

Basic functions:

- measurement of earth bond/continuity resistance with the currents: 200 mA (PAT-810/815/820), 10 A and 25 A (only PAT-815/820) (protection class I),
- measurement of insulation resistance – three measurement voltages: 100 V and 250 V (only PAT-815/820), 500 V (PAT-810/815/820),
- measurement of substitute leakage current,
- measurement of differential leakage current,
- measurement of touch leakage current,
- measurement of power,
- measurement of current consumption,
- IEC lead test,
- check of the L-N circuit test,
- measurement of mains voltage and frequency,
- RCD testing,
- flash test / high voltage test (only PAT-820).

Other:

- automatic measurement range selection,
- professional software for data processing and reporting,
- cooperation with a barcode reader and printer,
- supports pendrive flash memory,
- large and clear touch display,
- ergonomic operation.

Measurement of continuity resistance $I=200$ mA (protection class I)

Display range	Resolution	Accuracy
0,00...0,99 Ω	0,01 Ω	$\pm(4\% \text{ m.v.} + 2 \text{ digits})$
1,00...19,99 Ω		$\pm(4\% \text{ m.v.} + 3 \text{ digits})$

- test current: I_{200} mA for $R = 0,2...1,99 \Omega$
- adjustable limit
- adjustable measurement time

Measurement of earth bond $I=10$ A (protection class I)

Display range	Resolution	Accuracy
0...999 m Ω	1 m Ω	$\pm(3\% \text{ m.v.} + 4 \text{ digits})$
1,00...1,99 Ω	0,01 Ω	

- technical method
- test current: I_{10} A for $R \leq 0,5 \Omega$
- adjustable limit
- adjustable measurement time

Measurement of earth bond $I=25$ A (protection class I)

Display range	Resolution	Accuracy
0...999 m Ω	1 m Ω	$\pm(3\% \text{ m.v.} + 4 \text{ digits})$
1,00...1,99 Ω	0,01 Ω	

- technical method
- test current: I_{25} A for $R \leq 0,2 \Omega$
- adjustable limit
- adjustable measurement time

Measurement of insulation resistance

Measurement range according to IEC 61557-2 for:

$U_n=100$ V: 100 k Ω ...99,9 M Ω

$U_n=250$ V: 250 k Ω ...199,9 M Ω

$U_n=500$ V: 500 k Ω ...599,9 M Ω

U_n	Range	Resolution	Accuracy
100V	0...1999k Ω	1k Ω	$\pm(5\% \text{ m.v.} + 8 \text{ digits})$
	2,0...19,99M Ω	0,01M Ω	
	20,0...99,9M Ω	0,1M Ω	
250V	0...1999k Ω	1k Ω	
	2,00...19,99M Ω	0,01M Ω	
	20,0...199,9M Ω	0,1M Ω	
500V	0...1999k Ω	1k Ω	
	2...19,99M Ω	0,01M Ω	
	20,0...599,9M Ω	0,1M Ω	

- adjustable limit
- adjustable measurement time
- automatic discharge of the capacity of the tested device after measurement
- protection against measuring live devices

Measurement of differential leakage current:

Display range	Resolution	Accuracy
0,00...3,99mA	0,01mA	$\pm(5\% \text{ m.v.} + 2 \text{ digits})$
4,0...19,9mA	0,1mA	

- adjustable limit
- adjustable measurement time

Measurement of substitute leakage current:

Display range	Resolution	Accuracy
0,00...3,99mA	0,01mA	$\pm(5\% \text{ m.v.} + 2 \text{ digits})$
4,0...19,9mA	0,1mA	

- adjustable limit
- adjustable measurement time
- open circuit voltage 25...50 V

Measurement of touch leakage current:

Display range	Resolution	Accuracy
0,00...4,999mA	0,001mA	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$

- adjustable limit
- adjustable measurement time

Measurements of RCD parameters

RCD trip time test t_a

Test range according to IEC 61557: 0 ms ... to the upper limit of displayed value

RCD type	Factor	Range	Resolution	Accuracy
General	$0,5 \cdot I_{Dn}$	0...300 ms	1 ms	$\pm(2\% \text{ m.v.} + 2 \text{ digits})^1$
	$1 \cdot I_{Dn}$			
	$2 \cdot I_{Dn}$	0...150 ms		
	$5 \cdot I_{Dn}$	0...40 ms		

¹⁾ - accuracy of differential leakage current $I_{Dn} = 10$ mA I_{Dn} : $\pm 2\% \text{ m.v.} \pm 3 \text{ digits}$

Measurement of RCD disconnection current I_A for sinusoidal differential current

Test range according to IEC 61557: $(0,3...1,0)I_{A,n}$

Selected nominal current of RCD	Test range	Resolution	Test current	Basic uncertainty
10 mA	3,3...10,0 mA	0,1 mA	$0,3 \times I_{Dn} ... 1,0 \times I_{Dn}$	$\pm 5\% I_{Dn}$
15 mA	4,5...15,0 mA			
30 mA	9,0...30,0 mA			

- it is possible to start the measurement from the positive of the negative half of forced leakage current
- test current passage time max. 3200 ms
- automatic measurement of RCD disconnection time (t_A) and disconnection current
- measurement for: $0,5I_{A,n}$, $1I_{A,n}$, $2I_{A,n}$ i $5I_{A,n}$,

Measurement of power S:

Display range	Resolution	Accuracy
0...999 VA	1 VA	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$
1,00 k...3,99 kVA	0,01 kVA	

Measurement of power P

Display range	Resolution	Accuracy
0...999 W	1 W	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$
1,00 k...3,99 kW	0,01 kW	

Power factor PF

Display range	Resolution	Accuracy
0,00...1,00	0,01	$\pm(10\% \text{ m.v.} + 5 \text{ digits})$

Measurement of current consumption:

Display range	Resolution	Accuracy
0,00...15,99 A	0,01 A	$\pm(2\% \text{ m.v.} + 3 \text{ digits})$

Voltage measurement:

Display range	Resolution	Accuracy
195,0...265,0 V	0,01 V	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$