



Take care of Safety of the power tools with Sonel's PAT!

Product features

- advanced measuring unit enabling measurements of:
 - protective conductor resistance
 - of insulation resistance
 - of RCD circuit breaker parameters
 - of equivalent leakage current,
 - of differential leakage current,
 - of touch leakage current
 - of power
 - of power consumption
 - IEC cable test
 - of mains voltage and frequency.
 - flashtest - high voltage test (only PAT-820)
- a very intuitive user interface
- support for label printer and QR code scanner
- have duty housing (with IP67 flap closed)
- clear colour touchscreen



Application

Digital PAT-8XX series meters are designed for parameter measurements of all kinds electrical devices, such as power tools, household appliances, etc. The device is dedicated to the facility maintenance departments, companies providing power tool measurement services, hotels and public institutions services. PAT should be used in every place where the safety of using power tools is one of the inseparable elements of taking care of the user's safety against electric shock.



Device capabilities

The PAT-815/820 series devices thanks to the advanced measuring unit enable comprehensive testing of power tools. Due to the expanded interface, it enables the recording of large amounts of measurement data, and the use of additional functions to facilitate work. Support for QR code scanner, label printer or communication with PC is not a problem. The measurements are carried out in an intuitive and widely configurable manner.



Intuitive operation

The large, touch screen and graphic layout makes work on the device is intuitive and pleasant. The built-in help guides the user when building the correct measurement system. The work related to data records is based on a tree- structure memory that enables the construction of a transparent and extensive database.



Tree-structure memory

Writing to the memory with the initial description of the tested devices, a location of measurements, customer data, assignment of the serial number and index to the tested device, possibility of introducing comments to the tested device.

Have duty housing

Durable case with IP67 protection (with closed lead). It provides reliability during measurement, transport and storage.

Standard accessories



mains cable with IEC C19 plug

WAPRZZAS1



test lead 1,8 m, orange, (10 A / 25 A, terminated in a crocodile clip)

WAPRZ1X8ORKS



2x test lead 1,8 m, red, 11 kV (banana plugs)
(PAT-820 only)

WAPRZ1X8REBB



2x pin probe, red 5 kV (banana socket)
(PAT-820 only)

WASONREOGB2



USB transmission cable

WAPRZUSB



2x fuse 0314 015.VXP 15 A 250 VAC 6.3x32 mm Littlefuse

WAPOZB15PAT



Sonel Reader software

WAPROREADER

Additional accessories



**IEC C6 to C13
adapter**
WAADAPATIEC2



**C-3 current clamps
($\Phi=52$ mm)**
WACEGC30KR



**PAT16-P three-phase
socket adapter
16 A for PAT**
WAADAPAT16P



**PAT16-PR three-
phase socket
adapter 16 A for
PAT (switchable)**
WAADAPAT16PR



**PAT16-C three-phase
socket adapter
16 A for PAT (4P)**
WAADAPAT16C



**PAT16-CPR
three-phase socket
adapter 16 A for PAT
(4P, switchable)**
WAADAPAT16CPR



**PAT32-P three-phase
socket adapter
32 A for PAT**
WAADAPAT32P



**PAT32-PR three-
phase socket
adapter 32 A for
PAT (switchable)**
WAADAPAT32PR



**PAT32-C three-phase
socket adapter
32 A for PAT (4P)**
WAADAPAT32C



**PAT16-F1 industrial
socket adapter
16 A for PAT**
WAADAPAT16F1



**PAT32-F1 industrial
socket adapter
32 A for PAT**
WAADAPAT32F1



**Crocodile clip,
blue, 1 kV, 20 A**
WAKROBU20K02



**Crocodile clip,
red, 1 kV, 20 A**
WAKRORE20K02



**Kelvin clamp,
1 kV, 25 A**
WAKROKELK06



**pin probe, red 1 kV
(banana socket)**
WASONRE0GB1



**double-wire test
lead 2,1 m (IEC C13
/ banana plug)**
WAPRZ2X1DZIECB



**double-wire test
lead 1,5 m (PAT/
banana plug)**
WAPRZ1X5DZBB



**IEC test
adapter (Shuko)**
WAADAPATIEC1



**brush probe for
PAT Testers**
WASONSZ1



**high-current pin
probe 1 kV (ba-
nana sockets)**
WASONSPGB1



**barcode scan-
ner 2D (USB)**
WAADACK2D

Measurement of continuity resistance I=200 mA (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: I200 mA for R = 0,2...1,99 Ω
- adjustable limit
- adjustable measurement time

Measurement of I=10 A earth bond (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	

- technical method
- test current: I10 A for R<0,5 Ω
- adjustable limit
- adjustable measurement time

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

Display range	Resolution	Accuracy
0...999 mΩ	1 mΩ	±(3% w.m. + 4 cyfry)
1,00...1,99 Ω	0,01 Ω	

- technical method
- test current: 25 A for R=0,2 Ω
- adjustable limit
- adjustable measurement time

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 N
- $U_n = 500$ V: 500 kΩ...599,9 MΩ

U_n	Range	Resolution	Accuracy
100 V	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	
250 V	0...1999 kΩ	1 kΩ	
	2,00...19,99 MΩ	0,01 MΩ	
	20,0...199,9 MΩ	0,1 MΩ	
500 V	0...1999 kΩ	1 kΩ	
	2...19,99 MΩ	0,01 MΩ	
	20,0...599,9 MΩ	0,1 MΩ	

- 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...3,99 mA	0,01 mA	±(5% m.v. + 2 digits)
4,0...19,9 mA	0,1 mA	

- adjustable limit
- adjustable measurement time

Measurement of substitute 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	

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

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	±(8% m.v. + 5 digits)

Measurement of power P

Display range	Resolution	Accuracy
0...999 W	1 W	±(5% m.v. + 3 digits)
1...3,99 kW	0,01 kW	±(8% m.v. + 5 digits)

Power factor PF

Display range	Resolution	Accuracy
0,00...1,00	0,01	±(10% m.v. + 5 digits)

Measurement of current consumption

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

Voltage measurement

Display range	Resolution	Accuracy
195,0...265,0 V	0,1V	±(2% m.v. + 2 digits)

Technical specification

measurement category	II 300V acc.to EN 61010-1
enclosure protection rating acc. to EN 60529	IP40 (IP67 with lid closed)
power supply	195 V...265V, 50Hz
load current	max. 16A (230V)
dimensions	330 x 235 x 120 mm
weight	approx. 6,2 k
storage temperature	-20°...+70°C
operating temperature	-10°...+50°C
humidity	20...80%
display	TFT 7" 800x480
data transmission	USB 2.0, WiFi