	Signal Clamp,UAT-600 Series
SC-7000-EUR	4542825	Current Clamp for AT-7000-EUR Wire Tracer
SF100-D	3454312	Fuse finder
TL-7000-EUR	4542857	Test lead set for AT-7000 w/alligator clips blk/red, probes blk/red (accessories)
TL-UAT-600	4994446	Test leads kit,UAT-600 Series
UAT-600-RE	4994590	Receiver,UAT-600 Series
UAT-600-TE	4994601	Transmitter,UAT-600 Series
UAT-610-EUR	4994541	Underground Utility Locator Kit
UAT-620-EUR	4994565	Underground Utility Locator Kit w/Clamp

### Digital Multimeters

15XP-B	3534088	Compact, Full-Featured Multimeter
30XR-A	2727774	Prof DMM With Non-Contact Volt Tester
33XR-A	2727788	Prof DMM With Temp And Capacitance
34XR-A	2727795	Prof DMM True-RMS w Temperature & Backlight
35XP-A	2727849	Compact DMM With Temp, Freq, Capacitance
37XR-A	2727808	Prof DMM True-RMS w Component Logic Test
38XR-A	2727824	Prof DMM True-RMS w optical PC interface
5XP-A	2727851	Compact DMM with Non-Contact Voltage
93497D	3454491	Hexagon 340A Digital multimeter
93523D	3454478	Hexagon 110 Digital multimeter
93524D	3454484	Hexagon 120 Digital multimeter
AM-500-EUR	4102332	Digital Multimeter
AM-510-EUR	4102344	Digital Multimeter
AM-520-EUR	4131281	Digital Multimeter
AM-535-EUR	4701027	Digital Multimeter TRMS with test leads
AM-540-EUR	4131308	Digital Multimeter
AM-555-EUR	4701030	Digital Multimeter, TRMS, Dual Display, test leads, temp
DM73C	2727739	Probe Style DMM
DM78C	3156830	Universal-Multimeter

## Model Item number Description

HD110C	2670779	Heavy Duty Multimeter
HD160C	2670787	Heavy Duty Multimeter
LCR55A	3026976	Handheld Capacitance Tester with Transistor Test
PM51A	2727700	Pocket Multimeter
PM55A	2727721	Pocket Multimeter

### Clamp Meters

93570D	3313218	CHB5 Leakage Current Clamp with Harmonics
AC50A	3033017	Leakage Clamp Meter
AC68C	2727919	Specialty Clamp Multimeter 600A ACDC
AC75B	2727885	Specialty Clamp Multimeter 600A
ACD-10 PLUS	3037808	Clamp Multimeter 600A
ACD-14 PLUS	3086905	Clamp Multimeter 400A
ACD-14-PRO-EUR	4718989	AC TRMS Clamp Meter, Dual Display, 600 A, jaw 30 mm
ACD-16 TRMS-PRO	2730713	Recording Clamp Multimeter TRMS 1000A
ACD-235W	3804941	TRMS 400A Swivel clamp w/temp and capacity
ACD-45PQ	3730013	600A Power Quality Clamp
ACD-50NAV	3729945	600 A AC Navigator Clamp
ACD-53NAV	3729977	1000A AC TRMS Navigator Clamp
ACD-6 PRO	2730785	Clamp Meter 1000A
ACDC-100	2740452	Clamp Multimeter 1000A
ACDC-100 TRMS	2740465	Clamp Multimeter TRMS 1000A ACDC
ACDC-100 TRMS-D	3454615	Clamp Multimeter TRMS 1000A AC/DC
ACDC-100-D	3454603	Clamp Multimeter 1000A
ACDC-3400 IND	3434889	Industrial Clamp TRMS 1000A AC/DC
ACDC-52NAV	3729961	600A AC/DC TRMS Navigator Clamp
ACDC-54NAV	3729989	1000A AC/DC TRMS Navigator Clamp
ALC-110-EUR	4930890	Leakage current clamp
AMP-210-EUR	4560581	AC TRMS Clamp Meter, 600 A, jaw 30 mm
AMP-220-EUR	4560596	AC/DC TRMS Clamp Meter, 600 A, jaw 35 mm
AMP-25-EUR	4588268	AC/DC TRMS, Mini Clamp Meter, 300 A, jaw 25 mm
AMP-310-EUR	4560603	AC TRMS Clamp, 600 A, HVAC with Motor Testing, jaw 30 mm
AMP-320-EUR	4560615	AC/DC TRMS Clamp Meter 600A Motor Testing, jaw 35 mm
AMP-330-EUR	4560626	AC/DC TRMS Clamp, 1000 A, Industr.Motor Testing, jaw 51 mm
CHB15-D	3454457	Clamp Meter AC/DC
CHB35-D	3454469	Clamp Meter AC/DC
CT235A	3026809	Optional Current Transducer
CT237B	3511514	Optional Current Transducer
LH41A	3030898	Leakage Clamp Meter ACDC
UAT-620-EUR	4994565	Underground Utility Locator Kit w/Clamp

### Appliance, Installation, Energy Testers

93530-D	3454416	Megohmmeter
DGC-1000A	2731217	Earth Resistance Clamp Meter
GT-400-D	4380998	Appliance Tester
GT-650-CH	5017935	Appliance tester
GT-650-D	4866881	Appliance tester
GT-900-CH	4866908	Appliance tester
GT-900-D	4866896	Appliance tester
KMP7010	3730256	Earth Resistance Tester
KMP7020	3730295	RCD Tester with fast trip
KMP7021	3730301	RCD Tester with auto ramp
KMP7030	3842833	Earth Loop Impedance Tester
KMP7036	3730274	Insulation Tester
MT204-S	3454632	Machinery tester
PROINSTALL-100-EUR	4374504	Telaris Multifunction Installation Tester
PROINSTALL-200-EUR	4374519	Telaris Multifunction Installation Tester Type B/RCD & Earth Test
PROINSTALL-75-UK	4826466	Multifunction Installation Tester (UK, Ireland only)

### Accessories for installation and Appliance Testers

1240	3313412	Three-phase adapter 16A
1241	3313420	Three-phase adapter 32A
1312	2390062	Software ES Control Professional 0100
1314	2390081	Software es control professional 0701-0702/0113
1316	2390735	Software es control professional Complete
1311D	2390055	Current Clamp Adapter CHB 1 (AC)
1325D	3223132	Barcode-Scanner
1343D	3313514	VLP5 Drehstrom-Verlängerungsprüfadapter
ADPTR-B15-EUR	4854873	Light Check Adapter
ADPTR-B15-EUR 5PK	5017104	Light-Check Adapter B15, 5 PACK
ADPTR-B22-EUR	4854858	Light Check Adapter
ADPTR-B22-EUR 5PK	5017119	Light-Check Adapter B22, 5 PACK
ADPTR-E14-EUR	4854864	Light Check Adapter
ADPTR-E14-EUR 5PK	5017128	Light-Check Adapter E14, 5 PACK
ADPTR-E27-EUR	4854847	Light Check Adapter
ADPTR-E27-EUR 5PK	5017137	Light-Check Adapter E27, 5 PACK
ADPTR-GU10-EUR	4854886	Light Check Adapter
ADPTR-GU10-EUR 5PK	5017143	Light-Check Adapter GU10, 5 PACK
ADPTR-KIT1-EUR	4854835	Light-Check Adapter Kit EUR w/Carrying case
ADPTR-PE-EUR	4854900	Socket Check Adapter Schuko PE
ADPTR-SCT-EUR	4854899	Socket Check Adapter Schuko
BC-1250G	4377939	Barcode Scanner for MT-204-S,GT650, GT900
DAA-16	2743806	16A 3-Phase CEE Plug W/Banana Jacks
DAA-32	2743850	3-Phase CEE Plug W/Banana Jacks
PA-1	4362289	Adapter for 3-pole plug
PAT-BRUSH	4151667	Brush probe
PROINSTALL-CC	4466927	Soft case, carrying strap
PROINSTALL-TL-D	4466841	LC35 AMP-MF1Mains test cord, Schuko
PROINSTALL-TL-KIT	4466911	Remote test probe, installation tester lead set w/probe tips
TL-EARTH	4388671	Earth test accessory kit
TL-USB	4372676	USB Download Cable for ProInstall Series



Model	Item number	Description
<b>Phase Sequence Meter</b>		
PRM-5-EUR	4375961	Phase Sequence Tester with fixed tead leads
PRM-6-EUR	4633222	Phase Rotation and Motor Testing, LCD display, test leads

<b>Environmental</b>		
93517D	3313290	Sound Level Meter
93560D	3222543	Digital Luxmeter with data storage
CM100	3311826	Carbon Monoxide Meter
LM-100	3052348	Light Meter Manual Ranging
LM-120	3052353	Light Meter Auto Ranging
MANO2-A	3477279	Manometer for Differential Pressure
SM-10	3052366	Sound Meter
SM-20A	3477333	Sound Meter
SM-CAL1	3052382	Sound level calibrator
TACH-10	3730008	Contact/Non-Contact Tachometer
TACH20	3311961	Tachometer
TMA10A	2817785	Anemometer with Flexible Precision Vane
TMA-21HW	3730239	Hot Wire Anemometer
TMA40-A	3477287	Anemometer with temperature and RH function
TMA5	3503169	Mini-vane Anemometer
TMULD-300	2731543	Ultrasonic Leak Detector Kit
TX900	3390352	Microwave leakage detector
ULD-300	2734431	Ultrasonic Leak Detector
UT-300	2734446	Ultrasonic Transmitter

<b>Temperature/Humidity</b>		
1032D	2145689	Thermal Conductivity Pase 30 g
5790D	3313229	Temperature Probe Type 111 Flexible Wire Probe
5793D	3313234	Temperature Probe Typ 106 Needle Probe
5794D	2147186	Unitest 104 Liquid Probe
5795D	2147199	Unitest 101 Surface Probe
5797D	3313241	Temperature Probe Typ 110 Fast Response Probe
IR-450-EUR	4308539	Mini IR-Thermometer with flashlight/laser pointer
IR608A	3015690	Infrared Thermometer Laser Pointer
IR-710-EUR	4308480	Infrared Thermometer (10:1)
IR-720-EUR	4308500	Infrared Thermometer (20:1)
IR-730-EUR	4308517	Infrared Thermometer (30:1)
IR-750-EUR	4308521	Infrared Thermometer (50:1)
IRC-110-EUR	4909794	Infrared Camera
IRC-120-EUR	4989024	Infrared Camera
MT-10	3503178	Moisture Meter
TH-1	3311871	Temperature Meter (Probe Style)
TH-3	3027060	Relative Humidity and Temp Meter
THWD-3	3033042	Relative Humidity and Temp Meter
TMD-50	3730150	Thermometer TMD-50, Typ K
TMD-53	3730085	Thermometer TMD-53, Type K/J
TMD-56	3730138	Thermometer TMD-56, Typ K/J/T/E Datalogger, USB
TPK-59	2733660	Thermocouple, Dual Banana
TPK-60	3503184	Optional external temperature probe
TPK-62	4160703	TPK-62 Temperature Adapter and 2 thermocouples,-40 to 1000 °C
TPP1-C1	2826634	Pocket Thermometer Probe; Immersion
TPP2-C1	2826652	Pocket Thermometer Probe; Surface
TR200-A	3477302	Temperature/RH Data Logger with Digital Display 133.00
TR300	3311844	Temperature and Relative Humidity Data Logger

<b>Accessories - Test leads and Probes</b>		
307111	2146495	Test Leads SML 4W Red 1000 mm
307112	3313550	Test Leads SML 4W Red 200 mm
307121	2146508	Test Leads SML 4W Black 1000 mm
307122	3313561	Test Leads SML 4W Red 2000 mm
370000	2146653	Electrician Set
370001	3313577	Electrician-Set
370003	2146666	Safety-Set IEC 61012
370004	2146675	PSK 2 - Set Red/Black
370008	2146694	PSS 2 - Set Red/Black
370010	2146701	SKP 41 - Set Red/Black
370012	2146712	KS 4 L - Set Red/Black
370014	2406445	Unitest Accessory Inst-Set Black/Blue/Green
370016	2406489	Unitest Accessory Machine Set Red/Black
370024	2146758	HCP 41 - Set Red/Black
390450	2406492	Mini Clamp 2 mm Red
390451	2406509	Mini Crocodile Clamp 2mm, Black
391511	2146861	Clamp-Type Test Probe Current Tracks 155 mm black
391512	2146877	Clamp-Type Test Probe Current Tracks 155 mm red
1306D	3313458	Professional Test Lead Kit Silicon
1307D	2146176	Test Lead Set 4 mm Silicon
1324D	2146183	Accessory Set Unidreh
DL243D	3026853	Test Lead Kit
DL248D	3026866	Test Lead Kit, Delux
EU-200	2745046	Test Lead Set for AT-2000 & AT-1000
MTS-LEADS	2733041	ISO Test Test Lead Kit (AMB-5KV-D)
MTL-45	2733119	Test Leads (AMB-45)
TL1500	2696277	Test Leads With Alligator Clips
TL-300	4588279	Test Leads, Crocodile Clips (3 colors), thermocouple, case
TL35B	3068232	Test Leads with Alligator Clips
TL36A	3034444	Test Leads with Alligator Clips
TL-7000-25M	4634011	Test Lead, 25 meter long
TL73C	3068244	Ground Lead with Alligator Clip (DM73C)
TL-GT07XX	3504418	Test lead
TL-MT204S	3504363	Test lead
TL-PRM-6	4692870	Test Leads for PRM-6-EUR
TP73C	3068259	Probe Tip DM73B

Model	Item number	Description
<b>Accessories</b>		
1152D	4157093	Adapter Wheel 0.1M for Tachometer
1153D	3222793	Test Probe with Cover for Tachometer
1154D	2145762	Reflective Strips for Tachometer
CABINET KEY	4827508	Universal key to switch cabinets and closures
HS-1	4594135	HS-1 Magnetic Hanger

<b>Carrying Cases</b>		
1150	2145755	Carrying case Nylon
1175	2145796	Carrying Case for Voltage tester VP-7XX and 2100-series
1193	2145812	Professional Carrying Case
CC-ACDC	2732643	Carrying Case
SV-U	2733511	Carrying Case
VC221B	3068271	Vinyl Carrying Case
VC30A	3068280	Carrying Case

<b>Software</b>		
38SW-A	2727813	RS232 Software/Cable
DL-SW-KIT	4597359	Download software + cable for installation tester ProInstall
TM-SWA	3027085	RS232 Software and Cable for TMD90A and TMA10A
USB-KIT2	3804929	Download Module for Clamps

<b>Fuses</b>		
FP100	1990707	Fuse Pack (2x 10 A/1000 V)
FP125	1561550	Fuse Pack (4x 0.1 A/250 V)
FP160	1990718	Fuse Pack (2x 10 A/600 V)
FP200	2095180	Fuse Pack (2x 2 A/1000 V)
FP300	1990688	Fuse Pack (4x 0.315 A/1000 V)
FP375	1561610	Fuse Pack (4x 0.25 A/500 V)
FP400	1561631	Fuse Pack (4x 10 A/600 V)
FP410	3368658	Fuse 11 A/1000V
FP425	1561646	Fuse Pack (2x 20 A/600 V)
FP500	1990695	Fuse Pack (4x 0.5 A/1000 V)
FP520	3157013	Fuse Pack (2x 0.5 A/500 V)
FP600	1565777	Fuse Pack (2x 15 A/600 V)
FP700	2637713	Fuse Pack (2x 2 A/1500 V) for HD160C
FP900	2278800	Fuse Pack (2x 200 mA/600 V)



# Complete Product Catalog

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