

PQube® 3v Power Analyzer



Overview

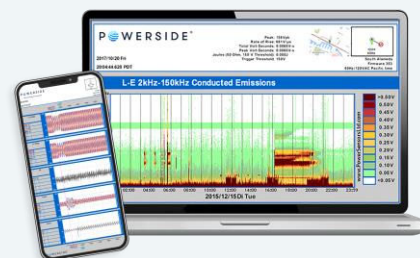
The PQube 3v is a compact voltage compliance instrument providing best-in-class real-time sensor data. It features an impressive number of standard features including class 0.2 revenue-grade metering, alarms, push reporting, and AC/DC power and process parameters monitoring with four additional analog channels.

The PQube 3v is easy to install and configure with auto-detection of the mains frequency, wiring configuration, and nominal voltage. It delivers ultra-precise results immediately to your inbox and can be networked to provide voltage monitoring at the point of common coupling (PCC), as well as diagnosing equipment malfunction via analog channel monitoring.

Features

- Connects directly to voltages up to 750 Vac (L-N) nominal
- Certified for Class A power quality according to IEC 61000-4-30 Ed3
- Detects high-frequency impulse events up to 4 MHz and records 2 kHz to 150 kHz emissions
- Auto-detects the mains frequency, wiring configuration and nominal voltage
- No software to install, built-in web and email server

RESULTS



- **Real-time readings via protocols**
Modbus, SNMP, BACnet, DNP3.0
- **Event recordings and graphs**
Text, CSV, GIF, and IEEE 1159-3 PQDIF
- **Daily, weekly, monthly, trends and graphs**
Text, CSV, GIF, and IEEE 1159-3 PQDIF

Technical Specifications

TECHNICAL SPECIFICATIONS	
Dimensions (L x W x H)	4.33 in X 2.89 in X 3.08 in (11.0 cm X 7.34 cm X 7.82 cm), 1.8 in (3.5 cm) DIN rail mountable
Weight	10.5 oz (300g)
Operating Environment	Temperature: -4 to +149° F (-20 to +65° C), +131° F (+55° C) with PM2 AUX load Humidity: 5 - 95% RH (inside use) Altitude: <2000 m above sea level
Power Supply	AC: 24 Vac \pm 10% at 50/60/400 Hz, 1.5A max DC: \pm 24 to 48 Vdc \pm 10% (polarity independent), 1A max. Optional PM1 and PM2 modules: 100 to 240 Vac 50/60 Hz and 120 to 370 Vdc Power over Ethernet (PoE) compatible
Internal Memory	32 GB (holds over a year of data, depending on number of recorded events)
Data Backup	USB 2.0 thumb drive; External microSD Card (not included)
Clock Synchronization	SNTP, NTP
Output File Types	GIF, text, CSV/Excel, and IEEE 1159-3 standard PQDIF
Communication Ports	10/100 Ethernet port (RJ-45) (optional wireless and cell modem)
Communication Protocols	Modbus/TCP, DNP 3.0, SNMP with traps, BACnet, FTP or HTTP (secure FTPS and HTTPS), and email

Measurement Functions

VOLTAGE	
Sampling Rate	512 samples per cycle at 50 Hz / 60 Hz (applies to voltage and analog channels)
Inputs	4 + Reference to earth (L1, L2, L3, N, E)
Voltage Range	0 to 750 Vac (L-N), 0 to 1300 Vac (L-L), impedance: 4.8M Ω
Voltage Magnitude*	L-L, L-N, L-E, and N-E. RMS over 1/2 cycle (Urms 1/2)
Frequency*	50 Hz, 60 Hz, 400 Hz, or 16.67 Hz
Unbalance (negative and zero sequence)*	IEC, GB, and ANSI methods
Flicker (Pinst, Pst, and Plt)*	IEC 61000-4-15
Voltage Harmonic & Interharmonic*	Volt or %H1, IEC 61000-4-7 Class 1, order up to 50 th
Total Harmonic Distortion (THD)	%, IEC 61000-4-7
High Frequency Impulse (voltage)	Records transient pulses on one channel (L1-E, L2-E, L3-E, or N-E) at 4 MHz sampling, or all 4 channels at 1 MHz, range: \pm 6 kV
Conducted Emissions (2 - 9 kHz)*	Volts for L1-E, L2-E, L3-E : resolution 200 Hz bins, range 0 to 60 Vpk
Conducted Emissions (8 - 10 kHz)*	Volts for L1-E, L2-E, L3-E, and N-E: resolution 2000 Hz bins, range 0 to 60 Vpk



ANALOG	
Inputs	4 single ended or 2 differential inputs (A1, A2, A3, A4, E) Low Range: Low: ± 10 Vdc or 6 Vac High Range: ± 100 Vdc or 60 Vac
Analog Magnitude	AN1-E, AN2-E, AN3-E, AN4-E or differential AN1-AN2, AN3-AN4 RMS refreshed 1/2 cycle
Power & Energy Configuration (Optional)	Power and energy meter 1 (AN1 X AN2), power and energy meter 2 (AN3 X AN4)

DIGITAL	
Inputs	1 differential input (D+, D-). Digital threshold 1.5 V \pm 0.2 V typical

ENVIRONMENT SENSORS	
Inputs	2 ENV2 probe inputs (USB2, USB3). Uses Powerside's ENV2 EnviroSensor probe
Temperature	-4 to 176° F (-20 to 80° C)
Humidity	0 to 100 % RH
Barometric Pressure	Resolution better than 0.001 hPa
Acceleration (x, y, and z)	(x, y, and z) ± 2 , ± 4 , or ± 8 gravity ranges, trigger on shock/vibration, seismic, or tilt

RELAY	
Outputs	1 output, trigger programmable
Activation Mode	Activated on sag/swell, over/under frequency, overcurrent, inrush, waveshape change high frequency, impulse, snapshot, and digital/analog events
Rating	RLY1 - 30 Vac or Vdc, 300mA max, activates for event duration or 3 seconds (whichever is longer), 20 ms delay

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

Order Information

Part Number: PQube3-PQ-0000-0000-XXXX

Contact Us

Canada

7850 Trans-Canada Highway
Saint-Laurent (QC) H4T 1A5
1 (877) 333-8392

sales@powerside.com
powerside.com

United States

980 Atlantic Ave., Suite 100
Alameda, CA 94501
1 (888) 736-4347



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