5.5 Service

Repairs under or out of warranty time: Please contact your distributor for further information.

Distributor's address:

Producer's address:

METREL d.d.
Ljubljanska 77
SI-1354 Horjul

tel.: +386 1 75 58 200
fax.: +386 1 7549 095
http://www.metrel.si
E-mail: metrel@metrel.si

Unauthorised person is not allowed to open the EasiTest. There are no user replaceable components inside the instrument, except the fuse, refer to paragraph **5.2. Fuses.**

6 Technical specification

6.1 Functions

Insulation resistance

Resistance:

Measuring range ..... (0.008 ÷ 1000) MΩ

Display range (MΩ)	Resolution (MΩ)	Accuracy*
0.000 ÷ 1.999	0.001	±(2 % of r. + 2 D)
2.00 ÷ 19.99	0.01	
20.0 ÷ 199.9	0.1	
200 ÷ 1000	1	±(10 % of r.)

*Specified accuracy is valid if Universal test cable is used, while it is valid up to 200 MΩ if Tip Commander is used.

Voltage:

Display range (V)	Resolution (V)	Accuracy
0 ÷ 1200	1	±(2 % of r. + 3 D)

Nominal voltages..... 250 V DC, 500 V DC, 1000 V DC
Current capability of generator at Utest >UN..... >1 mA
Short-circuit test current ..... <3 mA
Automatic discharge of tested object..... yes

Continuity of protective conductors

Measuring range ..... (0.08 ÷ 1999) Ω

Display range R (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 19.99	0.01	±(2 % of r. + 2 D)
20.0 ÷ 199.9	0.1	±(3 % of r.)
200 ÷ 1999	1	

Open-terminal test voltage ..... (4 ÷ 7) V DC
Short-circuit test current ..... >200 mA
Compensation of test leads (up to 5Ω)..... yes
Sound signal ..... yes
Automatic polarity exchange ..... yes
Measurement mode ..... single measurement

RCD – general data

Nominal differential currents.....
.....10mA, 30mA, 100mA, 300mA, 500mA, 1000mA
Accuracy of actual differential currents:
-0 / +0.1·IΔ; IΔ = IΔN, 2·IΔN, 5·IΔN
-0.1·IΔN / +0; IΔ = 0.5·IΔN
Test current shape ..... sine wave
Test current start at ..... 0° or 180°
RCD type..... standard or selective

Contact voltage Uc

Measuring range..... .....(10 ÷ 100) V

Display range (V)	Resolution (V)	Accuracy*
0.00 ÷ 9.99	0.01	(-0 / + 10)% of r.± 0.2 V
10.0 ÷ 100.0	0.1	(-0 / + 10)% of r.

*The accuracy is valid if:
- Mains voltage is stabile during the meas.
- PE terminal is free of interfering voltage

Measurement principle ..... without aux. probe
Test current ..... < 0.5 IΔN
Limit contact voltage..... 25V or 50 V
The contact voltage is calculated to IΔN (standard type) or to 2IΔN (selective type).

RCD – Fault loop resistance RL (Trip Lock)

Display range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 19.99	0.01	±(5 % of r. + 0.05V/ IΔN + 0.2 Ω)
20.0 ÷ 199.9	0.1	
200 ÷ 1999	1	
2.00k ÷ 10.00k	0.01k	

Calculation ..... Uc =RL*IΔN
Measurement principle ..... without aux. probe
Test current ..... < 0.5 IΔN

RCD – Trip-out time (RCD manual, RCD auto)

Test current..... 0.5 IΔN, IΔN, 2 IΔN, 5 IΔN
(multiplier 5 is not available, if IΔN = 1000 mA)

Meas. range (G type) ..... (0ms ÷ upper disp. value)

Display range (ms) G type	Resolution (ms)	Accuracy
0 ÷ 300 (1/2IΔN, IΔN)	1	±3 ms
0 ÷ 150 (2IΔN)	1	
0 ÷ 40 (5IΔN)	1	

Meas. range (S type)..... (0 ms ÷ upper disp. value)

Display range (ms) S type	Resolution (ms)	Accuracy
0 ÷ 500 (1/2IΔN, IΔN)	1	±3 ms
0 ÷ 200 (2IΔN)	1	
0 ÷ 150 (5IΔN)	1	

RCD – Trip-out current (RCD ramptest)

Current IΔN:

Measuring range ..... (0.2 ÷ 1.1) IΔN

Display range	Resolution	Accuracy
0.2IΔN ÷ 1.1IΔN	0.05IΔN	±0.1IΔN

Time tΔ:

Measuring range ..... (10 ÷ 300) ms

Display range (ms)	Resolution (ms)	Accuracy
0 ÷ 300	1	±3ms

Voltage Uci:

Measuring range ..... (10 ÷ 100) V

Display range (V)	Resolution (V)	Accuracy*
0.00 ÷ 9.99	0.01	(-0/+10) % of r. ± 0.2 V
10.0 ÷ 100.0	0.1	(-0/+10) % of r.

*The accuracy is valid if:

- ☐ Mains voltage is stabile during the meas.
- ☐ PE terminal is free of interfering voltage

Uci voltage is calculated to trip-out current IΔ.

Fault loop resistance and prospective short-circuit current (LOOP L-PE, PSC)

Fault loop resistance RL-PE:

Measuring range ..... (0.20 ÷ 1999) Ω

Display range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 19.99	0.01	±(5 % of r. + 5 D)
20.0 ÷ 199.9	0.1	
200 ÷ 1999	1	

Prospective short-circuit current Ipsc:

Display range (A)	Resolution (A)	Accuracy
0.06 ÷ 19.99	0.01	Consider accuracy of RL-PE
20.0 ÷ 199.9	0.1	
200 ÷ 1999	1	
2.00k ÷ 19.99k	10	
20.0k ÷ 24.4k	100	

Ipsc calculation..... Ipsc = UN·1.06 / RL-PE
UN = 115V; (100V ≤ UL-PE < 160 V)
UN = 230V; (160V ≤ UL-PE ≤ 264 V)
Max. test current (at 230 V)..... 2.5 A
Nominal voltage range ..... (100 ÷264) V / (45 – 65) Hz

Line resistance and prospective short-circuit current (LOOP L-N, PSC)

Line resistance RL-N(L):

Measuring range ..... (0.20 ÷ 1999) Ω

Display range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 19.99	0.01	±(5 % of r. + 5 D)
20.0 ÷ 199.9	0.1	
200 ÷ 1999	1	

Prospective short-circuit current Ipsc:

Display range (A)	Resolution (A)	Accuracy
0.06 ÷ 19.99	0.01	Consider accuracy of RL-N(L)
20.0 ÷ 199.9	0.1	
200 ÷ 1999	1	
2.00k ÷ 19.99k	10	
20.0k ÷ 24.4k	100	

Ipsc calculation..... Ipsc = UN·1.06 / RL-N(L)
..... UN = 115V; (100 V ≤ Uinp < 160 V)
..... UN = 230V; (160 V ≤ Uinp ≤ 264 V)
..... UN = 400V; (264 V < Uinp < 440 V)
Max. test current (at 230V)..... 2.5 A
Nominal voltage range ..... (100 ÷440) V / (45 – 65) Hz

Voltage (Loop L-E, Loop L-N)

Display range (V)	Resolution (V)	Accuracy
0 ÷ 440	1	±(2 % of r. + 2 D)

Nominal frequency range ..... (45 ÷ 65) Hz

Frequency (Loop L-E, Loop L-N)

Display range (Hz)	Resolution (Hz)	Accuracy
45.0 ÷ 65.0	0.1	±(0.1 % of r. +1 D)

Nominal voltage range ..... (10 ÷ 440) V

6.2 General characteristics

Power supply..... 6 V DC (4 × 1.5V battery IEC LR14)
Visual and sound warnings ..... yes
Dimensions (w × h × d) ..... (26.5 × 11 × 18.5) cm
Weight (without accessories, with batteries) ..... 1.8 kg
Display ..... LCD with backlight
Protection classification..... double insulation

Over-voltage category..... CATIII/300 V or CATII/600 V
Pollution degree 2
Degree of protection..... IP 44
Working temp. range..... 0°C ÷ +40 °C
Nominal (reference) temp. range ..... +10°C ÷ +30 °C
Max. humidity ..... 85 % RH (0 °C ÷ +40 °C)
Nominal (reference) hum. range .....40% RH ÷ 60 % RH
Auto power off..... yes