

2017 | 2018



Product Catalog

Electrical

Test Equipment

English





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V1X Mini
First Voltage
Continuity Tester



Megohmmeter
First Multifunction Installation tester



NG 309



Unitest 380



Unitest V1X



0100-Multitester
(first multifunction
installation tester)

1975

1980

1985

1990

1995



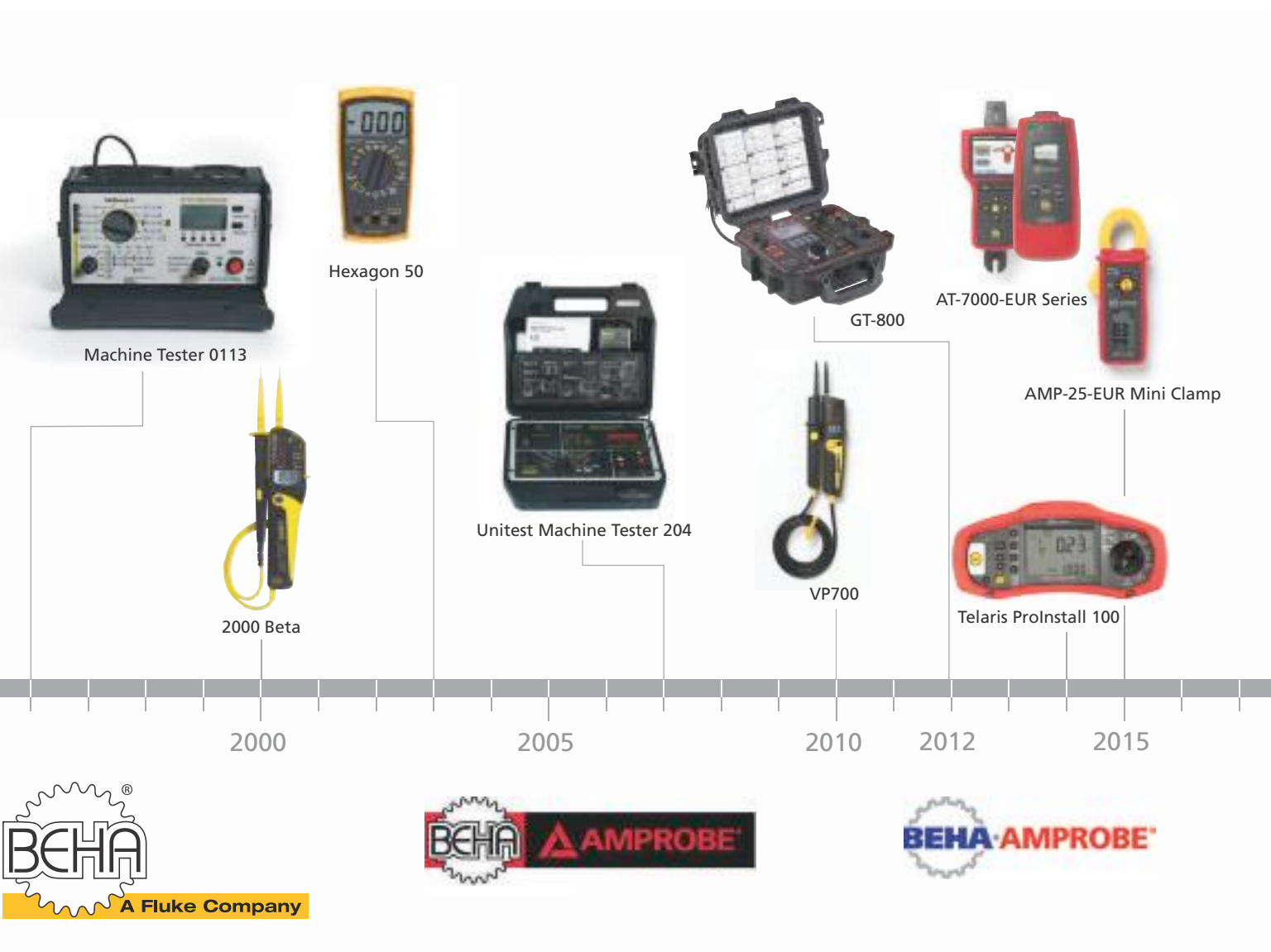
More than 40 years of Beha-Amprobe: milestones of the brand

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.

Our new products and recommendations

BAT-250-EUR Battery analyzer

More information can be found on page 13

BAT-250-EUR

Article no. 4620297



2100-Gamma

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

CAT III 1000 / CAT IV 600,
6 - 1000 V AC, 6 - 1200 V DC

More information can be found on page 11

2100-GAMMA

Article no. 4709243



AMP-25-EUR AC/DC TRMS mini clamp

More information can be found on page 38

AMP-25-EUR

Article no. 4588268



AT-7000-EUR series Multi-function cable locator Wire tracing reinvented

More information can be found on page 20

AT-7020-EUR

Article no. 4542794

AT-7030-EUR (illustrated here)

Article no. 4542782



AMP-200-EUR series Clamp meters True-RMS clamp meters

An alternative to our previous products:

ACD-14 TRMS-PLUS,

ACD-10 TRMS-PLUS

ACDC-100 TRMS

ACDC-400

More information can be found on page 38

AMP-210-EUR

Article no. 4560581

AMP-220-EUR (illustrated here)

Article no. 4560590



AMP-300-EUR series Clamp meters TRMS clamp meters for motor maintenance

An alternative to our previous products:

ACD-14 TRMS-PLUS

ACD-10 TRMS-PLUS

ACDC-100 TRMS

ACDC-400

More information can be found on page 39

AMP-310-EUR

Article no. 4560603

AMP-320-EUR

Article no. 4560615

AMP-330-EUR

(illustrated here)

Article no. 4560626



ACD-14-PRO-EUR

Current clamp with dual display (AC)

An alternative to our previous products:

ACD-14 Plus
ACD-14 TRMS-PLUS

More information can be found on page 40

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



AM-500-EUR series

Digital multimeter

An alternative to our previous products:

5XP-A
30XR-A **33XR-A**
34XR-A **35XP-A**
37XR-A **38XR-A**

More information can be found on page 27

AM-550-EUR



AM-500-EUR
Article no. **4102332**
AM-510-EUR
Article no. **4102344**

AM-520-EUR
Article no. **4131281**
AM-530-EUR
Article no. **4131296**

AM-540-EUR
Article no. **4131308**
AM-550-EUR
Article no. **4131313**

PRM-5-EUR

Phase sequence indicator

An alternative to our previous products:

DR 100

More information can be found on page 14

PRM-5-EUR
Article no. **4375961**



PRM-6-EUR

Motor and Phase Rotation Indicators

An alternative to our previous products:

DR 705

More information can be found on page 14

PRM-6-EUR
Article no. **4633222**



Light adapters

4854835 ADPTR-KIT1-EUR Light Check Adapter Kit EUR w/carrying case
4854847 ADPTR-E27-EUR Light Check Adapter E27
4854858 ADPTR-B22-EUR Light Check Adapter B22
4854864 ADPTR-E14-EUR Light Check Adapter E14
4854873 ADPTR-B15-EUR Light Check Adapter B15
4854886 ADPTR-GU10-EUR Light Check Adapter GU10



ADPTR-GU10-EUR



ADPTR-PE-EUR

Socket testers

4854820 ADPTR-SCT-UK Socket Check Adapter UK
4854899 ADPTR-SCT-EUR Socket Check Adapter Schuko
4854900 ADPTR-PE-EUR Socket Check Adapter Schuko PE

ProInstall-75-UK

Multifunction Installation Tester (for UK)

ProInstall-75-UK
Article no. **4826466**



Electric 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.

Products

Voltage detectors / testers	10
Lamp testers	11
Continuity testers	13
Phase rotation indicators	14

Symbols used in this chapter

	Continuity test (optical and/or acoustic)		DC and AC voltage
	Trip test or internal load for triggering a residual current circuit breaker (RCD/FI)		Phase sequence indication
	Display with LED		IP protection category (e.g. IP65)
	Display with LCD		Water-resistant (spray, jets of water)
	Lighting of measurement points		Dust-resistant
	Resistance measurement (e.g. 0...2 kΩ)		Measurement memory for barely visible or readable measurement results
	Back light		Non-contact detection of AC voltage
	No battery needed		Detecting magnetic fields
	Alternating current		Acoustic recognition of (alternating) current
	Disclosure of measurement category in accordance with EN 61010, DIN VDE 0411		

						
Model	2100-ALPHA	2100-BETA	2100-GAMMA	VOLTfix plus	VOLTfix Drill	MAGNO-VOLTfix
Model.	2100-ALPHA	2100-BETA	2100-GAMMA	2052-D	2054-D	2050-D
Display	LED bar chart display	LED bar chart display LCD 3-1/2-digit	LED bar chart display LCD 3-1/2-digit	1 LED	2 LEDs	2 LEDs
Voltage test						
Range/resolution	12, 24, 50, 120, 230, 400, 690 V	12, 24, 50, 120, 230, 400, 690 V 12...690 V / 1 V	12, 24, 50, 120, 230, 400, >690 V, 6...1000 V AC, 6...1200 V DC / 1 V	50...600 V AC	50...600 V AC	50...600 V AC
Tolerance AC/DC	in accordance with DIN VDE 0682-401	in accordance with DIN VDE 0682-401	in accordance with DIN VDE 0682-401			
Test current (at voltage)	< 3.5 mA (690 V)	< 3.5 mA (690 V)	<3.5 mA AC at 1000 V AC/ <4.5 mA DC at 1200 V DC			
Basic load (at voltage)	Approximately 2.4 W at 690 V	Approximately 2.4 W at 690 V	Approximately 3.5 W at 1000 V AC/approx. 5.4 W at 1200 V DC			
Automatic turn-on threshold	Approximately 12 V	Approximately 12 V	LED: >12 V, LCD: >6V	Approximately 50 V	Approximately 50 V	Approximately 50 V
Measurement Category	CAT IV / 600 V CAT III / 690 V	CAT IV / 600 V CAT III / 690 V	CAT IV / 600V CAT III / 1000 V	CAT III / 600V	CAT III / 600V	CAT III / 600V
Frequency						
Voltage test	DC, 16.7... 400 Hz	DC, 16.7... 400 Hz	DC, 16.7...400 Hz	50...500 Hz	50...500 Hz	50...500 Hz
Polarity	overall area	overall area	overall area			
Phase sequence detection						
	340...400 VAC / 47...63 Hz	340...400 VAC / 47...63 Hz	170...1000 VAC / 40...70 Hz			
Continuity test						
Area/Signaling	0...500 kΩ optically/acoustically	0...500 kΩ optically/acoustically	0...500 kΩ optically/acoustically Low resistance indication: <10-50 Ω		0...3 MΩ	
Test Current	<5μA	<5μA	<5μA		Approximately 0.3μA	
Resistance Measurement						
			0...1999 Ω			
Overall						
Additional load	Approximately 240 W at 690 V, ≤ 200 mA	Approximately 240 W at 690 V, ≤ 200 mA	Approximately 300 W at 1000 VAC / Approximately 420 W at 1200 VDC			
On-time recovery time	max. 30 s/240 s	max. 30 s/240 s	max. 30 s/240 s	constant	constant	constant
Power supply	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03
Voltage AC/DC testing	●	●	●	AC only	AC only	AC only
Automatic range selection	●	●	●			
Single-pole phase testing	●	●	●		●	
Non-contact voltage indicator/ electrical field (NCV/EF)			●	●	●	●
Automatic internal nominal load	●	●	●			
Accessory Case	CC-VP-7xx	CC-VP-7xx	CC-VP-7xx			
Features	Continuity measurement, single-pole phase test, lighting of measurement points	Continuity measurement, single-pole phase test, lighting of measurement points, digital LCD	Resistance measurement range, low resistance continuity test, single-pole phase test, lighting of measurement points, digital LCD, NVC			



2100-ALPHA

Voltage and continuity tester with phase sequence indication

Functions

- Voltage test
- Optical and acoustic continuity and voltage test
- Patented phase rotation indicator, no 3rd hand required
- Single-pole phase test
- Polarity

Product information

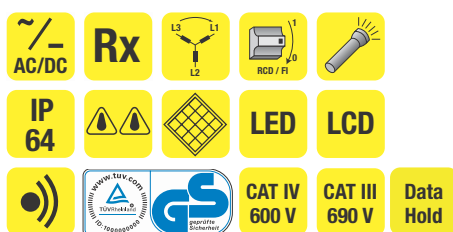
- Switchable load (load tester) of 240 W via two push buttons, triggering a RCD/FI up to 30 mA
- IP 64, water and dust-resistant
- Integrated probe-tip protection for reducing the danger of injuries
- Fully functional voltage indicator even without batteries or if batteries are empty

Product highlights

- 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
- Lighting of measurement points via white LED
- Extremely robust construction with doubly insulated wires

Technical specifications

Display	LED bar graph display ±12, ±24, 50, 120, 230, 400, 690 V Graphical LCD, 12...690 V AC/DC 12...690 V AC/DC
Voltage range	
Direct current / alternating current	automatic recognition
Frequency range	DC 16 2/3 Hz... 400 Hz
Internal nominal load	approx. 2.4 W at 690 V
Test current	≤3.5 mA (without key activation)
Switchable load	approx. 240 W (at 690 V)
Test current with load	≤ 350 mA
Rotating field definition	340...440 V AC (phase conductor)
Frequency range	47...63 Hz
Single-pole phase test	
Voltage range	180 ... 690 V AC
Frequency range	40...70 Hz
Continuity test	
Switching threshold	approx. 500 kΩ
Test current	<5 μA
Safety cert	DIN VDE 0682-401, EN 61243-3
Measurement	CAT IV / 600 V, CAT III / 690 V
Pollution Degree	2
Protection Category	IP 64, water and dust-resistant
Power supply	2 x battery 1.5 V Micro, IEC LR03
Current consumption	max. 60 mA
Dimensions	approx. 280 x 78 x 35 mm
Weight	approx. 320 g



2100-BETA

Voltage and continuity tester with phase sequence indication

As the 2100-ALPHA, also with:

- Digital LCD 12...690 V AC/DC



Accessories:

Carrying case
Model CC-VP-7xx



Spare part: 2100-ACCS
4 mm probe extenders and probe tip covers
Model 2100-ACCS

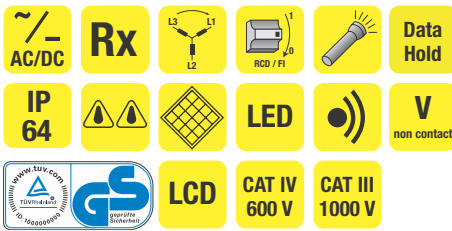
Scope of delivery 2100 ALPHA/BETA:

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

Ordering Information:

Description	Model	Article no.
2100-ALPHA	2100-ALPHA*	4312495
2100-BETA	2100-BETA*	4312508
Carrying case	CC-VP-7xx	3889931
2100-ACCS (Spare part)	2100-ACCS	4736214

* Packing unit of 10 items (also available individually)



Included:

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



Accessories:

Carrying case
Model CC-VP-7xx



Spare part: 2100-ACCS
4 mm probe extenders and probe
tip covers
Model 2100-ACCS

2100-GAMMA

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

Functions

- Voltage test up to 1000 V alternating current and 1200 V direct current
- Digital LCD 12...1000 V AC/ 1200 V DC
- Measures resistance up to 1999 Ohm
- Optical and acoustic continuity and voltage test
- Low resistance continuity measurement <10...50 Ohm
- Patented phase rotation indicator, no 3rd hand required
- Single-pole phase test
- Polarity
- Non-contact voltage (NCV/EF) detection

Product information

- Switchable load (load tester) of 300 W at 1000 VAC / 420 W at 1200 VDC via two push buttons, triggering a RCD/FI up to 30 mA
- IP 64, water and dust-resistant
- Integrated probe-tip protection for reducing the danger of injuries

Product highlights

- 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
- Lighting of measurement points via white LED
- Extremely robust construction with doubly insulated wires

Ordering Information:

Description	Model	Article no.
2100-GAMMA	2100-GAMMA*	4709243
Carrying case	CC-VP-7xx	3889931
2100-ACCS (Spare part)	2100-ACCS	4736214

* Packing unit of 10 items (also available individually)

Technical specifications

Display	LED bar graph display ±12, 24, 50, 120, 230, 400, ≥690V LCD, 6...1000 V AC/ 1200 V DC
Voltage range	6...1000 V AC/ 1200 V DC
Direct/ Alternating current	automatic recognition
Frequency range	DC, 16 2/3 Hz...400 Hz
Internal nominal load	approx. 3.5 W at 1000 VAC / 5.4 at 1200 VDC
Test current	≤3.5 mA at 1000 VAC / ≤4.5 mA at 1200 VDC (without key activation)
Switchable load	approx. 300 W at 1000 V AC/ Approximately 420 W at 1200 VDC
Test current with load	≤300 mA AC at 1000 V AC/ ≤350 mA DC at 1200 V DC
Rotating field definition	170...1000 V AC (phase conductor)
Frequency range	40...70 Hz
Single-pole phase test	
Voltage range	100 ... 1000 V AC
Frequency range	40...70 Hz
Continuity measurement of switching threshold	approx. 500 kΩ
Test current	<5 μA
Resistance measurement range/resolution	0...1999 Ω/1 Ω
Test current	<30 μA
Low resistance indication acoustic indication	<10...50 Ω
Overvoltage protection	1000 V AC/1200 V DC
Non-contact voltage indicator (NCV/EF)	
Voltage range	100...1000 V AC
Frequency range	50...60 Hz
Display	Three-stage display via LCD segments
Safety cert	DIN VDE 0682-401, EN 61243-3
Measurement	CAT IV / 600 V, CAT III / 1000V
Pollution Degree	2
Protection Category	IP 64, water and dust-resistant
Power supply	2 x battery 1.5 V Micro, IEC LR03
Current consumption	max. 60 mA
Dimensions	approx. 280 x 78 x 35 mm
Weight	approx. 320 g

LT-10-EUR

Lamp Tester

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

Device highlight

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



Included:

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

Technical specifications

Display	1 LED
Test voltage	approx. 3 kV / 280 kHz
(with new battery)	
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	1 x battery 9V, 6LR61
Dimensions	170 x 40 x 24 mm
Weight	approx. 100g (incl. batteries)

Ordering Information:

Description	Model	Article no.
LT-10-EUR	LT-10-EUR	4386345
LT-10-ANT (Spare part)	LT-10-ANT	4357839





Included:

- 1 x VOLTfix plus
- 2 x battery 1.5 V, IEC LR03
- 1 x user manual



Included:

- 1 x VOLTfix drill
- 2 x battery 1.5 V, IEC LR03
- 1 x user manual



Included:

- 1 x MAGNO-VOLTfix
- 2 x battery 1.5 V, IEC LR03
- 1 x user manual

VOLTfix plus

Non-contact volt probe

Functions

- Non-contact, optical and acoustic detection of AC voltages
- Fast, accurate detection of cable breaks in open-ended cables, e.g. cable drums or extension cables

Product information

- Reliable, automatic self-test of activated device with optical readiness indicator
- Compact, handy design that fits in any pocket
- Wide range of applications in trade and industry

Device highlight

- On/off switch

Technical specifications

Display	1 LED
Voltage range	50...600 V AC
Frequency range	50...500 Hz
On-time	constant
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411, EN 61010
Power supply	2 x battery 1.5 V, IEC LR03
Dimensions	140 x 24 x 20 mm
Weight	approx. 50 g

Ordering Information:

Description	Model	Article no.
VOLTfix plus	2052-D*	3454347

VOLTfix Drill

Non-contact voltage probe with screwdriver insert

Functions

- Non-contact, optical and acoustic detection of AC voltages
- Direct voltage test via screwdriver blade
- Continuity test
- Fast, accurate detection of cable breaks in open-ended cables, e.g. cable drums, extension cables

Product information

- Reliable, automatic self-test of activated device with optical readiness indicator
- Compact, handy design that fits in any pocket

Device highlight

- Integrated, ultra-bright flashlight
- Fixed, high-quality screwdriver insert (chrome, vanadium, molybdenum blade)

Technical specifications

Display	2 LEDs
Voltage range/	50...600 V AC
Frequency	
Voltage	50...500 Hz
Continuity test	0... 3 MΩ
Test current	approx. 0.3 μA
On-time	constant
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411, EN 61010
Power supply	2 x battery 1.5 V, IEC LR03
Dimensions	160 x 25 x 21 mm
Weight	approx. 55 g

Ordering Information:

Description	Model	Article no.
VOLTfix drill	2054-D*	3454358

MAGNO-VOLTfix

Non-contact voltage probe with magnetic field detection

Functions

- Non-contact, optical and acoustic detection of AC voltages
- Fast, accurate detection of cable breaks in open-ended cables, e.g. cable drums, extension cables
- Optical signal for detection of magnetic fields, e.g. on magnetic coils or permanent magnets

Product information

- Compact, handy design that fits in any pocket
- Wide range of applications in trade and industry

Technical specifications

Display	2 LEDs
Voltage range/	50...600 V AC
Frequency	
Voltage	50...500 Hz
On-time	constant
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411, EN 61010
Power supply	2 x battery 1.5 V, IEC LR03
Dimensions	140 x 24 x 20 mm
Weight	approx. 50 g

Ordering Information:

Description	Model	Article no.
MAGNO-VOLTfix	2050-D*	3454335

* Packing unit of 10 items (also available individually)



Included:

- 1 x TESTFIX without batteries
- 1 x spare lamp
- 1 x carrying case
- 2 x uninsulated crocodile clips
- 1 x user manual

TESTFIX

Continuity and circuit tester with flashlight function

Functions

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

Product information

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

Product highlights

- Flashlight function with continuous light

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

Ordering Information:

Description	Model	Article no.
TESTFIX	9023*	2147430

* Packing unit of 10 items (also available individually)



Included:

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

Ohmtest

Continuity tester

Functions

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

Product information

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

Device highlight

- Voltage-proof up to 600 V

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	1 x battery 9 V, IEC 6LR61
Dimensions	110 x 58 x 24 mm
Weight	approx. 150 g

Ordering Information:

Description	Model	Article no.
Ohmtest	9072-D*	3454373
Carrying case	1150	2145755

* Packing unit of 10 items (also available individually)



Accessories:

- Carrying case
Model 1150



Included:

- 1 x BAT-250-EUR
- 1 x user manual

BAT-250-EUR

Battery tester

Functions

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

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

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

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

Ordering Information:

Description	Model	Article no.
BAT-250-EUR	BAT-250-EUR	4620297



Included:

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

Accessories

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

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, clockwise, 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



Accessories:

Unidreh accessory set
Model 1324



Carrying case
Model 1150



Crocodile clips for conductor rails
Model 391511 (red)
Model 391512 (black)

Ordering Information:

Description	Model	Article no.
PRM-5-EUR	PRM-5-EUR	4375961
Unidreh accessory set	1324	2146183
Carrying case	1150	2145755
Crocodile clip for conductor rail		
Red	391511	2146861
Black	391512	2146877



Included:

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

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



Accessories:

Unidreh accessory set
Model 1324



Carrying case
Model 1150



Crocodile clips for conductor rails
Model 391511 (red)
Model 391512 (black)



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

Ordering Information:

Description	Model	Article no.
PRM-6-EUR	PRM-6-EUR	4633222
Unidreh accessory set	1324	2146183
Carrying case	1150	2145755
Crocodile clip for conductor rail		
Red	391511	2146861
Black	391512	2146877
TL-PRM-6 test lead set for PRM-6-EUR		
(Spare part)	TL-PRM-6	4692870

Measuring solar radiation



Products

SOLAR-100

15

Symbols used in this chapter



Fast measurement



Measurement Memory



Min/MAX memory



SOLAR-100

Solar Power Meter

Functions

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

Product information

- Display switchable between W/m^2 or $\text{BTU} / (\text{ft}^2 \times \text{h})$
- Manual range selection
- Integrated measurement memory (data hold)
- MAX/MIN function
- Manual zero adjustment

Technical specifications

Display	LCD, 3 1/2 digit, 1999 digits
Measurement ranges	0...200, 2000 W/m^2 , 0...634 $\text{BTU} / (\text{ft}^2 \times \text{h})$
Resolution	0.1, 1 W/m^2 ; 0.1, 1 BTU
Accuracy	$\pm 10 \text{W/m}^2$ ($\pm 3 \text{ BTU}$) or $\pm 5 \%$
Power supply	1 x 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:

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

Ordering Information:

Description	Model	Article no.
SOLAR-100	SOLAR-100	3474979

Locating and measuring wires/cables



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

Interesting facts

Cable locators	18
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Cable locators	20
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AT-7000-EUR Features and Functions



Trace energised or de-energised wires by removing the junction box cover.

Trace Wires Inside Conduit

Detect and trace energised and de-energised wires that are surrounded by metal conduits by removing the cover off the junction box and using the sensor tip of the AT-7000-RE receiver to identify the exact wire that transmits the signal generated by the AT-7000-TE transmitter. Wires in non-metal conduits can be traced directly without opening the junction box and using the AT-7000-RE Receiver's Smart Sensor™.



Induce signal with the current clamp when there is no bare conductor.

Find energised wires without direct connection to wires, signal feed via current clamp

The SC-7000-EUR current clamp accessory can be used with the AT-7000-TE transmitter to induce a signal into energised and de-energised wires when direct access to the wires is neither possible, nor desired. Simply clamp around the desired wire to induce the signal, then begin tracing.



Use the Tip Sensor to trace wires in hard to reach areas.

Use the Tip Sensor to trace wires in hard to reach areas

When used with the AT-7000-TE transmitter, the tip sensor pinpoints the location of energised and de-energised wires in tight, hard to reach spaces. It easily and accurately traces the targeted energised and de-energised wires in junction boxes, corners, walls, floors and ceilings to a depth of up to approx. 6 meters (20 feet).



Non-contact voltage (NCV) detection.

Non-contact voltage (NCV) detection

The NCV feature extends functionality of the AT-7000-RE receiver by detecting energised wires from 90 to 600 V and 40 to 400 Hz without the use of the AT-7000-TE transmitter. Its adjustable sensitivity fits a range of applications, from detecting presence of voltage (higher sensitivity) to precisely pinpointing a hot wire in a bundle (lower sensitivity).

Cable locator AT-7000-EUR



Transmitter



Receiver

Theoretical operating principle

The cable locator consists of a transmitter and the receiver.

The signal generated by the transmitter consists of a modulated current, which generates an electromagnetic field around a conductor.

This electromagnetic field, that is set up around the conductor, induces a

current in the nozzles on the receiver. The induced current is amplified by the receiver, decoded, converted into the original signal, and then appears in the display.

The transmitter must always be connected for such an application such that a closed circuit is the result.



Types of application

1. Single-pole application: connection of the transmitter to only one conductor

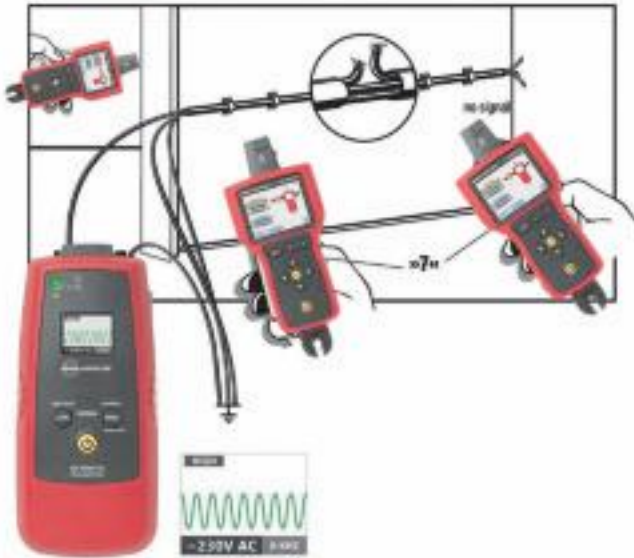
The receiver is powered by the built-in battery (rechargeable) in this operating mode. As the signal generated by the transmitter is of high-frequency origin, then only a single conductor can be searched or traced.

The second conductor replaces earth. In this arrangement a high-frequency current flows through the conductor via the air and back to earth in a similar manner as with a radio transmitter and radio receiver.

2. Double-pole application: connection of transmitter to the grid

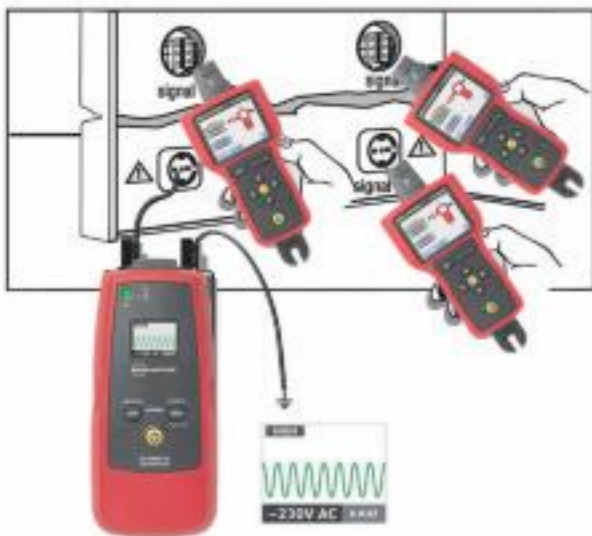
The transmitter is powered by the grid. In such a case the modulation current flows from the transmitter, for example in the phase, to the transformer and then back to the transmitter via the neutral conductor.

A further opportunity is available for de-energised systems, where the transmitter is connected to the start of two cables and then the ends of the cables are short-circuited. This also results in a closed circuit. The transmitter is then powered by the built-in battery. The cable locator can only locate cables that are correctly connected in accordance with physical principles.



Locating interruptions in cables (single-pole application)

The signal is transmitted to the wire that is suspected to be interrupted. The other wires are connected with the ground jack on the transmitter, and with an earth. The signal is traced with the receiver. The signal breaks off at the point where the interruption takes place.



In closed circuits (double-pole application)

Closed circuits are suitable, for example, for locating sockets, switches, fuses, etc. in domestic installations that are energised. This application is possible either when de-energised, or energised (from 90 - 270 V). The tracing depth is approximately 0. . . 10 cm.

Tracing fuses





AT-7000-EUR series

Multi-function wire tracer

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.

Technical specifications

Display	TFT-LCD color screen, 8.9 cm (3.5"), 70 x 53 mm with backlit display
Resolution	320 x 240 pixels
Measurement frequencies	energised: 6.25 kHz De-Energised: 32.768 kHz
Tracing depth	
Smart sensor	approx. 5 cm ... approx. 1.5 m
Tip sensor, energised	approx. 5 cm ... approx. 6.7 m
Tip sensor, de-energised	approx. 5 cm ... approx. 4.3 m
Non-Contact	
Voltage test	approx. 5 cm ... approx. 1.2 m
Non-contact voltage detection (NCV)	approx. 90 ... 600 V AC
Safety cert	DIN VDE 0411/EN 61010-1
Measurement category	CAT IV / 600 V
Power supply	4x batteries 1.5 V, IEC LR 06 (AA), Mignon
Energy intake	2 W
Dimensions	280 x 113 x 65 mm
Weight	approx. 540 g
Transmitter AT-7000-TE	
Display	TFT-LCD, 4.5 cm (1.77"), 28 x 35 mm with backlit display
Resolution	128 x 160 pixels
Measurement frequencies	energised 6.25 kHz de-energised 32.768 kHz
Voltage measurement	9 ... 300 V AC/DC 0 ... 400 Hz
Safety cert	DIN VDE 0411/EN 61010-1
Measurement category	CAT IV / 300 V
Power supply	6x batteries 1.5 V, IEC LR 06 (AA), Mignon
Energy consumption	2 W
Dimensions	216 x 100 x 56 mm
Weight	approx. 590 g



AT-7020-EUR

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



AT-7030-EUR

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

Accessories:

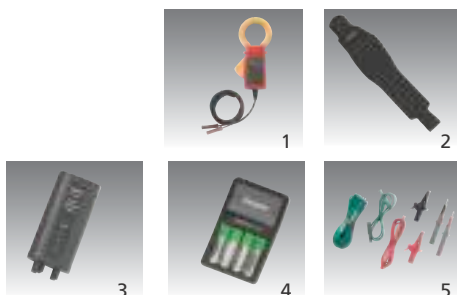
1. Current clamp
SC-7000-EUR
2. Hanging strap for transmitter
HS-1
3. Power pack for transmitter
BR-7000-T
4. Battery charger
BR-7000-C
5. Test leads 25 m
TL-7000-25M

Ordering Information:

Description	Model	Article no.
AT-7020-EUR	AT-7020-EUR	4542794
AT-7030-EUR	AT-7030-EUR	4542782
Receiver	AT-7000-RE	4542802
Transmitter	AT-7000-TE	4542816

Recommended Accessories

Current clamp	SC-7000-EUR	4542825
Hanging strap for transmitter	HS-1	4594135
Power pack for transmitter	BR-7000-T	4467296
Battery charger	BR-7000-C	4544583
Test lead 25 m	TL-7000-25M	4634011





Cable Locator Set for live and de-energised circuits

Functions

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

Product information

- Set consisting of transmitter and receiver in a robust, shock-proof case
- Transmitter signal is indicated optically and acoustically
- 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
- Accurate locating by means of displaying a specified letter on the receiver

Included:

- 1 x cable locator receiver
- 1 x cable locator transmitter, code "F"
- 4 x test leads
- 3 x battery 9 V, IEC 6LR61
- 2 x crocodile clips
- 2 x probes
- 1 x carry case
- 1 x user manual



ECB50A 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

Included:

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

* This product is not available in Switzerland

* For UK: circuit breaker finder ECB50A-E available with UK plug

* For EUR (except UK): ECB50A-FGIS with Schuko plug

Technical specifications

Display	LED bar for intensity and 7-segment display on receiver for number or letter indicating the transmitter code
Tracing depth	0...40 cm
Withstand voltage	250 V
Measurement category	CAT II/250 V
Pollution degree	2
Safety cert.:	EN 61010-1/IEC 61010
Power supply	1 x battery 9 V, IEC 6LR61 (receiver) 2 x battery 9 V, IEC 6LR61 (transmitter)
Dimensions	380 x 305 x 90 mm (case)
Weight	approx. 1.8 kg

Ordering Information:

Description	Model	Article no.
Cable locator set in case	2032-D	3454320

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	1 x battery 9 V, IEC 6LR61 (receiver) network supply (transmitter)
Dimensions	180 x 120 x 45 mm (case)
Weight	approx. 250 g (set)

Ordering Information:

Description	Model	Article no.
ECB50A-E	ECB50A-E	3027097
ECB50A-FGIS	ECB50A-FGIS	3027106

AT-3500

Underground cable locator

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.





AT-3500

Underground Cable / Pipe Locator System

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:
 - 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

Technical specifications

Transmitter T-3500	
Transmission power	0.1 W/0.5 W (switchable)
Frequency	32.768 kHz
Power supply	6 x battery, IEC LR20 / D / Mono
Operating time	approx. 40 hours (for operation with interruptions and with alkali batteries at 20 °C)
Protection category	IP 56
Dimensions	260 x 255 x 140 mm
Weight	1.7 kg (2.65 lb)
Receiver R-3500	
Frequency ranges	Range 1: Radio 15 kHz to 23 kHz; Range 2: Power grid 50 / 60 Hz; Range 3: Transmitter 32.768 kHz
Sensitivity	Range 1: Radio > 20 µA; Area 2: Power grid > 7 mA; Range 3: Transmitter > 5 µA
Depth range	0.1 m ... 5 m
Resolution	0.1 m
Power supply	10 x battery 1.5 V, IEC LR6 / AA / Mignon
Operating time	approx. 40 hours (for operation with interruptions and with alkali batteries at 20 °C)
Protection category	IP 67 from the lower edge of the receiver to the lower edge of the battery compartment, and IP 56 for all parts for which this description is not relevant
Dimensions	approx. 99 x 660 x 252 mm
Weight	approx. 2.5 kg

Included:

- 1 x R-3500 receiver
- 1 x T-3500 transmitter
- 1 x user manual
- 2 x test leads
- 2 x crocodile clips
- 1 x earth spike
- 10 x battery 1.5 V, IEC LR6 / AA / Mignon
- 6 x battery 1.5 V, IEC LR20/D/Mono
- 1 x robust carry case

Accessories:



- MLS55-3,
Pipe transmitter for AT-3500
order no. MLS55-3



- SC-3500, Current clamp
for AT-3500
order no. SC-3500

Ordering Information:

Description	Model	Article no.
AT-3500	AT-3500	3435058
MLS55-3	MLS55-3	3435099
SC-3500	SC-3500	3435073



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 1 x 9 V, IEC 6F22
Dimensions	130 x 56 x 38 mm
Weight	approx. 600 g

Included:

- 1 x LAN-1
- 1 x remote coding plug
- 1 x battery 9 V, IEC 6F22
- 2 x adapter RJ45/BNC
- 1 x adapter RJ45/RJ45
- 2 x adapter BNC/BNC
- 1 x carrying case
- 1 x user manual

Ordering Information:

Description	Model	Article no.
LAN-1	LAN-1	3052401

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 money.

Products

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AM-500-EUR series	28
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Junior set and kits	32

	Battery test		Back light
	Temperature measurement		Diode test and Continuity beeper
	Frequency verification		Measurement Memory
	Capacitance measurement		Measurement Category
	PC interface		True PC measurement
	Digital bar graph display		Min/Max Hold

Model	AM-500-EUR	Hexagon 110	Hexagon 120	Hexagon 340	37 XR-A	38 XR-A
Display Digits	3½ digit, 1999 digits	3¾ digit, 4000 digits	3¾ digit, 4000 digits	¾ digit, 5000 digits	4 digit, 9999 digits	4 digit, 9999 digits
True-RMS measurement				AC	AC	AC+DC
Bar graph						
Ranges						
Voltage AC	1 mV... 600 V (1.0% + 3D)	0.1 mV... 1000 V (1.5% + 5D)	0.1 mV... 1000 V (1.5% + 5D)	0.01 mV... 1000 V (0.5% + 3D)	0.1 mV... 750 V (1.2% + 10D)	0.1 mV... 750 V (1.2% + 10D)
Basic Accuracy*						
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 (0.8% + 3D)	0.1 mV... 1000 V (0.3% + 4D)	0.1 mV... 1000 V (0.3% + 4D)	0.01 mV... 1000 V (0.08% + 2D)	0.1 mV... 1000 V (0.1% + 5D)	0.1 mV... 1000 V (0.25% + 5D)
Basic Accuracy*						
Current AC	0.1 µA...10 A (1.5% + 3D)	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 (1.5% + 10D)	0.01 µA... 10 A (1.5% + 20D)
Basic Accuracy*						
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 (1.2% + 3D)	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 (0.5% + 10D)	0.01 µA... 10 A (0.5% + 10D)
Basic Accuracy*						
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						
Frequency						
Temperature						
Range selection						
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	1 x 9 V	2 x 1.5 V	2 x 1.5 V	1 x 9 V	1 x 9 V	1 x 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 connec- tion 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

Model	HD 110C	HD 160C	AM-510-EUR	AM-520-EUR	AM-530-EUR	AM-540-EUR	AM-550-EUR
							
Display Digits	4 digit, 9999 digits	4 digit, 9999 digits	3% digit, 3999 digits	3% digit, 3999 digits	3% digit, 3999 digits	3% digit, 5999 digits	3% digit, 5999 digits
True-RMS measurement		AC			AC		AC
Bar graph			•	•		•	•
Ranges							
Voltage AC	0.1 mV... 1000 V (1.2 % + 10 D)	0.1 mV... 1000 V (1.2 % + 10 D)	0.1 mV...600V (1.0 % + 3 D)	400 mV...750V (1.0 % + 3 D)	400 mV...750V (1.0 % + 3 D)	1 mV...1000 V (1.0 % + 3 D)	1 mV...1000 V (1.0 % + 3 D)
Basic Accuracy*	45 Hz...2 kHz	45 Hz...2 kHz	45 Hz... 400 Hz	45 Hz...400 Hz	45 Hz...400 Hz	45 Hz... 400 Hz	45 Hz... 400 Hz
Frequency	0.1 mV... 1500 V	0.1 mV... 1500 V	1 mV...600V	0.1 mV...1000 V	0.1 mV...1000 V	0.1 mV...1000 V	0.1 mV...1000 V
Voltage DC	(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)
Basic Accuracy*	0.01 µA... 2 A	0.01 µA... 2 A	0.1 µA...10 A	0.1 µA...10 A	0.1 µA...10 A	0.1 µA...10 A	0.1 µA...10 A
Current AC	(0.8 % + 4 D)	(0.8 % + 4 D)	(1.2 % + 2 D)	(1.2 % + 3 D)	(1.2 % + 3 D)	(1.2 % + 5 D)	(1.2 % + 5 D)
Basic Accuracy*	45 Hz...1 kHz	45 Hz...1 kHz	45 Hz... 400 Hz	45 Hz...400 Hz	45 Hz...400 Hz	45 Hz...400 Hz	45 Hz...400 Hz
Frequency	0.01 µA...2 A	0.01 µA...2 A	0.1 µA...10A	0.1 µA...10 A	0.1 µA...10 A	0.1 µA...10 A	0.1 µA...10 A
Current DC	(1.5% + 10D)	(1.5% + 10D)	(1.0 % + 2 D)	(1.0 % + 2 D)	(1.0 % + 2 D)	(1.0 % + 2 D)	(1.0 % + 2 D)
Basic Accuracy*	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
Resistance	•	•	•	•	•	•	•
Diode and continuity test							
Capacitance		0.01 nF... 400.0 µF	10 pF...100.0 µF	10 pF...4000 µF	10 pF...4000 µF	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	-40...+1000 °C
Range selection							
Automatic	•	•	•	•	•	•	•
Manual	•	•	•	•	•	•	•
Data Hold	•	•	•	•	•	•	•
Min/max value memory		•	•	•	•	•	•
Peak Hold						•	•
Relative measurement	•	•					
Data logger/interface							
Auto Power Off	•	•	•	•	•	•	•
Battery	1 x 9 V	1 x 9 V	1 x 9 V	1 x 9 V	1 x 9 V	1 x 9 V	1 x 9 V
Measurement Category	CAT IV/1000V	CAT IV/1000V	CAT III/600 V	CAT III/600V, CAT I/1000 V	CAT III/600V, CAT I/1000 V	CAT IV/600 V, CAT III/1000 V	CAT IV/600 V, CAT III/1000 V
Features	Highest levels of safety CAT IV/1000V, Auto Power Off	Highest levels of safety CAT IV/1000V 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



Manual
Range

Data
Hold

Included:

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

LCR55A

LCR Meter

Functions

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

Product information

- Manual range selection
- Integrated measurement memory (data hold and MAX hold)
- Shock-proof and impact-resistant thanks to standard protective holster
- Auto Power Off

Product highlights

- Large, clear display



Accessories:

Soft Case
Model CC-ACDC

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 _{ceo}	
Test current:	approx. 1 mA
Test voltage:	3.0 V DC typical
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	183 x 79 x 38 mm
Weight	approx. 311 g (incl. battery)

Ordering Information:

Description	Model	Article no.
LCR55A	LCR55A	3026976
CC-ACDC	CC-ACDC	2732643



Manual
Range

CAT III
600 V



Included:

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

AM-500-EUR

Compact digital multimeter

Functions

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

Device information

- Automatic and manual range selection
- Integrated measurement memory (data hold)
- Shock-proof and impact-resistant thanks to standard protective holster
- μA measurement range
- Auto Power Off

Product highlights

- 1.5 V and 9 V battery test



Accessories:

Carrying case for devices with protective holster Model 1150

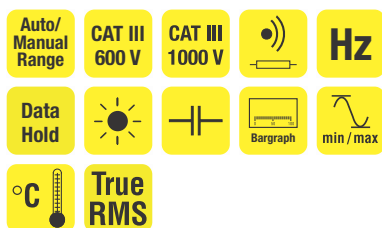
Safety set
Model 370003

Technical specifications

Display	LCD, 3½ digit, 1999 digits
Ranges	
AC voltage	1 mV...600 V
Basic accuracy	±(1.0% rdg. + 3 digits)
Frequency range	45...400 Hz
DC voltage	1 mV...600 V
Basic accuracy	±(0.8% rdg. + 3 digits)
Input resistance	10 MΩ
AC current	0.1 μA...10 A
Basic accuracy	±(1.5% rdg. + 3 digits)
Frequency range	45...400 Hz
DC current	0.1 μA...10 A
Basic accuracy	±(1.2% rdg. + 3 digits)
Resistance	1 Ω...20 MΩ
Basic accuracy	±(1.5% rdg. + 5 digits)
Pollution degree	2
Measurement category	CAT III/600V
Safety cert.:	DIN VDE 0411, EN 61010, IEC 61010
Power supply	2 x 1.5 V, LR3
Dimensions	150 x 83 x 40 mm
Weight	290 g (incl. battery)

Ordering Information:

Description	Model	Article no.
AM-500-EUR	AM-500-EUR	4102332
Carrying case	1150	2145755
Safety set	370003	2146666



Included with AM series:

- 1 x AM-510-EUR, AM-520-EUR, AM-530-EUR, AM-535-EUR, AM-540-EUR, AM-550-EUR, AM-555-EUR
- 2 x test leads
- 1 x temperature probe (only AM-520-EUR, AM-530-EUR, AM-535-EUR)
- 2 x temperature probes (only AM-520-EUR, AM-530-EUR, AM-535-EUR)
- 1 x temperature adapter (only AM-535-EUR, AM-540-EUR, AM-550-EUR, AM-555-EUR)
- 1 x hanging strap (only AM-520-EUR, AM-530-EUR, AM-540-EUR, AM-550-EUR)
- 1 x battery 9 V, IEC 6LR61
- 1 x carry case (only AM-520-EUR, AM-530-EUR, AM-535-EUR, AM-540-EUR, AM-550-EUR, AM-555-EUR)
- 1 x user manual

Accessories:



Safety set
Model 370003



VC221B carrying case
Material: Imitation leather, carrying strap
External dimensions: 220 x 115 x 60 mm
Model VC221B



2 x temperature probes with adapter
For AM-540-EUR and AM-550-EUR,
AM-555-EUR
Model TPK-62

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 (AM-510-EUR only)

Product information

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

Product highlights

- True RMS measurement (TRMS) (only AM-530-EUR and AM-550-EUR)
- 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-530-EUR

As AM-520-EUR, but with:

- True RMS measurement (TRMS)

AM-540-EUR

As AM-520-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-550-EUR

As AM-540-EUR, but with:

- True RMS measurement (TRMS)

Technical specifications*

Display	LCD, 3 ³ / ₄ digit, 5999 digits
Ranges	
AC voltage	1 mV...1000 V
Basic accuracy	±(1.0% rdg. + 3 digits)
Frequency range	45 Hz...1 kHz
DC voltage	0.1 mV...1000 V
Basic accuracy	±(0.5% rdg. + 3 digits)
Input resistance	10 MΩ
AC current	0.1 μA...10 A
Basic accuracy	±(1.2% rdg. + 5 digits)
Frequency range	45 Hz...1 kHz
DC current	0.1 μA...10 A
Basic accuracy	±(1.0% rdg. + 2 digits)
Resistance	0.1 Ω...60 MΩ
Basic accuracy	±(1.0 % rdg. + 2 digits)
Continuity	R < 10 Ω
Frequency	1.00 Hz...60 MHz
Basic accuracy	±(0.1% rdg. + 3 digits)
Capacitance	0.01 nF...60 mF
Basic accuracy	±(3.0% rdg. + 5 digits)
Temperature	-40°C...1000°C
Basic accuracy	±(1.0% rdg. + 8 °C)
Pollution degree	2
Measurement category	CAT III/600 V, CAT II/1000 V (AM-510, AM-520, AM-530) CAT IV / 600 V, CAT III / 1000 V (AM-540, AM-550)
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	182 x 90 x 45 mm

* Technical data relates to the highest model in the series. Data regarding individual modules can be found on our website www.beha-amprobe.com.

Ordering Information:

Description	Model	Article no.
AM-510-EUR	AM-510-EUR	4102344
AM-520-EUR	AM-520-EUR	4131281
AM-530-EUR	AM-530-EUR	4131296
AM-535-EUR	AM-535-EUR	4701027
AM-540-EUR	AM-540-EUR	4131308
AM-550-EUR	AM-550-EUR	4131313
AM-555-EUR	AM-555-EUR	4701030
Safety set	370003	2146666

Model	AM-510-EUR	AM-520-EUR	AM-530-EUR	AM-535-EUR	AM-540-EUR	AM-550-EUR	AM-555-EUR
Display	3 ³ / ₄ digit, 3999 digits	3 ³ / ₄ digit, 3999 digits	3 ³ / ₄ digit, 3999 digits	3 ³ / ₄ digit, 3999 digits	3 ³ / ₄ digit, 5999 digits	3 ³ / ₄ digit, 5999 digits	3 ³ / ₄ digit, 5999 digits
True-RMS measurement	—	—	•	•	—	•	•
Bar graph	—	•	•	•	•	•	•
Temperature	—	•	•	•	•	•	•
Temperature inputs	0	1	1	1	2	2	2
Min/max value memory	—	•	•	•	•	•	•
Peak Hold	—	—	—	—	•	•	•
Battery test	•	—	—	—	—	—	—
Low pass filter	—	—	—	—	•	•	•
Duty cycle function	—	—	—	—	•	•	•
Measurement Category	CAT III / 600 V	CAT III / 600 V CAT II / 1000 V	CAT III / 600 V CAT II / 1000 V	CAT III / 600 V CAT II / 1000 V	CAT IV / 600 V CAT III / 1000 V	CAT IV / 600 V CAT III / 1000 V	CAT IV / 600 V CAT III / 1000 V



Hexagon 110



Hexagon 120



Hexagon 340



Hexagon® 110

Digital multimeter with extra large display

Functions

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

Product information

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

Product highlights

- Digital multimeter with extra large display
- Acoustic warning signal and display message in case of incorrect jack connections (Hexagon 110 and 120 only)

Hexagon® 120

As Hexagon 110, but with:

- Temperature measurement

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

Technical specifications*

Display	LCD, 3¾ digit, 5000 digits
Ranges	
AC/DC voltage	0.01 mV...1000 V
AC basic accuracy	± (0.5 % rdg. + 3 D)
DC basic accuracy	± (0.08 % rdg. + 2 D)
AC/DC current: 0.1 µA to 10 A (20 A, 30 s)	
AC basic accuracy	± (0.6 % rdg. + 3 D)
DC basic accuracy	± (0.2 % rdg. + 4 D)
AC frequency	
range	40 Hz ... 20 kHz
Alternating current	40 Hz...1 kHz
Resistance	0.01 Ω...50 MΩ
Basic accuracy	±(0.1 % rdg. + 2 D)
Temperature	-50°...1000° C
Basic accuracy	±(0.3% rdg. + 3 digits)
Frequency	5 Hz...125 kHz
Basic accuracy	±(0.01 % rdg. + 2 digits)
Capacitance	0.01 nF...9999 µF
Basic accuracy	±(0.8% rdg. + 3 digits)
Pollution degree	2
Measurement category	CAT III/600 V, CAT III/1000 V (110, 120) CAT IV/600 V, CAT III/1000 V (340)
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	198 x 97 x 55 mm
Weight	approx. 430 g

* Technical data relates to the highest model in the series. Data regarding individual modules can be found on our website www.beha-amprobe.de or pages 31 and 32.

Model	Hexagon 110	Hexagon 120	Hexagon 340A
Display	3¾ digit, 4000 digits	3¾ digit, 4000 digits	3¾ digit, 5000 digits
True-RMS measurement	–	–	•
Bar graph	–	–	•
Temperature	–	•	•
Min/max value memory	Max Hold	Max Hold	•
Peak Hold	–	–	•
Illuminated display	–	–	•
RS-232 interface	–	–	•
Acoustic jack control	•	•	–
IR/RS-232 interface	–	–	•
Measurement Category	CAT III / 600 V	CAT III / 600 V	CAT IV / 600 V

Included with Hexagon:

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

Accessories:



For all Hexagon models
Carrying case for devices with protective holster
Model 1150



Safety set
Model 370003



For Hexagon 340:
Software for transferring and displaying data on a PC
Model 1332

Ordering Information:

Description	Model	Article no.
Hexagon 110	93523-D	3454478
Hexagon 120	93524-D	3454484
Hexagon 340A	93497-D	3454491
Carrying case	1150	2145755
Safety set	370003	2146666
Software	1332	3313506



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

Technical specifications

Display	LCD, 3 $\frac{3}{4}$ digit, 4000 digits
Ranges	
AC voltage	0.001 V...600 V
Basic accuracy	$\pm(2.0\% \text{ rdg.} + 5 \text{ digits})$
Frequency range	50 Hz...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	$\pm(1.0\% \text{ rdg.} + 2 \text{ digits})$
Input resistance	10 M Ω
Resistance	0.1 Ω ...40 M Ω
Basic accuracy	$\pm(1.5\% \text{ rdg.} + 6 \text{ digits})$
Continuity	R < 65 Ω
Frequency	5 Hz...1 MHz
Basic accuracy	$\pm(0.5\% \text{ rdg.} + 4 \text{ digits})$
Capacitance	0.1 nF...3000 μ F
Basic accuracy	$\pm(3.5\% \text{ rdg.} + 6 \text{ digits})$
Pollution degree	2
Measurement category	CAT III/300V, CAT II/600V
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1 x battery 3 V, IEC CR2032
Dimensions	113 x 53 x 10 mm
Weight	approx. 78 g (incl. battery)

Included:

- 1 x PM51A
- 1 x battery 3 V, IEC CR2032
- 1 x user manual



Accessories:

- Soft Field Case
- Model VC30A

Ordering Information:

Description	Model	Article no.
PM51A	PM51A	2727700
VC30A	VC30A	3099130



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 μ A 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™)

Technical specifications

Display	LCD, 3 $\frac{3}{4}$ digit, 6000 digits
Ranges	
AC voltage	0.001 V...600 V
Basic accuracy	$\pm(1.5\% \text{ rdg.} + 5 \text{ digits})$
Frequency range	50 Hz...60 Hz
DC voltage	0.001 V...450 V
Basic accuracy	$\pm(0.5\% \text{ rdg.} + 3 \text{ digits})$
Current AC	0.1 μ A...2000 μ A
Basic accuracy	$\pm(1.5\% \text{ rdg.} + 3 \text{ digits})$
Frequency range	50 Hz...60 Hz
Current DC	0.1 μ A...2000 μ A
Basic accuracy	$\pm(1.2\% \text{ rdg.} + 3 \text{ digits})$
Resistance	0.1 Ω ...6,000 M Ω
Basic accuracy	$\pm(1.2\% \text{ rdg.} + 6 \text{ digits})$
Continuity	R < 175 Ω
Frequency	10 Hz...30.00 kHz
Basic accuracy	$\pm(0.5\% \text{ rdg.} + 4 \text{ digits})$
Capacitance	0.1 nF...100.0 μ F
Basic accuracy	$\pm(3.5\% \text{ rdg.} + 6 \text{ digits})$
Pollution degree	2
Measurement category	CAT III/300V, CAT II/600V
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1 x battery 3 V, IEC CR2032
Dimensions	113 x 53 x 10 mm
Weight	approx. 78 g (incl. battery)

Included:

- 1 x PM55A
- 1 x battery 3 V, IEC CR2032
- 1 x case
- 1 x user manual

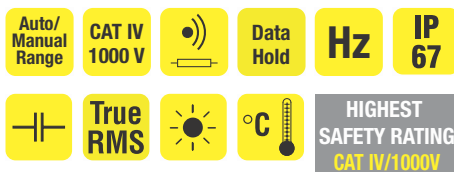


Accessories:

- Soft Case
- Model VC30A

Ordering Information:

Description	Model	Article no.
PM55A	PM55A	2727721
VC30A	VC30A	3099130



Included:

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

Accessories:

Professional test lead set with silicone insulation
Model 1306

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

Technical specifications

Display	LCD, 4 digit, 9999 digits
Ranges	
AC voltage	0.1 mV...1000 V
Basic accuracy	±(1.2 % rdg. + 10 digits)
Frequency range	45 Hz...2 kHz
DC voltage	0.1 mV...1500 V
Basic accuracy	±(0.1 % rdg. + 5 digits)
Input resistance	10 MΩ
AC current	0.01 μA...2 A
Basic accuracy	±(0.8 % rdg. + 4 digits)
Frequency range	45 Hz...1 kHz
DC current	0.01 μA...2 A
Basic accuracy	±(1.5 % rdg. + 10 digits)
Resistance	0.1 Ω...40 MΩ
Basic accuracy	±(1.0 % rdg. + 10 digits)
Continuity	R < 40 Ω
Frequency measurement	0.01 Hz...10 MHz
Basic accuracy	±(0.1 % rdg. + 5 digits)
Capacitance measurement	0.01 nF...400.0 μF
Basic accuracy	±(3.0 % rdg. + 10 digits)
Temperature	-20°C...1300°C
Basic accuracy	±(1.0 % rdg. + 3 °C)
Pollution degree	2
Measurement category	CAT IV / 1000 V
Safety cert.	DIN VDE 0411, EN 61010, IEC 61010
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	200 x 102 x 59 mm
Weight	approx. 642 g (incl. battery)

* Technical data relates to the HD160C model. Data regarding individual models can be found on our website www.beha-amprobe.com

Ordering Information:

Description	Model	Article no.
HD160C	HD160C	2670787
HD110C	HD110C	2670779
Professional test lead set 1306		3313458



Included:

- 1 x DM73C
- 1 x test leads
- 1 x crocodile clip
- 1 x probe
- 2 x battery 1.5 V, IEC LR44
- 1 x user manual

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	2 x battery 1.5 V, IEC LR44
Dimensions	198 x 29 x 35 mm
Weight	approx. 150 g (incl. battery)



Accessories:

Carrying case
Model VC30A

Ordering Information:

Description	Model	Article no.
DM73C	DM73C	2727739
VC30A	VC30A	3068280



Our recommendation for training!

Junior set A

consisting of:

- Hexagon 60 digital multimeter
- 2100-ALPHA
- Testfix 9023
- Test leads (red/black)
- Rugged carrying case

Included:

- 1 x Hexagon 60
- 1 x 2100-ALPHA
- 1 x Testfix 9023
- 2 x test leads
- 1 x robust carry case

Ordering Information:

Description	Model	Article no.
Junior set A	AMPRB-EU-03-A	4460579



AMPRB-EU-01-A

Standard kit

Contents

- AM-510-EUR (Digital multimeter)
- ACD-10 PLUS (Digital current clamp)
- TPP1-C1 (contact thermometer)
- EU-200 (test lead set with 2 leads), 2 test prods (4 mm), 2 crocodile clips (CAT III/1000 V)
- Hard carrying case

Included:

- 1 x AM-510
- 1 x ACD-10 PLUS
- 1 x TPP1-C1
- 1 x EU-200
- 1 x Hard carrying case

Ordering Information:

Description	Model	Article no.
Standard kit A	AMPRB-EU-01-A	4460593



AMPRB-EU-02-A

Professional kit

Contents

- AM-540-EUR (Digital multimeter)
- ACDC-100 TRMS (digital AC/DC current clamp)
- IR608A infrared thermometer
- EU-200 (test lead set with 2 leads), 2 test prods (4 mm), 2 crocodile clips CAT III/1000 V
- Hard carrying case

Included:

- 1 x AM-540-EUR
- 1 x ACDC-100 TRMS
- 1 x IR608A
- 1 x EU-200
- 1 x Hard carrying case

Ordering Information:

Description	Model	Article no.
Professional kit A	AMPRB-EU-02-A	4460587

Current clamps



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.

Products

Full overview	35
AMP series of clamp meters (AC, AC/DC)	38
Clamp meters (AC)	40
Clamp meters (AC/DC)	41
Power clamp meters	44
Leakage current clamp meters	46
Clamp meters (AC/DC), current clamp adapters, and accessories	47

Symbols used in this chapter

	Minimal or maximal value memory		PC interface
	Peak value memory		Setting up UNINSULATED, HAZARDOUS, ACTIVE conductors and removal of these is permitted
	Best resolution (e.g. 10 µA AC)		Integrated measurement value recording (data logger)
	Information regarding the current measurement range (e.g. 1000 A AC)		Back light
	Analog output		True-RMS measurement
	Temperature measurement		Measurement Category
	Low pass filter		Phase sequence indication
	Capacitance measurement		Measuring resistance
	Frequency verification		Measurement of ionization current (µA DC range) in heating systems
	Acoustic continuity measurement (occasionally with diode test)		AMP tip

Interesting facts regarding current clamps and clamp adapters

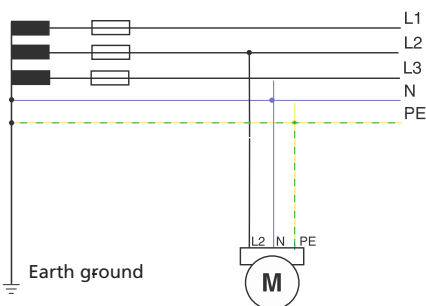
Current clamps and clamp adapters are suitable for measuring AC and DC currents on units and systems without interrupting the current flow.

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.

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.

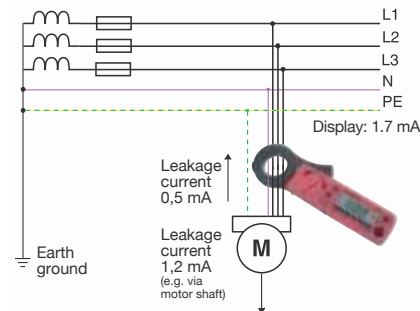


Measurement of current usage
"Max-Hold" function of a
single-phase motor

Stray current measurement (leakage current measurement)

High-resolution current clamps for leakage currents over 10 μA 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

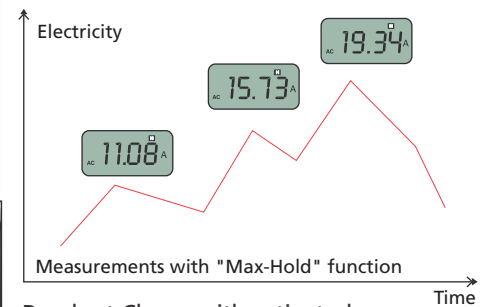
Our current clamps and clamp adapters are characterized by being simple and intuitive. The individual conductor is fully surrounded by the current clamp. The measured value appears on the digital display and can be read off immediately.

Storing the displayed reading (Hold) and measurement memory

After pressing the HOLD button, the value that is currently displayed is stored on the display. This is very useful if the display cannot be read during measurement. With some current clamps the minimum or maximum value (min/max data hold) of a measurement series can also be stored on the display.

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".

Power clamp meters

Measurement of apparent, active, reactive power and power factor $\cos$ 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.

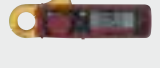
Clamp adapters

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.

Model	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 3/4 digit, 6000 digits	3 3/4 digit, 6000 digits	3 3/4 digit, 6000 digits	3 3/4 digit, 6000 digits	3 3/4 digit, 6000 digits	3 3/4 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	2 x 1.5 V IEC LR44	2 x 1.5 V IEC LR03	2 x 1.5 V IEC LR03	2 x 1.5 V IEC LR03	2 x 1.5 V IEC LR03	2 x 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
Features	Back light Low pass filter Non-contact voltage recognition, measurement of inrush current	Diode test, Back light	Diode test, Back light	Diode test, Back light Thermometer -40°C to 400°C 3-phase and motor rotation indicator DC micro amps	Diode test, Back light Thermometer -40°C to 400°C 3-phase and motor rotation indicator DC micro amps	Diode test, back light thermometer -40°C to 400°C 3-phase and motor rotation indicator DC micro amps Flashlight function

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

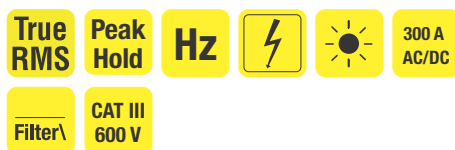
Current clamps | Overview

Model	ACD-10 PLUS	ACD-14 PRO-EUR	ACD-205W	ACD-235W	CHB 15	CHB 35	ACDC-100	ACDC-100 TRMS
								
Max. current	600 A	600 A	400 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	AC/DC	AC/DC	AC/DC	AC/DC
True RMS measurement				•		•		•
Display	3½ digit, 4000 digits	3½ digit, 4000 digits	3½ digit, 3999 digits	3½ digit, 3999 digits	3½ digit, 3999 digits	3½ digit, 3999 digits	3½ digit, 4000 digits	3½ digit, 4000 digits
Current AC	0.01 A... 600 A	0.01 A... 600 A	0.01 A... 400 A	0.01 A... 400 A	0.01 A... 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% + 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	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	1 mV... 600 V	0.1 V... 400 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	1.2% + 5 digits	2% + 2	2% + 2	1% + 4 digits	1% + 4 digits
Frequency	50...500 Hz	50...400 Hz	50...500 Hz	50...500 Hz	40Hz...1kHz	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 mV... 600 V	0.1 V... 400 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	0.5 % + 2 digits	2% + 2	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	0.1Ω...40.00 MΩ	0.1 Ω...400 Ω	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	1.0% + 4 digits	2% + 2 digits	2% + 2 digits	0.8% + 6 digits	0.8% + 6 digits
Continuity test	R < 120 Ω	R < 120 Ω	R < 25 Ω	R < 25 Ω	R < 40 Ω	0.01 Hz...9.99 kHz	R < 120 Ω	R < 120 Ω
Frequency verification	0.001Hz...100kHz	0.001Hz...100kHz			0.01 Hz...50 kHz		R < 120 Ω	R < 120 Ω
Power measurement								
Data Hold	•	•	•	•	•	•		•
MIN/MAX/Peak Hold	•	•			•	•		
Capacitance measurement								
Jaw opening	25 mm	25 mm	30 mm	30 mm	23 mm	23 mm	50 mm	50 mm
Power supply	1 x 3V, IEC/CR2032	2 x 3 V, IEC/CR2032	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC LR6	2 x 1.5 V, IEC LR6	2 x 1.5 V, IEC LR03	2 x 1.5 V, IEC R03
Auto Power Off	•	•	•	•			•	•
Measurement Category	CATIII/600 V	CATIII/600 V	CATIII/600 V	CATIII/600 V	CATII/600 V	CATII/600 V	CATIII/600 V	CATIII/600 V
Features	Narrow jaws Measurement of inrush current	2000 µA measurement range for direct measurement of ionization currents in heating systems	Non-contact voltage recognition, swivel clamp head (180°)	Non-contact voltage recognition, swivel clamp head (180°)		Non-contact frequency measurement	Measurement of inrush current	Measurement of inrush current True-rms reading

Model	ACD-50NAV	ACDC-52NAV	ACDC-54NAV	ACDC-400	ACDC-3400 IND	AC50A	CHB 5	IH41A
								
Max. current	600 A	600 A	1000 A AC/DC	400 A	1000 A	60 A	50 A	40 A
Current type	AC	AC/DC	AC/DC	AC/DC	AC/DC	AC	AC	AC/DC
True RMS Measurement	•	•	•		•		•	
Display	3 1/2 digit, 4000 digits	3 1/2 digit, 4000 digits	3 1/2 digit, 4000 digits	3 1/2 digit, 3999 digits	3 1/2 digit, 6600 digits	3 1/2 digit, 3999 digits	4 digit, 9999 digits	4 digit, 4000 digits
Current AC	0.01...600 A	0.01...600 A	0.01...1000 A	0.01 A...400 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	1.5 % + 5 digits	1.5 % + 3 digits	2 % + 10 digits	1.5 % + 5 digits	1.5 % + 5 digits	1.3 % + 5 digits
Frequency	50 Hz...400 Hz	50 Hz...400 Hz	50 Hz...400 Hz	50/60 Hz	50...1 kHz	40 Hz...1 kHz	45 Hz...1 kHz	40...400 Hz
Current DC	0.01...600 A	0.01...600 A	0.01...1000 A	0.01 A...400 A	0.1 A...1000 A			0.001...40 A
Basic Accuracy*	1.5 % + 5 digits	1.5 % + 5 digits	1.5 % + 5 digits	1.5 % + 3 digits	2 % + 5 digits			1.3 % + 5 digits
Voltage AC	0.01...1000 V	0.01...1000 V	0.01...1000 V	0.1 mV...600 V	0.1 mV...750 V	0.1 V...400 V	0.1 V...600 V	
Basic Accuracy*	1 % + 5 digits	1 % + 5 digits	1 % + 5 digits	1 % + 3 digits	1.5 % + 8 digits	2 % + 4 digits	0.5 % + 5 digits	
Frequency	50 Hz...500 Hz	50 Hz...500 Hz	50 Hz...500 Hz	50...500 Hz	50 Hz...1 kHz	40 Hz...1 kHz	50 Hz...1 kHz	
Voltage DC	0.01...1000 V	0.01...1000 V	0.01...1000 V	0.1 mV...600 V	0.1 mV...1000 V			
Basic Accuracy*	0.7 % + 2 digits	0.7 % + 2 digits	0.7 % + 2 digits	0.8 % + 2 digits	0.5 % + 2 digits			
Resistance	1 Ω...99.99 kΩ	1 Ω...99.99 kΩ	1 Ω...99.99 kΩ	0.1 Ω...40 MΩ	0.1 Ω...66.00 MΩ	0.1 Ω...400 Ω		
Basic Accuracy*	1 % + 3 digits	1 % + 3 digits	1 % + 3 digits	1 % + 3 digits	1 % + 5 digits	1 % + 2 digits		
Continuity test	R < 30 Ω	R < 30 Ω	R < 30 Ω	R < 40 Ω	R < 30 Ω	R < 40 Ω		
Frequency verification	20.00...9.999 kHz	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...600 kW	0...999 kW					
Data Hold	•	•	•	•	•	•	•	•
MIN/MAX Peak Hold	•	•	•	•	•	•	•	•
Capacitance measurement	0.01...4000 μF	0.01...4000 μF	0.01...4000 μF		0.001 nF...6.6 mF			
Jaw opening	37 mm	42 mm	42 mm	30 mm	51 mm	30 mm	30 mm	19 mm
Power supply	9 V, IEC 6F22	9 V, IEC 6F22	9 V, IEC 6F22	2 x 1.5 V, IEC R03	1 x 9 V, IEC 6F22	2 x 1.5 V, IEC LR6	2 x 1.5 V, IEC LR6	1 x 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 IV / 600 V CAT III / 1000 V	CAT III / 600 V	CAT III / 1000 V, CAT IV / 600 V	CAT II / 600 V	CAT II / 600 V, CAT III / 500 V	CAT III / 300 V
Features	Active power, cos φ, Harmonic content (THD), Bar graph	Active power, cos φ, Harmonic content (THD), Bar graph	Active power, cos φ, Harmonic content (THD), Temperature, Bar graph	Illuminated display	Relative value measurement, illuminated display, Duty cycle function	Leakage current clamp, lowest resolution 0.01 mA	Leakage current clamp, lowest resolution 0.01 mA Harmonics measurement up to the 99th peak value measurement	Measurement of direct currents with 1 mA resolution

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

Current clamps



AMP-25-EUR

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:

- 1 x AMP-25
- 2 x batteries 1.5V, IEC LR 44
- 1 x carrying case
- 1 x user manual

Technical specifications

Display	LCD, 3¾ digit, 6000 digits
Ranges	
Current AC	0.01 A... 60 / 300 A
Basic accuracy	±(1.5% rdg. + 5 digits)
Frequency range	50...400 Hz
Current DC	0.01 A... 60 / 300 A
Basic accuracy	±(1.5% rdg. + 8 digits)
Current AC (with low pass filter)	0.01 A... 300 A
Basic accuracy	±(3.5% rdg. + 5 digits)
Frequency range	50...60 Hz
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411/EN 61010/
Jaw opening	approx. 25 mm
Power supply	2x battery 1.5V IEC LR 44
Dimensions	147 x 60 x 32 mm
Weight	approx. 140 g

Ordering Information:

Description	Model	Article no.
AMP-25-EUR	AMP-25-EUR	4588268



AMP-210-EUR

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 (AMP-210-EUR), 35 mm (AMP-220-EUR)

- Auto Power Off

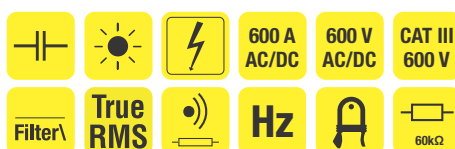
Product highlights

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

Technical specifications*

Display	LCD, 3¾ digit, 6000 digits
Ranges	
Current AC	0.01 A... 600 A
Basic accuracy	±(1.8% rdg. + 5 digits)
Frequency range	50...400 Hz
Current DC	0.01 A... 600 A
Basic accuracy	±(2.0% rdg. + 5 digits)
Current (Amp-Tip) AC/DC	0.01 A... 60 A
Basic accuracy	±(1.5% rdg. + 5 digits)
Frequency range	DC, 50...60 Hz
AC/DC voltage	0.1 V...600 V
Basic accuracy	±(1.0% rdg. + 5 digits)
Frequency range	DC, 50...60 Hz
Continuity	IN ≤ 10 Ω, OUT ≥ 250 Ω
Resistance	0.01 ... 60.00 kΩ
Basic accuracy	±(1.0% rdg. + 5 digits)
Capacitance measurement	0.1 ... 2500 µF
Frequency measurement	5.00 ... 999.9 Hz
Non-Contact	
Voltage measurement	10 ... 1000 V AC, 50/60Hz
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411/EN 61010
Jaw opening	approx. 30 mm (AMP-210-EUR), approx. 35 mm (AMP-220-EUR)
Power supply	2x batteries 1.5 V, IEC LR 03 (AAA),
Micro	
Dimensions	219 x 77 x 37 mm (AMP-210-EUR), 224 x 77 x 37 mm (AMP-220-EUR)
Weight	approx. 208 g (AMP-210-EUR), approx. 254 g (AMP-220-EUR)

* Technical data relates to the highest model in the series. Data regarding individual modules can be found on our website www.beha-amprobe.com or the table on pages 41, 42, and 43.



AMP-220-EUR

Current clamp (AC/DC)

As AM-210-EUR, but with:

- DC Current Function
- Display of mixed currents AC+DC (TRMS)
- Display of mixed voltages AC+DC (TRMS)
- Larger housing than AMP-220-EUR

Included:

- 1 x AMP-210-EUR or AMP-220-EUR
- 2 x test leads
- 2 x batteries 1.5 V, IEC LR 03
- 1 x carrying case
- 1 x user manual

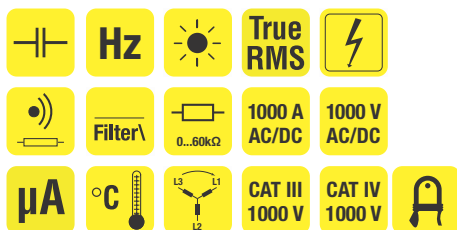
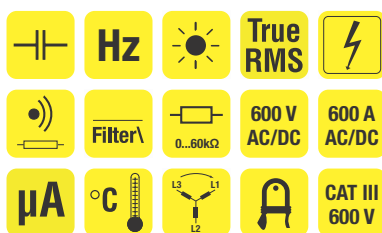
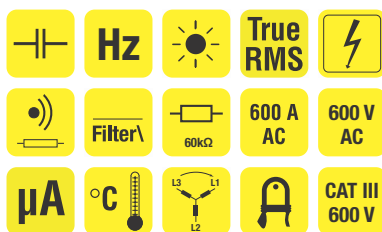


Accessories:

- Safety set
- Model 370003

Ordering Information:

Description	Model	Article no.
AMP-210-EUR	AMP-210-EUR	4560581
AMP-220-EUR	AMP-220-EUR	4560596
Safety set	370003	2146666



AMP-310-EUR

current clamp (AC)

Functions

- Current, voltage and resistance measurement
- Capacitance and frequency measurement
- Measurement of ionization current (μA 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 (AMP-310-EUR), 35 mm (AMP-320-EUR), 51 mm (AMP-330-EUR)
- Auto Power Off

Product highlights

- Precise measurement of smaller currents (Amp-Tip)
- Displays rotary field direction and motor rotation direction Illuminated display
- Measurement of ionization current (μA DC range) in heating systems

AMP-320-EUR

Current clamp (AC/DC)

As AMP-310-EUR, but with:

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

AMP-330-EUR

Current clamp (AC/DC)

As AMP-320-EUR, but with:

- Voltage measurement up to 1000 A AC/DC
- AC and DC voltage measurements to 1000 V
- Measurement categories CAT IV 600 V, CAT III 1000 V
- Larger housing than AMP-320-EUR

Included:

- 1 x AMP-310-EUR or AMP-320-EUR
- 2 x test leads
- 2 x crocodile clips
- 1 x temperature probe
- 2 x battery 1.5 V, IEC LR 03 (or IEC LR 06)
- 1 x carrying case
- 1 x user manual



Accessories:

Safety set
Model 370003

Technical specifications*

Display	LCD, 3¾ digit, 6000 digits
Ranges	
Current AC	0.01 A... 600 A (or 1000 A)
Basic accuracy	±(1.8% rdg. + 5 digits)
Frequency range	50...400 Hz
Current DC	0.01 A... 600 A (or 1000 A)
Basic accuracy	±(2.0% rdg. + 5 digits)
Current (Amp-Tip) AC/DC	0.01 A... 60 A
Basic accuracy	±(1.5% rdg. + 5 digits)
Frequency range	DC, 50...60 Hz
AC/DC voltage	0.1 V...600 V (or 1000 V)
Basic accuracy	±(1.0% rdg. + 5 digits)
Frequency range	DC, 50...60 Hz
Continuity	IN ≤ 10 Ω, OUT ≥ 250 Ω
Resistance	0.01 ... 60.00 kΩ
Basic accuracy	±(1.0% rdg. + 5 digits)
Capacitance measurement	0.1 ... 2500 μF
Frequency measurement	5.00 ... 999.9 Hz
Non-Contact	
Voltage measurement	10 ...1000 V AC, 50/60Hz
Ionization current	0.1 μA... 2000 μA
Basic accuracy	±(1.0% rdg. + 5 digits)
Temperature	-40 ... +400 °C
Basic accuracy	±(1.0% rdg. + 0.8 °C)
Pollution degree	2
Measurement category	CAT III/600 V CAT IV / 600 V, CAT III / 1000 V (AMP-330-EUR)
Safety cert.:	DIN VDE 0411/EN 61010
Jaw opening	30 mm (AMP-310-EUR) 35 mm (AMP-320-EUR) 51 mm (AMP-330-EUR)
Power supply	2x battery 1.5 V, IEC LR 03 (AAA), Micro 2x battery 1.5 V, IEC LR 06 (AA), Mignon (AMP-330-EUR)
Dimensions	219 x 77 x 37 mm (AMP-310-EUR) 224 x 77 x 37 mm (AMP-320-EUR) 258 x 94 x 44 mm (AMP-330-EUR)
Weight	approx. 208 g (AMP-310-EUR), approx. 254 g (AMP-320-EUR) approx. 420 g (AMP-330-EUR)

* Technical data relates to the highest model in the series. Data regarding individual modules can be found on our website www.beha-amprobe.com or the table on pages 41, 42, and 43.

Ordering information:

Description	Model	Article no.
AMP-310-EUR	AMP-310-EUR	4560603
AMP-320-EUR	AMP-320-EUR	4560615
AMP-330-EUR	AMP-330-EUR	4560626
Safety set	370003	2146666



ACD-10 PLUS current clamp (AC)

Functions

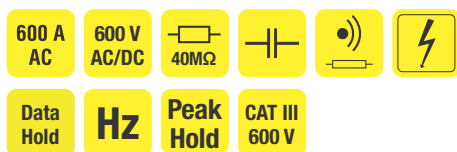
- Current, voltage and resistance measurement
- Continuity beeper
- Diode test
- Capacitance and frequency measurement
- Measurement of inrush current (30 ms)

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:

- 1 x ACD-10 PLUS
- 2 x test leads
- 1 x battery 3 V, IEC CR2032
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 4000 digits
Ranges	
Current AC	0.01 A... 600 A
Basic accuracy	±(1.5% rdg. + 8 digits)
Frequency range	50/60 Hz
AC voltage	0.001 V...600 V
Basic accuracy	±(1.5% rdg. + 5 digits)
Frequency range	50...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	±(0.5 % rdg. + 3 digits)
Continuity	R < 120 Ω
Resistance	0.1 Ω... 40.00 MΩ
Basic accuracy	±(1.0% rdg. + 4 digits)
Frequency measurement	0.001 Hz...100 kHz
Capacitance measurement	0.1 nF...3000 µF
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 25 mm
Power supply	1 x battery 3 V, IEC CR2032
Dimensions	190 x 63 x 32 mm
Weight	approx. 150 g

Ordering Information:

Description	Model	Article no.
ACD-10 PLUS	ACD-10 PLUS	3037808
ACD-10 PLUS	ACD-10 PLUS-D*	3454555
Safety set	370003	2146666

D* is German version



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

Functions

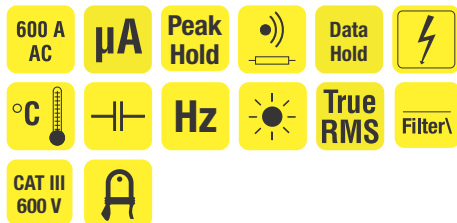
- True RMS current measurement
- Voltage and resistance measurement
- Capacitance and frequency measurement
- Temperature measurement
- Continuity beeper
- Low pass filter
- Measurement of inrush current
- Non-contact voltage detection

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 (µA DC range) in heating systems
- True RMS measurement (TRMS)



Included:

- 1 x ACD-14-PRO-EUR
- 2 x test leads
- 1 x temperature probe
- 2 x batteries 1.5 V, IEC LR 03
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	Dual-LCD, 3¾ digit, 6000 digits
Ranges	
Current AC	0.01 A... 600 A
Basic accuracy	±(1.8% rdg. + 5 digits)
Frequency range	50...400 Hz
Current (Amp-Tip) AC	0,01 A... 60 A
Basic accuracy	±(1.5% rdg. + 5 digits)
Frequency range	50...60 Hz
AC/DC voltage	0.1 V...600 V (or 1000 V)
Basic accuracy	±(1.0% rdg. + 5 digits)
Frequency range	DC, 50...60 Hz
Continuity	IN ≤ 10 Ω, OUT ≥ 250 Ω
Resistance	0.01 ... 60.00 kΩ
Basic accuracy	±(1.0% rdg. + 5 digits)
Capacitance measurement	0.1 ... 2500 µF
Frequency measurement	5.00 ... 999.9 Hz
Non-Contact Voltage measurement	10 ... 550 V, 50/60 Hz
Ionization current	0.1 µA... 2000 µA
Basic accuracy	±(1.0% rdg. + 5 digits)
Temperature	-40 ... +400 °C
Basic accuracy	±(1.0% rdg. + 0.8 °C)
Pollution degree	2
Measurement category	CAT III/600 V
Safety cert.:	DIN VDE 0411/EN 61010
Jaw opening	30 mm
Power supply	2x batteries 1.5 V, IEC LR 03 (AAA), Micro
Dimensions	219 x 77 x 37 mm
Weight	approx. 208 g

Ordering Information:

Description	Model	Article no.
ACD-14-PRO-EUR	ACD-14-PRO-EUR	4718989
Safety set	370003	2146666



ACD-20SW

Swivel clamp meter (AC)

Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Diode test

Product information

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

Product highlights

- Clamp head swivels up to 180°
- Non-contact voltage detection



Included:

- 1 x ACD-20SW
- 2 x test leads
- 2 x battery 1.5V, IEC LR03
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.01...400 A
Basic accuracy	±(2% rdg. + 6 digits)
Frequency range	50...60 Hz
AC voltage	1.0 mV...600.0 V
Basic accuracy	±(1.2% rdg. + 5 digits)
Frequency range	50...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	±(0.5% rdg. + 2 digits)
Continuity	R < 25 Ω
Resistance	0.1 Ω... 40 MΩ
Basic accuracy	±(1.0% rdg. + 4 digits)
Pollution degree	2
Measurement category	CAT III / 600 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 30 mm
Power supply	2 x battery 1.5 V, AAA IEC LR03
Dimensions	240 x 70 x 41 mm
Weight	approx. 220 g

Ordering Information:

Description	Model	Article no.
ACD-20SW	ACD-20SW	3472723
Safety set	370003	2146666



ACD-23SW

Swivel clamp meter TRMS (AC)

Functions

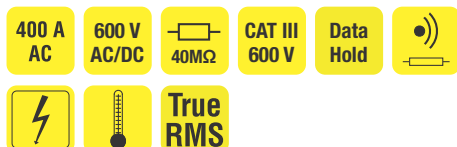
- Current, voltage and resistance measurement
- Audible continuity and diode test
- Capacitance and temperature measurement

Product information

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

Product highlights

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



Included:

- 1 x ACD-23SW
- 2 x test leads
- 2 x battery 1.5V, IEC LR03
- 1 x temperature probe
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.01...400 A
Basic accuracy	±(2% rdg. + 6 digits)
Frequency range	50...60 Hz
AC voltage	1.0 mV...600.0 V
Basic accuracy	±(1.2% rdg. + 5 digits)
Frequency range	50...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	±(0.5% rdg. + 2 digits)
Continuity	R < 25 Ω
Resistance	0.1 Ω... 40 MΩ
Basic accuracy	±(1.0% rdg. + 4 digits)
Capacitance measurement	0.01...4000 µF
Temperature measurement	-35...400°C
Pollution degree	2
Measurement category	CAT III / 600 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 30 mm
Power supply	2 x battery 1.5 V, AAA IEC LR03
Dimensions	240 x 70 x 41 mm
Weight	approx. 220 g

Ordering Information:

Description	Model	Article no.
ACD-23SW	ACD-23SW	3804941
Safety set	370003	2146666

Current clamps | Clamp meters (AC/DC) bis 400 A



ACDC-400

Current clamp (AC/DC)

Functions

- Current, voltage and resistance measurement
- Continuity beeper

Product information

- Automatic and manual range selection
- Integrated measurement memory (data hold, MIN/MAX)
- Relative measurement
- Additional bar graph display
- Jaw opening 30 mm
- Auto Power Off

Product highlights

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



Included:

- 1 x ACDC-400
- 2 x test leads
- 2 x battery 1.5 V, IEC LR03
- 1 x carrying case
- 1 x user manual

Accessories:



- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.01 A... 400 A
Basic accuracy	±(1.5% rdg. + 3 digits)
Frequency range	50/60 Hz
Current DC	0.01 A... 400 A
Basic accuracy	±(1.5% rdg. + 3 digits)
AC voltage	0.1 mV...600 V
Basic accuracy	±(1% rdg. + 3 digits)
Frequency range	50...500 Hz
DC voltage	0.1 mV...600 V
Basic accuracy	±(0.8 % rdg. + 2 digits)
Continuity	R < 40 Ω
Resistance	0.1 Ω... 40 MΩ
Basic accuracy	±(1% rdg. + 3 digits)
Pollution degree	2
Measurement category	CAT III / 600 V
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010
Jaw opening	approx. 30 mm
Power supply	2 x battery 1.5 V, IEC LR03
Dimensions	205 x 64 x 39 mm
Weight	approx. 280 g

Ordering Information:

Description	Model	Article no.
ACDC-400	ACDC-400-D*	3454596
ACDC-400	ACD-400	2730810
Safety set	370003	2146666

*D is German version



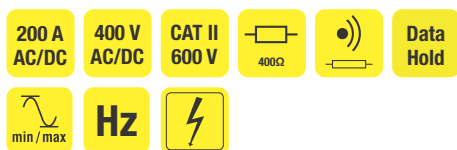
AMP-210-EUR AC clamp meter



AMP-320-EUR AC/DC clamp meter



AMP-330-EUR AC/DC clamp meter



Included:

- 1 x CHB15
- 2 x test leads
- 2 x battery 1.5 V, IEC LR6
- 1 x carrying case
- 1 x user manual

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.



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.01...200 A
Basic accuracy	± (2 % rdg. + 4 digits)
Current DC	0.01...200 A
Basic accuracy	± (2 % rdg. + 2 digits)
Voltage AC	0.1...400 V
Basic accuracy	± (2 % rdg. + 2 digits)
DC voltage	0.1 V...400 V
Basic accuracy	± (2 % rdg. + 2 digits)
Frequency range for AC current/voltage	40 Hz...1 kHz
Input resistance	10 MΩ
Resistance	0.1...400 Ω
Basic accuracy	± (2 % rdg. + 2 digits)
Continuity	R < 40 Ω
Frequency measurement	0.01 Hz...50 kHz
Basic accuracy	± (1 % rdg. + 2 digits)
Pollution degree	2
Measurement category	CAT II/600 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 23 mm
Power supply	2 x battery 1.5 V, IEC LR6
Dimensions	183 x 64 x 36 mm
Weight	approx. 190 g

Ordering Information:

Description	Model	Article no.
CHB15	93468-D	3454457
Safety set	370003	2146666



Included:

- 1 x CHB35
- 2 x battery 1.5 V, IEC LR6
- 1 x carrying case
- 1 x user manual

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)

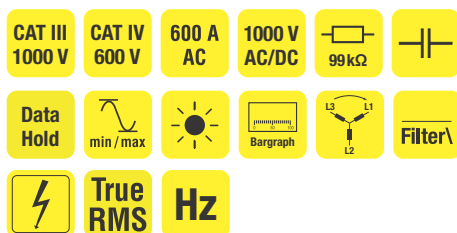
Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.001...400 A
Basic accuracy	± (2 % rdg. + 3 digits)
Current DC	0.01...400 A
Basic accuracy	± (2 % rdg. + 2 digits)
AC frequency range	40 Hz ... 1 kHz
Crest factor	<4
Frequency measurement	0.01 Hz...9.99 kHz
Basic accuracy	± (1 % rdg. + 2 digits)
Pollution degree	2
Measurement category	CAT II/600 V
Safety cert.:	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 23 mm
Power supply	2 x battery 1.5 V, IEC LR6
Dimensions	183 x 64 x 36 mm
Weight	approx. 190 g

Ordering Information:

Description	Model	Article no.
CHB35	93469-D	3454469

Current clamps | Clamp meters (AC/DC) bis 600 A



ACD-50NAV

CAT IV Navigator™ power clamp meter 600 A (AC) TRMS

Functions

- Current, voltage and resistance measurement
- Continuity beeper
- Capacitance and frequency measurement
- Measurement of active power
- Measuring the power factor $\cos \varphi$
- 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 37 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:

- 1 x ACD-50NAV
- 2 x test leads
- 1 x battery 9 V, IEC 6F22
- 1 x carrying case
- 1 x user manual



Accessories:

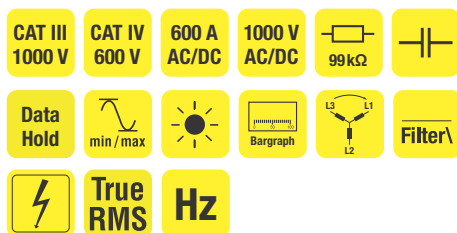
- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 4000 digits
Ranges	
Current AC	0.01...600 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Frequency range	50 Hz...400 Hz
Voltage AC	0.01...1000 V
Basic accuracy	±(1 % rdg. + 5 digits)
Frequency range	50 Hz...500 Hz
DC voltage	0.01...1000 V
Basic accuracy	±(0.7 % rdg. + 2 digits)
Active power	0...600.0 kW
$\cos \varphi$	-1.00...0.00...+1.00
Harmonics	Up to 25th
total harmonic distortion (THD)	0.1...100 %
Resistance	1Ω...99.99 kΩ
Basic accuracy	±(1 % rdg. + 3 digits)
Continuity	R < 30 Ω
Frequency measurement	20.00...9,999 kHz
Capacitance measurement	0.01...4000 µF
Pollution degree	2
Measurement category	CAT IV / 600 V, CAT III / 1000 V
Safety cert.	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 37 mm
Power supply	1 x battery 9 V, IEC 6F22
Dimensions	approx. 260 x 80 x 40 mm
Weight	approx. 480 g

Ordering Information:

Description	Model	Article no.
ACD-50NAV	ACD-50NAV	3729945
Safety set	370003	2146666



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 $\cos \varphi$
- 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:

- 1 x ACDC-52NAV
- 2 x test leads
- 1 x battery 9 V, IEC 6F22
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 4000 digits
Ranges	
Current AC	0.01...600 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Frequency range	50 Hz...400 Hz
Current DC	0.01...600 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Voltage AC	0.01...1000 V
Basic accuracy	±(1 % rdg. + 5 digits)
Frequency range	50 Hz...500 Hz
DC voltage	0.01...1000 V
Basic accuracy	±(0.7 % rdg. + 2 digits)
Active power	0...600.0 kW
$\cos \varphi$	-1.00...0.00...+1.00
Harmonics	Up to 25th
total harmonic distortion (THD)	0.1...100 %
Resistance	1Ω...99.99 kΩ
Basic accuracy	±(1 % rdg. + 3 digits)
Continuity	R < 30 Ω
Frequency measurement	20.00...9,999 kHz
Capacitance measurement	0.01...4000 µF
Pollution degree	2
Measurement category	CAT IV / 600V, CAT III / 1000 V
Safety cert.	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 42 mm
Power supply	1 x battery 9 V, IEC 6F22
Dimensions	approx. 260 x 80 x 40 mm
Weight	approx. 480 g

Ordering Information:

Description	Model	Article no.
ACDC-52NAV	ACDC-52NAV	3729961
Safety set	370003	2146666



ACDC-54NAV

CAT IV Navigator™ power clamp meter 1000 A (AC/DC) TRMS

Functions

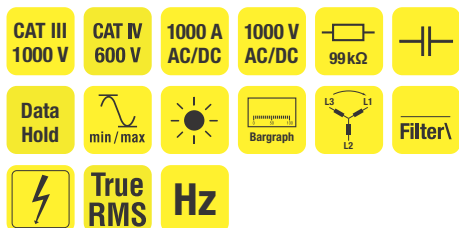
- Current, voltage and resistance measurement
- Continuity beeper
- Capacitance and frequency measurement
- Temperature measurement
- Measurement of active power
- Measuring the power factor $\cos \varphi$
- Harmonics measurement for current and voltage values (up to the 25th harmonic)
- Measurement 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:

- 1 x ACDC-54NAV
- 2 x test leads
- 1 x temperature probe
- 1 x battery 9 V, IEC 6F22
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003

Technical specifications

Display	LCD, 3¾ digit, 4000 digits
Ranges	
Current AC	0.01...1000 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Frequency range	50 Hz...400 Hz
Current DC	0.01...1000 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Voltage AC	0.01...1000 V
Basic accuracy	±(1 % rdg. + 5 digits)
Frequency range	50 Hz...500 Hz
DC voltage	0.01...1000 V
Basic accuracy	±(0.7 % rdg. + 2 digits)
Active power	0...999.9 kW
$\cos \varphi$	-1.00...0.00...+1.00
Harmonics	Up to 25th
total harmonic distortion (THD)	0.1...100 %
Resistance	1 Ω...99.99 kΩ
Basic accuracy	±(1 % rdg. + 3 digits)
Continuity	R < 30 Ω
Frequency measurement	20.00...9.999 kHz
Capacitance measurement	0.01...4000 μF
Temperature measurement	-50...1000°C
Pollution degree	2
Measurement category	CAT IV / 600V, CAT III / 1000 V
Safety cert.	DIN VDE 0411/EN 61010/IEC 61010
Jaw opening	approx. 42 mm
Power supply	1 x battery 9 V, IEC 6F22
Dimensions	approx. 260 x 80 x 40 mm
Weight	approx. 480 g

Ordering Information:

Description	Model	Article no.
ACD-54NAV	ACD-54NAV	3729989
Safety set	370003	2146666



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 measurement
- Jaw opening: 51 mm

Product highlights

- True RMS measurement (TRMS)



Included:

- 1 x ACDC-3400 IND
- 2 x test leads
- 1 x battery 9 V, IEC 6F22
- 1 x carrying case
- 1 x user manual



Accessories:

- Safety set
- Model 370003



- Test lead set with crocodile clips
- Model TL36A

Technical specifications

Display	LCD, 3¾ digit, 6600 digits
Ranges	
Current AC	0.1...1000 A
Basic accuracy	± (2 % rdg. + 10 digits)
Frequency range	50 Hz...1 kHz
Current DC	0.1...1000 A
Basic accuracy	± (2 % rdg. + 5 digits)
AC voltage	0.1 mV...750 V
Basic accuracy	± (1.5 % rdg. + 8 digits)
Frequency range	50 Hz...1 kHz
DC voltage	0.1 mV...1000 V
Basic accuracy	± (0.5 % rdg. + 2 digits)
Continuity	R < 30 Ω
Resistance	0.1 Ω...66.00 MΩ
Basic accuracy	± (1 % rdg. + 5 digits)
Frequency measurement	0.01 Hz...1.000 MHz
Capacitance	0.001 nF...6.6 mF
Duty cycle function	5.0 %...95.0 %
Pollution degree	2
Measurement categories	CAT IV 600 V, CAT III 1000 V
Safety cert.:	EN 61010/IEC 61010
Jaw opening	approx. 51 mm
Power supply	1 x battery 9 V, IEC 6F22
Dimensions	281 x 105 x 53 mm
Weight	approx. 560 g

Ordering Information:

Description	Model	Article no.
ACDC-3400 IND	ACDC-3400 IND	3434889
TL36A	TL36A	3034444
Safety set	370003	2146666



Included:

- 1 x AC50A
- 2 x test leads
- 2 x battery 1.5 V, IEC LR6
- 1 x carrying case
- 1 x user manual

AC50A

Digital leakage current clamp (AC)

Functions

- Leakage current measurement
- Voltage and resistance measurement
- Continuity test with beeper

Product information

- Manual range selection
- Integrated measurement memory (data hold)
- MIN/MAX and relative value measurement
- Additional bar graph display
- Jaw opening 30 mm
- Auto Power Off

Product highlights

- Minimum resolution: 0.01 mA
- 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

Technical specifications

Display	LCD, 3¾ digit, 3999 digits
Ranges	
Current AC	0.01 mA...60 A
Tolerance	±(1.5 % rdg. + 5 digits)
Voltage AC	0.1...400 V
Tolerance	±(2 % rdg. + 4 digits)
Frequency range for AC current/ voltage	40 Hz...1 kHz
Input resistance	10 MΩ
Tolerance	
Resistance	0.1...400 Ω
Tolerance	±(1 % rdg. + 2 digits)
Continuity	R<40 Ω
Pollution degree	2
Measurement category	CAT II/600 V
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010
Jaw opening	approx. 30 mm
Power supply	2 x battery 1.5 V, IEC LR6
Dimensions	210 x 62 x 36 mm
Weight	approx. 230 g

Accessories:



Adapters for stray current measurements:
Schuko/Schuko*
Model 1233



CEE 5-pole 16 A
Model 1235



CEE 5-pole 32 A
Model 1236

Ordering Information:

Description	Model	Article no.
AC50A	AC50A	3033017
AC50A	AC50A-D*	3454543

D* is German version

Test adapter:

Schuko/Schuko*	1233	2145900
CEE 5-pin 16 A	1235	2145921
CEE 5-pin 32 A	1236	2145939

* only for countries with Schuko plug



Included:

- 1 x CHB5
- 2 x test leads
- 2 x battery 1.5 V, IEC LR6
- 1 x carrying case
- 1 x 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
- 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

Technical specifications

Display	LCD, 4 digit, 9999 digits
Ranges	
Current AC	0.5 mA...50 A
Basic accuracy	±(1.5 % rdg. + 5 digits)
Voltage AC	0.1...600 V
Basic accuracy	±(0.5 % rdg. + 5 digits)
Frequency range for AC current/ voltage	45 Hz...1 kHz
Input resistance	10 MΩ
Frequency measurement	45...65 Hz
Basic accuracy	±(0.2 Hz)
Harmonics	display up to 99th
Crest factor measurement	1.00...99.99
Basic accuracy	±(5 % rdg. + 30 digits)
Pollution degree	2
Measurement category	CAT II/600 V, CAT III/300 V
Safety cert.:	DIN VDE 0411/EN 61010/ IEC 61010
Jaw opening	approx. 30 mm
Power supply	2 x battery 1.5 V, IEC L 6
Dimensions	210 x 62 x 36 mm
Weight	approx. 200 g

Ordering Information:

Description	Model	Article no.
CHB5	93570	3313218

Measurement adapter:

Schuko/Schuko*	1233	2145900
CEE 5-pole 16 A	1235	2145921
CEE 5-pole 32 A	1236	2145939



LH41A

Digital current clamp (AC/DC)

Functions

- Current measurement from 1 mA AC and DC

Product information

- Manual range selection
- Jaw opening 19 mm
- Automatic zero-point (DC measurement range)
- Integrated 5 s measurement memory (data hold)
- Auto Power Off

Product highlights

- Minimum resolution: 1 mA
- Shielded against external interference



Included:

- 1 x LH41A
- 1 x battery 9 V, IEC 6LR61
- 1 x user manual

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

Ordering Information:

Description	Model	Article no.
LH41A	LH41A	3030898



CT235A

Current clamp adapter (AC/DC)

Functions

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

Product information

- Can be used with all common multimeters; also compatible with TRUE RMS multimeters and analogue recorders
- Output Signal: 1 mV corresponds to 1 A test current
- Jaw opening 32 mm
- Fixed test leads
- Zero adjustment



Included:

- 1 x CT235A
- 1 x battery 9 V, IEC 6F22
- 1 x user manual

Technical specifications

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

Ordering Information:

Description	Model	Article no.
CT235A	CT235A	3026809



CT237B

Current clamp adapter (AC/DC)

Functions

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

Product information

- Can be used with all common multimeters; also compatible with TRUE RMS multimeters and analogue recorders
- Output Signal: 10 mV corresponds to 1 A test current
- Jaw opening 20 mm
- Fixed test leads
- Zero adjustment



Included:

- 1 x CT237B
- 1 x battery 9 V, IEC 6F22
- 1 x user manual

Technical specifications

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

Ordering Information:

Description	Model	Article no.
CT237B	CT237B	3511514

Measurement and test 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.

See our full line of UK specific single and multifunction testers at beha-amprobe.com

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Symbols used in this chapter

	Low ohm measurement		Leakage test
	Measurement of loop resistance		Measurement of touch current
	Measurement of internal resistance		Software optionally available
	Trip test for residual current circuit breakers (RCD/FI)		Internal measurement memory
	Earth Ground Testing		High-voltage testing
	RCD-FI test with increasing test current		No battery needed
	Adjustable curve form of test current (RCD/FI)		Display with LCD
	Adjustable test time		Integrated socket test with contact electrode
	PC interface		Touch screen
	Uses SD card memory storage		Automatic test sequence
	Testing of AC/DC-sensitive RCD/FI		Connection for barcode scanner
	Testing of portable residual current circuit breakers (PRCD)		Connection of an external current clamp





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

Product information

- Measures Earth ground resistance - 3 point (fall of potential) or 2 point tests
- Voltage measurement prevents false measurements
- Built-in memory to store 20 measurements
- Safety CAT III 600V

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

Technical specifications

(At 23°C ± 5°C. 45% to 75% RH)

Earth Resistance Measurement	0.00Ω ~ 40.00Ω	± (2% rdg + 20 LSD)
	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:

- 1 Pc. Test lead set for 3 point test
- 1 Pc. Auxiliary ground rods
- 1 Pc. Test lead set for 2 point test
- 1 Pc. Batteries (6 x AA)
- 1 Pc. User's manual
- 1 Pc. Strap and carrying case

Accessories:

Description	Model	Article no
Single function tester kit carry bag	KP1700	4160759



KMP7021

Digital RCD Tester according to BS7671 IEE 17th Edition regulations

Functions

- Designed to check for correct operation of RCD devices

Product information

- Three levels of trip currents (x1/2, x1, x5) for complete range of testing applications: Fast Trip Function and Ramp Test
- Phase switch selection 0° and 180° for positive and negative semi-cycle testing
- Large display
- Safety CAT III 300 V

Product highlights

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

Technical specifications

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

Operating Voltage	230Vac, 50 Hz	+10% to -15%
Trip current @ X1/2	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 1000ms) 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 (KMP7021)	250mA (trip time 0 to 40ms)	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:

- 1 Pc. 3-Wires mains test cord
- 1 Pc. Test lead set with leads/probes/alligator clips
- 1 Pc. User manual
- 1 Pc. Strap and carrying case

Accessories:

Description	Model	Article no
Standard test lead set for KMP7030	SL7030	4160744
Single function tester kit carry bag	KP1700	4160759

* Products are only available in UK

Ground Resistance Tester

Earth ground testing



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)



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 (L - N impedance > 20 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
Voltage Measurement	100Vac ~ 300Vac	± (2% rdg + 4 LSD) @ 50/60Hz
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 BS EN 61557-1. BS EN 61557-3 BS EN 61326-1 (EMC)	

Included:

1 Pc. Mains test cord	1 Pc. Alligator clip set
1 Pc. Test lead set with IEC connector	1 Pc. batteries (8 x AA)
1 Pc. Test probe set,	1 Pc. user manual
	1 Pc. strap and carrying case

Accessories:

Description	Model	Article no
Standard test lead set for KMP7030	SL7030	4160744
Single function tester kit carry bag	KP1700	4160759



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)



Technical specifications

Specifications (At 23°C ± 5°C. 45% to 75% RH)		
Insulation Resistance @ 250V/500/1000V (Test Current ≥1mA)	0.00MΩ ~ 4.99MΩ 5.00MΩ ~ 49.9MΩ 50MΩ ~ 999Ω 1.00GΩ ~ 1.99GΩ (Buzzer threshold: 4MΩ)	± (3% rdg + 5 LSD) for 0.00MΩ ~ 99.9MΩ ± (5% rdg + 5 LSD) for 100MΩ ~ 1.99GΩ
Continuity @ IN ≥200mA, Uo=5Vdc (Nominal)	0.00MΩ ~ 9.99MΩ 10.0MΩ ~ 99.9MΩ	± (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:

2 Pc. Test leads	1 Pc. batteries (6 x AA)
2 Pc. Test probes	1 Pc. user's manual
2 Pc. alligator clips	1 Pc. carrying case and strap

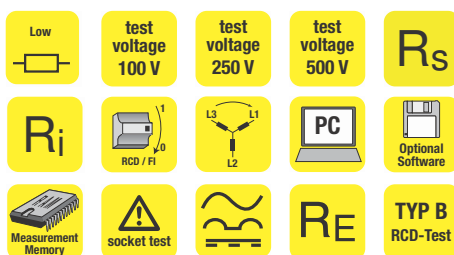
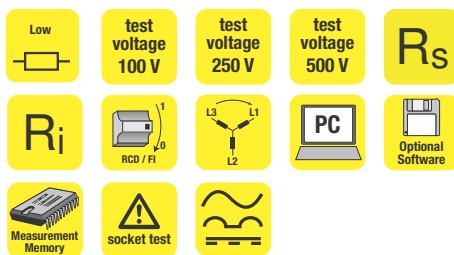
Accessories:

Description	Model	Article no
Single function tester kit carry bag	KP1700	4160759

Ordering Information:

Description	Model	Article no.
KPM7010	KPM7010*	3730256
KPM7021	KPM7021*	3730301
KPM7030	KPM7030*	3842833
KPM7036	KPM7036*	3730274

* Products are only available in UK



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 ProInstall-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:

- 1 x ProInstall-100 or 200
- 3 x test leads
- 3 x crocodile clips
- 3 x probes
- 1 x probe with test button
- 1 x protective holster (integrated)
- 1 x hanging strap
- 1 x carrying case
- 6 x battery 1.5 V, IEC LR6
- 1 x quick start guide
- 1 x user manual on CD-ROM
- 1 x Schuko input line cord

Recommended Accessories

Software		
Earth testing set	TL-EARTH	4388671
USB download cable	TL-USB	4372676
es control	0100	1312
Beha-Amprobe	DL-SW-KIT	4597359
downloader software with cable		

Technical specifications

Display	LCD, 4 digit, 9999 digits
Measurement range/resolution	
Voltage	50...500 V/1V AC
Frequency	45.0...65.0 Hz/0.1 Hz
Loop resistance	0.15...20/200/200 Ω 0.01/0.1/1 Ω
Short circuit current	0...10 kA
Input voltage range	100...500 V 50/60 Hz
Test current	approx. 7 A (at 230 V)
Internal network resistance	0.15...20/200/200 Ω 0.01/0.1/1 Ω
Short circuit current	0...10 kA
Input voltage range	100...500 V 50/60 Hz
Test current	approx. 7 A (at 230 V) approx. 5 mA (at 230 V)
Insulation resistance	0...1000 MΩ 0.01/ 0.1/1 MΩ
Test voltage	100, 250, 500, 1000 V DC
Low ohm measurement	0.05...20/200/2000 Ω 0.01/0.1/1 Ω
Test current	> 200 mA DC
RCD/FI rated residual currents-	10, 30, 100, 300, 500, 1000 mA
Factors:	x1/2, x1, x5 and AUTO
RCD/FI types:	Standard AC, selective, pulsating, B-type (only ProInstall-200)
Measurement functions	contact voltage, trip time, trip current test with rising test current
Contact voltage	0...50 V
Trip time	1...510 ms/1 ms
Trip current	30...110% of I _{DN} (in 10% increments)
Phase rotation test	
Input voltage range	100...500 V 50/60 Hz
Earth resistance	0.05...200 Ω / 2000 Ω
Probe resistance	0.1...52 kΩ
Max. measurement current	approx. 3.5 mA
Measurement voltage	approx. 25 V
Frequency	128 Hz/140 Hz
Overall	
Measurement memory values	approx. 400 to 1000 measurement values
Interface	IR/USB
Safety cert.:	DIN VDE 0411/EN61010/ IEC61010 DIN VDE 0413/ EN61557/IEC61557
Measurement category	CAT III/500 V, CAT IV/300 V
Pollution degree	2
Protection category	IP 40
Power supply	6 x battery 1.5 V, IEC LR6
Dimensions	110 x 260 x 130 mm
Weight	approx. 1500g (incl. batteries)

Ordering Information:

Description	Model	Article no.
ProInstall-100-D	ProInstall-100-D	4373971
ProInstall-100-DK	ProInstall-100-DK	4399247
ProInstall-200-D	ProInstall-200-D	4373980
ProInstall-100-CH	ProInstall-100-CH	4374484
ProInstall-200-CH	ProInstall-200-CH	4374491
ProInstall-100-EUR	ProInstall-100-EUR	4374504
ProInstall-200-EUR	ProInstall-200-EUR	4374519
ProInstall-75-UK*	ProInstall-75-UK	4826466
Please check which model is relevant for your country:		
D version for Germany, Austria only		
DK version for Denmark only		
CH version for Switzerland only		
UK version for UK/Ireland only		
EUR version for other EU countries except for UK, Germany, Austria, Switzerland and Denmark.		

Additional accessories can be found at the end of the chapter

* ProInstall-75-UK is not shown in this catalog, for information please visit our website beha-amprobe.com. Check for availability for your country with your local distributor.



R_E A mA

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

Product information

- Measurement memory for 116 readings
- Recording interval 1...255 s
- Limit adjustment with alarm function
- Data hold function
- Jaw opening 23 mm
- Calibration loop included

Product highlights

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

Included:

- 1 x DGC-1000A
- 1 x battery 9 V, IEC LR6
- 1 x user manual
- 1 x calibration loop
- 1 x case

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	1 x battery 9 V, IEC 6LR61
Dimensions	257 x 100 x 47 mm
Weight	approx. 640 g

Ordering Information:

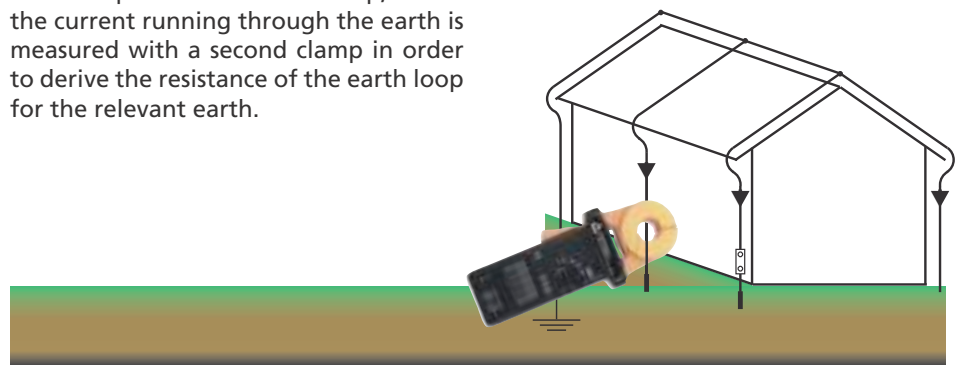
Description	Model	Article no.
DGC-1000 A	DGC-1000 A	2731217

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.





Utility model
29822508.5

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 55 x 86 mm
Weight	approx. 75 g

Included:
1 x Schuko test FI/RCD
1 x user manual

Ordering Information:		
Description	Model	Article no.
Schuko test FI/RCD	9080*	3530534

* Packing unit of 10 items (also available individually)
* Tester is available for countries with a Schuko plug only

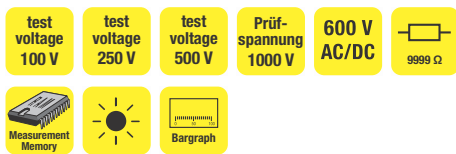
Socket test

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.



Measurement and test equipment in accordance with EN 61557 |

Megohmmeters



93530

Megohmmeter

Functions

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

Product information

- Built-in measurement memory for 9 readings
- Lock function enables continuous operation
- Zero adjustment with resistance measurement
- Backlit display
- Additional bar graph display

Technical specifications

Display	LCD, 4 digit; 9999 digits
Display range/resolution	0...999.9 kΩ/0.1 kΩ,
Insulation resistance	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
	CAT III/600 V
Measurement category	2
Pollution degree	2
Power supply	6 x battery 1.5 V, IEC LR6
Dimensions	200 x 95 x 48 mm
Weight	approx. 500 g

Included:

- 1 x insulation tester 93530
- 2 x test leads
- 1 x crocodile clip
- 1 x probe
- 1 x carrying case
- 6 x battery 1.5 V, IEC LR6
- 1 x user manual

Ordering Information:

Description	Model	Article no.
93530	93530-D	3454416

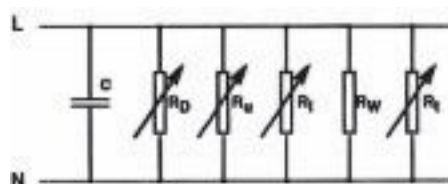
Things to know about insulation measurement:

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.



Replacement circuit diagram of the insulation resistor from L to N

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.



GT-400

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

Functions

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

Product information

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

Product highlights

- Battery-operated - ideal for mobile use
- Suitable for trained people due to the Pass/Fail descriptive function
- Simple to use due to a rotary switch and start button

Technical specifications

Display	Graphic LCD
Measurement range	
Resolution	
Protective earth resistance	0.10...2.00 Ω
Test current / voltage	> ± 200 mA DC / > 4 V
Test current/voltage	> 5 A / approx. 6 V AC
Insulation resistance	0.1...20 MΩ
Test current / voltage	> 500 V DC / > 1 mA
Equivalent stray current	0.1...20 mA
Test voltage	approx. 32 V AC
Overall limit value display	via symbols in LCD
	Safety cert.: DIN VDE 0404
	DIN VDE 0411/EN 61010/
	IEC 61010
	DIN VDE 0413/EN 61557/
	IEC 61557
Measurement category	CAT II/300 V
Pollution degree	2
Protection class	II
Protection category	IP 40
Power supply	6 x 1.5 V battery, IEC LR6 (AA)
Dimensions (W*H*D)	approx. 265 x 110 x 50 mm
Weight	approx. 700g

Included:

- 1 x equipment tester GT-400
- 1 x measurement accessories set with safety test line, Safety crocodile clip and safety probe
- 6 x battery type AA
- 1 x IEC power cable 0.5m
- 1 x carry case
- 1 x user manual



Accessories:

Leakage current clamp
AC50A



Measurement adapter Schuko/
Schuko
1233*

Test report 0701-0702
1279

Ordering Information:

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

D version for Germany, Austria and all other countries using the Schuko plug
CH version for Switzerland only
UK version for UK only

Check for availability for your country with your local distributor.

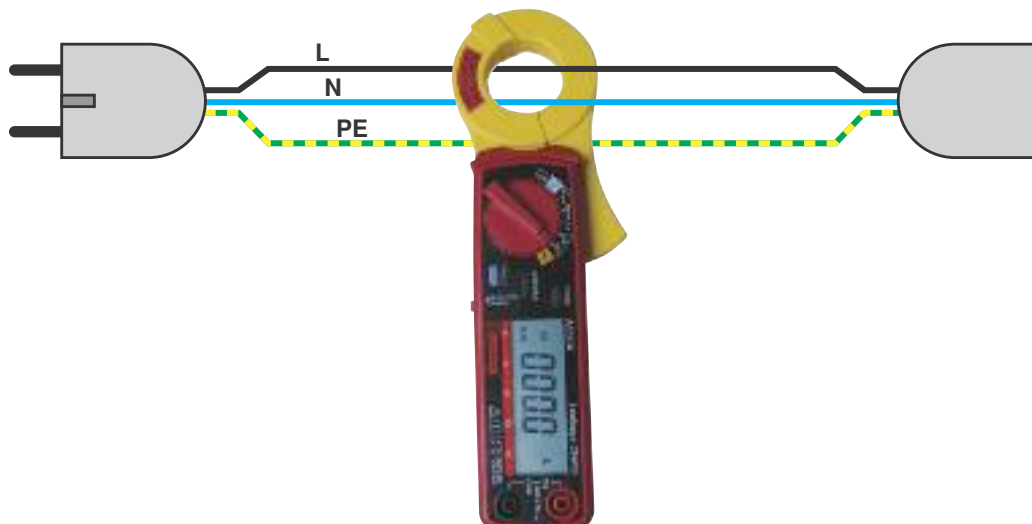
Recommended accessories

AC50A AC50A-D	3454543	
Schuko test adapter	1233	2145900
Test log 0701-0702	1279	3313435

Additional accessories can be found at the end of the chapter

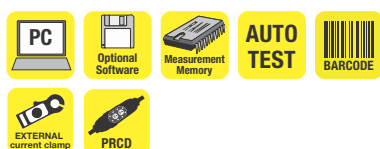
Application example for a leakage test under mains voltage:

Leakage current clamp
AC50A and measure-
ment adapter
Schuko/Schuko 1233



Measurement and test equipment in accordance with EN 61557 |

Equipment tester in accordance with EN 61557



Included:

- 1 x GT-600 with accessory case (fixed to device lid, removable)
- 1 x test lead
- 1 x probe
- 1 x crocodile clip
- 1 x interface cable (USB)
- 1 x user manual

GT-600

Equipment tester in accordance with DIN VDE 0701-0702

Functions

- Measurement of protective earth resistance
- Insulation resistance measurement
- Measurement of equivalent stray current
- Measurement of protection earth current
- Measurement of touch current
- Performance measurement, load voltage, load current, power factor
- Direct testing of IEC cables without adapter device information

Product information

- Memory for approx. 3800 readings, real-time clock
- 3 memory levels (client, location, department)
- Integrated interface (USB 2.0) for transferring measurements to PC
- Separate interface (USB 2.0) for connecting a barcode scanner and keyboard
- Graphical LCD for measured values, limit values and parameters
- Wiring diagrams and limit values on device lid
- Simple operation with rotary switch
- Manual test sequence
- Clear display "Test OK/not OK"
- Test lead compensation
- Compact and robust carrying case
- Convenient software with "es control professional" database for logging purposes available (optional)

Product highlights

- 5-A and 0.2-A test current for protective earth resistance
- Differential current procedure for protective earth current
- Direct measuring procedure for touch current
- Fast safety and function check of IEC cables
- Connection for barcode scanner for reading in sample numbers and test sequences
- Suitable for trained people due to the good/bad descriptive function

Technical specifications

Display	graphical LCD, 128 x 64 pixels
Display ranges	
Protective earth resistance	0.01...10.0 Ω
Test current/voltage	> 200 mA / approx. 6 V AC
Test current/voltage	> 5 A / approx. 6 V AC
Insulation resistance	0.01...50 MΩ
Test current / voltage	500 V DC / > 1 mA (250/500 V only GT-800)
Equivalent stray current	0.25...20 mA
Test voltage / current	approx. 45 V AC / approx. 260 mA
Protective earth current	0.25...20 mA (Differential current procedure)
Touch current	0.02...2 mA (Direct measurement procedure)
Apparent power	30 W...4.04 kVA
Active power	30 W...4.04 kW
Load voltage	195...253 V
Load current	0...16 A
Power factor	0...1
Voltage measurement SELV/PELV	10.0...150 V AC/DC
External current clamp input	0.0 ... 20.0 mA 0.2 ... 60.0 A, for clamp adapter 1000:1 (only GT-800)
Test functions of PRCD (only GT-800)	
Protective earth, insulation, function, protective earth current, RCD test:	1/2x I _{ΔN} , 1x I _{ΔN} , 5x I _{ΔN} , and trip current (ramp)
PRCD types	2-pole, 3-pole, and S-type
Mains fuse	2 x T16 A
Overall	
Measurement memory	3800 measurement values, corresponds to approx. 260 meter measurements for PC
Interface (USB 2.0)	for barcode scanner and keyboard
Interface (USB 2.0)	optical and acoustic
Limit value display	DIN VDE 0404 parts 1, 2, DIN VDE 0411-1 / EN 61010-1
Safety cert.:	DIN VDE 0413/EN 61557 parts 2, 4
Measurement category	CAT II/300 V
Protection category	IP 40
Power supply	230 V +10%/-15% 50/60 Hz
Power consumption	approx. 45 VA
Dimensions	300 x 250 x 130 mm
Weight	approx. 4.5 kg



Adapter cable ACF-6A

Ordering Information:

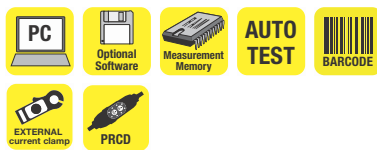
Description	Model	Article no.
GT-600*	GT-600	4151632

Recommended Accessories

Leakage current clamp adapter CHB1	1311	2390055
Adapter cable	ACF-6A	2743889
Barcode scanner BC-1250G	BC-1250G	4377939
Keyboard KBGE-MT204S	KBGE-MT204S	3504388
Software es control 0701-0702/0113 (without interface adapter)	1314	2390081

Further accessories are at the end of the chapter

* only available for countries which use a Schuko plug



Included:

- 1 x GT-800 with accessory case (fixed to device lid, removable)
- 1 x test lead
- 1 x probe
- 1 x crocodile clip
- 1 x interface cable (USB)
- 1 x user manual

GT-800

Automatic equipment tester in accordance with DIN VDE 0701-0702

as the GT-600, also with:

- Automatic test sequence, with input from custom test sequences
- Connection for external current clamp adapter for measurement of protective earth currents, even on 3-phase samples
- Testing of portable residual current circuit breakers (RCDs)
- Test voltage for insulation measurement, switchable 250 / 500 V
- Automatic polarity of mains socket



Adapter cable ACF-6A

Technical specifications

Display	graphical LCD, 128 x 64 pixels
Display ranges	
Protective earth resistance	0.01...10.0 Ω
Test current/voltage	> 200 mA / approx. 6 V AC
Test current/voltage	> 5 A / approx. 6 V AC
Insulation resistance	0.01...50 MΩ
Test current / voltage	500 V DC / > 1 mA (250/500 V only GT-800)
Equivalent stray current	0.25...20 mA
Test voltage / current	approx. 45 V AC / approx. 260 mA
Protective earth current	0.25...20 mA (Differential current procedure)
Touch current	0.02...2 mA (Direct measurement procedure)
Apparent power	30 W...4.04 kVA
Active power	30 W...4.04 kW
Load voltage	195...253 V
Load current	0...16 A
Power factor	0...1
Voltage measurement	
SELV/PELV	10.0...150 V AC/DC
External current clamp input	0.0 ... 20.0 mA 0.2 ... 60.0 A, for clamp adapter 1000:1 (only GT-800)
Test functions of PRCD (only GT-800)	
Protective earth, insulation, function, protective earth current, RCD test:	1/2 x I _{ΔN} , 1 x I _{ΔN} , 5 x I _{ΔN} , and trip current (ramp)
PRCD types	2-pole, 3-pole, and S-type
Mains fuse	2 x T16 A
Overall	
Measurement memory	3800 measurement values, corresponds to approx. 260 meter measurements
Interface (USB 2.0)	for PC
Interface (USB 2.0)	for barcode scanner and keyboard
Limit value display	optical and acoustic
Safety cert.:	DIN VDE 0404 parts 1, 2, DIN VDE 0411-1 / EN 61010-1, DIN VDE 0413/EN 61557 parts 2, 4
Measurement category	CAT II/300 V
Protection category	IP 40
Power supply	230 V +10%/-15% 50/60 Hz
Power consumption	approx. 45 VA
Dimensions	300 x 250 x 130 mm
Weight	approx. 4.5 kg

Ordering Information:

Description	Model	Article no.
GT-800*	GT-800	4151644
GT-800-CH**	GT-800-CH	4460614
* only available for countries which use a Schuko plug		
** Only available for Switzerland		

Recommended Accessories

Leakage current clamp adapter CHB1	1311	2390055
Adapter cable	ACF-6A	2743889
Barcode scanner BC-1250G	BC-1250G	4377939
Keyboard KBGE-MT204S	KBGE-MT204S	3504388
Software es control 0701-0702/0113	1314	2390081
(without interface adapter)		

Further accessories are at the end of the chapter





Earth measurement set

perfect for:

- e.g. Telaris ProInstall-200

Included:

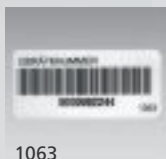
- 1 x carrying case
- 2 x ground spikes (235 x Ø 10 mm)
- 1 x test lead, red, 25 m
- 1 x test lead, blue, 25 m
- 1 x test lead, green, 5 m
- 3 x test lead winders
- 3 x crocodile clips

Ordering Information:

Description	Model	Article no.
Earth measurement set	TL-EARTH	4388671



Barcode scanner
BC-1250G



1063

Barcode Scanner

- For reading in barcoded sample numbers*
- Model 1325 for:
- For MACHINEmaster (Model 9050)

Model BC-GT07XX for:

- for equipment tester GT-0751

Model BC-1250G for:

- for machine tester MT 204-S (Model 9085)
- for equipment tester GT600 and GT800

Ordering Information:

Description	Model	Article no.
Barcode scanner	1325	3223132
Barcode scanner BC-GT07XX	BC-GT07XX	3504434
Barcode scanner BC-1250G	BC-1250G	4377939
Barcode sticker (250 pcs. on roll)	1063	2389952

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
- For MACHINEmaster (Model 9050)

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



KBGE-MT204S

USB keyboard

- For convenient entry of client/sample information on site
- For equipment tester GT600 and GT800

Ordering Information:

Description	Model	Article no.
Keyboard	KBGE-MT204S	3504388



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

Ordering Information:

Description	Model	Article no.
AC current clamp adapter	1226	3313401

1000 A
AC

Output
Analog



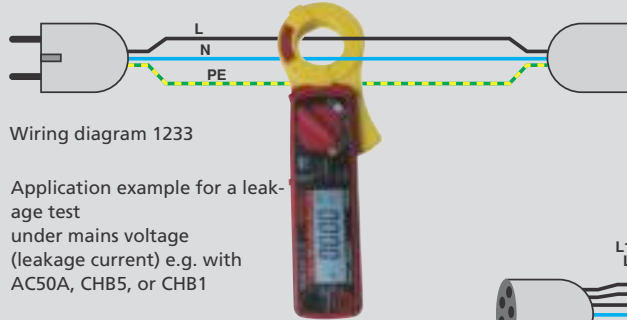
Measurement adapter for stray current/leakage current measurement

- 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

Ordering Information:

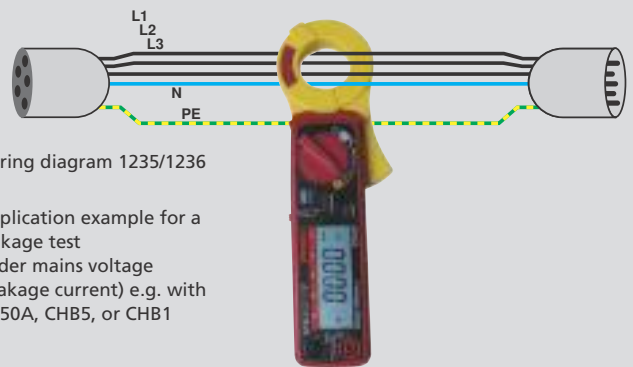
Description	Model	Article no.
Measurement adapter: Schuko/Schuko*	1233	2145900
CEE 5-pole 16 A	1235	2145921
CEE 5-pole 32 A	1236	2145939

* only for countries with Schuko plug



Wiring diagram 1233

Application example for a leakage test under mains voltage (leakage current) e.g. with AC50A, CHB5, or CHB1



Wiring diagram 1235/1236

Application example for a leakage test under mains voltage (leakage current) e.g. with AC50A, CHB5, or CHB1



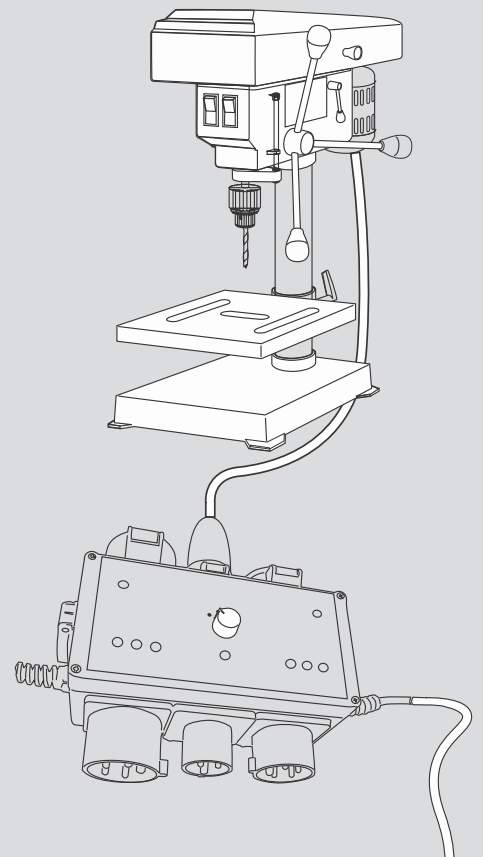
VLP 5

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

Ordering Information:

Description	Model	Article no.
VLP5	1343	3313514





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

Ordering Information:

Description	Model	Article no.
DAA-16*	DAA-16	2743806
DAA-32*	DAA-32	2743850

* with Schuko plug



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

Ordering Information:

Description	Model	Article no.
Three-phase adapter*	1142	3313394

* with Schuko plug



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

Ordering Information:

Description	Model	Article no.
Three-phase adapter 16A*	1240	3313412
Three-phase adapter 32A*	1241	3313420

* with Schuko plug



50 A
AC

Output
Analog

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-800

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	$\pm (6 \% + 0.5 \text{ mA})$
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

Ordering Information:

Description	Model	Article no.
CHB1	1311	2390055



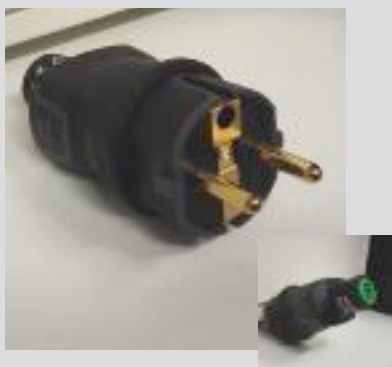
PAT-BRUSH

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

Ordering Information:

Description	Model	Article no.
Brush probe	PAT-BRUSH	4151667



ADAPTER-PE

Adapters for protective earth

- Measurement of protective earth resistance with securely attached equipment
- Secure contacting of the protective earth to a Schuko socket
- 4 mm plug-in technology

Ordering Information:

Description	Model	Article no.
Adapter for protective earth	ADAPTER-PE	4151659



PA-1

Adapter for 3-pole plug

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



Ordering Information:

Description	Model	Article no.
Adapter for 3-pole plug	PA-1	4362289

Software packages for logging purposes



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.



Products

es control professional
Downloader Software

64

	Software			
	es control professional 0100	es control professional 0701-0702/0113	es control professional Complete	Beha-Amprobe Downloader Software
Test equipment:	Model 1312	Model 1314	Model 1316	Model DL-SW-KIT
PROINSTALL-100	•		•	•
PROINSTALL-200	•		•	•
GT-600		•	•	
GT-800-CH		•	•	
GT-0751		•	•	
MACHINEmaster		•	•	
MT 204-S		•	•	



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:
 - ProInstall-100
 - ProInstall-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)

Supported instruments

- ProInstall-100
- ProInstall-200

Ordering Information:

Description	Model	Article no.
Downloader Software	DL-SW-KIT	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.

Ordering Information:

Description	Model	Article no.
es control professional 0100 (without interface cable)	1312	2390062
es control professional 0701-0702/0113 (without interface cable)	1314	2390081
es control professional Complete (without interface cable)	1316	2390735
USB download cable for ProInstall series	TL-USB	4372676
RS-232 on USB adapter	1217	2389965
Downloader Software DL-SW-Kit	DL-SW-KIT	4597359



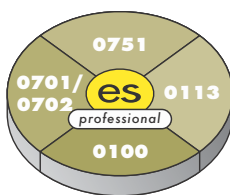
Recommended configuration for es control software

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

Included:

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



Price advantage!

Save upon purchasing a complete package (all modules) compared to buying all individual modules separately.

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



Accessories:

USB adapter including driver
Model 1217

Ordering Information:

Description	Model	Article no.
es control professional 0100	1312	2390062
es control professional 0701-0702 / 0113	1314	2390081
es control professional Complete (all modules)	1316	2390735
USB data cable for ProInstall series	TL-USB	4372676
RS-232 on USB adapter Beha-Amprobe	1217	2389965
Downloader Software with interface cable	DL-SW-KIT	4597359

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.

Products

Temperature meters	67
Moisture meters	70
Temperature / RH data logger	72
Temperature sensors / accessories	73
Light meters	74
Sound level meters	75
Anemometers	77
Tachometers	78

Symbols used in this chapter

	NTC as thermal element		Infra-red measurement
	NiCr/Ni thermo-element (K-type)		Data Logger
	Measurement memory DATA HOLD		Alarm function
	Min/max value memory		PC interface
	Back light		Dew point measurement



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:

- 1 x IR608A
- 1 x battery 9 V, IEC 6LR61
- 1 x user manual

Technical specifications

Display	LCD, 4 digit
Measurement ranges	-18...+400°C 0 ... 750° F
Resolution	0.2°C / 0.5°F
Basic accuracy	±2% or ±2°C (±3.5°F)
Emissivity	0.95 (preset)
Response time	500 ms
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	152 x 101 x 38 mm
Weight	approx. 227 g

Ordering Information:

Description	Model	Article no.
IR608 A	IR608A	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
- °F / °C selectable
- Temperature is displayed for 10 seconds
- With pocket clip

Product highlights

- With laser pointer
- Small and compact

Included:

- 1 x IR-450-EUR
- 1 x battery 1.5 V, IEC LR03, AAA
- 1 x user manual

Technical specifications

Display	LCD, 3 digit
Measurement ranges	-30...+500° C; 20 ... 932° F
Resolution	0.2° C / 0.5° F
Basic accuracy	±1.5% or ±2° C (±3° F)
Emissivity	0.95 (preset)
Response time	500 ms
Power supply	1 x battery 1.5 V, IEC LR03, AAA
Dimensions	100 x 20 x 29 mm
Weight	approx. 50 g

Ordering Information:

Description	Model	Article no.
IR-450-EUR	IR-450-EUR	4308539



IR-710-EUR



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

Technical specifications

Display	LCD, 4 digit
Measurement ranges	-32...+1550°C
Resolution	0.1°C < 999.9 °C / 1°C > 999.9 °C
Basic accuracy	±1.8% or ±1.8° C
Emissivity	Adjustable between 0.10...1.00
Response time	250 ms
Ratio of spot size to distance	50:1
Laser	1-point laser >1mW Class 2
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	183 x 147 x 57 mm
Weight	approx. 345
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	183 x 147 x 57 mm
Weight	approx. 345



IR-712-EUR
IR-720-EUR
IR-730-EUR



IR-712-EUR

Infrared Thermometer 12:1

as the IR-710-EUR, also with:

- Temperature measurement from -18° to 550°C
- Distance to spot size ratio: 12:1
- Continuously adjustable emissivity
- Integrated thread for tripod
- Measuring the average temperature

IR-720-EUR

Infrared Thermometer 20:1

as the IR-712-EUR, also with:

- Temperature measurement from -32° to 1050°C
- Distance to spot size ratio: 20:1

IR-730-EUR

Infrared Thermometer 30:1

as the IR-720-EUR, also with:

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



IR-750-EUR



IR-750-EUR

Infrared Thermometer 50:1

as the IR-730-EUR, also 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

Included:

- 1 x IR-710-EUR, IR-712-EUR, IR-720-EUR, IR-730-EUR, IR-750-EUR
- 1 x battery 9 V, IEC 6LR61
- 1 x carry case (only for IR-712-EUR, IR-720-EUR, IR-730-EUR, IR-750-EUR)
- 1 x user manual
- 1 x USB cable (only IR-750-EUR)
- 1 x software on CD (only IR-750-EUR)
- 1 x hard carrying case (only IR-750-EUR)
- 1 x K-type wire probe (only IR-750-EUR)

* Technical data relates to the highest model in the series (IR-750-EUR). Data regarding individual models can be found on our website www.beha-amprobe.com

Ordering Information:

Description	Model	Article no.
IR-710-EUR	IR-710-EUR	4308480
IR-712-EUR	IR-712-EUR	4308498
IR-720-EUR	IR-720-EUR	4308500
IR-730-EUR	IR-730-EUR	4308517
IR-750-EUR	IR-750-EUR	4308521



TMD-50



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

Technical specifications

Display	LCD, 3½ digit, 1999 digits
Measurement range	Type K -180...+1350° C (-292...+1999° F)
Basic accuracy	±(0.1% v.M.+1°C)
	±(0.1% v.M.+2°C)
	±(0.1% v.M.+2°F)
	±(0.1% v.M.+4°F)
Resolution	0.1 °C/°F
Power supply	4 x battery 1.5 V, IEC R03, AAA
Dimensions	approx. 160 x 85 x 30 mm
Weight	approx. 280 g



TMD-53



TMD-53

K-type / J-type digital thermometer with dual input

as the TMD-50, also 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)

TMD-53 specifications

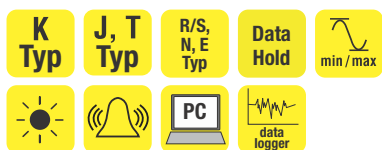
Display	LCD, 5 digit, 99999 digits
Measurement range	Type K -180...+1350° C (-292...+2462° F)
Basic accuracy	± (0.05% rdg. + 0.3°C)
	± (0.05% rdg. + 0.7°C)
	± (0.05% rdg. + 0.6°F)
	± (0.05% rdg. + 1.4°F)
Resolution	0.1 °C/°F
Power supply	4 x battery 1.5 V, IEC R03, AAA
Dimensions	approx. 160 x 85 x 30 mm
Weight	approx. 280 g

Included with TMD-50/TMD-53:

- 1 x TMD-50 or TMD-53
- 2 x K-type wire probe
- 4 x battery 1.5 V, IEC R03, AAA
- 1 x user manual



TMD-56



TMD-56

Digital thermometer with data logger and USB connection

as the TMD-53, also 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

Display	LCD, 4½ digit, 19999 digits
Measurement range	Type K: -180°C to 1350°C (-292°F to 2462°F)
Basic accuracy	Type K
	± (0.05% rdg. + 0.3°C)
	± (0.05% rdg. + 0.7°C)
	± (0.05% rdg. + 0.6°F)
	± (0.05% rdg. + 1.4°F)
Resolution	0.1 °C/°F
Power supply	4 x battery 1.5 V, IEC R03, AAA
Dimensions	approx. 160 x 85 x 30 mm
Weight	approx. 360 g

Accessories:



Carrying case
Model 1150



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

Included with TMD-56:

- 1 x TMD-56
- 2 x K-type wire probe
- 1 x USB cable
- 1 x software CD
- 4 x battery 1.5 V, IEC R03, AAA
- 1 x user manual

Ordering Information:

Description	Model	Article no.
TMD-50	TMD-50	3730150
TMD-53	TMD-53	3730085
TMD-56	TMD-56	3730138
Carrying case	1150	2145755
Heat-conducting paste	1032	2145689



TPP1-C1

Mini pocket thermometer with immersion probe

Functions

- Temperature measurement with integrated NTC sensor

Product information

- Immersion probe
- Measurement memory (data hold)
- Compact design
- With protective sleeve/holder (TPP1-C1 only)

TPP2-C1

Mini pocket thermometer with surface probe

- As TPP1-C1, but with:
Surface probe without protective sleeve



Accessories:

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

Included:

1 x TPP1-C1 or TPP2-C1
1 x battery 3 V, IEC 2032
1 x user manual

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	1 x battery 3 V, IEC 2032	
Dimensions		
(with protective sleeve): approx. 40 x 30 x 160 mm		
Weight	approx. 16 g	

Ordering Information:

Description	Model	Article no.
TPP1-C1	TPP1-C1	2826634
TPP2-C1	TPP2-C1	2826652
Heat-conducting paste	1032	2145689



TH-1

Digital humidity and temperature meter

Functions

- Humidity measurement
- Temperature measurement

Product information

- Probe integrated in device
- Switchable between °C and °F measurement
- Integrated measurement memory (data hold)
- MIN and MAX data hold
- Auto Power Off

Product highlights

- Compact and handy design
- Dew point measurement
- Measurement of wet bulb temperature



Included:

1 x TH-1
1 x battery 3 V, CR2032
1 x user manual

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	1 x battery 3V, CR2032
Dimensions	175 x 42 x 16 mm
Weight	approx. 120 g

Ordering Information:

Description	Model	Article no.
TH-1	TH-1	3311871



TH-3

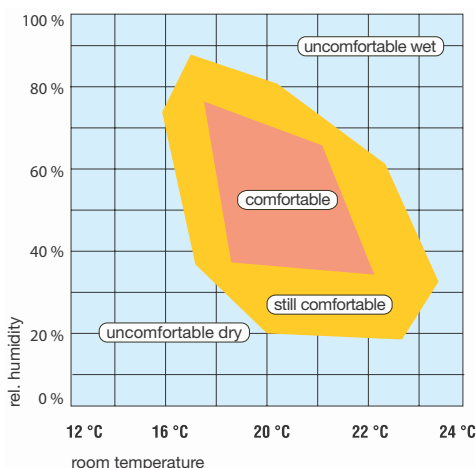
Digital humidity and temperature meter

Functions

- Humidity measurement
- Temperature measurement

Product information

- Probe integrated in device
- Switchable between °C and °F measurement
- Integrated measurement memory (data hold)
- MIN and MAX data hold
- Auto Power Off



THWD-3

Digital humidity and temperature meter

As TH-3, but also with:

- Dew point measurement
- Measurement of wet bulb temperature

Included:

- 1 x TH-3 or THWD-3
- 1 x carrying case
- 1 x battery 9 V, IEC 6LR61
- 1 x user manual

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

Ordering Information:

Description	Model	Article no.
TH-3	TH-3	3027060
THWD-3	THWD-3	3033042



MT-10

Moisture meters for construction and timber

Functions

- Moisture meters for construction and timber
- Temperature measurement

Product information

- Probe integrated in device
- Switchable moisture measurement for timber or construction materials
- Switchable temperature measurement in °C or °F
- Back light
- Auto Power Off

Product information

- 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

Included:

- 1 x MT-10
- 1 x battery 9 V, 6F22
- 1 x user manual

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	1 x battery 9 V, 6F22
Dimensions	145 x 60 x 31 mm
Weight	approx. 100 g

Ordering Information:

Description	Model	Article no.
MT-10	MT-10	3503178

Environmental testing | Temperature and moisture meter, carbon monoxide meter



Included:

- 1 x TR200-A
- 1 x user manual
- 1 x battery 3.0 V, IEC CR2
- 1 x USB cable
- 1 x CD with software (download suite)



Included:

- 1 x TR300
- 1 x user manual
- 4 x battery 1.5 V, IEC LR6
- 1 x USB cable
- 1 x CD with software (download suite)



Included:

- 1 x CM100
- 3 x batteries 1.5 V, IEC LR 03
- 1 x carrying case
- 1 x user manual

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

Accessories:

TPK-60, external temperature sensor
Model TPK-60

Technical specifications

Display	LCD, 3 1/4 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

Ordering Information:

Description	Model	Article no.
TR200-A	TR-200-A	3477302
TPK-60	TPK-60	3503184

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	4 x battery 1.5 V, IEC LR6
Dimensions	175 x 42 x 16 mm
Weight	approx. 200 g

Ordering Information:

Description	Model	Article no.
TR300	TR300	3311844

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

Product highlights

- Real time marking (date/time)
- USB interface
- Extra large digital display
- Alarm function

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

Ordering Information:

Description	Model	Article no.
CM100	CM100	3311826



**K
Typ**

TPK-59

flexible wire probe 4 mm plug

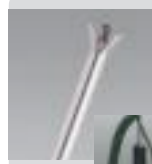
- with 4 mm plug (clearance 19 mm)
- Probe length approx. 0.9 m

K-type temperature sensor

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

Ordering Information

Model: TPK-59 · Article no.: 2733660



**K
Typ**

Type 101

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

Ordering Information

Model: 5795 · Article no.: 2147199



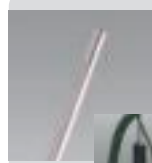
TPK-60

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 86)

Ordering Information

Model: TPK-60 · Article no.: 3503184



**K
Typ**

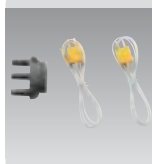
Type 104

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

Ordering Information

Model: 5794 · Article no.: 2147186



**K
Typ**

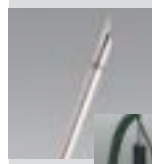
TPK-62

2 x temperature probes with adapter

- 4 mm jacks, connection for K-type probe
- Suitable for AM-540-EUR and AMP-550-EUR
- Temperature range (see AM-540-EUR/AM-550-EUR on page 35)

Ordering Information

Model: TPK-62 · Article no.: 4160703



**K
Typ**

Type 106

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

Ordering Information

Model: 5793 · Article no.: 3313234



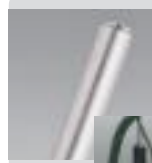
TM-SWA

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

Ordering Information

Model: TM-SWA · Article no.: 3027085



**K
Typ**

Type 110

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

Ordering Information

Model: 5797 · Article no.: 3313241



1032

Heat-conducting paste

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

Ordering Information

Model: 1032 · Article no.: 2145689



**K
Typ**

Type 111

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

Ordering Information

Model: 5790 · Article no.: 3313229



93560

Digital light meter with save function

Functions

- Illuminance measurement

Product information

- Automatic range selection
- Silicon sensor
- Integrated measurement memory (data hold)

Product highlights

- Measurement memory for 99 individual readings

Measure
0,1...
200 000 Lux

Data
Hold

Measurement
Memory

Included:

- 1 x 93560
- 6 x battery 1.5 V, IEC LR03
- 1 x carrying case
- 1 x user manual

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	6 x battery 1.5 V, IEC LR03
Dimensions	150 x 72 x 35 mm (unit) 92 x 60 x 29 mm (sensor)
Weight	approx. 250 g

Ordering Information:

Description	Model	Article no.
93560	93560	3222543



LM-100

Digital Lux Meter

Functions

- Light measurement

Product information:

- Manual range selection
- Silicon sensor
- Integrated measurement memory (data hold)
- Max data hold (Max)

LM-120

Digital Lux Meter

as the LM-100, also with:

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

Measure
0,1...
200 000 Lux

Data
Hold

Max
Hold

Included:

- 1 x LM-100 or LM-120
- 1 x battery 9 V, IEC 6F22
- 1 x carrying case
- 1 x user manual

Technical specifications

Display	LCD, 3½ digit
Measurement range	0...20 (only LM-120) 0...200, 2000, 20.000, 200.000 Lux 0-20, 200, 2000, 20.000 fc
Resolution	0.1, 1, 10, 100 Lux 0.01, 0.1, 1, 10 Fc
Accuracy	< 10 %
Power supply	1 x battery 9 V, IEC 6F22
Dimensions	130 x 63 x 38 mm (unit) 80 x 55 x 29 mm (sensor)
Weight	approx. 220 g

Ordering Information:

Description	Model	Article no.
LM-100	LM-100	3052348
LM-120	LM-120	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

INFO:

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.

Included:

- 1 x ultrasound leak detector ULD-300
- 1 x ultrasonic transmitter UT-300
- 1 x headphones
- 1 x extension and parabolic attachment
- 2 x batteries 9 V, IEC 6LR61
- 1 x carrying case
- 1 x user manual

Accessories:

ULTRASONIC TRANSMITTER
Model UT-300

Technical specifications

ULD-300	35 kHz...45 kHz ± 6 dB
Power supply	1 x 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)

Ordering Information:

Description	Model	Article no.
TMULD-300	TMULD-300	2731543
Ultrasonic transmitter (accessories)		
UT-300		2734446



93517

Digital sound level meter with save 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

Included:

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



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 k Ω , DC: 10 mV/dB at 5 k Ω
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	264 x 68 x 27 mm
Weight	approx. 260 g

Ordering Information:

Description	Model	Article no.
93517	93517	3313290



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

Included:

- 1 x SM-10
- 1 x battery 9 V, IEC 6LR61
- 1 x carrying case
- 1 x windbreak
- 1 x user manual

Data Hold

Max Hold



SM-20A

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

Product highlights

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

Included:

- 1 x SM-20A
- 1 x battery 9 V, IEC 6LR61
- 1 x interface cable
- 1 x software
- 1 x carrying case
- 1 x user manual

Data Hold

Max Hold



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

Included:

- 1 x SM-CAL1
- 1 x 1/2" adapter
- 1 x battery 9 V, IEC 6F22
- 1 x user manual

Technical specifications

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

Ordering Information:

Description	Model	Article no.
SM-10	SM-10	3052366

Technical specifications

Display	LCD, 4 digit
Measurement ranges	
A:	30...30 dB. (resolution: 0.1 dB)
C:	35...130 dB. (Resolution 0.1 dB)
Tolerance	±1.5 dB
Frequency range	31.5 Hz...8 kHz
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	200 x 55 x 38 mm
Weight	approx. 230 g

Ordering Information:

Description	Model	Article no.
SM-20A	SM-20A	3477333

Technical specifications

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

Ordering Information:

Description	Model	Article no.
SM-CAL1	SM-CAL1	3052382



Included:

- 1 x TMA5
- 1 x temperature probe TPK60
- 1 x battery 3.0 V, IEC CR 2032
- 1 x carrying case
- 1 x strap hanger
- 1 x 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

Ordering Information:

Description	Model	Article no.
TMA5	TMA5	3503169

Technical specifications

Display	LCD, 3 3/4 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	1 x battery 3.0 V, IEC CR 2032
Dimensions	136 x 46 x 17 mm
Weight	approx. 135 g



Included:

- 1 x TMA10A
- 1 x carry case
- 1 x battery 9 V, IEC 6LR61
- 1 x user manual

TMA10A

Anemometer

Functions

- Air velocity measurement (m/s)
- Airflow measurement (m³/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)



Accessories:

TM-SWA data logging-software and RS232 cable
Model TM-SWA

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 m³/s (Resolution 0.01 m³/s)
Temperature	0...50 °C or 32...122 °F (Resolution 0.1 °F/°C)
Basic accuracy	± 1.5 °F / 0.8 °C
Power supply	1 x battery 9 V, IEC 6LR61
Dimensions	181 x 71 x 38 mm
Weight	approx. 360 g (incl. battery)

Ordering Information:

Description	Model	Article no.
TMA10A	TMA10A	2817785
TM-SWA	TM-SWA	3027085



Included:

- 1 x TMA-21HW
- 1 x telescopic probe
- 1 x carry case
- 6 x battery 1.5 V, IEC LR03
- 1 x USB cable
- 1 x software on CD
- 1 x user manual

TMA-21HW

Hot-wire anemometer

Functions

- Air velocity measurement (m/s)
- Airflow measurement (m³/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 m³/s (Resolution 1 m³/s)
Temperature	-20...60 °C (Resolution 0.1 °C)
Basic accuracy	± 0.5 °C
Memory	512KB for 99 datasets
Power supply	6 x battery 1.5 V, IEC LR03
Dimensions	150 x 72 x 35 mm (unit)
Weight	approx. 300 g (incl. battery)

Ordering Information:

Description	Model	Article no.
TMA-21HW	TMA-21HW	3730239



TACH20

Digital tachometer

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)



Accessories:

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

Included:

1 x TACH20
1 x mechanical measurement adapter
1 x extension
2 x probes
2 x measuring wheel
10 x Reflex stickers
2 x batteries 1.5 V, IEC LR6
1 x case
1 x user manual

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	2 x battery 1.5 V, IEC LR6
Dimensions	180 x 60 x 25 mm
Weight	approx. 195 g

Ordering Information:

Description	Model	Article no.
TACH20	TACH20	3311961
Reflex stickers	1154	2145762



TACH-10

Digital tachometer

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



Accessories:

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

Included:

1 x TACH-10
1 x measuring wheel
1 x roll of Reflex stickers
1 x battery 9 V, IEC 6LR61
1 x user manual

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	1 x battery 9 V, IEC 6LR61
Dimensions	270 x 180 x 30 mm
Weight	approx. 550 g

Ordering Information:

Description	Model	Article no.
TACH-10	TACH-10	3730008
Reflex stickers	1154	2145762

Power and Energy Measurement



Energy costs have been rising at increasing speed for many years. For this reason, the notion of energy efficiency is more relevant than ever.

Using corresponding measuring equipment means it is not just possible to measure and document energy consumption, but it is also possible to establish the potential savings from your system.

Products

Power and energy measurement 80



Included:

- 1 x PQ55A
- 4 x current clamps
- 4 x crocodile clips
- 4 x test leads
- 8 x battery 1.5 V, IEC LR6
- 1 x mains adapter
- 1 x RS-232 cable
- 1 x carry case
- 1 x PC software (English) for Windows 2000/XP/ Vista with in-depth manual (German)
- 1 x user manual



Power Analyzer PQ55A 3-phase power and energy analyzer

Functions

- Comprehensive real-time monitoring, recording and analysis of 3-phase systems
- Voltage measurement (true RMS)
- Current measurement (true RMS)
- Power factor measurement
- Phase angle measurement
- Power analysis (active, apparent and reactive power)
- 4. Current clamp for neutral line current measurement
- Suitable for use in housing construction, offices and small businesses

Product information

- Internal 512 kB data logger for long-term monitoring
- Internal measurement memory for max. 99 individual readings
- Multi-functional measured value display for all input signals
- Power supply via batteries or external mains adapter
- Current clamps 3...1000 A, jaw opening 40 mm
- Data transfer via optically isolated RS-232 interface
- Software for data analysis included

Technical specifications

Voltage measurement:	
3 input channels with common reference point "N"	
Measurement range	0...600 Vrms
Resolution	0.1 V
Accuracy	± (1 % rdg. + 10 D) For voltages >80 V
Network frequency (operation)	50 Hz (excl. frequency inverter)
Current measurement:	
Measurement range	
phase 1-3	3...1000 A
"N" measurement range	3...250 A
Resolution	0.1 A
Basic accuracy:	± (2.5 % rdg. + 15 digits) ±1 % for currents > 3 A
Permissible overload	10 % (for sinusoidal currents)
Active power (P)	
display range: 0-999.9 kW	
Apparent power (S)	
display range 0 to -999.9 kVA	
Reactive power (Q)	
display range 0-999.9 kVar	
Power factor (PF)	
display range 0 to +1	
Phase angle	
display range 0° to 90°	
Frequency measurement (for voltage range >80 V)	
Measurement range 45 ... 85 Hz	
Phase sequence detection (for conductor voltages > 80 V)	
Energy measurement (active, apparent and reactive power)	
Accuracy ±(3.5 % rdg. + 20 digits)	
Data logger	
512 kB, non-volatile memory	
max. 20,000 readings,	
max. 10 measurement series	
max. 12,000 readings	
per measurement series	
adjustable: 5 s, 30 s, 1 min,	
2 min	
Sampling rate	
Manual	
measurement memory max. 99 readings	
General information	
Display multi-functional LCD	
Data transfer via optically isolated RS-232 interface	
Frequency range 42-63 Hz	
Power consumption approx. 10 VA	
Pollution degree 2	
Protection class II	
Protection category IP 30	
Measurement category CAT III/600 V	
Safety cert.: DIN VDE 0411/ EN 61010/IEC 61010	
Power supply 8 x batteries 1.5 V, IEC LR6	
Battery life typ. 50 h	
Mains adapter Schuko 230 V/12...15 V, 300 mA	
Environmental conditions	
Operating temperature 0 °C to +50 °C	
Storage temperature -10 °C to +60 °C	
Dimensions	
device (W x H x D) 235 x 117 x 54 mm	
Weight (incl. battery) approx. 730 g	

Ordering Information:

Description	Model	Article no.
Power Analyzer PQ55A*	PQ55A	3037739
* only available for countries with Schuko plug		

Measurement accessories for a secure connection



Products

Measurement accessories	82
Cases	88
Replacement parts/fuses	89

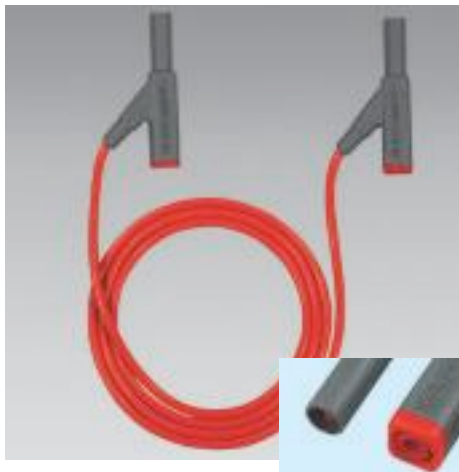
The right measurement and testing equipment, as well as the appropriate measurement accessories are important components for carrying out measurements in a safe, reliable manner.

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

Replacement parts and fuses are listed on page 103.

Symbols used in this chapter

	Length of plug-in technology (e.g. 4 mm)		Silicone test lead
	Touch protection		PVC test lead
	Disclosure of measurement category in accordance with EN 61010, DIN VDE 0411		Heat-resistant
	Current-carrying capacity (e.g. 16 A)		Cold-resistant



4 mm  **600 V** **16 A**

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

Accessory information

- Safety test lead, flexible 0.8 mm²
- 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

Ordering Information:

Description	Model	Article no.
Test lead ML 4W		
red - 1000mm	307111	2146495
black - 1000mm	307121	2146508
red - 2000mm	307112	3313550
black - 2000mm	307122	3313561



4 mm  **CAT III 1000 V** **2 A**

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

Accessory information

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

Set, consisting of:

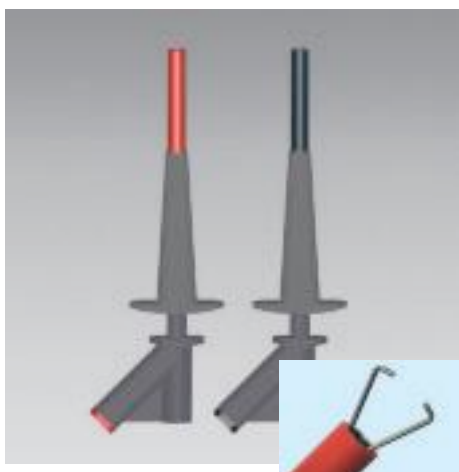
- 1 x SKP 41 gray/red
- 1 x SKP 41 gray/black

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

Ordering Information:

	Model	Article no.
	370010	2146701



4 mm  **CAT III 1000 V** **10 A**

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

Set, consisting of:

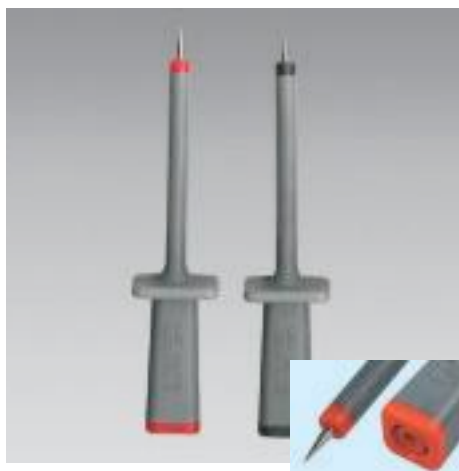
- 1 x HCP 41 gray/red
- 1 x HCP 41 gray/black

Design

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

Ordering Information:

	Model	Article no.
	370024	2146758



Probes PSS set of 2

Accessory information

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

Set, consisting of:

- 1 x probe PSS 2 gray/red
- 1 x probe PSS 2 gray/black

Design

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



Probes PSK set of 2 2 mm probe, short version

Accessory information

- Approx. 102 x 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)

Set, consisting of:

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



TL-300

Test lead set with crocodile clips (red, black, yellow), case, and temperature probe



Ordering Information:

Model	Article no.
370008	2146694

Ordering Information:

Model	Article no.
370004	2146675

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.

Ordering Information:

Model	Article no.
TL-300	4588279



Safety crocodile clip KS 4L set

4 mm plug-in technology

Accessory information

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

Set, consisting of:

- 1 x KS4L gray/red
- 1 x KS4L gray/black

Design

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



Ordering Information:

	Model	Article no.
	370012	2146712



Crocodile clips for conductor rails

4 mm safety plug-in technology

Accessory information

- 155 x 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



Ordering Information:

	Model	Article no.
red	391511	2146861
black	391512	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

Included:

- 3 x probes, black
- 1 x crocodile clip, black
- 1 x carrying case



Technical specifications

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

Ordering Information:

	Model	Article no.
UNIdreh accessory set	1324	2146183



The solution for secure contacts with CES sockets.



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)
- 2 mm probes

Included:

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

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

Ordering Information:

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

**SAFETY
RATING
CAT IV**



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)
- 4 mm probes

Included:

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

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

Ordering Information:

	Model	Article no.
Professional test lead set with silicone insulation	1307	2146176

**SAFETY
RATING
CAT IV**



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

Accessory information

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

Design

- Miniature crocodile clip

Ordering Information:

	Model	Article no.
red	390450	2406492
black	390451	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

Included:

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

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



Ordering Information:

Model	Article no.
TL36A	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

Included:

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

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



Ordering Information:

Model	Article no.
TL35B	3068232



EU-200

Test lead set

Accessory information

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

Included:

- 2 x test leads
- 2 x probes (with covers)
- 2 x crocodile clips

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

Ordering Information:

Model	Article no.
EU-200	2745046



Safety set

Accessory information

- Test lead set with 4 mm safety technology

Included:

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

Technical specifications

Current-carrying capacity	16 A
Measurement Category	
Safety test 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

Ordering Information:

	Model	Article no.
Safety set	370003	2146666



Electronics set

Accessory information

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

Included:

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

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

Ordering Information:

	Model	Article no.
Electronics set	370001	3313577



Electrician set

Accessory information

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

Included:

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

Technical specifications

Current-carrying capacity	6A/10A/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

Ordering Information:

	Model	Article no.
Electrician set	370000	2146653



1150 Carrying case

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

Model: 1150
Article no.: 2145755



1175 Carrying case

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

Model: 1175
Article no.: 2145796



CC-VP-7xx Carrying case

Material: Nylon, upholstered, fasteners,
Hand Strap.
Suitable for 2100 series (Alpha/Beta/Gamma)
and the VP-700 series
Internal dimensions: 280 x 80 x 45 mm

Model: CC-VP-7xx
Article no.: 3889931



1193 Professional carry case

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

Model: 1193
Article no.: 2145812



VC30A Carrying case

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

Model: VC30A
Article no.: 3068280



VC221B Carrying case

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

Model: VC221B
Article no.: 3068271



CC-ACDC Carrying case

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

Model: CC-ACDC
Article no.: 2732643



SV-U Carrying case

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

Model: SV-U
Article no.: 2733511

Fuses

Nominal	Feature	Nominal voltage	Dimensions	Packing unit	Item Number
500mA	fast-acting	1000V	6.3x32mm	4-pack, FP 500	1990695
500mA	fast-acting	500V	6.3x32mm	FP520	2156748
500mA	fast-acting	500V	6.3x32mm		3504681
500mA	fast-acting	1000V	6.3x32mm		2156753
630mA	fast-acting	500V	6.3x32mm		4223534
1A	fast-acting	600V	10x38mm		4223398
10A	fast-acting	600V	6.3x32mm		3814230
10A	fast-acting	500V	6.3x32mm		3504670
10A	fast-acting	1000V	10x38mm	2-pack, FP100	1990707
11A	fast-acting	1000V	10x38mm		803293
12.5A	fast-acting	500V	6.3x32mm		2156681
15A	fast-acting	500V	6.3x32mm		2156727





Appendix



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Index according to description	95

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 include 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

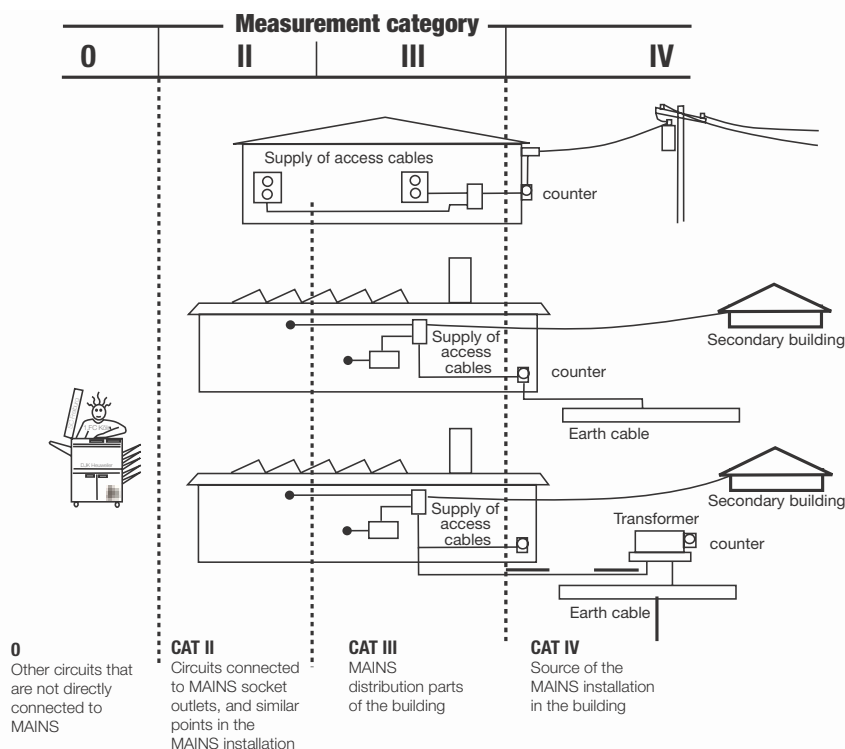
-  Warning of a hazardous area, observe the instruction manual
-  Caution! Hazardous voltage, risk of electric shock
-  Double or reinforced insulation in accordance with Class II IEC 61140 (Protection class II)
-  Conformity mark, confirms adherence to the relevant guidelines and regulations applicable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



1032	Heat-conducting paste up to 250°C (30g)	69	2050-D	MAGNO-VOLTfix contact-less voltage tester	9
1063	Barcode sticker 54 x 15 mm (250 pcs.)	59	2052-D	VOLTfix plus contact-less voltage tester	9
1141	Test lead Commander 2 (for 9050)	68	2054-D	VOLTfix Drill contact-less voltage tester	9
1142	Three-phase adapter	61	2100-ALPHA	Voltage and continuity tester with phase sequence display/LED	10
1150	Carry case	69	2100-BETA	Voltage and continuity tester with phase sequence display/LED-LCD	10
1154	Reflex sticker for TACH20	78	2100-GAMMA	Voltage and continuity tester with phase sequence display/LED-LCD 1000V	11
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1193	Professional carry case	88	30XR-A-D	Digital multimeter	*
1217	USB adapter	64	33XR-A-D	Digital multimeter	*
1226	AC current clamp adapter for 0100-EUROtest	59	34XR-A-D	Digital multimeter	*
1233	Measurement adapter: Schuko/Schuko	60	37XR-A	Digital multimeter	7
1235	Measurement adapter: CEE 5-pole, 16A	60	38XR-A	Digital multimeter	7
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1289	Protocol set	72	AC50A-D	Digital leakage current clamp (AC)	56
1290	Punch pliers	72	AC68C	Current clamp 600A AC/DC TRMS with DMM	*
1304	Marker tags (10 pcs.)	*	AC75B	Current clamp 600A AC, with DMM, temperature, capacitance	*
1306	Professional test lead set with 2 mm silicone safety probes	85	ACD-10 PLUS-D	Current clamp	40
1307	Professional test lead set with 4 mm silicone safety probes	85	ACD-14 TRMS-D	Current clamp 600A AC, TRMS, dual display	*
1311	CHB1 Leakage current clamp adapter (AC)	57	ACD-14-PRO-EUR	Current clamp with dual display	40
1312	Software es control professional 0100	64	ACD-20SW	Swivel current clamp (AC)	41
1314	Software es control professional 0701-0702/0113	64	ACD-23SW	Swivel current clamp (AC)	41
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1324	UNIDREH accessory set	84	ACD-45PQ	Power clamp meter 600 A AC TRMS	*
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1332	Software for Hexagon 340 digital multimeter	29	ACDC-100 (D)	Current clamp (AC/DC)	36
1338	Test report for DIN VDE0113 / EN 60204	72	ACDC-100 TRMS-(D)	Current clamp (AC/DC)	36
1343	VLP 5 Three-phase current extension test adapter	60	ACDC-3400 IND	Current clamp (AC/DC), TRMS, CAT IV	45
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5793	Type 106 thermal sensor, K-type immersion probe	73	ACDC-52NAV	Current clamp (AC/DC), TRMS, CAT IV, 600A	44
5794	Type 104 thermal sensor, K-type liquid sensor	73	ACDC-54NAV	Current clamp (AC/DC), TRMS, CAT IV, 1000A	45
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9050	MACHINEmaster machine and equipment tester	59	ADPTR-B22-EUR	Light Check Adapter B22	*
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370016	Measurement accessories MACHINE-SET red/black	*	AMP-310-EUR	AC current clamp 600A TRMS with rotary field measurement	39
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pocket multimeter in protective case, Autorange	DM78C	*	Test report for DIN VDE0113 / EN 60204	1338	56
Pocket thermometer with immersion probe	TPP1-C1	70	Test report in accordance with DIN VDE 0100	1278	56
Pocket thermometer with surface probe	TPP2-C1	70	Test report in accordance with DIN VDE 0701/0702	1279	56
Power Analyzer	PQ55A	80	TESTFIX continuity tester	9023	32
Power clamp meter 1000 A AC TRMS, CAT IV, Navigator™	ACD-53NAV	*	Three-phase adapter	1142	61
Power clamp meter 600 A AC TRMS	ACD-45PQ	*	Three-phase adapter 16A	DAA-16	61
Power pack for transmitter	BR-7000-T	20	Three-phase adapter 16A	1240	61
Probe for DM73C	TP73C	*	Three-phase adapter 32A	1241	61
Probes PSK set of 2	370004	83	Three-phase adapter 32A	DAA-32	61
Probes PSL 4 142mm gray/black	391121	*	Transmitter with LCD for AT-7000-EUR	AT-7000-TE	20
Probes PSL 4 142mm gray/red	391111	*	Type 101 thermal sensor, K-type surface probe	5795	73
Probes PSS set of 2	370008	83	Type 104 thermal sensor, K-type liquid sensor	5794	73
Professional carry case	1193	88	Type 106 thermal sensor, K-type immersion probe	5793	73
Professional Kit	AMPRB-EU-02-A	32	Type 110 thermal sensor, K-type fast response surface probe	5797	73
Professional test lead set with 2 mm silicone safety probes	1306	85	Type 111 thermal sensor, K-type flexible wire probe	5790	73
Professional test lead set with 4 mm silicone safety probes	1307	85	Ultrasonic leak detector kit	TMULD-300	70
PROINSTALL-CC, carrying case	PROINSTALL-CC	*	Ultrasonic leak detector kit	ULD-300	70
PROINSTALL-TL-CH test lead (Switzerland)	PROINSTALL-TL-CH	*	Ultrasonic transmitter	UT-300	70
PROINSTALL-TL-D test lead	PROINSTALL-TL-D	*	UNIDREH accessory set	1324	84
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Protocol set	1289	*	USB adapter	1217	64
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Receiver for AT-7000-EUR	AT-7000-RE	20	Voltage and continuity tester with phase sequence display/LED	2100-ALPHA	10
Reflex sticker for TACH20	1154	78	Voltage and continuity tester with phase sequence display/LED-LCD	2100-BETA	10
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Schuko measurement adapter for Telaris 0701/0702 (Switzerland)	1296C	*			
Schuko test FI/RCD (Socket tester with RCD/FI trigger)	9080	54			
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Software package es control professional Complete - Update	FTW00001342D	*			
Sound level calibrator	SM-CAL1	76			
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Test lead Commander 2 (for 9050)	1141	*			
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Test lead set for AT-7000-EUR	TL-7000-EUR	*			
Test lead set with 4mm safety technology	EU-200	86			
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Test lead set with crocodile clips (red/black)	TL1500	*			

*products in the portfolio but not shown in the catalog.







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