

## PROFITEST® 0100S-II

International Test Instrument for Electrical Systems with True Two-Hand Operation



All protective safety measures required by DIN VDE 0100 part 610, as well as the corresponding international regulations (e.g. IEC 64-8 and HD 364-6-61.S1), can be tested with the PROFITEST 0100S-II:

- Insulation resistance measurement per DIN VDE 0413 part 2 / EN 61557-2
- Loop impedance measurement per DIN VDE 0413 part 3 / EN 61557-3
- Low-resistance measurement per DIN VDE 0413 part 4 / EN 61557-4
- RCD testing per DIN VDE 0413 part 6 / EN 61557-6 (complete test)
- Earthing resistance measurement per DIN VDE 0413 part 5 / EN 61557-5
- Phase sequence testing per DIN VDE 0413 part 7 / EN 61557-7
- Line impedance and standing surface insulation resistance
- Earth leakage resistance, voltage, frequency, biasing current, leakage current, circulating current, current to 150 A

**Additional functions include:**

- Energy meter start-up testing, cable length determination, recommended fuse types

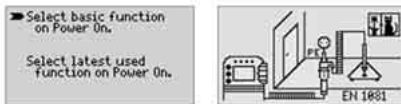
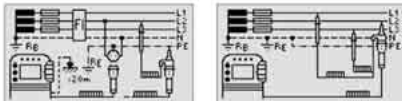
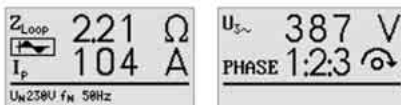
**Special features:**

- Loop impedance measurements to 550 V with display of allowable overcurrent protective devices
- Current measurements with clip-on ammeters as of 1 mA
- Low-resistance measurement with calculation of cable lengths
- Universal connector system: Interchangeable plug inserts and 2-pole plug-in adapter assure worldwide compatibility.
- Integrated processor-controlled charger for rechargeable NiCd and NiMH batteries
- Large voltage and frequency ranges: The range of applications includes all alternating current and 3-phase systems from 60 V to 800 V with frequencies from 15.4 Hz to 420 Hz.
- Meter start-up direction
- Large, easy to read display with background illumination: Menus, schematic diagrams, online help, measured, reference and nominal values etc. appear in plain text at a dot matrix display.
- Indication of connection errors and limit values violations
- Always current with software updates via IRDA interface
- Direct measurement of leakage current with clip-on ammeter, indirect with rising test current
- Easy, concise operation with a single function selector switch and three keys, as well as remote control
- Online help and schematic diagrams can be queried for all basic functions and sub-functions
- Immediate print-out of measured value tables via PSI plug-in module
- Data transmission to the PC via RS 232 interface and report generation with PC.doc-win, PC.base-m and PS3 software
- 6 different languages can be selected, and additional languages can be uploaded via the IRDA interface.

**The following versions are available:**

- **PROFITEST 0100S-II:** VDE 0100 test instrument with the following languages: German, English, French, Italian, Spanish and Dutch, including socket, earth contact plug, 2-pole adapter, cable for expansion to 3-pole adapter, 2 alligator clips, set of batteries, operating instructions and test report
- **PROFITEST 0100S-UK-II:** UK version with the following languages: English, Danish, Swedish, Finnish, German and Dutch
- **PROFITEST 0100S-E-II:** Iberian version with languages: Spanish, Catalan, Gallic, Basque, Portuguese and English
- **PROFITEST 0100S-O-II:** Slavic version with the following languages: Czech, Slovak, Hungarian, German, Polish

➔ See page 5 for training seminar: GTT1210, GTT1224B, GTT1224G, GTT1226



Type	PROFITEST 0100S-II	
RCCB testing with or w/o tripping:	– With nominal residual current	10/30/100/300/500 mA
	– With rising residual current	10/30/100/300/500 mA
Overcurrent protective devices	Loop resistance (... 550 V)	0 ... 10 Ω
	Short-circuit current	0 A ... 50 kA
Earthing measurements	Earth resistance	0.15 Ω ... 10 kΩ
	Earth electrode voltage	0 ... 253 V
	Standing surface insulation r.	0 ... 1 MΩ
Insulation resistance measurement	Insulation resistance	0 ... 300 MΩ
	Nominal voltage	100 / 250 / 500 V
	Nominal current	1 mA
	Insulation and earth leakage r.	50 kΩ ... 100 MΩ
Low-value resistance		0 ... 100 Ω
Alternating voltage		0 ... 253 / 500 / 850 V
Frequency		15 ... 420 Hz
Current measurement with clip		1 mA ... Clip Measuring Range
Nominal Ranges of Use	Voltage	60 ... 500 V
	Frequency	15.4 ... 420 Hz
Power supply	6 ea. 1.5 V mignon cell per IEC LR 6 (AA)	
Dimensions / weight	240 x 340 x 62 mm / 2.5 kg	

Type	Data Sheet No.	Article Number		
PROFITEST 0100S-II	3-348-888-03	M520A		
PROFITEST 0100S-UK-II	3-348-888-03	M520B		
PROFITEST 0100S-E-II	3-348-888-03	M520C		
PROFITEST 0100S-O-II	3-348-888-03	M520D		

## PROFi TEST® PSI-E/-BC



### PSI Module for PROFi TEST 0100S-II

#### PROFiTEST PSI-E

The PSI module (printer, storage, interface) functions simultaneously as printer, memory and interface. It is attached to the test instrument and secured with two snap-hooks.

Values measured with the PROFi TEST 0100S-II are transmitted to the PSI module by means of infrared light where they are stored to memory. It offers sufficient capacity for approximately 4400 measurement values from 200 electrical circuits. The measurement values from all of the recorded electrical circuits can be read out to the test instrument display in tabular form, and can be printed out onto a recording chart along with date and time by simply activating a key. The measurement value table can, for example, be attached directly to an approval report.

The PSI module is equipped with an RS 232 interface. Stored data can be transmitted via the interface to a PC and processed with PC.doc and PC.base software independent of the test instrument at a later point in time. Reports can be generated directly at a Centronics printer from the PSI module in A4 format with the DA-II printer adapter (optional).

- 3 functions with a single device: printer, memory and interface
- Report generating functions: numeric entry of buildings and electrical circuits
- Reports can be printed out in A4 format at Centronics printers with the help of a printer adapter (accessory).

#### PROFiTEST PSI-BC ⇒ same as PROFiTEST PSI-E with

- Expanded report generating functions: alphanumeric entry of buildings, distributors, RCDs, electrical circuits and defects, or data entry with a barcode scanner

Power supply: 4 ea. mignon cell per IEC LR 6 (AA)

Type	Data Sheet No.	Article Number		
PROFITEST PSI-E	3-348-976-03	M522A		
PROFITEST PSI-BC	3-348-976-03	M522D		

## PROFiTEST DC II / DI-MON 1



### PROFi TEST DC II: Add-On Device for the Measurement of Loop Resistance in TN Systems DI-MON 1: Differential Current Monitor for Acquiring Leakage Current

#### PROFiTEST DC II:

This add-on device allows for the measurement of loop impedance in TN systems which are equipped with RCCBs with the PROFiTEST 0100S-II. It suppresses tripping of RCCBs. The PROFiTEST DC II can also be used for measuring DC components, tripping current and time to trip for DC sensitive RCCBs (selective DC versions as well).

- Accessories: adapter with 3 test leads for PROFiTEST DC-II in systems without earthing contact sockets
- Dimensions: 205 mm x 120 mm x 100 mm (H x W x D), weight: 1.5 kg without connector cable

#### DI-MON 1:

Differential current monitor for acquiring leakage current which occurs only sporadically at individual power consumers. Allows for easy detection of faulty load components.

- Dimensions: 120 mm x 65 mm x 100 mm (H x W x D), weight: 360 gr.

Type	Data Sheet No.	Article Number		
PROFi TEST DC II	3-348-974-03	M523A		
3-pole adapter for DC-II	3-348-974-03	Z523A		
DI-MON 1	–	M662B		

## PROFiKALIBRATOR 1



### Comparative Calibration Device for Test Instruments per DIN VDE 0100

The PROFiKALIBRATOR 1 is a comparative calibration device for testers per DIN VDE 0100.

In combination with a test standard and a multimeter (e.g. METRA HIT 22S), it allows for testing of protective measure test instruments such as the PROFiTEST 0100S-II and the PROFiTEST C. The various functional values which must be determined according to DIN VDE 0100, part 610, are first compared with the test standard, and then with the measured values from the DUT. Measured values from the test standard serve as reference values. In this case, the test standard is a device of the same type as the DUT, which, however, has a valid calibration certificate.

Type	Data Sheet No.	Article Number		
PROFi-KALIBRATOR 1	–	M661A		

## PGS... Test Sets

### Test Sets in Carrying Case for Testing per DIN VDE 0100



In addition to the PROF/TEST 0100S-II, test sets include all essential accessories required for testing electrical systems in accordance with DIN VDE 0100 packed in a carrying case: e.g. PROF/TEST PSI-E, software with interface cable, A3-16 3-phase current adapter for CEE 16 A outlets, SP350 earth drills, Telearm1 telescoping rod for PE measurements, PS-10P recording chart and TR25 reel with 25 meters of cable.

Included with individual test sets:

Designation	Type	PGS ...					
		117T	210	211	215	216	2000
Universal carrying pouch	F2000				✓	✓	
Carrying case	K2000	✓	✓	✓			
Metal case	Z504J						✓
PROF/TEST 0100S-II	M520A	✓	✓	✓	✓	✓	✓
PROF/TEST PSI-E	M522A		✓				✓
PROF/TEST PSI-BC	M522D	✓		✓	✓	✓	
Digital Multimeter	METRAMax 12						✓
Software update, interface cable	WinProfi	✓	✓	✓	✓	✓	✓
Adapter	DA-II						✓
Earth spike	SP350		✓	✓			✓
Test probe extension	Telearm1		✓	✓			
Recording charts	PS-10P	✓	✓	✓			
Measuring adapter	A3-16						
Variable plug adapter set	Z500A	✓	✓	✓			✓
Plug insert	PRO-RLO	✓	✓	✓			✓
Plug insert	PRO-Schuko					✓	
Measurement cable, 25 m	TR25	✓	✓	✓			✓

➔ See page 5 for training seminar: GTT1210

Type	Data Sheet No.	Article Number		
PGS 117T	3-348-888-03	M509T		
PGS 210	3-348-888-03	M509L		
PGS 211	3-348-888-03	M509M		
PGS 215	3-348-888-03	M509R		
PGS 216	3-348-888-03	M509S		
PGS 2000	3-348-888-03	M509P		

### PRO-RLO and PRO-UNI Plug Inserts

Plug Inserts for PROF/TEST 0100S-II with 10 m Cable for PE Measurements and the like, or with 3 Connector Cables for Any Connection Standards



PRO-RLO: plug insert with 10 m cable for PE measurements and the like

PRO-UNI: plug insert with 3 connector cables for any connection standards

Type	Data Sheet No.	Article Number		
PRO-RLO	–	GTZ3214000R0002		
PRO-UNI	–	GTZ3214000R0003		

### Clip 0100S / Z3512A Clip-On Adapter Cable

Clip-On Current Transformer/Sensor and Cable for Connecting Current Clips



Clip 0100S:

Clip-on current sensor for measuring fault current with 3.5 mm jack plug

Z3512A:

Clip-on current sensor, selectable measuring range: 0 ... 1/100/1000 A~ AV~ ± (0.7% ... 0.2%)

Clip-on adapter cable:

Cable with banana plugs for connecting current clips to jack plugs at the PROF/TEST 0100S-II

Type	Data Sheet No.	Article Number		
Clip 0100S	3-349-017-03	Z501E		
Z3512A	–	Z225A		
Clip-on adapter cable	–	Z501G		

## PROFi TEST C

## Test Instruments – DIN VDE 0100 / IEC 364-6-61



Protective measures test instrument for loop resistance measurement, calculation of short-circuit current and display of suitable fuse ratings. In addition to complete testing for the effectiveness of RCCBs, the instrument is also capable of phase sequence analysis, as well as the measurement of voltage and frequency.

- The extremely rugged 2-component housing with integral impact guard makes this instrument perfect for use by on-site installation teams, and it supplements the PROFITEST 204 in accordance with the new EN 60204 in an ideal fashion.
- A large, illuminated, anti-reflection graphic display allows for clear, intuitive, menu-driven operation.
- Operation is quick and easy with a total of only 5 keys.
- The integrated measured value memory can be read out via the infrared data interface, which is included as standard equipment.
- Print-outs and reports can also be read out via the IR interface, and it can be used for updates to assure that the instrument continues to meet future demands as well.
- Stored measured values can be accurately assigned to their respective electrical circuits, distributors and buildings with the alphanumeric keypad.
- Unambiguous Go/No-Go decisions are made possible with LEDs and display messages.
- The desired language can be selected.
- A phase tester is integrated into the instrument.
- A carrying strap, a stand, holders for test probes and cables and a recharging socket for NiCd/NiMH batteries round out the convenient and safe PROFITEST C.
- Dimensions: 275 mm x 140 mm x 65 mm (H x W x D), weight: 1.2 kg with batteries
- Power supply: 4 ea. mignon cell per IEC LR 14
- PROFITEST C/METRISO C set consisting of: PROFITEST C, METRISO C, 3-pole adapter, IrDa 0100 adapter cable and KS17 measurement cables in HC 40 hard case

### Accessories:

- NA 0100S: charger for rechargeable battery set
- HC30-C: hard case with blister inserts for one series C test instrument with accessories
- HC40: hard case with blister inserts for two series C test instruments and accessories

### Software:

- PS3: software for test instruments including systems and equipment management, and reports generating (see page 63)
- PC.doc-win documentation and management software for measurements per DIN VDE 0701/0702 and 0100 as a supplement to MS Winword / Access (in German)
- WinProfi: for communications between the test instrument and the PC (included)

➤ See page 5 for training seminars: GTT1210, GTT1224B, GTT1224G, GTT1226



Functions	Measured Quantity	Measuring Range (display range I <sub>d</sub> )	Intrinsic Error	Nominal Range of use
U <sub>L-PE(N)</sub> U <sub>N-PE</sub>	U <sub>L-PE</sub> / U <sub>N-PE</sub> / U <sub>L-N</sub>	0 ... 300 V / (0 ... 600 V)	± (2% rdg. + 2 d)	108 ... 253 V
	f	15.0 ... 650 Hz	± (0.1% rdg. + 1 d)	15 ... 70 Hz
U <sub>3~</sub>	U <sub>3~</sub>	0 ... 500 V / (0 ... 600 V)	± (2% rdg. + 2 d)	108 ... 440 V
I <sub>Δ</sub>	U <sub>iΔN</sub>	0 ... 99.9 V	±(12.5% rdg. + 2 d) + (2.5% rdg. - 2 d)	5 ... 70 V
	R <sub>E</sub> / I <sub>ΔN</sub> = 10 mA	10 Ω ... 9.99 kΩ	-	Calculated value
	...	...		
	R <sub>E</sub> / I <sub>ΔN</sub> = 500 mA	0.2 Ω ... 380 Ω	± (5% rdg. + 2 d)	3.0 mA ... 13.0 mA
	I <sub>Δ</sub> / I <sub>ΔN</sub> = 10 mA	3.0 mA ... 13.0 mA		
	...	...		
	I <sub>Δ</sub> / I <sub>ΔN</sub> = 500 mA	150 mA ... 650 mA		
	Z <sub>Loop</sub>	U <sub>iΔ</sub> / U <sub>L</sub> = 25 mA	0 V ... 25.0 V	+ (12.5% rdg. + 2 d) + (2.5% rdg. - 2 d)
U <sub>iΔ</sub> / U <sub>L</sub> = 50 mA		0 V ... 50.0 V	0 V ... 50.0 V	
t <sub>A</sub> (I <sub>ΔN</sub> / 5 · I <sub>ΔN</sub> )		0 ms ... 999 ms	± 3 ms	
R <sub>E</sub>	R <sub>E</sub>	0.01 Ω ... 30.0 Ω	± 5 D ± (6% rdg. + 3 d)	0.25 Ω ... 30 Ω
		10.0 Ω ... 9.99 kΩ		± (4% rdg. + 3 d)

Type	Data Sheet No.	Article Number	
PROFITEST C	3-349-075-03	M521A	
PROFITEST C-CH	3-349-075-03	M521B	
Set PROFITEST C / METRISO C	3-349-075-03/-086-03	M508A	
NA 0100S		Z501D	
HC30-C		Z541C	
HC40		Z541D	
PC.doc-win		Z710F	

## METRISO C

### Digital Insulation and Resistance Measuring Instrument, 1000 V



The following functions are included for measurements in electrical systems, as well as at insulating and conducting floor coverings and walls:

- Measurement of insulation resistance and high-resistance with display of the measured value and the actual, respective measuring voltage
- Measurements at bonding and protective conductors with low-resistance measurement
- Measurement of contact current, voltage and frequency
- Optional measurement of temperature and relative atmospheric humidity
- All measurements are in compliance with the following regulations: DIN VDE 0100 part 610, DIN VDE 0413 (=EN 61557) parts 1, 2, and 4, DIN VDE 0701 part 240, EN 344, EN 1081, IEC 1340-4-1, IEC 1340-5-1
- Unambiguous limit value and Go/No-Go indication with 4 LEDs, helpful hints appear plainly at the display
- All measurement values are stored to memory with reference to their respective electrical circuit designations
- Rugged 2-component housing for everyday use
- Dimensions: 275 mm x 140 mm x 65 mm (H x W x D), weight: 1.2 kg with batteries
- Power supply: 4 ea. mignon cell per IEC LR 14

#### Accessories:

- NA 0100S: charger for rechargeable battery set
- HC30-C: hard case with blister inserts for one series C test instrument with accessories

#### Software:

- PS3 software for test instruments including systems and equipment management, and reports generating

➔ See page 5 for training seminars: GTT1210, GTT1224B, GTT1224G, GTT1226

#### Characteristic Values

Functions	Measuring Range	Measuring Voltage	Nominal Current
Insulation resistance $R_{ISO}$	000 k $\Omega$ ... 99.9 G $\Omega$	100 V ... 1000 V	1 mA ( $R_N=1$ k $\Omega/V$ )
Resistance $R_{LO}$	0.00 $\Omega$ ... 99.9 $\Omega$	4.5 V ( $U_0$ )	$\geq 200$ mA ( $R < 10$ $\Omega$ )
Voltage $U_{ISO}/U_{\sim}$	0 V ... 1200 V	–	–
Contact current $I_B$	0.00 mA ... 9.99 mA	–	–

Type	Data Sheet No.	Article Number		
METRISO C	3-349-086-03	M541A		

## METRISO<sup>®</sup> 500D

### Digital Insulation Measuring Instrument, 500 Volt



Classical, digital insulation measuring instrument for electrical systems with up to 500 V in accordance with EN 61 557 parts 1, 2 and 4 (DIN VDE 0413 parts 1 and 4) with a measuring voltage of 500 V

- Digital and analog display
- Warning for hazardous shock voltages
- Quick-test with signal lamp in test probe
- Low-resistance measurement per DIN VDE 0413, part 4

➔ See page 5 for training seminar: GTT1210

Type	Data Sheet No.	Article Number		
METRISO 500D	3-349-115-03	GTM5040000R0001		
F837 ever-ready case	–	GTZ3312000R0001		

## METRISO<sup>®</sup> 1000D (1000IR)

### Digital Insulation Measuring Instrument, 1000 Volt



Digital insulation measuring instrument for electrical systems with up to 1000 V in accordance with EN 61 557, parts 1, 2 and 4 (DIN VDE 0413, parts 1 and 4) with 3 measuring voltages: 100, 250 and 1000 V

- Digital and analog display
- Three nominal voltages: 100 V, 500 V, 1000 V (METRISO 1000 IR: 250 V, 500 V, 1000 V)
- Warning for hazardous shock voltages
- Voltage measurement to 1000 V
- Quick-test with signal lamp in test probe
- Low-resistance measurement per DIN VDE 0413, part 4

Type	Data Sheet No.	Article Number		
METRISO 1000D	3-349-115-03	GTM5050000R0001		
METRISO 1000IR	3-349-115-03	GTM5050000R0002		
F837 ever-ready case	–	GTZ3312000R0001		



## METRISO® 1000A

Analog Insulation Measuring Instrument, 1000 Volt



Low-cost analog insulation measuring instrument for electrical systems with up to 1000 V in accordance with EN 61 557, parts 1, 2 and 4 (DIN VDE 0413, parts 1 and 4)

- Five nominal voltages: 50 V, 100 V, 250 V, 500 V, 1000 V
- Voltage measurement to 1000 V
- Signal lamp for battery level
- Low-resistance measurement per DIN VDE 0413, part 4 / EN 61557 -1 / -2 / -4

**Accessories:**

- 1081 probe triangular probe for floor measurements in accordance with EN 1081, DIN VDE 0100 (see page 61)
- KS24: 4 m extension cable

Type	Data Sheet No.	Article Number		
METRISO 1000A in pouch	3-348-807-03	M540C		
KS24 extension cable	–	GTZ3201000R0001		
1081 probe	–	GTZ3196000R0001		

## METRAOHM 413

Digital Low-Resistance Measuring Instrument



Digital low-resistance measuring instrument in accordance with DIN VDE 0 413, part 4 and EN 61 557, parts 1 and 4

- Overvoltage protection
- Interference voltages indicated with LED, acoustic signal and measured value
- IP 65 protection
- Zero balancing for measurement cables

Type	Data Sheet No.	Article Number		
METRAOHM 413	3-348-810-03	M630A		

## ISO CALIBRATOR 1

Calibration Adapter for Insulation and Resistance Measuring Instruments



Calibration adapter for rapid, efficient testing of the accuracy of measuring instruments for insulation resistance and low-value resistors

Type	Data Sheet No.	Article Number		
ISO calibrator 1	–	M662A		

**Characteristic Values**

Type	METRISO 500D	METRISO 1000 D	METRISO 1000 IR	METRISO 1000 A	METRAOHM 413
Display	Digital			Analog	Digital
Insulation resistance	0 ... 3 GΩ	0 ... 30 GΩ		0 ... 400 MΩ	–
Number of ISO measuring ranges	6	7		15	
Intrinsic error		± (1.5% + 2 digits)			± (1.5% + 4 digits)
Max. nominal voltage	500 V	100 V/500 V/1000 V	250 V/500 V/1000 V	50 V ... 1000 V	
Nominal current		1 mA		≥ 1 mA / 200 mA	200 mA (20 mA)
Limit value signal	•	•	•	•	•
Signal lamp	•	•	•	–	•
Acoustic	•	•	•	–	•
Low-resistance measuring range		0.01 ... 30 Ω		0 ... 4 Ω	0.01 ... 20 Ω (200 Ω)
Voltage (AC / DC)	0 ... 500 V	0 ... 400 V	0 ... 1000 V	0 ... 1000 V	Interference voltage display
Power supply		6 ea. 1.5 V mono-cell, IEC R 20			1 ea. 9 V block, IEC 6 LR 61
Dimensions		165 x 125 x 110 mm			60 x 230 x 40 mm
Weight		1.85 kg		1.6 kg	0.25 kg

## METRISO® 5023

### Insulation and Resistance Measuring Instrument with Voltage Measuring Range



Handy, extremely rugged instrument for harsh ambient conditions with easy, clear-cut operation

- Straightforward two-hand operation
- Insulation measurement with 100, 250 and 500 V measuring voltage (VDE 0413, part 2 / EN 61557-2)
- Insulation resistance measurement from 0.1 to 400 M $\Omega$
- Low-value resistance measurement from 0 to 4  $\Omega$  (VDE 0413, part 4 / EN 61557-4)
- Voltage measurement from 0 to 500 V

#### Accessories:

- KS24: cable set for insulation measuring instruments
- ISO calibrator 1: calibration adapter

Type	Data Sheet No.	Article Number		
METRISO 5023 in pouch	3-349-212-03	M540D		
KS24	–	GTZ3201000R0001		
ISO calibrator 1	–	M662A		

## METRISO® 5000D-PI

### Digital High-Voltage Insulation Measuring Instrument to 5000 V DC



Instrument for traditional insulation measurement with selectable voltages of up to 5000 V – designed and manufactured for all known types of long-term insulation measurement as well, including DKD calibration certificate

- Extensive measuring range from 0.1 M $\Omega$  to 1 T $\Omega$
- Variable test voltage, or in fixed steps: 100 V, 250 V, 500 V, 1 kV, 1.5 kV, 2 kV, 2.5 kV, 5 kV
- Polarization index and absorption ratio
- Voltage measurement to 1000 V
- Frequency measurement from 15 Hz to 1 kHz
- Capacitance measurement from 0.1 to 5  $\mu$ F
- Measurement of electrical discharge
- Guard terminal for the elimination of surface current
- 5 m extension cable included as accessory
- Supply power from mains, battery pack or external 12 V power supply
- Backlit dot matrix display
- Digital display of measured values and limit values, characteristic curve display for polarization index
- Timer function: 1 sec. to 100 min.
- DKD calibration certificate

#### Accessories:

- Guard 5000A: 1 guard cable with plug and alligator clips
- Leadex 5000: 5 m extension cable
- SECUTEST PSI: PSI module with 2 rolls of recording chart, 1 ribbon cartridge, batteries and operating instructions
- DA-II: printer adapter for direct connection of external printers with Centronics interface
- KY 5000A: 2 alligator clips (5 kV version)
- ISO calibrator 1: calibration adapter for test voltages of up to 1000 V

**DKD**

Type	Data Sheet No.	Article Number		
METRISO 5000D-PI • German firmware • with rech. battery	3-349-209-03	M5810-V001		
METRISO 5000D-PI Basic instrument = all features 00	3-349-209-03	M5810		
PROFITEST 204HP/2.5 kV (not with C1)	3-348-802-03	M5810B1		
PROFITEST 204HP/5.4 kV (not with C1)	3-348-802-03	M5810B2		
Rechargeable battery (not with B1, B2)	–	M5810C1		
Caddy 2047 (not with B0)	3-348-802-03	M5810D1		
Signal 204, external signal lamp	3-348-802-03	M5810F1		
Guard 5000A, measurement cable	–	M5810G1		
LEADEX 5000, 5 m extension cable	–	M5810H1		
SECUTEST PSI, printer module	3-348-785-03	M5810I1		
DA-II	–	Z745M		
KY 5000A	–	Z580B		
ISO calibrator 1	–	M662A		
F2000 carrying pouch	3-349-126-02	Z700D		



## METRISO® 5000A

Analog Insulation Measuring Instrument, 5000 Volt



### METRISO 5000A:

Analog high-voltage insulation measuring instrument with 4 measuring voltages: 100, 250, 500 and 1000 V (per EN 61 557 part 2) and 1500, 2000, 2500 and 5000 V

### METRISO 5000AK:

The battery powered METRISO 5000A is converted into the muscle powered METRISO 5000AK simply by replacing the battery module with a crank generator.

- Extensive measuring range: 10 kΩ ... 1 TΩ
- Measuring range: 100 kΩ ... 100 MΩ (1000 V)
- Measuring voltages: 100 V, 250 V, 500 V, 1000 V, 1500 V, 2000 V, 2500 V, 5000 V
- Measurements to 1000 V per DIN VDE 0413
- Voltage measurement to 2000 V  $\overline{=}$ ,  $\sim$
- Concise logarithmic display
- Guard terminal for the elimination of surface current
- METRISO 5000A set: METRISO 5000A + KY 5000A + GUARD 5000A in F2000 universal carrying pouch
- METRISO 5000AK set: METRISO 5000AK + KY 5000A + GUARD 5000A in F2000 universal carrying pouch

### Accessories:

- Generator 5000A: crank generator for Metriso 5000A
- KY 5000A: 2 alligator clips for Metriso 5000A
- Guard 5000A: 1 guard cable and 1 alligator clip for METRISO 5000A
- Leadex 5000: 5 m extension cable

### Technical Data:

Type	METRISO 5000 A
Insulation resistance	1 TΩ
Open-circuit voltage	100 V, 250 V, 500 V, 1000 V, 1500 V, 2000 V, 2500 V, 5000 V
Voltage (AC / DC)	0 ... 2000 V
Power supply	6 ea. 1.5 V mono-cell, IEC R 20 (D size)
Dimensions	290 x 250 x 140 mm
Weight	3.4 kg (with batteries)

Type	Data Sheet No.	Article Number		
METRISO 5000A	3-348-858-03	M580A		
METRISO 5000AK	3-348-858-03	M580C		
METRISO 5000A-Set	3-348-858-03	M580S		
METRISO 5000AK-Set	3-348-858-03	M580T		
Generator 5000A	3-348-858-03	Z580A		
KY 5000A	–	Z580B		
Guard 5000A	–	Z580C		
Leadex 5000	–	Z580D		
F2000 carrying pouch	3-349-126-02	Z700D		

## GEOHM C

### Battery Powered Earth Tester (also for measurement of soil resistivity)



Compact, menu-driven instrument for the measurement of earthing resistance for 3 or 4-wire connection. Continuous monitoring of interference voltage, as well as auxiliary earth electrode and probe resistance with indication if allowable limit values are violated.

Complete display of all required values at a large dot matrix display, or warning with 4 LEDs.

Easy concise operation with only 4 keys.

- Measurement of earthing resistance in 5 ranges to 50 k $\Omega$
- Voltage measurement from 10 to 250 V, frequency measurement from 45 to 200 Hz
- Battery monitoring and self-test, integrated memory with IrDA interface, factory calibration certificate
- Extremely rugged 2-component housing, earth tester in accordance with DIN VDE 0413 part 5
- Measurement of ohmic resistance, automatic measurement of probe and auxiliary earth electrode resistance
- Automatic monitoring of interference voltages in the ground
- Helpful hints appear plainly at the display, automatic battery monitoring
- Storage of all measured values to memory
- Dimensions: 275 mm x 140 mm x 65 mm (H x W x D), weight: 1.2 kg with batteries
- Power supply: 4 ea. mignon cell per IEC LR 14

For the measurement of earthing resistance in electrical systems in accordance with:

- DIN VDE 0100, set-up of power installations with nominal voltages of up to 1000 V
- DIN VDE 0141, grounding in AC systems with nominal voltages of greater than 1 kV
- DIN VDE 0800, set-up and operation of telecommunications systems including data processing equipment
- DIN VDE 0185, lightning protection systems
- DIN VDE 0413 (=EN 61557), parts 1 and 5, devices for testing, measuring or monitoring protective measures and earth resistance

Accessories:

- NA 0100S: charger for rechargeable battery set
- HC30-C: hard case with blister inserts for one series C test instrument with accessories

Type	Data Sheet No.	Article Number		
GEOHM C	3-349-088-03	M590A		
NA 0100S	–	Z501D		
HC30-C	–	Z541C		

#### Technical Data:

Functions	Measuring Range	Resolution	Measuring Voltage	Test Current	Accuracy	Operating Error
Resistance	0.01 $\Omega$ ... 20 k $\Omega$	0.01 $\Omega$ ... 10 $\Omega$	Max. 50 V <sub>eff</sub> /128 Hz	10 m A <sub>eff</sub> ... 100 $\mu$ A <sub>eff</sub>	$\pm$ (3% rdg. + 3 d)	$\pm$ (10% +6 d)
	Manual: ... 50 k $\Omega$					$\pm$ (16% +10 d)
Voltage	0 V ... 250 V	–	–	–	–	–

## GEOHM<sup>®</sup> 33D

### Earth Tester with Crank Generator



Earth testers are used for the measurement of earth resistance in electrical systems per DIN VDE 0100, 0141, 0800 and 0185. This measurement is required for the determination of earthing system dimensions. The testers can also be used for geological ground surveys and for the planning of earthing systems. Interference voltages and auxiliary earth electrode resistance are continuously monitored. A signal is generated automatically if allowable limit values are exceeded.

The testers function in accordance with the current-voltage measuring method per DIN VDE 0413, part 7, and in accordance with the compensation measuring method in accordance with DIN VDE 0413, part 5.

- Digital LCD, limit value monitoring
- Easy to turn crank generator, rugged design

Technical Data:

Type	GEOHM 33D
Display	Digital
Measuring Ranges	0 ... 20 / 200 / 2000 / 20000 $\Omega$
Intrinsic error	$\pm$ (2% rdg. + 3 digits)
Power supply	Crank generator
Dimensions / weight	210 x 128 x 125 mm / 1.4 kg

Type	Data Sheet No.	Article Number		
GEOHM 33D	1-2.5-416.02	GTM5033000R0001		
F833 carrying pouch	–	GTZ3301001R0001		



## GEOHM Accessories E-Set 5



### Measuring Accessory Set for Earth Testers

Extensively equipped earth measurement case with space for device and accessories

Earth measurement case consisting of:

- Imitation leather case
- 1 drum with 25 m measurement cable
- 2 drums with 50 m measurement cable each
- 3 measurement cables, 0.5 m each
- 1 measurement cable, 2 m long
- 1 test clamp
- 4 earth drills, 350 mm long
- 1 dust cloth
- 2 pads with forms

Type	Data Sheet No.	Article Number		
E-Set 5	–	Z590B		

## GEOHM Accessories E-Set 3



### Measuring Accessory Set for Earth Testers

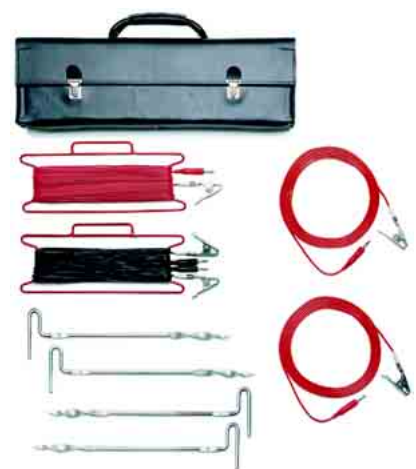
Moderately priced measuring accessories for measurements with earth spikes

Contents:

- 2 reels
- 2 measurement cables, 25 m each
- 1 measurement cable, 40 m long
- 2 measurement cables, 3 m each
- 4 earth spikes (zinc plated)
- 2 spike pullers
- 1 hammer

Type	Data Sheet No.	Article Number		
E-Set 3	–	GTZ3301005R0001		

## GEOHM Accessories E-Set 4



### Measuring Accessory Set for Earth Testers

Measuring accessories for earth measurements, same as E-Set 3 but with earth drills instead of spikes

Contents:

- 2 reels
- 2 measurement cables, 25 m each
- 1 measurement cable, 40 m long
- 2 measurement cables, 3 m each
- 4 earth drills

Type	Data Sheet No.	Article Number		
E-Set 4	–	Z590A		

### Accessories for Earth Resistance Measurements

Description	Type	Data Sheet No.	Article Number		
Reel with 25 m measurement cable	TR25	–	GTZ3303000R0001		
Drum with 50 m measurement cable	TR50	–	GTY1040014E34		
Earth drill, 35 cm long	SP350	–	GTZ3304000R0001		

## MetraPhase 1



### Phase Sequence Indicator with Electronic Rotary Dial, Frequency Display and Display of Nominal Line Voltage

Phase sequence indicator in compliance with safety regulations. Many users prefer the Ferraris type rotary dial which, however, requires a mechanical movement. The size of the movement necessitates the use of a relatively large housing in order to assure that the required clearances and creepage distances are adhered to. For this reason, we have equipped our new METRAPHASE 1 phase sequence indicator with an electronic rotary dial. LEDs arranged in a circular array not only indicate the direction of rotation, but rather line frequency as well by means of LEDs which light up in various colors. The presence of voltage at each phase is indicated with additional LEDs as required by the regulation, as well as nominal line voltage. This new phase sequence indicator can be used as a 3-pole or a 2-pole indicator.

- Power supply: 4 ea. mignon cell per IEC LR 6

#### Accessories:

- GH18: protective rubber cover (optional)
- Z500A: Variable plug adapter set, 3.5 to 12 mm diameter, set of three
- NA4/500: 230 V / 4 V power pack with safety connector cable

Type	Data Sheet No.	Article Number		
MetraPhase 1	3-348-992-03	M620A		
Protective rubber cover	–	GTZ3212000R0001		
Z500A variable plug adapter set	–	Z500A		
NA4/500 mains power pack	–	Z218A		

## MetraStart 1



### Meter Start-Up Tester

Meter start-up tester for the assurance of correct functioning of newly installed Ferraris current meters. 5 seconds are sufficient for the testing of rotation in the correct direction.

Type	Data Sheet No.	Article Number		
MetraStart 1	3-348-992-03	M620B		

## PhaseCop 2



### Phase Sequence Indicator with LEDs and Contact Protected Plugs

Instrument for the determination of the direction of rotation, or phase sequence in three-phase systems

- 3 LEDs indicate whether or not the 3 phase conductors are live
- Very large voltage and frequency range
- Simple operation, rugged design
- Permanently connected cables with contact-protected connector plugs, three plug-on test probes and one plug-on alligator clip

Type	Data Sheet No.	Article Number		
PhaseCop 2	3-348-846-03	GTM5202000R0001		
F801 ever-ready case	–	GTY3172070P01		

#### Technical Data

Type	METRAPHASE 1	PhaseCop 2
DIN VDE 0413 / EN 61557 compliant	●	●
Phase sequence display	LEDs	LEDs
Phase display	●	●
Display of nominal line frequency	●	-
Display of nominal line voltage	●	-
Nominal range of use	70 ... 690 V / 50 ... 400 Hz	90 ... 660 V / 45 ... 1000 Hz
Dimensions	84 x 195 x 35 mm	70 x 105 x 38.5 mm
Weight	0.3 kg	0.3 kg