

# Passive measuring adapters for single-phase and three-phase equipment up to 32 A

leakage current, fault current and load current measurements by means of leakage current clamp

**NEW!**

## BENNING MA 3 measuring adapter

- easy to use for efficient and quick testing
- connection for equipment with CEE connector
- suitable for appliance testers BENNING ST 725/ 750A/ 755/ 760
- test functions in combination with appliance testers:
- protective conductor resistance and insulating resistance
- functional test and phase sequence test of CEE cables
- alternative leakage current measurements

## BENNING triple CEE measuring adapter

- connection for equipment with CEE connector
- suitable for all common appliance testers
- test functions in combination with appliance testers:
  - protective conductor resistance and insulating resistance
  - alternative leakage current measurements

## BENNING CM 9-1

### TRUE RMS leakage current clamp

When using passive test adapters for testing in compliance with DGUV Regulation 3, an additional active leakage/fault current measurement may be required. For this, current clamps with a suitable filter and low resolution can be used.

- leakage/fault current measurement from 0.001 mA AC (1  $\mu$ A AC)
- preset filter (1 kHz) for appliance testing
- connectable low-pass filter LPF (40 Hz to 70 Hz)
- load current measurement up to 60.00 A AC
- voltage measurement: 0.01 V - 600,0 V AC/DC
- resistance measurement up to 600 k $\Omega$
- continuity test

Intermediate adapters are required for current measurement and for correct contacting for differential current measurement, direct protective conductor current measurement or load current measurement (see table below).



## Optional accessories

	item no.
<b>measuring adapter BENNING MA 3</b> (16 A CEE 3-pin, 16 A/32 A CEE 5-pin) for testing CEE extension cables (R <sub>PE</sub> , R <sub>INSU</sub> , I <sub>PE/CONT</sub> , functional test and phase sequence test) and single-/ three-phase loads (passive)	044159
<b>triple CEE measuring adapter</b> 16 A 3-pin, 16 A/32 A 5-pin for passive testing of three-phase loads (R <sub>PE</sub> , R <sub>INSU</sub> , I <sub>PE/CONT</sub> (alternative leakage current measurement method))	044147

See page 14 for further accessories

## Leakage Current Clamp and suitable Measuring Adapter

	item no.
<b>TRUE RMS leakage current clamp BENNING CM 9-1</b> ideal for supporting active leakage and fault current measurements during appliance testing	044682
<b>measuring adapters with individual lines led through for current measurements on CEE equipment</b>	
<b>single-phase</b> , shock-proof plug/coupling	044131
<b>three-phase</b> , 16 A/ 400 V CEE plug/ coupling	044127
<b>three-phase</b> , 32 A/ 400 V CEE plug/ coupling	044128

### BENNING ST 710

#### battery-operated appliance tester for mobile testing of electrical devices

- testing in compliance with VDE 0701-0702, ÖVE/ÖNORM E 8701, NEV, NEN 3140
- easy - operation by means of three keys
- quick - complete testing within 10 seconds
- mobile - testing can be made network-independently

#### Application

Safety-related testing of electrical devices/work equipment such as e.g. electrical devices/tools with ON/OFF switch, motorized equipment, lamps, cable reels, multiple distributors and household appliances. The protective conductor current/contact current is measured by means of the **alternative leakage current measurement method**.

#### Features

- automatic testing procedure for devices of class I, class II/III and line test
- testing of cable reels, multiple distributors and device connecting cables with rubber connector
- measuring result with "pass/fail" information
- limiting values preset in compliance with VDE standard
- indication in case of incorrect operation and if the test sample is not switched on
- sufficient battery capacity for > 2500 test samples
- three-phase test objects can be tested by means of optional measuring adapter

#### Measuring functions

- protective conductor resistance with a testing current of 200 mA DC and automatic polarity reversal
- insulating resistance with a testing voltage of 500 V DC
- protective conductor current and contact current by means of alternative leakage current measurement method
- voltage measurement on external shock-proof socket (L-N, L-PE, N-PE)



ST 710  
(050309): with socket of type E (BE/FR/CZ/SK/PL)  
(050315): with socket of type CH (CH)



Scope of delivery



CM 9-1

### Appliance Tester

	BENNING ST 710
display	graphic display
protective conductor resistance (R <sub>PE</sub> )	0.05 Ω - 20 Ω
insulation resistance (R <sub>iso</sub> )	0.1 MΩ - 20 MΩ (500 V DC)
protective conductor current/contact current by means of alternative leakage current measurement method (I <sub>EA</sub> )	0.1 mA - 20 mA
line test	R <sub>PE</sub> , R <sub>iso</sub> , short-circuit test and continuity test of phase conductor (L) and neutral conductor (N)
voltage	50 V - 270 V
scope of delivery	carrying case, test cable with alligator clip, appliance cable, batteries
item no.	050308

Measuring range indications refer to ranges from highest resolution to the final measuring range value.

### Optional accessories

	item no.
<b>TRUE RMS leakage current clamp BENNING CM 9-1</b> for the measurement of differential current, protective conductor current and load current of single-phase and three-phase loads (see page 10, 42)	044682
<b>measuring adapters for TRUE RMS leakage current clamp BENNING CM 9-1</b>	
single-phase, shock-proof plug/coupling	044131
three-phase, 16 A CEE-CEE, 5-pin	044127
three-phase, 32 A CEE-CEE, 5-pin	044128

See page 14 for further accessories