




LED test results indication (PASS / FAIL)



Full autotest procedure after pressing START





START




Visual test

Quick access to the measurement procedures













Measurements



Saving to memory/printing

 IP40	 LED	 CAT II	 R <sub>PE</sub>
 WiFi		 300 V	 10 A

PAT-10



## Security at hand

### Features

- LED test results indication
- quick access to the measurement procedures
- compact design and ergonomic soft case
- automatic measurement range selection
- measurement of protective conductor resistance with the currents:
  - » PAT-2 • PAT-2E • PAT-10 | 200 mA,
  - » PAT-10 | 200 mA, 10 A
- insulation resistance measurement:
  - » PAT-2 • PAT-2E • PAT-10 | 250 V
  - » PAT-2E • PAT-10 | 250 V, 500 V
- PRCD trip time testing
- measurement of equivalent, touch and differential leakage current
- measurement of mains voltage
- IEC lead test
- saving results to the memory
- printing labels with measurement results (option)
- works with software: **Sonel Reader** and **Sonel PAT Analysis**
- works with **Sonel PAT Analysis Mobile** application



## Capabilities

The PAT-10, PAT-2E and PAT-2 meters are an innovative combination of small dimensions (allowing full mobility) with advanced measuring systems, providing **fully automatic measurements** of electrical devices, IEC cables and extension cords - also those with PRCD.

A set of tests is made with just one press of the START button. Configuration options allow to **modify meter's work mode**, and thus - to better tailor it to user's needs.

PAT instruments are equipped with a manual measurement mode. It is useful in situations where individual test is sufficient instead of a complex measurement sequence.

All instruments enable basic tests **without external power supply**: simplified test sets are available in battery mode.

Small dimensions, light weight and a specially designed bag for the meter and accessories provide both convenience and high mobility. Wireless communication with the printer allows free measurement place arrangement without tangled wires. Meter's memory and integration with PC software additionally extends the functionality of the instruments.



## Standards

The tester can be used to test the equipment performance in accordance with standards:

- 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)
- AS/NZS 3760:2010 In-service safety inspection and testing of electrical 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

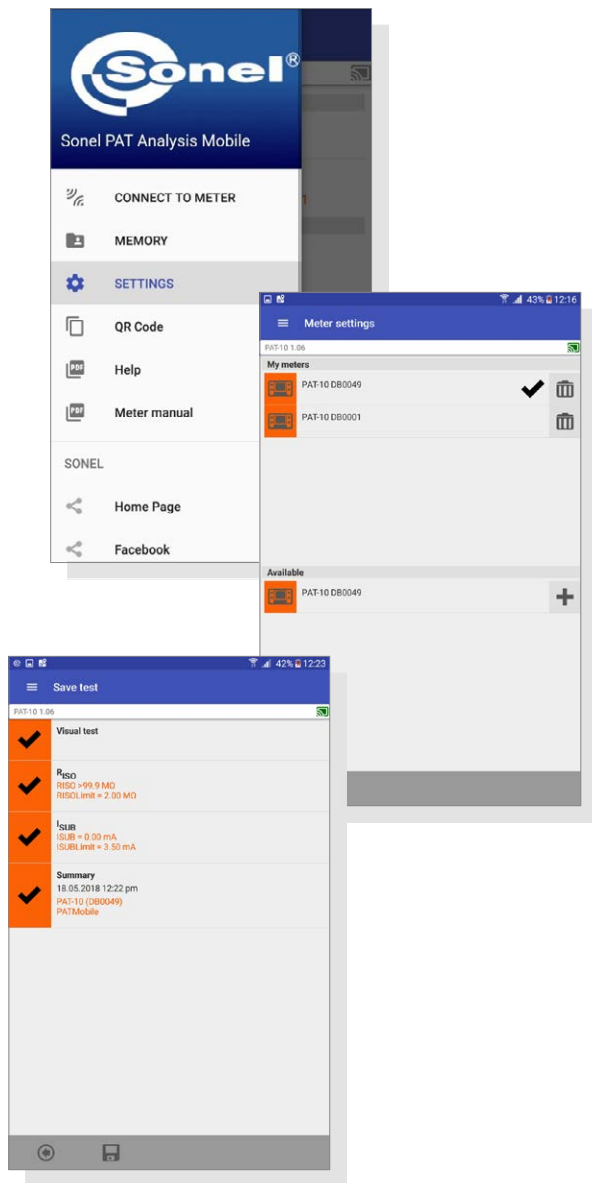


# Sonel PAT Analysis Mobile



The mobile application extends the capabilities of Sonel PAT-10, PAT-2E, PAT-2 testers series. It available on devices with Android operating system (version 5.0+). Sonel PAT Analysis Mobile:

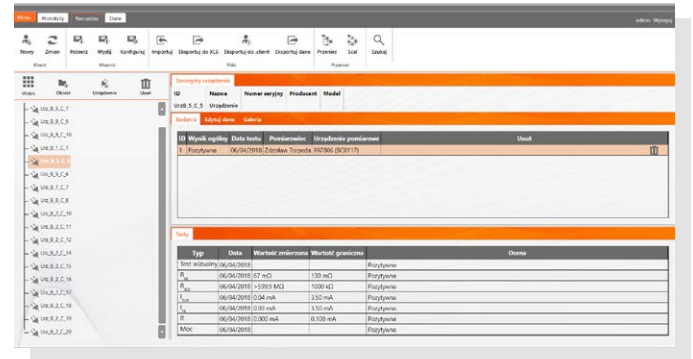
- connects wirelessly to the selected tester and printer,
- downloads measurement results,
- saves results to PAT memory structure (client, appliances and measurement data),
- prints reports and QR codes,
- reads QR codes of the PAT system,
- sends data via internet.



# Sonel PAT Analysis

This software is intended for companies that perform safety measurements of electrical equipment.

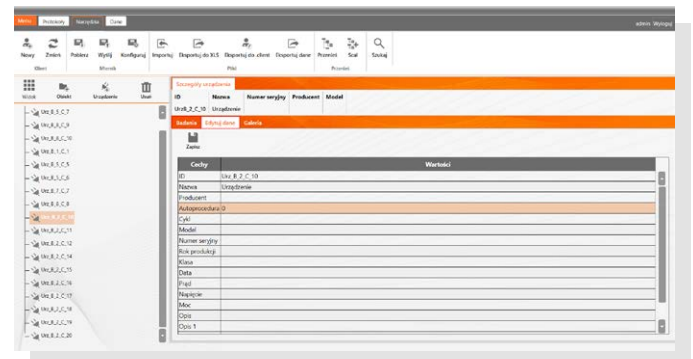
Applications are compatible with Sonel PAT-series testers. Data saved by the meter is entered into the test report for the selected item of equipment.



- Perfect for production plants, electrical tool rental services, repair and maintenance services, etc.
- Hierarchical data entry structure - a device is assigned to a specific company or department.
- Capability of gathering information about a given piece of equipment.
- Tracking the test history of a device.
- Capability of advanced meter configuration via software.
- Label printing on standard adhesive papers.
- Capability of creating a custom measurement standard using the report editor.
- Capability of scheduling measurements - every device contains a "Measurement cycle" list - the application automatically displays devices whose testing deadline is approaching or has expired.

## Report printing according to the following standards:

- VDE 0701:1, VDE 0701:200, VDE 0701:240, VDE 0701:260, DIN VDE 0702, EN 61010, EN 60335, EN 60950, IEC 60601, EN62353



# Specifications

Model	PAT-10	PAT-2E	PAT-2
Visual test	✓	✓	✓
Resistance measurement of PE conductor I = 200 mA	0.01...19.99 Ω	0.01...19.99 Ω	0.01...19.99 Ω
Resistance measurement of PE conductor I = 10 A	0.01...1.99 Ω	-	-
Insulation resistance measurement U = 250 V	0.25...99.9 MΩ	0.25...99.9 MΩ	-
Insulation resistance measurement U = 500 V	0.50...99.9 MΩ	0.50...99.9 MΩ	0.50...99.9 MΩ
Measurement of substitute leakage current	0.01...19.9 mA	0.01...19.9 mA	0.01...19.9 mA
Measurement of touch leakage current	0.001...4.999 mA	0.001...4.999 mA	-
Measurement of differential leakage current	0.10...19.9 mA	0.10...19.9 mA	-
IEC cord test ( $R_{ISO}$ , $R_{PE}$ , polarity)	✓	✓	✓
PRCD test (tripping time for $I_{\Delta n}$ : x1/x5; 0° and 180°)	10 mA, 30 mA	10 mA, 30 mA	-
Built-in memory for results / transmission to computer	✓	✓	✓
Wi-Fi	✓	✓	✓
Compatible with printer	✓	✓	✓
Meter configuration from computer	✓	✓	✓
Power supply	Network power supply: 220 V; 230 V; 240 V 50/60 Hz Built-in rechargeable battery	Network power supply: 220 V; 230 V; 240 V 50/60 Hz Built-in rechargeable battery	Built-in rechargeable battery (measurements can be performed during charging)
Measurement category CAT II 300 V	✓	✓	✓
Weight	ca. 1.40 kg		
Dimensions	200 x 180 x 77 mm		
Measurement standards	EN 50678, EN 50699		



## Standard accessories



**Test lead 1.2 m,  
1 kV (terminated in  
a crocodile clip) red**

WAPRZ1X2REBK



**Mains power  
cable Uni-Schuko  
/ IEC C19 plug**

WAPRZZAS1



**USB cable**

WAPRZUSB



**2 x Fuse 16 A,  
5 x 20 mm  
(PAT-2E, PAT-10)**

WAPOZB16PAT



**M-12 carrying case**

WAFUTM12

## Optional accessories



**Three-phase socket  
adapter 16 A**

5P  
WAADAPAT16P

5P switchable  
WAADAPAT16PR

4P  
WAADAPAT16C

4P switchable  
WAADAPAT16CPR



**Three-phase socket  
adapter 32 A**

5P  
WAADAPAT32P

5P switchable  
WAADAPAT32PR

4P  
WAADAPAT32C

4P switchable  
WAADAPAT32CPR



**3P industrial  
socket adapter**

16 A  
WAADAPAT16F1

32 A  
WAADAPAT32F1



**Test lead 1.2 m  
CAT III/1000V CAT  
IV/600V (2.5 mm<sup>2</sup> /  
banana plugs) red**

WAPRZ1X2REBB2X5



**Pin probe 1 kV  
CAT III/1000 V  
CAT IV/600 V  
(banana socket) red**

WASONREOGB1



**Brush probe  
(banana socket)**

WASONSZ1



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

WAKRORE20K02



**Report / barcode  
printer (Wi-Fi /  
D3, portable)**

WAADAD3



**IEC/Uni Schuko  
adapter for exten-  
sion cords testing**

WAADAPATIEC2



**Sonel PAT Analysis**

WAPROSONPAT3



**Accessories for  
Brother printer**

Ink tape  
WANAKD3

Rechargeable battery  
WAAKU19



**IEC 60320 C6 to  
C13 adapter**

WAADAPATIEC1