GOSSEN METRAWATT

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

3-447-050-03
2/12.22

- For use * with **PROFITEST MTECH+ IQ**, **MXTRA IQ** and **PRIME**
- Measurement of loop and online impedance **ZL-PE** [1] 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



[1] Measurement of loop impedance **ZL-PE** with sine (full-wave) and/or 15 mA sine

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 03.05.00

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

Applicable Regulations

IEC 61010-1/EN 61010-1/ 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 kΩ …499 MΩ	150 mΩ …999 Ω
PROFITEST MXTRA	50 kΩ …499 MΩ	150 mΩ …999 Ω
PROFITEST PRIME	50 kΩ …1.20 GΩ	50 mΩ …999 Ω

[1] 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 (5 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 3.15 A FF/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 (1st digit X)	Protection Against Foreign Object Ingress	IP XY (2nd digit Y)	Protection Against Water Ingress
4	≥ 1.0 mm ∅	0	Not protected

Dimensions	Housing (W × H × D): Approx. 27.5 × 10.5 × 12 cm (with PRO-SCHUKO plug insert)
Weight	Approx. 1.1 kg (test adapter without interface cable)

Connections

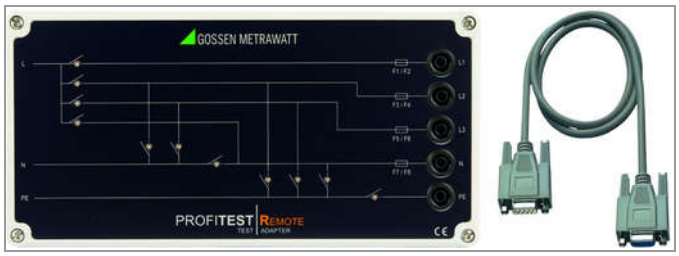
Measurement input	PRO-SCHUKO plug insert for **PROFITEST MTECH+ IQ** and **MXTRA IQ**, three 4 mm safety sockets for **PROFITEST PRIME**
Mains connection	Five 4 mm safety sockets, (adapter cables for CEE 16A, CEE 32A and CEE 63A available as accessories

Data Interface

Transmission parameters	9600 baud, 1 stop bit, no parity
Transmission format	All commands are transmitted as ASCII character strings.

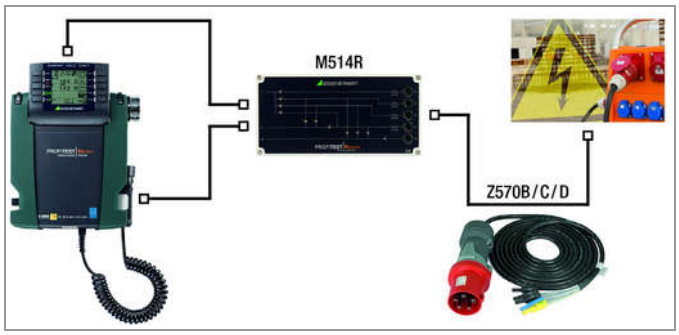
Scope of Delivery

1 Test adapter (Z555Z)
1 RS 232 interface cable
1 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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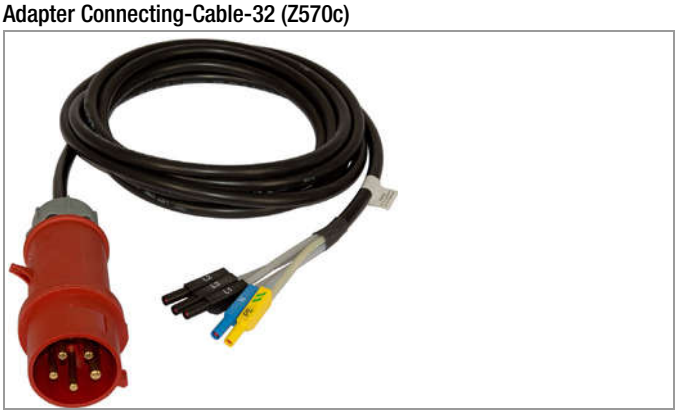
Accessories

Adapter Connecting-Cable-16 (Z570B)



Adapter Connecting-Cable-32 (Z570c)



Adapter Connecting-Cable-63 (Z570d)



Universal Carrying Pouch (Z700D)



PROFITEST MTECH+ IQ Test Instrument (M535B)



PROFITEST MXTRA IQ Test Instrument (M535D)



PROFITEST PRIME Test Instrument (M506A)



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Order Information

Description	Type	Article No.
Test adapter (with compensated offset) for PROFITEST MTECH+, MXTRA and PRIME test instruments (not included). The test adapter makes it possible to run an automated test sequence for insulation and loop resistance 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 sockets (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 sockets (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
Test instrument per DIN EN 61557/VDE 0413 for testing the effectiveness of protective measures in electrical 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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