



Accessories for portable appliance testers

## PATent for safety



measurements



labeling

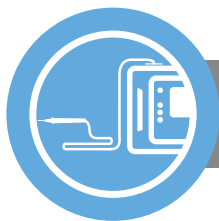


transportation



software

Sonel® we measure globally



# measurements

## Adapters for single phase industrial sockets

With their help, you can perform safety tests of devices that are powered from single-phase 16 A and 32 A industrial sockets. They ensure the availability of all tests that are carried out using the measuring socket on the face of the meter (provided that the rated current of the tested object does not exceed 16 A).



Type	Usage	Index
Unswitchable	Sockets 16 A, 1-phase 3-pole	WAADAPAT16F1
Unswitchable	Sockets 32 A, 1-phase 3-pole	WAADAPAT32F1

Accessories dedicated for:

- PAT-2
- PAT-2E
- PAT-10
- PAT-820
- PAT-80
- PAT-85
- PAT-86

## Adapters for three phase industrial sockets

The adapters enable safety tests of devices (or extension cords) supplied from 16 A or 32 A three-phase sockets.

- The unswitchable versions have permanently shorted lines L1, L2, L3 of a three-phase socket, connected to the L line of a single-phase plug.
- The switchable versions are equipped with a rotary switch shorting L of the measuring socket on the face of the meter with adapter phases - individually or collectively.

The use of a set of adapters allows testing of 3-phase extension cords, including polarization test.



Adapter Unswitchable

Type	Usage	Index
Unswitchable	Sockets 16 A, 3-phase 4-pole	WAADAPAT16C
Switchable		WAADAPAT16CPR
Unswitchable	Sockets 16 A, 3-phase 5-pole	WAADAPAT16P
Switchable		WAADAPAT16PR
Unswitchable	Sockets 32 A, 3-phase 4-pole	WAADAPAT32C
Switchable		WAADAPAT32CPR
Unswitchable	Sockets 32 A, 3-phase 5-pole	WAADAPAT32P
Switchable		WAADAPAT32PR
Switchable	Plugs 16 A, 3-phase 5-pole	WAADAPAT16PRIEC
Switchable	Plugs 32 A, 3-phase 5-pole	WAADAPAT32PRIEC



Adapter Switchable

Accessories dedicated for:

- PAT-2
- PAT-2E
- PAT-10
- PAT-820
- PAT-80
- PAT-85
- PAT-86

## PAT-3F-PE adapter for leakage current measurement

index: WAADAPAT3FPE

Designed to check:

- leakage current of a welding machine's primary circuit in a situation when it is supplied from a single-phase or three-phase mains (16 A or 32 A),
- PE leakage current for devices supplied from a three-phase mains with a maximum current of 16 A or 32 A.

Accessories dedicated for:

- PAT-86





## IEC Test adapter (Schuko)

index: WAADAPATIEC1

The adapter allows testing wires with IEC C5 plug (so-called "cloverleaf" or "Mickey Mouse"). The available test kit is the same as for standard IEC cables.

Accessories dedicated for:

- PAT-2
- PAT-2E
- PAT-10
- PAT-820
- PAT-80
- PAT-85
- PAT-86



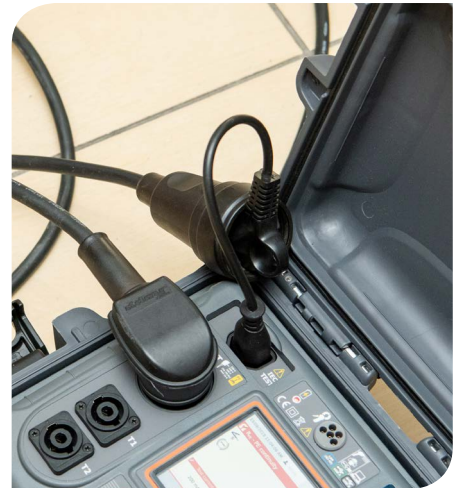
## IEC C6 to C13 adapter

index: WAADAPATIEC2

The adapter is terminated with IEC and Schuko plugs. It allows measurements of single-phase extension cords.

Accessories dedicated for:

- PAT-2
- PAT-2E
- PAT-10
- PAT-820
- PAT-80
- PAT-85
- PAT-86



## C-3 current clamp

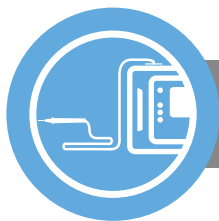
index: WACEGC3OKR

With the help of this clamp, a number of tests can be carried out on devices that are permanently connected to the mains:

Accessories dedicated for:

- PAT-820
- PAT-80
- PAT-85
- PAT-86





# measurements

## Test probes

The probe is often a necessary part of a test - it provides a galvanic connection between the meter and the tested object. In standard cases, a 1 kV probe is sufficient. A 5 kV probe is required for HV tests (high voltage insulation tests). When measuring continuity, to eliminate the resistance of the test leads, a high current probe comes in handy. The brush probe allows testing when the measurement is performed on a movable element, e.g. a drill spindle.

Name	Features	Index
Pin probe red	1 kV	WASONREOGB1
Pin probe blue		WASONBUOGB1
Pin probe red	5 kV	WASONREOGB2
High-current probe	1 kV	WASONSPGB1
Brush probe	1 kV	WASONSZ1

### Accessories dedicated for:



Pin probe 1 kV

PAT-2

PAT-2E

PAT-10

PAT-820

PAT-80

PAT-85

PAT-86



Pin probe 5 kV

PAT-820



High-current probe 1 kV

PAT-820

PAT-80

PAT-85

PAT-86



Brush probe

PAT-2

PAT-2E

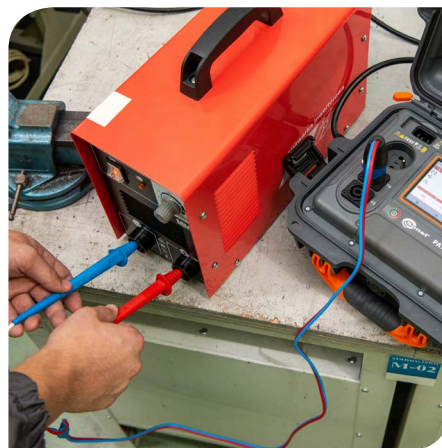
PAT-10

PAT-820

PAT-80

PAT-85

PAT-86



## Crocodile clips

What a crocodile clip is for - everyone can see. This is an important element of the measuring system. It is worth using when the use of probes is impossible or inconvenient.

Name	Features	Index
Crocodile clip red	1 kV	WAKRORE20K02
Crocodile clip blue		WAKROBU20K02
Kelvin's Crocodile clip	1 kV 25 A	WAKROKELK06

### Accessories dedicated for:



Crocodile clip 1 kV

PAT-2

PAT-2E

PAT-10

PAT-820

PAT-80

PAT-85

PAT-86



Kelvin's Crocodile clip 1 kV 25 A

PAT-820

PAT-80

PAT-85

PAT-86



## Test leads

There are no measurements without test leads. Their selection depends on the test method, but also on the tested object. If probes are needed, but they are not around, a crocodile terminated test lead can be used instead.

Name	Features	Index
Test lead 1,2 m	1 kV	WAPRZ1X2REBB2X5
Test lead 1,2 m terminated in a crocodile clip	1 kV	WAPRZ1X2REBK
Test lead 1,8 m terminated in a crocodile clip	Plug PAT, 10 A / 25 A	WAPRZ1X8ORKS
Test lead 1,5 m double-wire	Plug PAT / bananas	WAPRZ1X5DZBB
Test lead 2,1 m double-wire	Plug IEC13 / bananas	WAPRZ2X1DZIECB



### Accessories dedicated for:



Test lead 1,2 m

PAT-2

PAT-2E

PAT-10



Test lead 1,2 m terminated in a crocodile clip

PAT-2

PAT-2E

PAT-10



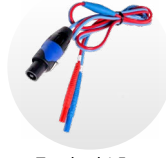
Test lead 1,8 m terminated in a crocodile clip

PAT-820

PAT-80

PAT-85

PAT-86



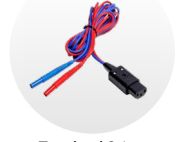
Test lead 1,5 m double-wire, plug PAT

PAT-820

PAT-80

PAT-85

PAT-86



Test lead 2,1 m double-wire, plug IEC13

PAT-820

## Create your own kit:



Pin probe 1 kV



Pin probe 5 kV



High-current probe 1 kV



Brush probe



Crocodile clip 1 kV



Kelvin's Crocodile clip 1 kV 25 A



Test lead 1,2 m



Test lead 1,2 m terminated in a crocodile clip



Test lead 1,8 m terminated in a crocodile clip



Test lead 1,5 m double-wire, plug PAT



Test lead 2,1 m double-wire, plug IEC13



# labeling

The label with the measurement result allows you to quickly and clearly assess whether the device is working correctly. Such a marker can be obtained without moving from the measuring stand - just use printers dedicated to PAT meters. The report includes the test result and its assessment, as well as a QR code to identify the device in the future.



## Report / barcode SATO printer

index: WAADAD2

Communicates with the meter via USB.



## Label Roll for SATO printer

index: WANAKD2

Adhesive paper for prints 50 mm wide.



## Ribbon for SATO printer

index: WANAKD2BAR

Toner cartridge.

**Accessories dedicated for:**

PAT-820 PAT-80 PAT-85 PAT-86



## Report / barcode Brother printer

index: WAADAD3

Communicates with the meter via Wi-Fi and USB.



## Label Roll for Brother printer

index: WANAKD3

Cassette containing 24 mm wide adhesive paper and toner.



## Battery for Brother printer

index: WAAKU19

Li-Ion rechargeable battery 7.2 V, 1.85 Ah.

**Accessory dedicated for:**

PAT-2 PAT-2E PAT-10 PAT-80 PAT-85 PAT-86



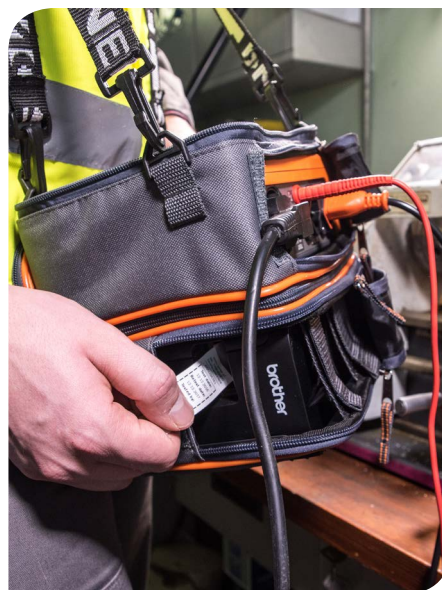
## QR code scanner

index: WAADACK2D

During the tests, it is good to know which device you are dealing with. This information is carried by the QR code on the label. The QR code scanner allows to identify the device and assign test results to it, building the history of measurements in the tester's memory.

**Accessory dedicated for:**

PAT-820 PAT-80 PAT-85 PAT-86





# transportation



## L11 carrying case

index: WAFUTL11

The case can fit the meter and the accessories. It protects the contents from dirt and damage. It's durable and easy to spot, thanks to bright orange colour. When there is a lot of equipment to move, a solid case is the best solution.

Accessory dedicated for:

PAT-80

PAT-85

PAT-86



## M12 carrying case

index: WAFUTM12

The case allows to perform the measurements while hanging around the user's neck. The lower pocket can hold the report printer, so the examined object can be marked as "working" or "out of order". This provides user high mobility. When the meter, accessories and printer are at hand, the measuring station is located where the tested device is.

Accessory dedicated for:

PAT-2

PAT-2E

PAT-10





# software

## Sonel PAT Server



This software:

- allows for smooth data management,
- enables work through a web browser,
- enables work in the task ordering mode,
- stores a copy of data on the server.

Using PAT Server, the user may:

- work with a permanent connection to the system,
- have unlimited access to the software,
- have immediate access to reporting,
- look after the crew and fleet,
- control access.

Software dedicated for:



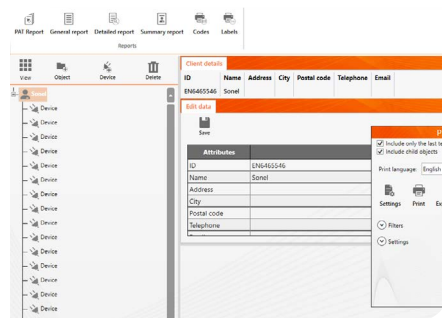
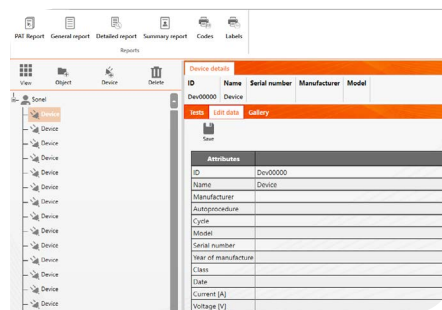
## Sonel PAT Analysis



index: WAPROSONPAT3

The software allows reading and storing data from PAT meters, as well as instrument configuration. Based on the measurement data, test reports are generated.

- Perfect for production plants, power tools rentals, services etc.
- The hierarchical structure of data allows to assign tested device to a specific company or department.
- The ability to collect information about tested devices and track their test history.
- Label printing on standard adhesive paper.
- The ability to schedule measurements. Each device contains a list of "Measurement cycle" - the software automatically displays devices which test date is approaching or has already expired.
- Possibility to create your own measurement standard thanks to the protocol editor.



Software dedicated for:



## Sonel PAT Analysis Mobile



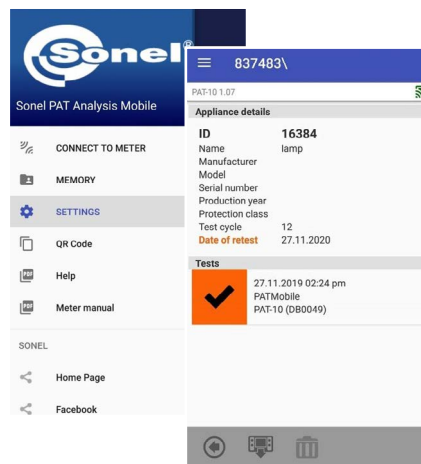
The mobile application expands the capabilities of the meters. It is designed for devices with the Android operating system.

Sonel PAT Analysis Mobile:

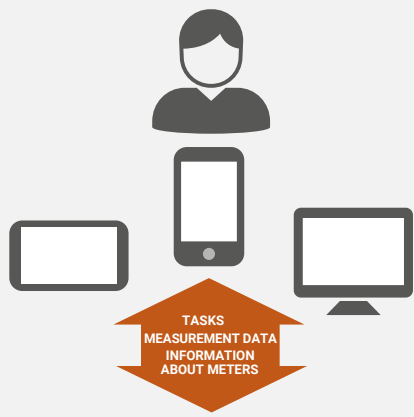
- connects wirelessly to the selected meter,
- downloads measurement results and saves them to the meter's memory structure (customer, device, measurement data),
- prints reports,
- reads QR codes of the PAT system,
- transfers data via Internet,
- complete meter control (selected models only)\*.

\* Option available in the future.

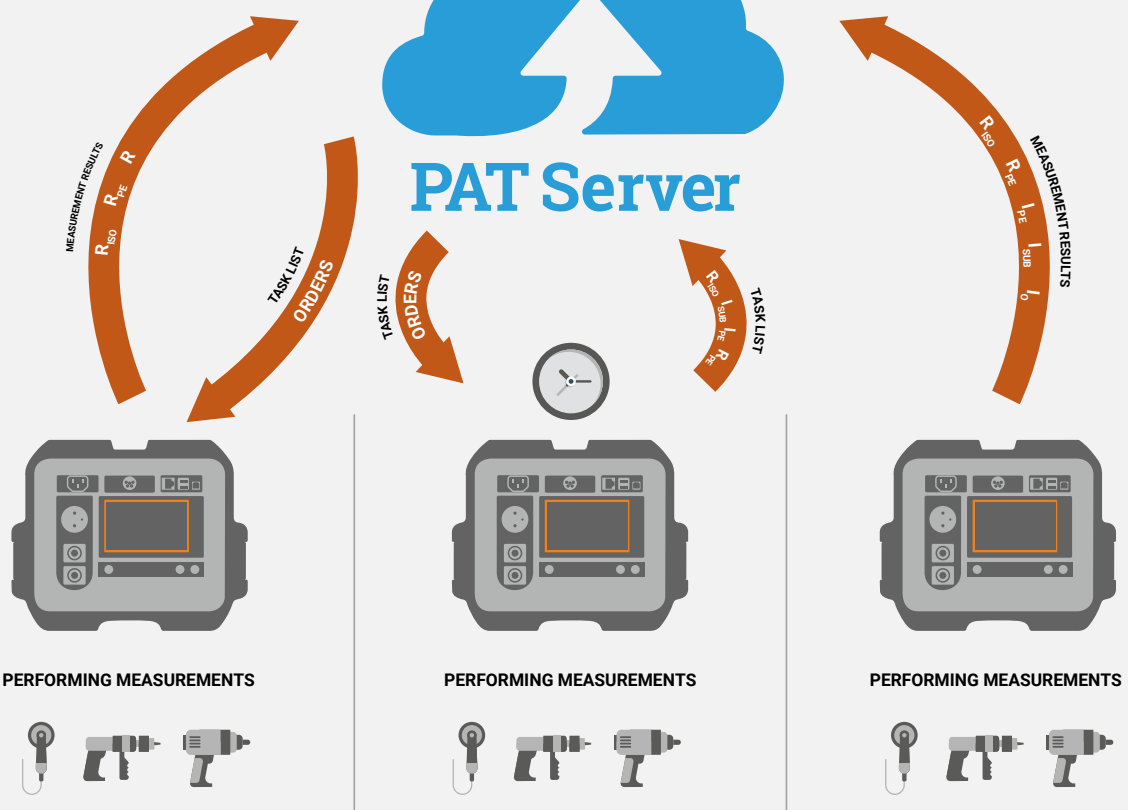
Software dedicated for:







**PAT Server**



PERFORMING MEASUREMENTS



PERFORMING MEASUREMENTS



PERFORMING MEASUREMENTS



**1 MODE: DATA TRANSMISSION IN REAL TIME**



The user works on a device that is permanently connected to the network. In this mode, data, orders and information are sent continuously.

**2 MODE: TASK IMPLEMENTATION**



The user receives a list of devices with guidelines, and then disconnects from the Internet. After measurements are taken, it connects to the network and sends the test results to a server with the cloud function.
















**3 MODE: DATA TRANSMISSION AFTER MEASUREMENT**



After the work is done, the user can upload data to the cloud.

Photo	Name	Index	PAT-820	PAT-86	PAT-85	PAT-80	PAT-10	PAT-2E	PAT-2
	Adapter for an industrial socket 16 A	WAADAPAT16F1	•	•	•	•	•	•	•
	Adapter for an industrial socket 32 A	WAADAPAT32F1	•	•	•	•	•	•	•
	Adapter for three-phase socket 16 A (5P)	WAADAPAT16P	•	•	•	•	•	•	•
	Adapter for three-phase socket 16 A Switchable (5P)	WAADAPAT16PR	•	•	•	•	•	•	•
	Adapter for three-phase socket 32 A (5P)	WAADAPAT32P	•	•	•	•	•	•	•
	Adapter for three-phase socket 32 A switchable (5P)	WAADAPAT32PR	•	•	•	•	•	•	•
	Adapter for three-phase socket 16 A (4P)	WAADAPAT16C	•	•	•	•	•	•	•
	Adapter for three-phase socket 16 A switchable (4P)	WAADAPAT16CPR	•	•	•	•	•	•	•
	Adapter for three-phase socket 32 A (4P)	WAADAPAT32C	•	•	•	•	•	•	•
	Adapter for three-phase socket 32 A switchable (4P)	WAADAPAT32CPR	•	•	•	•	•	•	•
	Battery for Brother printer	WAAKU19	•	•	•	•	•	•	•
	Fuse 6.3 x 32 mm, 15 A	WAPOZB15PAT	2						
	Fuse 5 x 20 mm, 16 A	WAPOZB16PAT		2	2	2	2	2	
	C-3 current clamp (Ø52 mm)	WACEGC30KR	•	•	•	•			
	Barcode scanner 2D (USB)	WAADACK2D	•	•	•	•			

Photo	Name	Index	PAT-820	PAT-86	PAT-85	PAT-80	PAT-10	PAT-2E	PAT-2
	D2 portable USB report / barcode printer (Sato)	WAADAD2	•	•	•	•			
	D3 portable Wi-Fi / USB report / barcode printer (Brother)	WAADAD3		•	•	•	•	•	•
	L11 carrying case	WAFUTL11		1	1	1			
	M12 carrying case	WAFUTM12					1	1	1
	Crocodile clip red 1 kV 20 A	WAKRORE20K02	•	1	•	•	•	•	•
	Crocodile clip blue 1 kV 20 A	WAKROBU20K02	•	1	•	•			
	Kelvin clamp 1 kV, 25 A	WAKROKELK06	•	•	•	•			
	PC software: Sonel PAT Analysis	WAPROSONPAT3	•	•	•	•	•	•	•
	PC software: Sonel Reader	WAPROREADER	1	1	1	1	1	1	1
	IEC Test adapter (Shuko)	WAADAPATIEC1	•	•	•	•	•	•	•
	IEC C6 to C13 adapter	WAADAPATIEC2	•	•	•	•	•	•	•
	Test lead 1.2 m, red, 1 kV (2.5 mm2, banana plugs)	WAPRZ1X2REBB2X5						•	•
	Test lead 1.2 m, red, 1 kV (terminated in a crocodile clip)	WAPRZ1X2REBK						1	1
	Test lead 1.8 m, red, 5 kV (banana plugs)	WAPRZ1X8REBB	2						
	Test lead 1.8 m, orange, (10 A / 25 A, terminated in a crocodile clip)	WAPRZ1X8ORKS	1	1	1	1			

Photo	Name	Index	PAT-820	PAT-86	PAT-85	PAT-80	PAT-10	PAT-2E	PAT-2
	Double-wire test lead 2.1 m (IEC C13 / banana plug)	WAPRZ2X1DZIECB	•	1	•	•			
	Double-wire test lead 1.5 m (PAT/banana plug)	WAPRZ1X5DZBB	•	1	•	•			
	USB cable	WAPRZUSB	1	1	1	1	1	1	1
	Power cord 1.8 m (orange IEC plug)	WAPRZ1X8REIEC					1	1	1
	Mains cable with IEC C19 plug	WAPRZZAS1	1	1	1	1			
	Pin probe, red 1 kV (banana socket)	WASONREOGB1	•	•	•	•	•	•	•
	Pin probe, blue 1 kV (banana socket)	WASONBUOGB1		•	•	•			
	Pin probe, red 5 kV (banana socket)	WASONREOGB2	2						
	Brush probe	WASONSZ1	•	•	•	•	•	•	•
	High-current pin probe 1 kV (banana sockets)	WASONSPGB1	•	•	•	•			
	Ribbon for printer Brother D1 (with glue)	WANAKD1		•	•	•			
	Label Roll – Black on White for D2 printer SATO (with glue)	WANAKD2	•	•	•	•			
	Label Roll – Black on White for Brother D3 (with glue)	WANAKD3		•	•	•	•	•	•
	Ribbon for D2 printer (SATO)	WANAKD2BAR	•	•	•	•			
	PAT-3F-PE adapter for leakage current testing	WAADAPAT3FPE		•	•	•			



1, 2, 4 - number of standard accessories  
 • - optional accessory

**SONEL S.A.**

Wokulskiego 11  
58-100 Świdnica  
Poland

[sonel.com](http://sonel.com)