

### The device is designed to work with networks:

- with nominal frequency 50/60Hz,
- with nominal voltage:  
64/110 V; 110/190V; 115/200V; 127/220V; 220/380V;  
230/400V; 240/415V; 254/440V; 290/500 V; 400/690V.
- DC network

### Supported networks:

- single-phase,
- two-phase with common N conductor,
- three-phase star connection with and without N conductor,
- three-phase delta.

### Parameters of analyzer PQM-702:

| Parameter                                       |                     | Measurement range                                | Max. resolution                                 | Accuracy   |
|---|---------------------|--|---|--|
| Alternating voltage (TRMS)                      | —                   | 0.0...760 V                                      | 0.01 % $U_n$                                    | $\pm 0.1\% U_n$  |
| Crest factor                                    | Voltage             | 1.00...10.00 ( $\leq 1.65$ for 690 V voltage)    | 0.01  | $\pm 5\%$  |
|   | current             | 1.00...10.00 ( $\leq 3,6 I_{nom}$ )              | 0.01  | $\pm 5\%$ m.v.   |
| Alternating current TRMS                        | —                   | depending on clamp*                              | 0.01% of nominal range                          | $\pm 0.1\%$ of nominal range (error does not account for clamp error)        |
| Frequency                                       | —                   | 40.00...70.00 Hz                                 | 0.01Hz  | $\pm 0.01$ Hz  |
| Active, reactive, apparent and distortion power | —                   | depending on configuration (transformers, clamp) | up to four decimal places                       | depending on configuration (transformers, clamp)                             |
| Active, reactive apparent energy                | —                   | depending on configuration (transformers, clamp) | up to four decimal places                       | as power error   |
| cos $\phi$ and power factor (PF)                | —                   | 0.00...1,00                                      | 0.01  | $\pm 0.03$   |
| tg $\phi$                                       | —                   | 0.00...10.00                                     | 0.01  | depends on active and reactive power error                                   |
| Harmonics and interharmonics                    | Voltage             | as for alternating voltage True RMS              | as for alternating voltage True RMS             | $\pm 5\% U_n$ for $U_n \geq 1\% U_n$<br>$\pm 0.05\% U_n$ for $U_n < 1\% U_n$ |
|   | Current             | as for alternating voltage True RMS              | as for alternating voltage True RMS             | $\pm 5\% I_n$ for $I_n \geq 3\% I_n$<br>$\pm 0.15\% I_n$ for $I_n < 3\% I_n$ |
| THD   | Voltage             | 0.0..100.0%                                      | 0.1%  | $\pm 5\%$  |
|   | Current             | (in regards to the rms value)                    |   | $\pm 5\%$  |
| Active and reactive power of harmonics          | —                   | depending on configuration (transformers, clamp) | depending on minimal current and voltage values | —  |
| Angle between current and voltage harmonics     | —                   | -180.0...+180.0°                                 | 0.1°  | $\pm (h \times 1^\circ)$   |
| K- factor                                       | —                   | 1.0...50.0                                       | 0.1   | $\pm 10\%$   |
| Flicker severity $P_{ST}, P_{LT}$               | —                   | 0.20...10.00                                     | 0.01  | $\pm 5\%$  |
| Voltage asymmetry                               | Voltage and current | 0.0...20.0%                                      | 0.1%  | $\pm 0.15\%$<br>(absolute error)   |
| Mains signaling                                 | Voltage             | 5...3000 Hz                                      | 0.01 Hz   | $\pm 0.15\% U_n$ for 1...3% $U_n$ , 5% $U_n$ for 3...15% $U_n$               |
| Transients (PQM-703 only)                       | Voltage             | $\pm 6000$ V (with max. sampling 10 MHz)         | 5V  | $\pm (0.5\% + 25$ V)   |

\*Clamp F-1, F-2, F-3: 0..3000A (10000A<sub>pp</sub>) \*Clamp C-4: 0..1000A (3600A<sub>pp</sub>) \*Clamp C-5: 0..1000A (3600A<sub>pp</sub>) \*Clamp C-6: 0..10A (36A<sub>pp</sub>) (without current transformers) Clamp C-7: 0...100 A (360A<sub>pp</sub>)

### Standard accessories:

- Test leads 2.2 m; 7 pcs (permanent),
- "Crocodile" clip K01; black; 3 pcs,
- "Crocodile" clip K02; yellow,
- "Crocodile" clip K02; blue,
- "Crocodile" clip K02; red; 2 pcs,
- USB cable,
- Power supply plug (L1 and N),
- Adapter AC-16,
- Hard carrying case,

**WAKROBL20K01**  
**WAKROYE20K02**  
**WAKROBU20K02**  
**WAKRORE20K02**  
**WAPRZUSB**  
**WAADAAZ1**  
**WAADAAC16**  
**WAWALX12**

- Straps for PQM,
- DIN Rail Mounting Clip (ISO) (3 - elements),
- Voltage Adapter with M4/M6 thread; 5 pcs,
- Magnetic voltage adapter; 4 pcs,
- Fasteners and bands for mounting the analyzer on a pole; 2 pcs,
- Receiver – interfejs for radio transmission OR1 (USB),
- Sonel Analysis software for data analysis,
- Built-in rechargeable battery,
- instruction manual, calibration certificate.

**WAPOZOPAKPL**  
**WAPOZUCH3**  
**WAADAM4M6**  
**WAADAUMAGKPL**  
**WAPOZUCH4**  
**WAADAUSBOR1**

### Additional accessories:

- WAWALL2** - External IP67 GPS antenna, 10 m,
- Rechargeable Li-Ion battery

**WAPOZANT10GPS**  
**WAAKU11**



- Carrying case for clamps,
- Clamps:



| Clamp                          | C-4          | C-5                  | C-6          | C-7           | F-1        | F-2               | F-3        |
|--------------------------------|--------------|----------------------|--------------|---------------|------------|-------------------|------------|
| INDEX                          | WACEGC40KR   | WACEGC50KR           | WACEGC60KR   | WACEGC70KR    | WACEGF10KR | WACEGF20KR        | WACEGF30KR |
| Rated current                  | 1000A AC     | 1000A AC<br>1400A DC | 10A AC       | 100 A AC      |            | 3000A AC          |            |
| Max. overload current          | 1200A AC     | 1000A AC<br>3000A DC | 20A AC       | 100 A AC      |            | 10kA AC           |            |
| Minimal measurable current     | 100mA        | 500mA                | 10mA         | 20 mA         |            | 1A                |            |
| Frequency                      | 30Hz...10kHz | DC...5kHz            | 40Hz...10kHz | 40 Hz...1 kHz |            | 40Hz...10kHz      |            |
| Input signal level             | 1mV / 1A     | 1mV / 1A             | 100mV / 1A   | 500 mV / 1A   |            | 38.8 $\mu$ V / 1A |            |
| Max. diameter of measured cord | 52mm         | 39mm                 | 20mm         | 24 mm         | 360mm      | 235mm             | 120mm      |
| Minimal basic accuracy         | $\leq 0.5\%$ | $\leq 1.5\%$         | $\leq 1\%$   | 0,5%          |            | 1%                |            |
| Battery power supply           | —            | +                    | —            | —             |            | —                 |            |
| Lead length                    | 2.2m         | 2.2m                 | 2.2m         | 3 m           |            | 2.2m              |            |
| Measurement category           | IV 300V      | IV 300V              | IV 300V      | III 300 V     |            | IV 600V           |            |