

BENNING World Class Test Equipment

# Safety Instruments BENNING IT 101, IT 110 and IT 120 B testing of electrical systems in compliance with the standards

## **BENNING IT 101**

### Insulation and Resistance Measuring Device

- measurement of insulating resistance and calculation of the resulting leakage current
- testing voltages of 50 V, 100 V, 250 V, 500 V and 1000 V
  selectable limiting values for ISO measurement, green LED for "PASS", red LED for testing voltage/external voltage
- resistance measurement with a testing current of 200 mA for testing protective conductor connections
- measurement of polarization index (PI) and dielectric absorption rate (DAR)
- switchable probe tip for triggering the measuring process
- internal memory for 100 measuring values per measuring function
- TRUE RMS voltage measurement with low-pass filter
- including case, switchable probe tip, silicone measuring leads, magnetic hook, alligator clips, rubber protective frame and batteries

## *BENNING IT 110, BENNING IT 120* B Installation Testers For safety tests on electrical systems according to DIN VDE 0100 and IEC 60364

Multifunctional installation testers for complete testing and efficient troubleshooting of electrical systems

- measurement of the protective conductor line and of the equipotential bonding line with a testing current of 200 mA
- measurement of the insulation resistance with testing voltages of 100 V, 250 V, 500 V and 1000 V
- line impedance and loop impedance measurement (optional without tripping of the RCD) with calculation of the shortcircuit current (PFC/PSC)
- complete testing of RCDs with nominal fault currents of 10/30/100/300/500/1000 mA
- measurement of contact voltage (without tripping), tripping time and tripping current (ramp test) of residual current operated device (RCD)
- · phase-sequence testing in three-phase mains

BENNING IT 110

IT 110

 voltage measurement up to 500 V and online voltage monitoring

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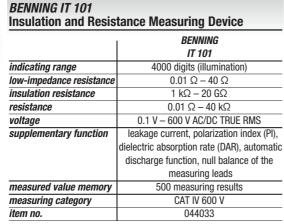
CAT IV 600 V TRUE RMS

TES

IT 101

BENNING

101



_	<b>BENNING IT 110</b> Installation Tester		
_	display		
_			

	IT 110
display	graphic display (illuminated)
low-impedance resistance	0.01 Ω – 2000 Ω
insulation resistance	1 kΩ – 1000 MΩ
line impedance (L-N/L)	0.01 Ω – 2000 Ω
loop impedance (L-PE)	0.01 Ω – 2000 Ω
short-circuit current	0.01 A – 24.4 kA
RCD testing	tripping time, tripping current,
type AC, A	contact voltage
phase sequence	yes
voltage, frequency	1 V – 500 V, 45 Hz – 65 Hz
item no.	044100

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Scope of delivery BENNING IT 101

## BENNING World Class Test Equipment

# BENNING IT 110, IT 120 B Installation Testers the perfect solution for efficient testing

## **Features**

## BENNING IT 110, BENNING IT 120 B

- all measuring functions can be selected directly by means of a rotary switch
- switchable probe tip for releasing the measuring process
- graphic display and help function with connecting diagram
- complete measuring result with measuring parameters, limiting value and symbols for PASS/FAIL
- current supply by means of 6 NiMH storage batteries (AA) with charger

## **Additional functions BENNING IT 120 B**

in addition to the BENNING IT 110:

- · testing of universal current-sensitive RCDs of type B
- current measurement (TRUE RMS) by means of current clamp adapter (optional)
- illumination measurement by means of lux sensor (optional)
- · earthing measurement by means of three-wire measuring method (optionally with earthing set)
- integrated measured value memory for 500 measurements

BENNING IT 120 B

IT 120 B

R 190 500U 1MΩ R:>1000mo

• USB and RS 232 interface

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• BENNING PC-Win IT 120 B software included in delivery

## Logging software with Test Log according to ZVEH **BENNING PC-Win IT 120 B**

- PC software for reading the stored test data
- · creation of test logs with handover and status report according to ZVEH
- · structuring and export function of the test data



## **INFORMATION:**

Scope of delivery of the BENNING IT 120 B

RCDs of type B are increasingly used for multi-phase equipment of power electronics. In case of a fault, these devices also detect smooth DC fault currents and high-frequency AC fault currents.



Test log

according to

ZVEH





**BENNING** luxmeter type B



#### **BENNING IT 120 B Installation Testers**

NEW! Testing of universal

current-sensitive

RCDs of type B

	BENNING	
	IT 120 B	
display	graphic display (illuminated)	
low-impedance resistance	0.01 Ω – 2000 Ω	
insulation resistance	1 kΩ – 1000 MΩ	
line impedance (L-N/L)	0.01 Ω – 2000 Ω	
loop impedance (L-PE)	0.01 Ω – 2000 Ω	
short-circuit current	0.01 A – 24.4 kA	
RCD testing	tripping time, tripping current,	
type AC, A, B	contact voltage	
phase sequence	yes	
voltage, frequency	1 V – 500 V, 45 Hz – 65 Hz	
earth resistance	0.01 Ω – 2000 Ω	
current (TRUE RMS)	0.1 mA – 20 A (by means of the clamp)	
luminous intensity	0.01 lux – 20 klux (by means of sensor)	
measured value memory	500 measuring results	
interfaces	USB, RS 232	
incl. software	BENNING PC-Win IT 120 B	
item no.	044102	

	BENNING IT 110	BENNING IT 120 B
tester incl. carrying case / carrying strap	x	Х Х
switchable probe tip	Х	Х
test cable with shock-proof plug	Х	Х
universal test cable, 3 x L = 1.5 m	Х	Х
3 x test probe, 3 x crocodile clips	х	Х
charger with 6 NiMH storage batteries (AA)	х	Х
PC software BENNING PC-Win IT 120 B		Х
USB and RS 232 cable		Х

Scope of delivery of the installation testers

Optional accessories for BENNING IT 120 B					
current clamp adapter <b>BENNING CC 2</b>					
0.5 A – 20 A AC (200 A AC)	item no. 044110				
illumination sensor <b>BENNING luxmeter type B</b>					
Accuracy: 5 %	item no. 044111				
earthing set consisting of 2 earth rods and 3 te	est cables				
(2 x L = 20 m, 1 x L = 4.5 m)	item no. 044113				