



Accessories for power quality analyzers

## Reach for more capabilities



measurements



installation



communication



software



power supply



transportation



# measurements

## Flexible coils



F-x clamps

Flexible coils, also referred to as Rogowski coils, are used for measurements of alternating currents in hard-to-access points, where it is not possible to clamp fixed jaws. They enable the measurements of current levels up to 6000 A. With the 5-pin termination, they are connected directly to the power quality analyzers.

Name	Max. diameter of measured conductor	Rated current	Index
F-1A1	Ø 380 mm	1.5 kA AC	WACEGF1A10KR
F-1A		3 kA AC	WACEGF1A0KR
F-1A6		6 kA AC	WACEGF1A60KR
F-2A1	Ø 250 mm	1.5 kA AC	WACEGF2A10KR
F-2A		3 kA AC	WACEGF2A0KR
F-2A6		6 kA AC	WACEGF2A60KR
F-3A1	Ø 140 mm	1.5 kA AC	WACEGF3A10KR
F-3A		3 kA AC	WACEGF3A0KR
F-3A6		6 kA AC	WACEGF3A60KR

The HD version (Heavy Duty) features increased resistance to mechanical damage.

Name	Max. diameter of measured conductor	Rated current	Index
F-2AHD	Ø 290 mm	3 kA AC	WACEGF2AHD0KR
F-3AHD	Ø 145 mm	3 kA AC	WACEGF3AHD0KR

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711

## Current clamps

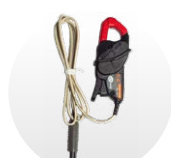
Split-Core current clamps are used for measuring alternating and direct currents. They are available in four variants of different diameters of the clamped conductor and the type of current to be measured. All models are terminated with a 5-pin connector.



C-4A current clamp



C-5A current clamp



C-6A current clamp

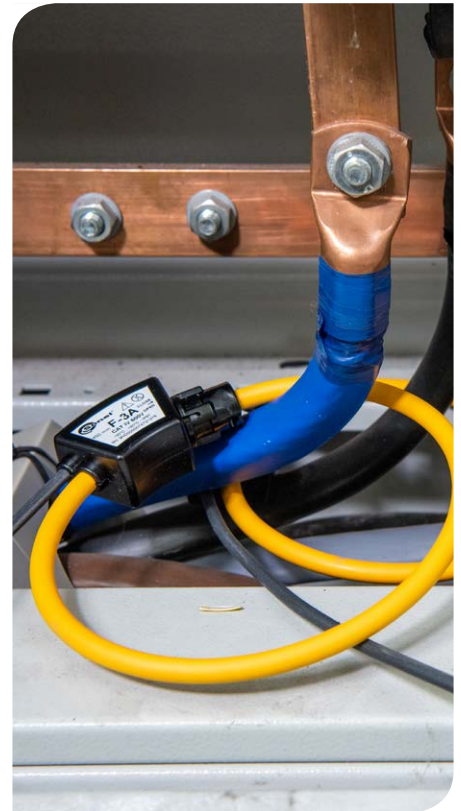


C-7A current clamp

Name	Max. diameter of measured conductor	Rated current	Index
C-4A	Ø 52 mm	1000 A AC	WACEGC4A0KR
C-5A	Ø 39 mm	1000 A AC 1400 A DC	WACEGC5A0KR
C-6A	Ø 20 mm	10 A AC	WACEGC6A0KR
C-7A	Ø 24 mm	100 A AC	WACEGC7A0KR

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711



## Comparison of current clamps

	C-4A WACEGC4AOKR	C-5A WACEGC5AOKR	C-6A WACEGC6AOKR	C-7A WACEGC7AOKR
<b>Rated current</b>	1000 A AC	1000 A AC 1400 A DC	10 A AC	100 A AC
<b>Frequency</b>	30 Hz...10 kHz	DC...5 kHz	40 Hz...10 kHz	40 Hz...1 kHz
<b>Max. diameter of measured conductor</b>	52 mm	39 mm	20 mm	24 mm
<b>Min. basic accuracy</b>	≤0.5%	≤1.5%	≤1%	0,5%
<b>Battery power</b>	—	✓	—	—
<b>Lead length</b>	2.2 m	2.2 m	2.2 m	3 m
<b>Measurement category</b>	IV 300 V	IV 300 V	IV 300 V	III 300 V
<b>Housing protection class</b>	IP40			

	F-1A1 / F-1A / F-1A6 WACEGF1A1OKR WACEGF1AOKR WACEGF1A6OKR	F-2A1 / F-2A / F-2A6 WACEGF2A1OKR WACEGF2AOKR WACEGF2A6OKR	F-3A1 / F-3A / F-3A6 WACEGF3A1OKR WACEGF3AOKR WACEGF3A6OKR	F-2AHD WACEGF2AHDOKR	F-3AHD WACEGF3AHDOKR
<b>Rated current</b>	1500 / 3000 / 6000 A AC	1500 / 3000 / 6000 A AC	1500 / 3000 / 6000 A AC	3000 A AC	
<b>Frequency</b>	40 Hz...10 kHz			10 Hz...20 kHz	
<b>Max. diameter of measured conductor</b>	380 mm	250 mm	140 mm	290 mm	145 mm
<b>Min. basic accuracy</b>	0.5%			0.5%	
<b>Battery power</b>	—			—	
<b>Lead length</b>	2.5 m			2.5 m	
<b>Measurement category</b>	IV 600 V			IV 600 V	
<b>Housing protection class</b>	IP67			IP65	



### AC-16 line splitter

index: WAADAAC16

AC-16 has been designed to simplify current and voltage measurements: it eliminates the need to remove the electrical sockets. It is dedicated for use in earthed networks. The unit is equipped with a 1:1 (X1) ratio and 10:1 (X10) ratio. The maximum current load is 16 A. The adapter can be used with any type of clamps offered by SONEL S.A.

**Accessory dedicated for:**

PQM-700 PQM-707 PQM-710 PQM-711







# measurements



AGT-16T adapter



AGT-32P adapter



AGT-63P adapter

## Industrial socket adapters

Adapters enabling the connection of instruments to single-phase or three-phase sockets in industry environments. Offered in three current load versions – 16 A, 32 A and 63 A – as well as variants with 4 and 5 pins for the 3-phase outlets.

Name	Intended use	Index
AGT-16T	16 A, 1-phase, 3-pole sockets	WAADAAGT16T
AGT-16C	16 A, 3-phase, 4-pole sockets	WAADAAGT16C
AGT-16P	16 A, 3-phase, 5-pole sockets	WAADAAGT16P
AGT-32T	32 A, 1-phase, 3-pole sockets	WAADAAGT32T
AGT-32C	32 A, 3-phase, 4-pole sockets	WAADAAGT32C
AGT-32P	32 A, 3-phase, 5-pole sockets	WAADAAGT32P
AGT-63P	63 A, 3-phase, 5-pole sockets	WAADAAGT63P

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711



## Adapters for control terminals

index: WAADAPRZKPL1

Adapters enabling the connection of the analyzer to terminal strips and test points in electrical switchgear units. Measuring category CAT II / 1000 V. The kit includes 5 adapters.

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711



## Magnetic voltage adapters

index: WAADAUMAGKPL

Adapters enabling the connection of the instrument directly to protective devices in the electrical switchgear. Fast and easy installation means electricians and maintenance personnel save time. Special design to prevent accidental disconnection of the adapter from the fixing point.

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711



## Voltage adapters

index: WAADAM4M6

Adapters enabling the connection of the analyzer directly to DIN rail terminal blocks in electrical switchgear units. Each adapter offers M4 / M6 thread. Versatility of this solution is unique on a global scale. The kit includes 5 adapters.

Accessories dedicated for:

PQM-700 PQM-707 PQM-710 PQM-711





## ASX-1 piercing adapter

index: WAADAPRZASX1KPL

The adapter is designed for mounting on insulated lines with aluminum or copper core and a cross section of 16-150 mm<sup>2</sup> / 1.5-16 mm<sup>2</sup>. ASX-1 consists of a piercing probe and a test lead with Ø4 mm terminal. The set includes 4 adapters.

Both the body of the probe and the terminal are made of high quality composite material and elastomer – this guarantees resistance to atmospheric influences and UV radiation. The piercing element is made of stainless steel and the head - of aluminum, which ensures the repeatability of the tightening torque.

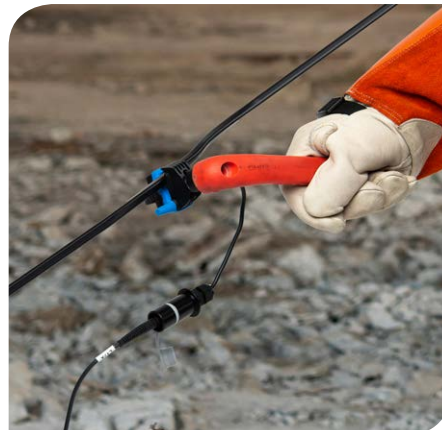
**Accessories dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711



## Voltage adapter for energy measuring terminal block

index: WAADASKA

The adapter allows the meter to be connected to the SKA-type test and control strip. The adapter plug is adjusted to the dimensions of the test sockets in the strips, while its socket is a standard 4 mm banana input for connecting the test lead. The kit includes 5 adapters.

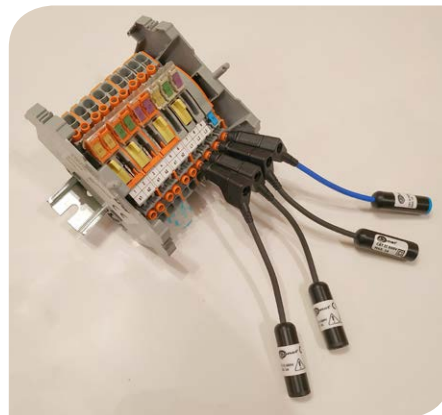
**Accessories dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711



## Voltage probe with grasper

index: WASONKGB1KPL

It is used for connecting voltage test leads in hard-to-access points. Examples of use: elements of switchgear cabinets: bolts, nuts or busbars.

The kit includes 5 test probes.

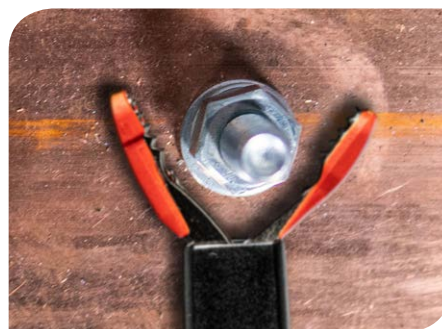
**Accessories dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711



## Flat test clip

index: WASONCGB1KPL

It is used for connecting voltage cables in hard to reach places. Exemplary application objects are elements of switchboard equipment: busbars, bolts or nuts. The set includes 5 probes.

**Accessories dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711





# installation

## DIN rail mounting bracket with positioning catches



index: WAPOZUCH3

Elements of this accessory kit enable the solid and permanent suspension of PQM devices on DIN rails, which are popular in switchgear cabinets. Thanks to the special design, the risk of accidentally knocking the instrument off is practically eliminated.

The bracket should be screwed to the rear panel of the analyzer, using the supplied screws. Additionally, the kit includes positioning catches. They are equipped with special hooks that are supported on the DIN rail to improve the stability of the instrument mounting.

### Accessories dedicated for:

PQM-700 PQM-710 PQM-711



## Mounting on the pole

The analyzer is designed for operation in adverse weather conditions – it can be installed directly on power transmission poles. This is ensured by the kit, which includes:

- mounting bracket for poles straps (2 pcs set),
- straps for pole mounting.

It is an effective solution, appreciated by all fitters who can perform the task quickly and without the need to use additional tools.



### Mounting bracket for poles straps

index: WAPOZUCH4

Screwed to the rear panel of the analyzer, they form slots for attaching the straps. This way, the instrument can be mounted on the pole.



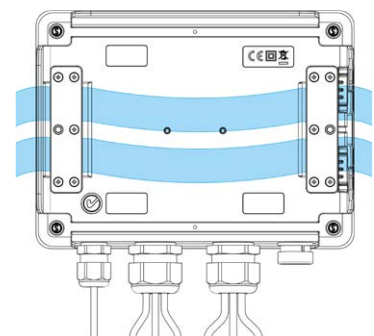
### Straps for mounting on the pole

index: WAPOZOPAKPL

Strap length is 120 cm. They can be used for mounting items on poles with different diameters or structures: both pre-stressed concrete and lattice steel types.

### Accessories dedicated for:

PQM-700 PQM-710 PQM-711







## Magnetic holders

index: WAPOZUCH5

The set includes two holders that are screwed to the rear panel of the analyzer. They are used to mount the instrument on metal surfaces. Magnets with a high attraction force prevent the instrument from sliding down – e.g. on the doors of switchgear panels – despite the load resulting from the forces acting on the analyzer and measuring leads.



Accessories dedicated for:

PQM-700

PQM-710

PQM-711



## Cover with a magnetic strap

index: WAPOZUCH8

It is designed for fixing the analyzer to metal surfaces. It holds the power supply adapter. It allows measuring leads and power cables to be arranged. The kit includes a special case equipped with holders for the connection of the strap with a magnetic lock. Neodymium magnets used in the lock prevent the instrument from sliding down – also from painted metal surfaces.

Accessory dedicated for:

PQM-707



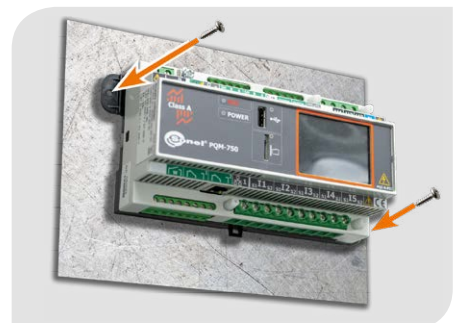
## Wall mounting kit

indeks: WAPOZUCH17

Kit for permanent wall mounting of the meter.

Accessory dedicated for:

PQM-750





## communication



### GPS antenna

index: WAPOZANT10GPS

The antenna allows time synchronization via GPS when the analyzer is used indoors. The length of the lead is 10 m. Thanks to a magnetic holder, the antenna can be mounted on any metal surface, e.g. transformer chamber door.

**Accessory dedicated for:**

PQM-710

PQM-711



### GSM signal repeater

index: WAPOZANTREPEATER

When the analyzer is required to receive a GSM signal, but there is a poor reception at the place of installation - use a signal repeater.

The kit includes two antennas. The first is attached to the analyzer housing. The second must be placed outside the poor GSM reception zone.

**Accessory dedicated for:**

PQM-710

PQM-711



### USB cable

index: WAPRZUSB

The cable with connectors of A and B type, compatible with USB 1.1 and 2.0. It is intended to connect the computer to Sonel devices equipped with USB sockets of B type. The cable is used to transfer the measurement results, configurations and updating the firmware of many meters.

**Accessory dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711



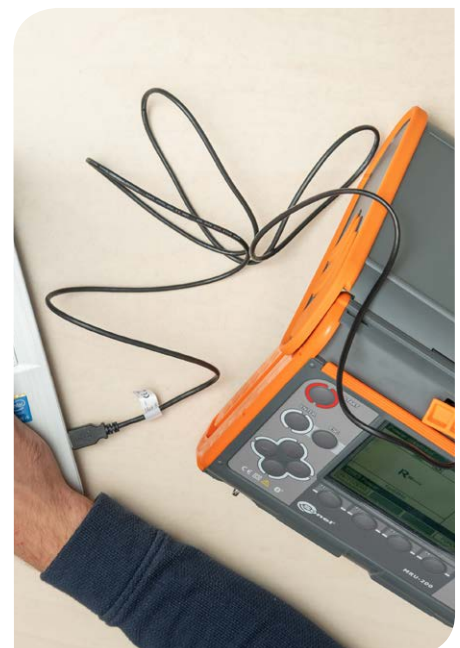
### LAN network cable

index: WAPRZRJ451X5EKR

LAN network cable, shielded, 1.5 m. The cable is used to transfer the measurement results, configurations and updating the firmware of the meter.

**Akcesorium dedykowane do:**

PQM-750







## software

### Sonel Analysis



index: WAPROANALIZA4

Application indispensable for working with PQM-series analyzers. It enables:

- analyzer configuration,
- data reading from logger,
- preview of network parameters in real time (with capability of reading via GSM modem),
- deletion of data in the analyzer,
- data presentation in tables,
- data presentation in charts,
- data analysis and generating reports in compliance with standard EN 50160 (reports) and other user defined reference conditions - also for PV microinstallations up to 50 kW, a breakdown for active power states  $P > 0$ ,  $P < 0$  and  $P = 0$  and taking into account the graphs  $Q_1 = f(U_1/U_n)$  and  $\cos\phi = f(P/P_n)$ ,
- independent support of multiple analyzers,
- analyzer firmware updates.

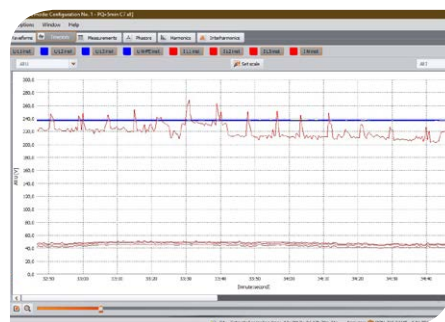
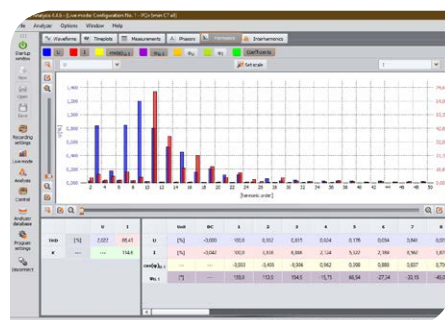
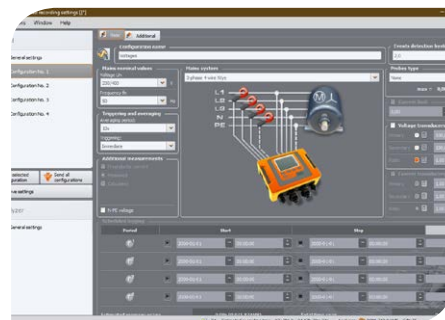
Sonel Analysis software enables reading of selected parameters and their graphic presentation in real time. These parameters are measured independently of the registration saved on the memory card.

Thanks to the software the user can read data stored on the memory card and analyze them. There is also an option to save the data to the computer's hard drive for archiving or subsequent processing.

With data from the analyzer user can prepare reports according to EN 50160 standard, as well as user criteria. The files are generated to PDF, HTML, CSV or TXT format.

**Software dedicated for:**

PQM-700 PQM-707 PQM-710 PQM-711



### Sonel Analysis Mobile

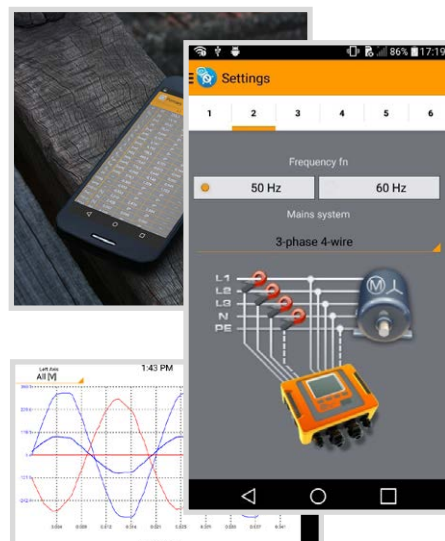


Mobile version of the program cooperating with PQM-711 and PQM-710 analyzers. With the application, you can connect directly to your device via the Wi-Fi interface and check of current readings of network parameters to which the analyzer is connected.

Useful for users can be remotely start/stop recording, and to change the measurement point (configuration) in the analyzer.

**Software dedicated for:**

PQM-710 PQM-711





## power supply



### AZ-2 power supply adapter

index: WAADAAZ2

Designed for charging the analyzer battery directly from the electrical switchgear. It is particularly useful during long-term monitoring on facilities, where using the grid socket is not possible. Safety stackable plugs enable the charging of the analyzer while still having the option to perform measurements. Connected to the power supply adapter with an IEC C8 connector, AZ-2 does not require any additional adapters to function properly.

**Accessory dedicated for:**

PQM-707



### Power supply adapter AZ-3

index: WAADAAZ3

Mains plug with banana sockets. It enables the charging of the analyzer batteries from the power supply socket, while eliminating the need to connect the instrument to the measured object. It is particularly useful when copying data, analyzing results or transferring the configuration: there is no risk of the device battery unexpectedly discharging when performing such operations.

**Accessory dedicated for:**

PQM-700

PQM-710

PQM-711



### Cable for battery charging from car cigarette lighter socket (12 V)

index: WAPRZLAD12SAM

Connected directly to the analyzer. It enables the battery to be charged when the only available source of power is the cigarette lighter socket in a vehicle. Discharged battery? No available power outlet or circuits for instrument charging? Thanks to this accessory, all the required measurements can be carried out. The cable can be also used for other instruments offered by SONEL S.A.

**Accessory dedicated for:**

PQM-707





## transportation



### L19 backpack

index: WAFUTL19

The backpack designed especially for comfortable carrying the meter with accessories. It is particularly useful when you want to have your hands free when moving with the equipment, e.g. when climbing a ladder. Equipped with a tablet pocket, it can accommodate a meter and a set of accessories. It is made of high-quality materials and has reinforced zippers and buckles.

**Accessory dedicated for:**

PQM-707



### L-2 hard carrying case

index: WAWALL2

It ensures the safe transport and storage of measuring clamps.

**Accessory dedicated for:**

PQM-700

PQM-707

PQM-710

PQM-711



### XL-2 hard carrying case

index: WAWALXL2

It ensures the safe transport and storage of the analyzer together with its accessories.

**Accessory dedicated for:**

PQM-700

PQM-710

PQM-711



### XL-12 hard carrying case

index: WAWALXL12

It ensures the safe transport and storage of the analyzer together with its accessories. A large number of compartments allows for effective protection of a large amount of equipment.

**Accessory dedicated for:**

PQM-707

























Photo	Name	Index	PQM-750	PQM-711 Pro	PQM-711	PQM-710 Pro	PQM-710	PQM-707	PQM-700
	AGT-16C adapter (for 3-phase outlets)	WAADAAGT16C		•	•	•	•	•	•
	AGT-16P adapter (for 3-phase outlets)	WAADAAGT16P		•	•	•	•	•	•
	AGT-16T adapter (for industrial outlets)	WAADAAGT16T		•	•	•	•	•	•
	AGT-32C adapter (for 3-phase outlets)	WAADAAGT32C		•	•	•	•	•	•
	AGT-32P adapter (for 3-phase outlets)	WAADAAGT32P		•	•	•	•	•	•
	AGT-32T adapter (for industrial outlets)	WAADAAGT32T		•	•	•	•	•	•
	AGT-63P adapter (for 3-phase outlets)	WAADAAGT63P		•	•	•	•	•	•
	Cable adapter for control terminals CAT II / 1000 V (5 pcs.)	WAADAPRZKPL1		•	•	•	•	•	•
	Voltage adapter for energy measuring terminal block (5 pcs)	WAADASKA		•	•	•	•	•	•
	Magnetic adapter (4 pcs.)	WAADAUMAGKPL		1	1	1	1	1	1
	Magnetic adapter, black	WAADAUMAGKBL		•	•	•	•	•	•
	Magnetic adapter, blue	WAADAUMAGKBU		•	•	•	•	•	•
	Voltage adapter with M4 / M6 thread	WAADAM4M6		1	1	1	1	•	•
	Voltage adapter with M4 / M6 thread, black	WAADAM4M6BL		•	•	•	•	•	•
	Voltage adapter with M4 / M6 thread, blue	WAADAM4M6BU		•	•	•	•	•	•
	Voltage adapter with M4 / M6 thread, yellow	WAADAM4M6YE		•	•	•	•	•	•
	AC-16 line splitter adapter	WAADAAC16		1	1	1	1	1	•
	AZ-2 power supply adapter (IEC C7 plug / banana sockets)	WAADAAZ2						1	
	AZ-3 power supply adapter (mains plug / banana sockets)	WAADAAZ3		1	1	1	1		1
	Li-Ion 3.6 V 4.5 Ah battery (replaceable in the SONEL S.A. service)	WAAKU11		1	1	1	1		1





















Photo	Name	Index	PQM-750	PQM-711 Pro	PQM-711	PQM-710 Pro	PQM-710	PQM-707	PQM-700
	Li-Ion 11.1 V 3.4 Ah battery	WAAKU15						1	
	GPS antenna	WAPOZANT10GPS		•	•	•	•		
	GSM signal repeater	WAPOZANTREPEATER		•	•	•	•		
	Flexible clamp F-1A (Ø 360 mm) 3 kA	WACEGF1AOKR		•	•	•	•	•	•
	Flexible clamp F-2A (Ø 235 mm) 3 kA	WACEGF2AOKR		•	•	•	•	•	•
	Flexible clamp F-3A (Ø 120 mm) 3 kA	WACEGF3AOKR		4	•	4	•	4	•
	Flexible clamp F-1A1 (Ø 360 mm) 1.5 kA F-1A6 (Ø 360 mm) 6 kA	WACEGF1A1OKR WACEGF1A6OKR		•	•	•	•	•	•
	Flexible clamp F-2A1 (Ø 235 mm) 1.5 kA F-2A6 (Ø 235 mm) 6 kA	WACEGF2A1OKR WACEGF2A6OKR		•	•	•	•	•	•
	Flexible clamp F-3A1 (Ø 120 mm) 1.5 kA F-3A6 (Ø 120 mm) 6 kA	WACEGF3A1OKR WACEGF3A6OKR		•	•	•	•	•	•
	Flexible clamp F-2AHD (Ø 290 mm) 3 kA	WACEGF2AHDOKR		•	•	•	•	•	•
	Flexible clamp F-3AHD (Ø 145 mm) 3 kA	WACEGF3AHDOKR		•	•	•	•	•	•
	C-4A current clamp (Ø 52 mm) 1000 A AC	WACEGC4AOKR		•	•	•	•	•	•
	C-5A current clamp (Ø 39 mm) 1000 A AC/DC	WACEGC5AOKR		•	•	•	•	•	•
	C-6A current clamp (Ø 20 mm) 10 A AC	WACEGC6AOKR		•	•	•	•	•	•
	C-7A current clamp (Ø 24 mm) 100 A AC	WACEGC7AOKR		•	•	•	•	•	•
	L-4 carrying case	WAFUTL4						1	
	L-18 carrying case	WAFUTL18							1
	L-19 backpack	WAFUTL19						•	
	Crocodile clip, black 1 kV 20 A	WAKROBL20K01		3	3	3	3	3	3
	Crocodile clip, red 1 kV 20 A	WAKRORE20K02		2	2	2	2	2	2






































Photo	Name	Index	PQM-750	PQM-711 Pro	PQM-711	PQM-710 Pro	PQM-710	PQM-707	PQM-700
	Crocodile clip, blue 1 kV 20 A	WAKROBU20K02		1	1	1	1	1	1
	Crocodile clip, yellow 1 kV 20 A	WAKROYE20K02		1	1	1	1	1	
	Lead 2.2 m, black 1 kV with L1 marker (banana sockets)	WAPRZ2X2BLBBL1						1	
	Lead 2.2 m, black 1 kV with L2 marker (banana sockets)	WAPRZ2X2BLBBL2						1	
	Lead 2.2 m, black 1 kV with L3 marker (banana sockets)	WAPRZ2X2BLBBL3						1	
	Lead 2.2 m, blue 1 kV (banana sockets)	WAPRZ2X2BUBB						1	
	Lead 2.2 m, yellow-green 1 kV (banana sockets)	WAPRZ2X2YEBB						1	
	USB data transmission cable	WAPRZUSB	1	1	1	1	1	1	1
	LAN network cable, shielded, 1.5 m	WAPRZRJ451X5EKR	1						
	Pin probe, black 1 kV (banana socket)	WASONBLOGB1						•	
	Pin probe, red 1 kV (banana socket)	WASONREOGB1						•	
	Pin probe, blue 1 kV (banana socket)	WASONBUOGB1						•	
	Pin probe, yellow 1 kV (banana socket)	WASONYEGB1						•	
	Voltage probe with grasper (5 pcs.)	WASONKGB1KPL		•	•	•	•	•	•
	Flat test clip for busbars (5 pcs.)	WASONCGB1KPL		•	•	•	•	•	•
	Flat test clip black for busbars, black	WASONBLCGB1		•	•	•	•	•	•
	Flat test clip blue for busbars, blue	WASONBUCGB1		•	•	•	•	•	•
	Flat test clip green for busbars, green	WASONGRCGB1		•	•	•	•	•	•



Photo	Name	Index	PQM-750	PQM-711 Pro	PQM-711	PQM-710 Pro	PQM-710	PQM-707	PQM-700
	ASX-1 piercing adapter (4 pcs.)	WAADAPRZASX1KPL		•	•	•	•	•	•
	Hanging straps (type L-2)	WAPOZSEKPL						1	
	Strap for mounting on the pole (2 pcs.)	WAPOZOPAKPL		1	1	1	1		1
	DIN rail mounting bracket with positioning catches	WAPOZUCH3		1	1	1	1		1
	Plates for pole mounting (2 pcs.)	WAPOZUCH4		2	2	2	2		2
	Magnetic holder for mounting the meter (2 pcs.)	WAPOZUCH5		•	•	•	•		•
	Case for hanging with a magnetic strap (universal)	WAPOZUCH8						•	
	Cover (universal)	WAPOZUCH12						•	
	Wall mounting kit	WAPOZUCH17	1						
	Hard carrying case for clamps	WAWALL2		•	•	•	•	•	•
	XL-2 hard case	WAWALXL2		1	1	1	1		•
	XL-12 hard case	WAWALXL12						•	
	Cable for battery charging from the car lighter socket 12 V	WAPRZLAD12SAM						1	
	Mains cable 230 V (IEC C7 plug)	WAPRZLAD230						1	
	Z7 power supply adaptor	WAZASZ7						1	
	8 GB microSD card	WAPOZMSD8	1						
	Seal for voltage and current terminals (set of 2 pcs.)	WAPOZPLOKPL	1						
	Fork terminal for grounding terminal	WAZACWID	1						
	Touchscreen pen	WAPOZTPEN						1	

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

