

1. ELECTRICAL SPECIFICATIONS

Uncertainty indicated as $\pm$ [% readings + (no. of digits * resolution)] at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$, <60%HR

Continuity test of earth conductors with 200mA

Range (Ω)	Resolution (Ω)	Uncertainty (*)
0.01 $\div$ 9.99	0.01	$\pm(2.0\% \text{rdg} + 2\text{dgt})$
10.0 $\div$ 99.9	0.1	

(*) Considering calibration of test cables

Test current: > 200mA DC for $R \leq 5\Omega$ (included calibration) ; Resolution of test current: 1mA

Open-circuit voltage: $4\text{V} \leq V_0 \leq 12\text{V}$

Continuity test of earth conductors with 10A

Range (Ω)	Resolution (Ω)	Uncertainty
0.001 $\div$ 0.999	0.001	$\pm(1.0\% \text{rdg} + 2\text{dgt})$

Test current: >10A AC for $R \leq 0.45\Omega$

Resolution test current: 0.1A ; Open-circuit voltage: <12VAC

Measurement method: 4 wires

Power supply voltage: 230V AC / 50/60Hz

Continuity test of earth conductors with 10A in compliance with IEC/EN60204-1:2006

Range (Ω)	Resolution (Ω)	Uncertainty
0.001 $\div$ 0.999	0.001	$\pm(1.0\% \text{rdg} + 2\text{dgt})$

Test current: >10A AC for $R \leq 0.45\Omega$; Resolution test current: 0.1A ; Open-circuit voltage: <12VAC

Length measurement range: 0.1m $\div$ 999.9m

Selectable section: 0.5, 1, 1.5, 2.5, 4, 6, 10, 16mm² ; Copper resistivity: 0.017 $\Omega\text{mm}^2/\text{m}$

Measurement method: 4 wires

Power supply voltage: 230V AC / 50/60Hz

Contact voltage U_t

Range (V)	Resolution (V)	Uncertainty
0 $\div$ 2 U_{tlim}	0.1	-0%, +(10.0% rdg + 3dgt)

U_{tlim} (UI): 25V , 50V

Frequency

Range (Hz)	Resolution (Hz)	Uncertainty
47.0 $\div$ 63.6	0.1	$\pm(0.1\% \text{rdg} + 1\text{dgt})$

The Loop measurement is active only for 50Hz $\pm 0.5\text{Hz}$

Voltage (LOOP, Phase Sequence)

Range (V)	Resolution (V)	Uncertainty
15 $\div$ 460	1	$\pm(3.0\% \text{rdg} + 2\text{dgt})$

Line Impedance (Phase-Phase, Phase-Neutral)

Range (Ω)	Resolution (Ω) (*)	Uncertainty
0.01 $\div$ 9.99	0.01	$\pm(5.0\% \text{rdg} + 3\text{dgt})$
10.0 $\div$ 199.9	0.1	

(*) 0.1 m Ω on range 0.0 $\div$ 199.9 m Ω (with IMP57 optional accessory)

Maximum peak current: 3.65A (at 127V); 6.64A (at 230V); 11.5A (at 400V)

Test voltage: 100 $\div$ 265V (Phase-Neutral) / 100 $\div$ 460V (Phase-Phase); 50Hz $\pm 0.5\text{Hz}$

Fault Loop Impedance (Phase-Ground)

Range (Ω)	Resolution (Ω) (*)	Uncertainty
0.01 $\div$ 9.99	0.01	$\pm(5.0\% \text{rdg} + 3\text{dgt})$
10.0 $\div$ 199.9	0.1	
200 $\div$ 1999	1	

(*) 0.1 m Ω on range 0.0 $\div$ 199.9 m Ω (with IMP57 optional accessory)

Maximum peak current: 3.65A (at 127V); 6.64A (at 230V)

Test voltage: 100 $\div$ 265V (Phase-Ground); 50Hz $\pm 0.5\text{Hz}$

Fault Loop Resistance R_A without RCDs tripping

Range (Ω)	Resolution (Ω)	Uncertainty
1 $\div$ 1999	1	$\pm(5.0\% \text{rdg} + 3\text{dgt})$

Test current: 15mA ; Phase-Ground voltage: 100 $\div$ 265V 50Hz $\pm 0.5\text{Hz}$



2. GENERAL SPECIFICATIONS

REFERENCE GUIDELINES

Safety:	IEC/ENEN61010-1
Product type standard:	IEC/EN61557-1, 3, 4, 7
Insulation:	double insulation
Pollution degree:	2
Measurement category:	CAT II 600VAC (inputs) / 350VAC (to ground) CAT III 600V AC (inputs) / 300VAC (to ground)
Continuity with 200mA:	IEC/EN61557-4
Continuity with 10A:	IEC/EN60439-1
Continuity with 10A (LOW Ω 10E60204)	IEC/EN60204-1:2006
Loop Impedance / Ra:	IEC/EN61557-3
Phase sequence:	IEC/EN61557-7
Max altitude of use:	2000m

DISPLAY AND MEMORY:

Features:	Dot matrix with backlight
Resolution:	128x128 dots
Memory:	999 measures

POWER SUPPLY:

Batteries:	6x1.5V alkaline batteries type LR6 AA AM3 MN1500
Battery life:	LOW Ω : > 80 test LOOP:>1000test; Ra $\frac{1}{\equiv}$:>1000 test Phase sequence: > 1000 test
Mains power supply:	230V- 50Hz (Continuity 10A features only)

MECHANICAL FEATURES:

Dimensions (L x W x H):	225x165x105mm
Weight (included batteries):	1.7kg

WORKING ENVIRONMENTAL CONDITIONS:

Reference temperature:	23°C $\pm$ 5°C
Working temperature:	0° $\div$ 40°C
Allowed relative humidity:	< 80% HR
Storage temperature:	-10 $\div$ 60°C
Storage humidity:	< 80% HR

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