



CAT II

300 V

IEC

61557

IP40

WiFi

TOUCH
SCREEN

FLASH
TEST

QR CODE
SYSTEM

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-820 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-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



2x pin probe, red
5 kV
(banana socket)

WASONREOGB2



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)

WAPRZ1X8REBB



Mains cable with
IEC C19 plug

WAPRZZAS1



USB
transmission cable

WAPRZUSB



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

WAPOZB15PAT

Optional accessories



IEC C6 to C13 adapter

WAADAPATIEC2



C-3 current clamps (Φ=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)

WASONREOGB1



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 (banana sockets)

WASONSPGB1



Barcode scanner 2D (USB)

WAADACK2D

Technical specification

Measurement functions	Range	Resolution	Accuracy ±(% m.v. + digits)
Resistance of protective conductor (PE) I = 200 mA / 10 A / 25 A	up to 19.99 Ω	from 1 mΩ	from ±(3% m.v. + 4 digits)
Insulation resistance U _{ISO} = 100 V / 250 V / 500 V	up to 599.9 MΩ	from 1 kΩ	±(5% m.v. + 8 digits)
Visual test		✓	
Continuity check of protective conductor (PE)		✓	
Insulation resistance measurement at three points		✓	
Durability of insulation (Flash Test)		✓	
IEC cable test		✓	
Fuse test		✓	
Functional test			
Apparent power S	up to 3.99 kVA	from 1 VA	from ±(5% m.v. + 3 digits)
Active power P	up to 3.99 kW	from 1 W	from ±(5% m.v. + 3 digits)
Power Factor (PF)	up to 1.00	0.01	±(10% m.v. + 5 digits)
Current consumption for power measurement	up to 15.99 A	0.01 A	±(2% m.v. + 3 digits)
Leakage current measurement			
PE leakage current and differential leakage current	up to 19.9 mA	from 0.01 mA	±(5% m.v. + 2 digits)
Substitute leakage current	up to 19.9 mA	from 0.01 mA	±(5% m.v. + 2 digits)
Touch leakage current	up to 4.999 mA	0.001 mA	±(5% m.v. + 3 digits)
RCD switch test			
Measurement of RCD parameters according to IEC 61557	up to 300 ms	1 ms	±(2% m.v. + 2 digits)
Measurement of RCD tripping current I _A for sinusoidal residual current (AC type)	up to 30 mA	0.1 mA	±5% I _{Δn}
Measurement of power network parameters			
Voltage	up to 265.0 V	0.1 V	±(2% m.v. + 2 digits)
Voltage of PE in power network	up to 59.9 V	0.1 V	±(2% m.v. + 2 digits)
Frequency	up to 55.0 Hz	0.1 Hz	±(2% m.v. + 2 digits)

Technical data

Display	TFT 7" 800 x 480 px
Power supply	195...265 V 50 Hz mains
Load current	max. 16 A (230 V)

Safety and work conditions

Measuring category according to EN 61010	II 300 V
Ingress protection	IP40
Type of insulation according to EN 61010-1 and IEC 61557	double
Dimensions	390 x 308 x 172 mm
Weight	ca. 5.7 kg
Operating temperature	-10...+50°C
Storage temperature	-20...+70°C
Humidity	20...80%
Nominal temperature	+20...+25°C
Reference humidity	40%...60%
Altitude a.s.l.	<2000 m

Memory and communication

Memory of measurement results	min. 4 GB
Data transmission	USB 2.0, Wi-Fi

Other information

Quality standard - development, design and production	ISO 9001
	ISO 14001
	ISO 45001
The product meets the EMC (emission for industrial environment) requirements according to standards	EN 61326-1
	EN 61326-2-2