

PORTABLE APPLIANCE AND WELDING MACHINES TESTER PAT-806

NEW!



EN

60974-4

CAT II

300V

PAT-806 digital meters are used to measure the parameters of portable electrical equipment (power tools, white goods, etc.) which determine their safety: resistance of protective conductors, insulation resistance, continuity of connections, leakage current, power.
Specifically the instrument is dedicated to measure the welding equipment.

PAT-806 can be used to test the equipment performed in accordance with standards:

- **EN 60974-4:** Arc welding equipment - Part 4: Periodic inspection and testing.
- **EN 60745-1:** Hand-held motor-operated electric tools. Safety. General requirements.
- **EN 61029:** Safety of transportable motor-operated electric tools. General requirements.
- **EN 60335-1:** Household and similar electrical appliances -Safety -Part 1: General requirements.
- **EN 60950:** Safety of information technology equipment (IT Equipment).
- **VDE 0404-1:** Prüf- und Messeinrichtungen zum Prüfen der elektrischen Sicherheit von elektrischen Geräten. Teil 1: Allgemeine Anforderungen.
- **VDE 0404-2:** Prüf- und Messeinrichtungen zum Prüfen der elektrischen Sicherheit von elektrischen Geräten. Teil 2: Prüfeinrichtungen für Prüfungen nach Instandsetzung, Änderung oder für Wiederholungsprüfungen.
- **VDE 0701-0702** Prüfung nach Instandsetzung, Änderung elektrischer Geräte. Wiederholungsprüfung elektrischer Geräte. Allgemeine Anforderungen für die elektrische Sicherheit.



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Basic functions:

- **measurement of parameters of arc welding machines (EN 60974-4):**
 - welding machine no-load voltage measurement,
 - U_p voltage (peak),
 - welding circuit leakage current measurement,
- measurement of protective conductor resistance with the currents: 200mA, 10A, 25A (protection class I),
- measurement of insulation resistance – three measurement voltages: 100V, 250V and 500V
- measurement of equivalent leakage current,
- measurement of PE leakage current,
- measurement of residual leakage current,
- measurement of touch leakage current,
- measurement of equivalent leakage current,
- measurement of power,
- measurement of current consumption,
- IEC lead test,
- fuse test,
- check of the L-N circuit test,
- measurement of mains voltage and frequency.

Other:

- automatic measurement range selection,
- 990 memory cells for measurement results with option of uploading to a PC through a USB port or printing,
- professional software for data processing and reporting,
- cooperation with a barcode reader and printer,
- supports pendrive flash memory,
- large and clear display with backlight,
- ergonomic operation.

Standard accessories:

- Power supply cord
- „Crocodille” clip K03; black - 2 pcs
- Pin probe with banana connector; black
- Test lead with banana plug; 1,2m; 2,5mm² black - 2 pcs
- USB cable
- 0314 015.VXP 15 A 250 VAC 6.3x32 mm Littlefuse fuse (2 pcs)
- Carrying case L5
- Sonel Reader software
- Calibration certificate

WAPRZAS1
WAKROBL30K03
WASONBLOGB3
WAPRZ1X2BLBB2X5
WAPRZUSB
WAPQZB15PAT
WAFUTL5

Additional accessories:

- 1.2 m 10/25 A two-core test lead “U1/I1”
- 1.2 m 10/25 A two-core test lead “U2/I2”
- Sonel high-current probe
- Kelvin clip
- 1 kV black “crocodile” clip
- 1 kV black probe
- 1.2 m black test lead terminated with banana plugs, black
- Cord - Schuko/IEC adapter (for testing extension cords)
- 16 A three-phase socket adapter
- 16 A switched three-phase socket adapter
- 32 A three-phase socket adapter
- 32 A switched three-phase socket adapter
- 16 A industrial socket adapter
- 32 A industrial socket adapter
- IEC adapter for testing IEC cords terminated with a “Mickey Mouse” connector
- Sonel PAT software
- USB bar code reader
- Portable USB report/bar code
- Stickers with bar codes (a reel of 100 stickers)
- Permanent adhesive tape

WAPRZ1X2DZBB1
WAPRZ1X2DZBB2
WASONSPGB1
WAKROKELK06
WAKROBL30K03
WASONBLOGB1
WAPRZ1X2BLBB2X5
WAADAPATIEC2
WAADAPAT16P
WAADAPAT16PR
WAADAPAT32P
WAADAPAT32PR
WAADAPAT16F1
WAADAPAT32F1
WAADAPATIEC1
WAPROSONPAT1
WAADACK1
WAADAD1
WANAKKODPAS
WANAKD1



Conforms to the EMC requirements according to EN 61326-1:2009 and EN 61326-2-2:2006

Electrical safety:

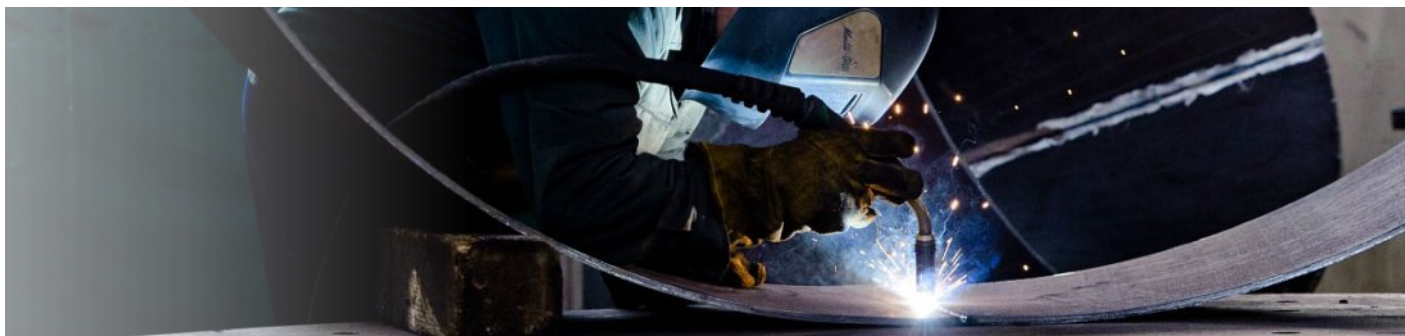
- insulation according to
- measurement category
- enclosure protection rating acc. to EN 60529:

EN 61010-1 and IEC 61557
II 300V acc.to EN 61010-1
IP40

Other technical specification:

- power supply
- load current
- measurement results memory
- data transmission to PC
- dimensions:
- weight
- operating temperature:
- storage temperature:
- humidity

187...265 V, 50 Hz
max. 16 A (230 V)
990 cells
USB
330 x 235 x 120 mm
4,75 kg
0...+40 °C
-20...+70 °C
20...80%



Measurement of protective earth conductor resistance I=200mA (protection class I)

Display range	Resolution	Accuracy
0,00...0,99 Ω	0,01 Ω	±(4% m.v. + 2 digits)
1,00...19,99 Ω		±(4% m.v. + 3 digits)

- test current: ≥200 mA for R=0,2...1,99 Ω
- upper limit adjustable in the 10 mΩ ... 1,99 Ω range with the 0,01 Ω resolution
- measurement time adjustable in 1...60 s range, with the 1 s resolution

Measurement of protective earth conductor resistance I=10 A (protection class I)

Display range	Resolution	Accuracy
0...999 mΩ	1 mΩ	±(3% m.v. + 4 digits)
1,00...1,99 Ω	0,01 Ω	±(3% m.v. + 40 digits)*

- * for two-wire measurement
- technical method
- test current: ≥10 A for R≤0,5 Ω
- limit adjustable in the 10 mΩ ... 1,99 Ω range with the 0,01 Ω resolution
- measurement time adjustable in 1...60 s range, with the 1 s resolution

Measurement of protective earth conductor resistance I=25A (protection class I)

Display range	Resolution	Accuracy
0...999 mΩ	1 mΩ	±(3% m.v. + 4 digits)
1,00...1,99 Ω	0,01 Ω	±(3% m.v. + 40 digits)*

- * for two-wire measurement
- technical method
- measurement with sinusoidal current of the mains frequency, test current: ≥25 A for R≤0,2 Ω
- limit adjustable in the 10 mΩ ... 1,99 Ω range with the 0,01 Ω resolution
- measurement time adjustable in 1...60 s range, with the 1 s resolution

Measurement of L-N circuit resistance

Display range	Resolution	Accuracy
0...999 Ω	1 Ω	±(5% m.v. + 5 digits)
1,00...4,99 kΩ	0,01 Ω	

- test voltage: 4...8 V AC
- short-circuit current: max. 5 mA

Measurement of insulation resistance

Measurement range according to IEC 61557-2 for:

U_n=100 V: 100 kΩ...99,9 MΩ

U_n=250 V: 250 kΩ...199,9 MΩ

U_n=500 V: 500 kΩ...599,9 MΩ

U _n	Range	Resolution	Accuracy
100V	0...1999 kΩ	1 kΩ	±(5% m.v. + 8 digits)
	2,0...19,99 MΩ	0,01 MΩ	
	20,0...99,9 MΩ	0,1 MΩ	
250V	0...1999 kΩ	1 kΩ	
	2,00...19,99 MΩ	0,01 MΩ	
	20,0...199,9 MΩ	0,1 MΩ	
500V	0...1999 kΩ	1 kΩ	
	2...19,99 MΩ	0,01 MΩ	
	20,0...599,9 MΩ	0,1 MΩ	

- limit adjustable in the: 0.01...9.9 MΩ range with the 0.1 MΩ resolution
- adjustable measurement time: continuous measurement (Cont), or from 4 s to 3 min with 1 s resolution
- automatic discharge of the capacity of the tested device after measurement
- protection against measuring live devices
- output current max. 1.4 mA

Measurement of PE and residual leakage current:

Display range	Resolution	Accuracy
0,00...3,99 mA	0,01 mA	±(5% m.v. + 2 digits)
4,0...19,9 mA	0,1 mA	

- limit adjustable in the 0.01...9.9 mA range with the 0.01 mA/0.1 mA resolution
- adjustable measurement time: continuous measurement (Cont), or 1...60 s with 1 s resolution
- in the middle of the measurement time, the meter automatically switches the polarity at the measuring terminal and displays the greater value
- current measurement band 40 Hz...100 kHz (for leakage current) or 20 Hz...100 kHz (for residual leakage current)

Measurement of equivalent leakage current:

Display range	Resolution	Accuracy
0,00...3,99 mA	0,01 mA	±(5% m.v. + 2 digits)
4,0...19,9 mA	0,1 mA	

- limit adjustable in the 0.01...9.9 mA range with the 0.01 mA/0.1 mA resolution
- adjustable measurement time: continuous measurement (Cont), or 1...60 s with 1 s resolution
- open circuit voltage 25...50 V

Measurement of touch leakage current:

Display range	Resolution	Accuracy
0,00...4,999 mA	0,001 mA	±(5% m.v. + 3 digits)

- limit adjustable in the 0.01...1.99 mA range with the 0.01 mA resolution
- adjustable measurement time: continuous measurement (Cont), or 4...60 s with 1 s resolution

No-load voltage measurement for welding machines:

Voltage measurement U_R (r.m.s.):

Display range	Resolution	Accuracy
5,0...170,0 V	0,1 V	±(2,5% w.m. + 5 digits)

- upper limit adjustable in the 5,0...170,0 V range with the 1 V resolution

U_p (peak) voltage measurement:

Display range	Resolution	Accuracy
5,0...240,0 V	0,1 V	±(2,5% w.m. + 5 digits)

- upper limit adjustable in the 5,0...240,0 V range with the 1 V resolution

Welding circuit leakage current measurement I_L:

Display range	Resolution	Accuracy
0,00...14,99 mA	0,01 mA	±(5% w.m. + 2 digits)

- current measurement range results from the applied measurement system which is in accordance with EN 60974-4
- upper limit adjustable in the 0,10 mA...14,90 mA range with 0,1 mA resolution
- adjustable time of measurement: 3 s...60 s with 1 s resolution

Measurement of power S:

Display range	Resolution	Accuracy
0...999 VA	1 VA	±(5% m.v. + 3 digits)
1...3,99 kVA	0,01 kVA	

- adjustable measurement time: continuous measurement (Cont), or 1...60 s with 1s resolution

Measurement of current consumption:

Display range	Resolution	Accuracy
0,00...15,99 A	0,01 A	±(2% m.v. + 3 digits)

- adjustable measurement time: continuous measurement (Cont), or 1...60 s with 1s resolution

Voltage measurement:

Display range	Resolution	Accuracy
187,0...265,0 V	0,01 V	±(2% w.m. + 2 cyfry)

Display range	Resolution	Accuracy
45,0 Hz...55,0 Hz	0,1 Hz	±(2% w.m. + 2 cyfry)

PE network voltage measurement:

Display range	Resolution	Accuracy
0,0...59,9 V	0,1 V	±(2% w.m. + 2 cyfry)

- pomiar napięcia sieciowego pomiędzy PE i N zasilania miernika

* - dla U < 5 V niepewność nie jest specyfikowana