**Power Quality Analyzer SHMK120S**

**Overview**

SHMK120S is a modern digital measurement instrument, providing accurate three-phase measurements of AC electrical quantities. It enables power quality assessment according to present standards and also functions as a revenue power meter.

**Areas of application**

The Power Quality Analyzer SHMK120S is intended for continuous measurements of electrical power and power quality parameters in three-phase AC networks. It can be used to control the conformity of power quality with EN 50160 norms as well as power metering per IEC 62053-22 class 0.2S.

**Features**

**Multifunctionality**

Device measures harmonics, interharmonics, unbalance, flicker, active, reactive and apparent powers, phase angles of fundamental and harmonic components, etc.

**High accuracy and standard compliance**

Current and Voltage measurement accuracy 0.1%. All power quality measurements are made according to IEC 61000-4-30 ed.2 Class A. Harmonic and interharmonic components are measured according to IEC 61000-4-7 Class I. Flicker is measured according to IEC 61000-4-15 Class F3. Active energy measurement is IEC 62053-22 class 0.2S. Reactive energy measurement is IEC 62053-23 class 1.

**Compact design** (120 x 120 x 75 mm) enables fast and easy installation.

**Increased LED indicator height** (25 mm) provides comfortable local meter readings.

**Ethernet based synchronization** (NTP or PTP IEEE 1588) requires no additional synchronization circuits and is accurate up to ±1µs.

**Competitive price**

**Measurements**

- Power frequency
- Voltage and current magnitudes
- Flicker perceptibility
- Dips, swells, interruptions
- Voltage unbalance
- Voltage harmonics
- Voltage interharmonics
- Under- and overdeviation
- Relative phase angles
- Active, reactive, apparent powers
- Active and reactive energies
## Power Quality Analyzer SHMK120S

| **Physical** | Dimensions (W x H x D) | 120 x 120 x 75 mm  
4.7 x 4.7 x 3.0 inch |
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<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>Weight</td>
<td>0.7 kg (1.54 lbs)</td>
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<tr>
<td><strong>Environmental</strong></td>
<td>Temperature range (operating)</td>
<td>-40..+55 °C (-40..+131 °F)</td>
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<tr>
<td></td>
<td>Humidity</td>
<td>30 to 80% non-condensing</td>
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<td></td>
<td>IP class</td>
<td>ANSI/IEC 60529 IP51</td>
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| **Interfaces** | Voltage                | 3 x AC inputs (650VAC max)  
57.7/133/230VAC line-to-neutral  
100/230/400VAC line-to-line |
|              | Current                | 3 x AC inputs  
5A secondary (10A RMS max)  
1A secondary (2A RMS max) |
|              | Communication ports    | Ethernet (10/100BASE-T or  
100BASE-FX), RS-485 |
|              | Display                 | 3-row 4-digit LED display+1-row  
8-digit energy LED display or  
QVGA 320x240 LCD color display |
| **Communications** | Remote HMI and Control | HTTP (WEB interface) |
|              | Communication protocols | IEC 60870-5-104 (Ethernet)  
IEC 60870-5-101 (EIA RS-485) |
|              | Synchronization        | NTP (RFC 5905) / PTP (IEEE-1588) |
| **Power Supply** | Voltage               | 90...264 VAC, 47...63 Hz  
DC 130-370V |
| **Measurements** | Current and Voltage    | 0.1% |
|              | Power quality          | IEC 61000-4-30 : Class A |
|              | Harmonics and Interharmonics | IEC 61000-4-7 : Class I |
|              | Flicker                | IEC 61000-4-15 : Class F3 |
|              | Active Energy          | IEC 62053-22 : Class 0.2S |
|              | Reactive Energy        | IEC 62053-23 : Class 1 |