GOSSEN METRAWATT

AT3-III E Test Adapter

for Active and Passive Testing of Single and 3-Phase Electric Devices and Extension Cables in Combination with SECUTEST.../SECULIFE ST Test Instruments (M7050..., M7010... und M6930...)

3-349-156-03
9/4.21

- **Connection of single and 3-phase devices and extension cables** without reversing polarity at devices under test in operating modes with and without mains power via the test sockets and the test plug
- **Extensive equipment** with plug connectors up to CEE 32
- **Function test with nominal current of up to 16/20 A**
- **Displays:** **residual current shutdown** LED red
  mains operation Lamps L1/L2/L3 yellow
- **Mains connection 230/400 V 50 Hz**
  via mains plug CEE 3P+N+PE 16 A mains outlet
- **Safety provided by electronic monitoring of residual current**
  with DUT shutdown if residual current exceeds 20 mA and optical error indication.
  Trip control with "residual current tripping" test key.
- **Prevention of short-circuits**
  and blown mains fuses during testing of defective single and 3-phase extension cables.
- **Compact and robust aluminum frame case, provided with a lock**

MADE IN GERMANY

CE

Additional Features

- Tests in accordance with the menu-controlled test sequences of the test instruments, fully automatic or manual.
- Transmission of test results to the test instruments and evaluation with the test instruments.
- Test adapter function EL1 (accessory for test instruments) for testing single phase extension cables is integrated as a module in the AT3-III.

Applications

The AT3-III E test adapter is used for measuring and testing single and 3-phase electrical devices and extension cables in combination with test instruments with the following article numbers (basic device):

M7010 (SECUTEST SIII / SIII+ / SIII+H;
SECUTEST S2N+ / S2N+10 / N+w)

M6930 (SECULIFE ST / ST HV)

M7050 (SECUTEST BASE / BASE10 / PRO;
SECUTEST ST BASE / ST BASE10 / ST PRO;
SECULIFE ST BASE / ST BASE25).

These tests must be performed by a qualified electrician with an appropriate test instrument after repair or modification, and are also required for periodic testing.
Depending upon the type of device under test and how it is used, testing of protective conductor resistance, insulation resistance and equivalent leakage current, as well as residual and contact current is required by these regulations.
Testing per EN 60601-1 is only possible to a certain extent.

The test adapter, in combination with the test instrument, allows for

– the passive testing:

- of protective conductor resistance
- of insulation resistance
- of protective conductor current by means of equivalent leakage current method
- of dielectric strength (HV test up to 1.5 kV)[1]
- at extension cables:
  – testing for conductor short-circuiting,
  – testing for conductor interruption

  and additionally at 3-phase extension cables:
  – testing for conductor reversal on L1, L2 and L3 for the determination of clockwise rotation.
- with protection by means of electronic residual current monitoring with mains shutdown at DUTs with residual current of more than 20 mA and visual error messages

– the active testing:

nominal current 16 A – maximum 20 A current consumption by DUT)
  – of protective conductor current [1 3]
  – by means of the differential current method (requires voltage measurement sockets at the test instrument [2])
  – by means of direct method (requires direct measurement of protective conductor current at the test instrument)
- of contact current [3]

1 only if the utilized test instrument is capable of performing this measurement
2 not with SECUTEST BASE / BASE10 or without Feature I01, respectively.
3 Please note that the pole reversal function is not active with the applied test instrument if you use the AT3-IIIE adapter for the testing of single-phase test objects (socket 3 / earthing contact plug). In this case, all leakage current measurements must be performed manually in **both** pole directions.

AT3-III E Test Adapter
for Active and Passive Testing of Single and 3-Phase Electric Devices and Extension Cables

Safe, Efficient Work

Operation is simple and safe. The test adapter is connected to a 3-phase 16 A mains outlet, and to the respective test instrument. Testing is performed without reversing polarity at the device under test, either automatically or manually, and is controlled by the test sequence of the utilized test instrument. Safety shutdown occurs if the factory preset residual current value is exceeded.

Applicable Regulations and Standards in accordance with which the test adapter has been manufactured and tested

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)
DIN EN 61140 VDE 0140-1	Protection against electric shock Common aspects for installation and equipment
DIN EN 61326-1 VDE 0843-20-1	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements

Regulations and Standards for the Use of test adapters

DIN VDE 0701-0702	Inspection after repair, modification of electrical appliances - Periodic inspection on electrical appliances - General requirements for electrical safety
IEC 62353 DIN EN 62353 VDE 0751-1	Medical electrical equipment – Recurrent test and test after repair of medical electrical equipment
DGUV provision 3 (previously BGV A3)	Provision 3 of the Deutsche Gesetzliche Unfallversicherung *(German Statutory Accident Insurance)* – Accident Prevention Regulation „Electrical systems and equipment“

Characteristic Values

Residual Current Measuring Function

Measuring Range	0 … 20 mA
Transformation Ratio	1 V per 10 mA
Intrinsic Uncertainty	±(5% of rdg. + 0.05 mA)

Nominal ranges of use

Line voltage L1/L2/L3/N	207 … 253 V AC
Frequency	49 … 51 Hz
Temperature	0 °C … +40 °C
Line voltage wave shape	sine

Reference conditions

Ambient temperature	+23 °C ±2 K
Relative humidity	50% ±5%
Line voltage	230 V/400 V ±10%
Measured quantity frequency	50 Hz ±0.2%

Ambient Conditions

Operation	–10 … + 40 °C
Storage	–25 … + 60 °C
Relative humidity	max. 75%, no condensation allowed
Elevation	to 2000 m

Power Supply

Line nominal voltage	3~230/400 V/50 Hz/CAT II

Connection only permissible with overload protection device
I_n = 16 A $I_2 \leq 1.45\ I_n$

Electrical Safety

Pollution degree	2
Safety class	I
4-pole residual current shutdown at	I_{dN} = 14.6 mA, t_a = 82 ms
Fuse protection	F315mA L 250V
5 x 20	T32mA L 250 V DIN EN 60127-2

Mechanical Design

Protection	case: IP 40 per DIN VDE 0470, part 1 terminals: IP 20
Dimensions	405 x 300 x 220 mm (with lid)
Weight	approx. 6.7 kg

Electromagnetic Compatibility

Intrinsic Uncertainty	EN 61326-1:2006 class B
Intrinsic Uncertainty	EN 61326:20

Please observe the technical data of the respective test instrument.

Standard Equipment

1 test case AT3-III E
1 operating instructions
1 plug insert per EN 60320 C13 for C6 sockets (non-heating devices, 10 A to 2.5 A IBM plug)

Order Information

Description	Type	Article Number
Test adapter	AT3-III E	Z745S

For additional information regarding accessories please refer to
- Measuring Instruments and Testers catalog
- www.gossenmetrawatt.com

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