

PROFITEST REMOTE 3-Phase Test Adapter for Testers Including PROFITEST MTECH+ IQ, MXTRA IQ and PRIME

3-447-050-03

- For use * with PROFITEST MTECH+ IQ, MXTRA IQ and PRIME
- Measurement of loop and online impedance ZL-PE and ZL-N
- Measurement of insulation resistance Rins with up to 500 V DC
- No replugging required during measurement
- No phase reversal possible during measurement
- Saves time for testing in electrical systems
- Connection to the test instrument via 3-pole PRO-SCHUKO test adapter or 4 mm safety sockets L, N and PE
- The test adapter is controlled via the connected test instrument
- Connection to the electrical system via 4 mm safety sockets L1, L2, L3, N and PE
- Data communication via RS 232 port
- No need to determine offset thanks to 4-wire measurement
- Indication of conductor connection via LED



Applications

Loop and Line Impedance Measurement

Measurement of loop and line impedance can be performed in the 65 to 500 V range. Conversion to short-circuit current is based on the respective nominal line voltage, insofar as the measured line voltage is within the specified range. Test instrument measuring error is also taken into account for conversion. Outside of this range, short-circuit current is calculated on the basis of momentary line voltage and measured impedance.

Measurement of Insulation Resistance using Nominal Voltage, with Variable or Rising Test Voltage

Insulation resistance is usually measured with a nominal voltage of 500, 250 or 100 V. A test voltage which deviates from nominal voltage, and lies within a range of 15 to 500 V, can be selected for measurements at sensitive components, as well as systems with voltage limiting devices. Measurement can be performed with a constantly rising test voltage in order to detect weak points in the insulation and determine tripping voltage for voltage limiting devices. Voltage at the device under test and any triggering/breakdown voltage appear at the test instrument's display.

- * The test adapter is suitable for use with the following test instruments:
- **PROFITEST MTECH+ IQ**, as of firmware version 03.04.00
- PROFITEST MXTRA IQ, as of firmware version 03.04.00
- PROFITEST PRIME, as of firmware version 03.05.0

The test adapter is controlled via the RS 232 port when measuring RINS, ZL-PE and ZL-N.

Applicable Regulations

| IEC 61 010-1/EN 61 010-1/ VDE 0411-1 | Safety requirements for electrical equipment for measurement, control and laboratory use — General requirements |
|---|--|
| EN 60529 VDE 0470, part 1 | Test instruments and test procedures Degrees of protection provided by enclosures (IP code) |

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Characteristic Values

Test Instrument Measuring Ranges

| Test Instrument ¹ | Insulation Resistance Measurement | Line and Loop Resistance Measurement |
|------------------------------|--------------------------------------|---|
| PROFITEST MTECH+ | 50 kΩ499 MΩ | 150 m Ω 999 Ω |
| PROFITEST MXTRA | 50 kΩ499 MΩ | 150 m Ω 999 Ω |
| PROFITEST PRIME | 50 kΩ1.20 GΩ | 50 m $Ω$ 999 $Ω$ |

Refer to the test instruments' characteristic values in this regard as well.

Ambient Conditions

Operating temperature +5 ... +45 °C Storage temperature -20 ... +60 °C

Relative humidity Max. 75% (no condensation),

no condensation allowed

Elevation Max. 2000 m

Power Supply

Auxiliary voltage 5 V via RS 232 port

Current consumption 60 mA (all relays dropped out)

240 mA (2 relays picked up) 600 mA (all relays picked up)

Power consumption 3 W

Electrical Safety

Measuring category 300 V CAT III

Pollution degree 2

Protection class II per IEC 61010-1/EN 61010-1/

VDE 0411-1

Fuse link F1 ... F8: 8 ea. F 8.0 A H/500 V
Test voltage Insulation test voltage may not exceed

500 V.

Operating conditions Continuous operation

Electromagnetic Compatibility (EMC)

Interference emission EN 61326-1:2013, class B

Interference immunity EN 61326-1:2013

EN 61326-2-1:2013

Mechanical Design

Protection Housing: IP 40 per DIN VDE 0470, part 1 /

EN 60 529

Table Excerpt Regarding Significance of IP Codes

| IP XY | Protection Against | IP XY | Protection Against Water |
|---------------------------|------------------------|---------------------------|--------------------------|
| (1 st digit X) | Foreign Object Ingress | (2 nd digit Y) | Ingress |
| 4 | ≥ 1.0 mm Ø | 0 | Not protected |

Dimensions Housing (W x H x D):

Approx. 27.5 x 10.5 x 12 cm

(with PRO-SCHUKO plug insert)

Weight Approx. 1.1 kg

(test adapter without interface cable)

Connections

Measurement input PRO-SCHUKO plug insert for

PROFITEST MTECH+ IQ and MXTRA IQ, three 4 mm safety sockets for

PROFITEST PRIME

Mains connection Five 4 mm safety sockets,

(adapter cables for CEE 16A, CEE 32A and CEE 63A available as accessories

Data Interface

Transmission

parameters 9600 baud,

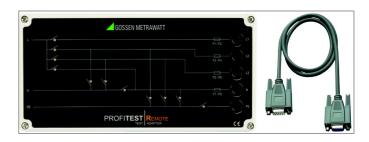
1 stop bit, no parity

Transmission format All commands are transmitted as ASCII

character strings.

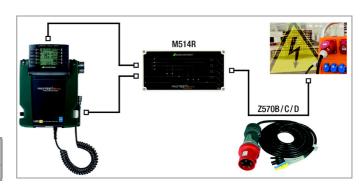
Scope of Delivery

- 1 Test adapter (Z555Z)
- 1 RS 232 interface cable
- Set of operating instructions



Sample Application

Circuit setup for documentation and measurement of line and a loop impedance as well as insulation resistance with the help of the **PROFITEST MXTRA IQ** as an accessory



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Accessories

Adapter Connecting-Cable-16 (Z570B)



PROFITEST MTECH+ IQ Test Instrument (M535B)



Adapter Connecting-Cable-32 (Z570c)



PROFITEST MXTRA IQ Test Instrument (M535D)



Adapter Connecting-Cable-63 (Z570d)



PROFITEST PRIME Test Instrument (M506A)



Universal Carrying Pouch (Z700D)



GMC-I Messtechnik GmbH

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3-Phase Test Adapter for Testers Including PROFITEST MTECH+ IQ, MXTRA IQ and PRIME

Order Information

| Description | Туре | Article No. |
|--|---------------------|-------------|
| Test adapter (with compensated off- set) for PROFITEST MTECH+, MX- TRA and PRIME test instruments (not included). The test adapter makes it possible to run an automated test sequence for insulation and loop re- sistance measurements RINS, ZL-PE and ZL-N at multi-core cables with L1, L2, L3, N and PE, 300 V CAT III. | PROFITEST REMOTE | M514R |
| Accessory Adapter | | |
| Adapter cable with CEE plug, 5-pole 16 A, and 4 mm safety sock- ets (L1, L2, L3, N, PE), cable length: 4.8 m, 300 V CAT III | Connecting-Cable-16 | Z570B |
| Adapter cable with CEE plug, 5-pole 32 A, and 4 mm safety sock- ets (L1, L2, L3, N, PE), cable length: 4.8 m, 300 V CAT III | Connecting-Cable-32 | Z570C |
| Adapter cable with CEE plug, 5-pole 63 A, and 4 mm safety sockets (L1, L2, L3, N, PE) for PROFITEST E- Mobility and remote adapter, cable length: 4.8 m, 300 V CAT III | Connecting-Cable-63 | Z570D |
| Accessory Pouch | | |
| Universal carrying pouch | F2000 | Z700D |
| Accessory Test Instruments | | |
| Universal protective measures test instrument per EN 61557 parts 1, 2, 3, 4, 5, 6, 7 and 10 with integrated memory and insulation measurement up to 1000 V, additionally with tripping test operating mode for AC/DC sensitive RCDs and loop impedance measurement without tripping the RCD, e-mobility test, Bluetooth interface, with DAkkS calibration certificate | PROFITEST MTECH+ IQ | M535B |
| Universal protective measures test instrument per EN 61557 parts 1, 2, 3, 4, 5, 6, 7 and 10 with integrated memory and insulation measurement up to 1000 V as well as additional tripping test for AC/DC sensitive RCDs, loop impedance measurement without tripping the RCD, selective earth measurement with current clamps as optional accessories, testing of IMDs and RCMs, e-mobility test, Bluetooth interface, with DAkkS calibration certificate and IZYTRONIQ Business Starter | PROFITEST MXTRA IQ | M535D |

| Description | Tuno | Article No. |
|---------------------------------------|-----------------|-------------|
| Description | Туре | Article No. |
| Test instrument per DIN EN 61557/ | | |
| VDE 0413 for testing the effective- | | |
| ness of protective measures in elec- | | |
| trical installations per DIN IEC | | |
| 60364/DIN VDE 0100-600, | | |
| in machines per | | |
| DIN EN 60204/VDE 0113-1, | | |
| in PV systems per | | |
| DIN EN 62446/VDE 0126-23 | | |
| and in charging stations per | | |
| VDE 0122-1, | | |
| voltage measurement: 1000 V AC/ | | |
| DC, ZL- PE 690 V AC/800 V DC, | | |
| RLO 200 mA/25 A, RINS up to | | |
| 1000 V, testing of type A, AC, F, EV, | | |
| B, B+ and MI RCDs, PRCDs, IMDs | | |
| and RCMs, testing of leakage | | |
| current, touch current, integrated | | |
| memory, freely programmable test | | |
| sequences, sensor input, USB, | | |
| Bluetooth interface | PROFITEST PRIME | M506A |

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