POWERSIDE®

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Data Sheet

# GridAnalyzer with PQube® 3 Power Analyzer


## Overview

The growing presence of distributed energy resources (DER) poses a new set of emerging threats to the Power Grid stability.

The GridAnalyzer delivers real-time phasor data needed to maintain grid stability. Its ultra-precise power quality monitoring helps to continuously verify DER connection compliance.

Gain more situational awareness of your distribution grid or micro-grid.

## Features

- Real-time C37.118 streaming and historical phasor data recording
- Complete power quality monitoring
  - Harmonics
  - Conducted emissions
  - Voltage sags, swells, interruptions
- High frequency impulses
- Options : Wall-Mount, Pole-Mount

## Application

- Monitor frequency and voltage control
- Helps to understand involuntary islanding
- Monitor post commissioning ride-through
- Provides insight into the cause of the DER triggering

# Technical Specifications

| TECHNICAL SPECIFICATIONS | |
|---|---|
| **Dimensions (L x W x D)** | 33.67 x 28.6 x 14.06 cm (13.26 x 11.73 x 5.53 in) |
| **Weight** | 14 lbs (6.35 Kg) |
| **Operating Environment** | -20 to 65° C (-4 to 149° F), 5 to 95% RH (inside use), <2000 m above sea level<br>For EMC immunity, overvoltage, and other conditions, see full specs |
| **Clock Synchronization** | GPS mandatory for PMU, NTP, SNTP |
| **Communication** | Ethernet port RJ-45, 10/100 (optional wireless and cell modem) |
| **UPS (Battery Backup)** | Up to 1 hour (configurable) |

| COMMUNICATION PROTOCOLS | |
|---|---|
| **PQube 3 Power Analyzer** | Modbus/TCP, DNP 3.0, SNMP with traps, BACnet, FTP or HTTP (secure FTPS and HTTPS), and email |

| MEASUREMENT CHANNELS | |
|---|---|
| **Voltage Connection** | L1, L2, L3, N screw terminals. Max torque 5 inch-pounds (0,6 Nm) |
| **Wiring Configuration** | 3-phase delta, wye/star single-phase, split-single-phase |
| **Measurement Range** | 0 to 750 Vac L-N (0 to 1300 Vac L-L) |
| **Input Impedance** | 4.8 MΩ |
| **Current Connection** | Via external current transformer with voltage output screw terminal<br>Max torque 2 inch-pounds (0,25 Nm) |
| **CT Ratings** | 0.333 Vrms, 10 Vpk, 0 to 6000 Amps: 0.333 V |
| **Measurement Range** | 3.5 crest factor |
| **Input Impedance** | 33.3 kΩ |

| PHASOR MEASUREMENT FUNCTIONS (PMU) | |
|---|---|
| **Frequency Range** | 50 / 60 Hz |
| **Sampling Rate** | 25,600 samples/s at 50 Hz and 30,720 samples/s at 60 Hz |
| **Accuracy** | VA (per-phase, peak, and total) |
| **TVE (Total Vector Area)** | Typical TVE \| ±0.01%<br>Typical short-term TVE stability for differential measurements: ±0.002% |
| **Accuracy (±% rdg ±% FS)** | ±0.050% (10 to 750 Vac L-N)<br>Typical :±0.010% (120 V – 600 Vac L-N) |
| **Angle (±% rdg ±% FS)** | ±0.010° 1 Standard Deviation<br>Typical : ±0.003° |

| MODES OF OPERATION | |
|---|---|
| **Ultra Precise Mode** | Recordings to Internal Memory<br>Streaming according to C37.118-2011 (both simultaneously) |
| **Ultra Precise Parameters** | 3 voltage and 3 current phasors, frequency<br>Active/reactive powers, power factor (recorded only) |
| **Low Latency Mode** | Using P-Filter* (streaming according to C37.118-2011)<br>Using M-Filter* (streaming according to C37.118-2011)<br>Latency: 50 ms typical |
| **Low Latency Mode Parameters** | 4 voltage and 8 current phasors, frequency, 4 analog channels<br>Active/reactive powers, power factor (recorded only) |

| POWER QUALITY ANALYSIS | |
|---|---|
| **Sampling Rate** | 512 samples per cycle at 50 / 60 Hz (applies to voltage, current, and analog channels)<br>1 MHz for HF impulses |

# Measurement Functions

| VOLTAGE | |
|---|---|
| **Magnitude*** | L-L, L-N, L-E, and N-E. RMS refreshed 1/2 cycle |
| **Frequency*** | 16.67 / 50 / 60 / 400 Hz |
| **Unbalance (Negative and Zero Sequence)*** | IEC, GB, and ANSI methods |
| **Flicker (Pinst, Pst, and Plt)*** | IEC 61000-4-15 |
| **Harmonic & Interharmonic*** | Volt or %H1, IEC 61000-4-7 Class 1, order up to 50th |
| **Total Harmonic Distortion (THD)** | %, IEC 61000-4-7 |
| **High Frequency Impulse (Voltage)** | Record transient pulses on one channel (L1-E, L2-E, L3-E, or N-E) at 4 MHz sampling, or all four channels at 1 MHz, range: ± 6 kV |
| **Conducted Emissions (2 to 9 kHz)*** | Volts for L1-E, L2-E, L3-E resolution 200 Hz bins<br>Range 0 to 60 Vpk |
| **Conducted Emissions (8 to 150 kHz)*** | Volts for L1-E, L2-E, L3-E, and N-E resolution 200 Hz bins Range 0 to 60 Vpk |

* Meets or exceeds IEC 61000-4-30 Ed. 3

| CURRENT | |
|---|---|
| **Current Magnitude*** | RMS refreshed 1/2 cycle (Irms ½) |
| **Peak Current** | RMS over 1 sec, 1 min, or user-defined |
| **Unbalance (Negative and Zero Sequence)*** | IEC, GB, and ANSI methods |
| **Voltage Harmonic & Interharmonic*** | Amp, order up to 50th |
| **Total Demand Distortion (TDD)** | Amp, IEC 61000-4-7 |
| **Total Harmonic Demand Distortion (THDI)** | %, IEC 61000-4-7 |

* Meets or exceeds IEC 61000-4-30 Ed. 3 Class A

| POWER | |
|---|---|
| **Total Power** | Up to two (3-phase) loads |
| **Peak Power** | Intervals: 1 sec, 1 min, or user defined (up to one hour) |
| **Reactive Power** | VAR (per-phase and total) |
| **Apparent Power** | VA (per-phase, peak, and total) |
| **Power Factor** | TPF or DPF method (per-phase and total) |

## Order Information

- Product: Grid Analyzer Pole-Mount
    - Part Number: GridAnalyzer-Pole-M24-0000-000-XXXX

- Product : Grid Analyzer Wall-Mount
    - GridAnalyzer-Wall-M24-0000-000-XXXX

## Contact Us


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