

# OVERVIEW OF THE TEST AND MEASUREMENT FUNCTIONS

## DIGITAL CURRENT CLAMP MULTIMETER/LEAKAGE CURRENT CLAMP



	<b>BENNING CM 1-2</b>	<b>BENNING CM 1-4</b>	<b>BENNING CM 2</b>	<b>BENNING CM 2-1</b>	<b>BENNING CM 10-1</b>	<b>BENNING CM 11</b>	<b>BENNING CM 12</b>
<b>Display range</b>	2,000	9,999	4,000	4,000	6,000	6,000	9,999
<b>Basic accuracy</b>	1.0%	1.0%	0.5%	2.0%	1.0%	1.0%	1.0%
<b>Voltage AC</b>	0.1 V - 600 V	6 V - 1000 V	1 mV - 600 V	0.1 mV - 600 V	0.1 mV - 1000 V	0.01 V - 600 V	10 mV - 1000 V
<b>Voltage DC</b>	0.1 V - 600 V	6 V - 1000 V	0.1 mV - 600 V	0.1 mV - 600 V	0.1 mV - 1000 V	0.1 mV - 600 V	10 mV - 1000 V
<b>Current AC</b>	100 mA - 400 A	0.1 A - 200 A	100 mA - 300 A	10 mA - 400 A	10 mA - 1500 A	0.1 mA - 20 A	10 mA - 600 A
<b>Current DC</b>	-	-	10 mA - 300 A	10 mA - 400 A	10 mA - 1500 A	0.1 mA - 10 A	10 mA - 600 A
<b>Resistance</b>	0.1 Ω - 20 MΩ	1 Ω - 50 kΩ	0.1 Ω - 40 MΩ	0.1 Ω - 40 MΩ	0.1 Ω - 600 kΩ	0.1 Ω - 600 kΩ	0.1 Ω - 100 kΩ
<b>Continuity/diode</b>	Yes/ -	Yes/ -	Yes/ -	Yes/Yes	Yes/Yes	Yes/ -	Yes/Yes
<b>Volt sensor</b>	-	-	-	Yes	Yes	-	Yes
<b>MIN/MAX memory/ ZERO function</b>	HOLD	HOLD	HOLD, PEAK, ZERO	HOLD, MAX/ MIN ZERO	HOLD, MIN/MAX, INRUSH, ZERO	HOLD, MIN/ MAX, ZERO	HOLD, PEAK, MAX/MIN
<b>Measurement method</b>	RMS	TRUE RMS	TRUE RMS	TRUE RMS	TRUE RMS	TRUE RMS	TRUE RMS
<b>Clamp opening</b>	30 mm	16 mm	25 mm	27 mm	42 mm	23 mm	33 mm
<b>Measurement category</b>	CAT III 600 V	CAT IV 600 V	CAT III 300 V	CAT IV 300 V	CAT IV 600 V	CAT IV 300 V	CAT IV 600 V
<b>Article no.</b>	4000 828 957	4000 828 948	4000 828 873	4000 828 956	4000 828 955	4000 828 923	4000 828 943

## INSULATION/RESISTANCE METER ACCORDING TO STANDARD DIN VDE 0100



	<b>BENNING IT 101</b>
<b>Measurements according to standard DIN VDE 0100/0105</b>	Insulation, calculation of the resulting leakage current (test voltages 50 V ... 1000 V), low-impedance resistance
<b>Display range</b>	4,000 digit (lighting)
<b>Voltage AC/DC</b>	0.1 V - 600 V AC/DC TRUE RMS
<b>Insulation resistance</b>	1 kΩ - 20 GΩ
<b>Low-impedance resistance</b>	0.01 Ω - 40 Ω
<b>Resistance</b>	0.01 Ω - 40 kΩ
<b>Measured value memory</b>	500 measurement results
<b>Measurement category</b>	CAT IV 600 V
<b>Additional feature</b>	Leakage current, polarisation index (PI), absorption degree (DAR), automatic discharge function, Zero comparison of measuring lines, red LED for external voltage, green LED
<b>Article no.</b>	4000 828 900

## INSTALLATION TESTERS



	<b>BENNING IT 105</b>	<b>BENNING IT 130</b>
<b>Display</b>	Graphic display (illuminated)	Graphic display (illuminated)
<b>Low-impedance measurement</b>	0.15 Ω - 199 kΩ	0.01 Ω - 2 kΩ
<b>Insulation resistance</b>	0.20 kΩ - 199 MΩ	10 kΩ - 1000 MΩ
<b>Line impedance (L-N/L)</b>	0.20 Ω - 1999 kΩ	0.01 Ω - 10 kΩ
<b>Loop impedance (L-PE)</b>	0.20 Ω - 1999 kΩ	0.01 Ω - 10 kΩ
<b>Short-circuit current</b>	up to 26 kA	0.01 A - 200 kA
<b>Residual current test type AC/A/F and B/B+</b>	Trip time ½ x, 1 x and 5 x IΔN, AUTO Trip current (ramp)	Trip time, Trip current (ramp) Touch voltage, auto testing
<b>Test current</b>	sinusoidal (AC), pulsating (A) 10/30/100/300/500 mA	-
<b>Rotating field testing</b>	right/left	-
<b>Rotating field</b>	-	Yes
<b>Voltage (TRUE RMS), frequency</b>	1 V - 440 V, 45 Hz - 65 Hz	1 V - 550 V, 0 Hz - 500 Hz
<b>Grounding resistance</b>	-	0.01 Ω - 2,000 Ω (via earthing set)
<b>Current (TRUE RMS)</b>	-	0.1 mA - 400 A (via pliers)
<b>Light intensity</b>	-	0.01 lux - 20 klux (via sensor)
<b>Measured value memory</b>	-	up to 1,800 measurement results
<b>Interfaces</b>	-	USB, RS 232
<b>incl. software</b>	-	BENNING PC-Win IT 130
<b>Article no.</b>	4000 828 939	4000 828 919