1. TECHNICAL SPECIFICATIONS – DMM FUNCTIONS

Accuracy is indicated as ± [% readings + (no. of digits*resolution)] at 23°C ± 5°C, relative humidity <70%HR

DC/AC TRMS VOLTAGE (Autorange)

Range	Resolution	DC Accuracy	Accuracy (30 ÷ 70Hz)	Accuracy (70 ÷ 400Hz)	Input impedance
1.0 ÷ 999.9mV	0.1mV	±(0.5%rdg+2dgt)	±(1.0%rdg+2dgt)	±(2.0%rdg+2dgt)	1MΩ
1.000 ÷ 9.999V	0.001V				
10.00 ÷ 99.99V	0.01V				
100.0 ÷ 605.0V	0.1V				

AC/DC VOLTAGE: MAX / MIN / AVG / PEAK

Function	Range	Resolution	Accuracy	Response time
MAX, MIN, AVG	1.0mV ÷ 999.9mV	0.1mV	±(5.0%rdg + 10dgt)	500ms
	1.000V ÷ 9.999V	1mV		
	10.00V ÷ 99.99V	10mV		
	100.0V ÷ 605.0V	100mV		
PEAK	10.0mV ÷ 999.9mV	0.1mV		1ms
	1.000V ÷ 9.999V	1mV		
	10.00V ÷ 99.99V	10mV		
	100.0V ÷ 605.0V	100mV		

DC/AC CURRENT TRMS (with external clamp)

Range	Resolution	DC Accuracy	Accuracy (30 ÷ 70Hz)	Accuracy (70 ÷ 400Hz)	Crest factor	Overload protection
1.0 ÷ 999.9mV	0.1mV	±(0.5%rdg+2 dgt)	±(1.0%rdg+2 dgt)	±(2.0%rdg+2 dgt)	3	605Vrms max
1.000 ÷ 1.200V	1mV				1.5	

Note: accuracy indicated don't consider clamp accuracy. Please refer also to transducers clamp user's manual.

AC/DC CURRENT: MAX / MIN / AVG / PEAK (with external clamp)

Function	Range	Resolution	Accuracy	Response time	Overload protection
MAX, MIN, AVG	1.0mV ÷ 999.9mV	0.1mV	±(5.0%rdg+10 dgt)	500 ms	605Vrms max
	1.000V ÷ 1.200V	1mV			
PEAK	10.0mV ÷ 999.9mV	0.1mV		1ms	
	1.000V ÷ 3.000V	1mV			

RESISTANCE AND CONTINUITY TEST

Range	Resolution	Accuracy	Continuity test	Overload protection
0.00Ω ÷ 39.99Ω	0.01Ω	±(1.0%rdg+5 dgt)	R ≤40Ω	605Vrms max for 1 minute
40.0Ω ÷ 399.9Ω	0.1Ω			
400Ω ÷ 3999Ω	1Ω			
4.00kΩ ÷ 39.99kΩ	10Ω			

FREQUENCY (with test leads)

Range	Resolution	Accuracy	Input voltage	Overload protection
30.0 ÷ 199.9Hz	0.1Hz	±(0.5%rdg+2 dgt)	1.0mV ÷ 605V	605Vrms max
200 ÷ 400Hz	1Hz			

FREQUENCY (with external clamp)

Range	Resolution	Accuracy	Input voltage	Overload protection
30.0 ÷ 199.9Hz	0.1Hz	±(0.5%rdg+2dgt)	1.0mV ÷ 1.000V	605Vrms max
200 ÷ 400Hz	1Hz			

2. TECHNICAL SPECIFICATIONS – VERIFY TESTS

Tripping time test for RCD type AC and A

Range (ms)	Resolution (ms)	Accuracy	Overload protection
2 ÷ 300	1	±(2.0% rdg + 2dgt)	605Vrms max

Nominal trip-out currents: 30mA, 30x5mA, 100mA, 300mA (Type AC), 30mA (Type A)
RCD type: AC (∿), A (⩙), General
Phase-Earth / Phase-Neutral voltage: 100V ÷ 265V
Frequency: 50Hz ± 0.5Hz / 60Hz ± 0.5Hz

Tripping currente test for RCD type AC and A

RCD Type	IΔN	Range IΔN [mA]	Resolution	Accuracy
AC, A (General)	30mA	6.0 ÷ 33.0	0.5mA	- 0%, +10%$I_{\Delta N}$

Phase-Earth / Phase-Neutral voltage: 100V ÷ 265V
Frequency: 50Hz ± 0.5Hz / 60Hz ± 0.5Hz

Global Earth Resistance

Test current	Range (Ω)	Resolution (Ω)	Accuracy	Overload protection
15mA	1 ÷ 1999	1	±(5.0% rdg + 2dgt)	605Vrms max
100mA	0.1 ÷ 199.9	0.1	±(5.0% rdg + 3dgt)	

Phase-Earth voltage: 110V ÷ 265V
Frequency: 50Hz ± 0.5Hz / 60Hz ± 0.5Hz
Limit contact voltage: 50V

Phase sequence / conformity

Type of measure	Voltage range (V)	Frequency range (Hz)	System type
1 Wire	90 ÷ 315 (Phase – Earth)	45 ÷ 65	up to 315 (Phase – Earth) up to 550V (Phase – Phase)
2 Wire	110 ÷ 315 (Phase – Neutral)	45 ÷ 65	up to 315 (Phase – Earth) up to 550V (Phase – Phase)

Max crest factor :1.5
NOTE: the two-wire measurement can be performed also phase to phase in plants without neutral, even with one phase to earth, but always with phase to phase voltage up to 550V

3. GENERAL SPECIFICATIONS

DISPLAY:	
Features:	Dual numeric, 9999 points
Display update:	2 times/sec
Visible area:	73x73 mm
POWER SUPPLY:	
Batteries:	4 batteries 1.5V type LR6-AA-AM3-MN 1500
ELECTRICAL FEATURES:	
Conversion:	AC 16 Bit, TRMS
Sample frequency:	64 sample/period
MECHANICAL FEATURES:	
Dimensions (L x W x H):	240 x 100 x 45mm
Weight (included batteries):	approx 630 g
ENVIRONMENTAL CONDITIONS:	
Reference temperature:	23°C ± 5°C
Working temperature:	0° ÷ 40°C
Allowed relative humidity:	<70%HR
Storage temperature:	-10 ÷ 60°C
Storage humidity:	< 70%HR
TEST VERIFIES REFERENCE STANDARDS:	
Global earth resistance:	IEC/EN61557-3
RCDs test:	IEC/EN61557-6
Phase sequence indication:	IEC/EN61557-7
REFERENCE STANDARDS:	
Safety of measuring instruments:	IEC/EN61010-1 + A2(1997)
Product type standard:	IEC/EN61557-1,3,6,7
Insulation:	double insulation
Pollution degree:	2
Overvoltage category:	CAT III 550V AC Phase - Ground CAT III 550V AC Phase - Phase
Max height of use:	2000m

This instrument complies with the requirements of the European 2006/95/EEC (LVD) and EMC 2004/108/EEC