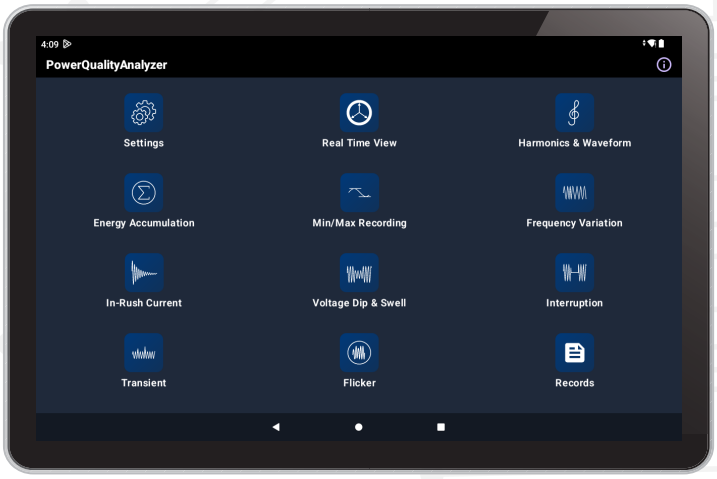
SANDS

PQS-1001

Portable Power Quality Analyzer

From Measurement to Cloud – Intelligent Power Quality Monitoring



Designed, Engineered and Manufactured by SANDS

PQS is a complete in-house innovation, from hardware and firmware to cloud, delivering accuracy, reliability, and a roadmap for the future.

Technical Excellence

IEC-based PQ metrology: Class S (IEC 61000-4-30) - covering harmonics, flicker, dips, swells, interruptions, and transients.

Reporting Made Easy

Cloud dashboard with historic trends, alarms, and Excel/PDF reports

Safety & Efficiency

Remote tablet operation for safer, faster setup - no direct panel exposure

Consistent Audits

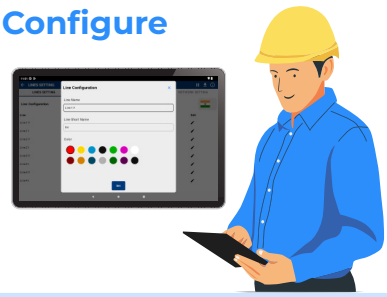
Repeatable audits with asset & route management and photo-tagging

What makes PQS-1001 different?

The PQS-1001 is designed as a connected platform for power quality analysis. It combines a rugged measurement unit with a wireless tablet interface and cloud reporting features such as asset and route management, extending the role of a portable analyzer beyond conventional logging.

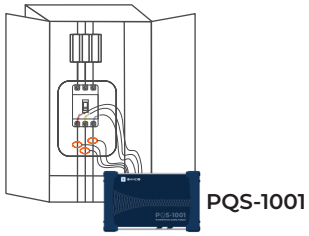
How does the PQS-1001 change the workflow?

Configure



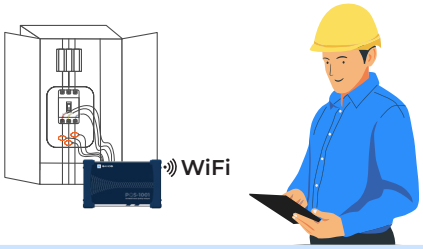
The engineer creates asset routes and measurement plans in the application.

Connect



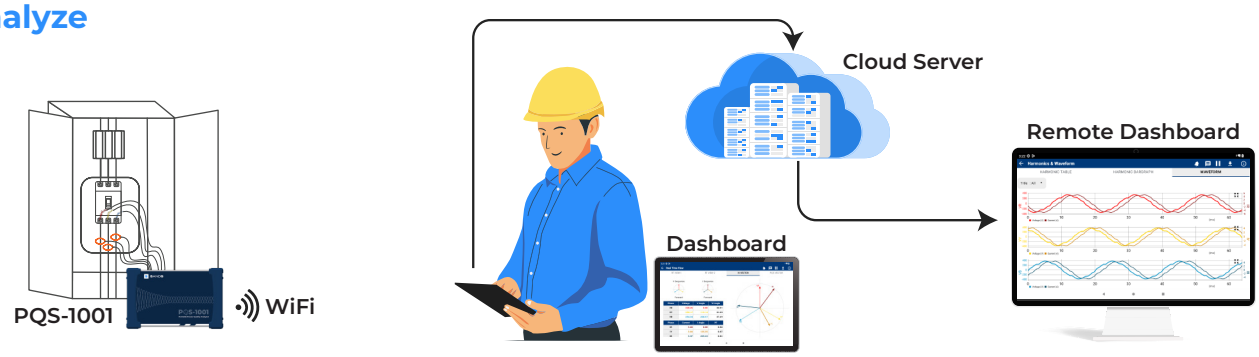
The engineer installs the analyzer at the panel with suitable CTs and PTs.

Operate



The engineer uses a wireless tablet for safe and efficient measurement.

Analyze



The engineer reviews synchronized cloud data for reports, compliance, and trends.

PQS-1001 Applications

Energy Management
Identify savings through power factor, harmonics, and flicker analysis

Renewables
Validate inverter performance and support grid integration

Industrial Plants
Improve reliability of motors, drives,compressors, and HVAC

Utilities
Ensure compliance & resolve PQ complaints efficiently

Measurement Parameters	
Voltage Range	Up to 1000 V AC (phase-to-neutral), 2000 V AC (phase-to-phase)
Current Range	Up to 3000 A (with supplied clamp and Rogowski CTs)
Frequency Range	45-65 Hz
Power Values	Active (W), Reactive (VAr), Apparent (VA), Distorting Power (VAD) – per phase & total
Power Factor	PF (true), Displacement PF (cosφ), tanφ – per phase & total
Energy Values	Active (Wh), Reactive (VArh), Apparent (VAh), Distortion Energy (Dh)
Harmonics	Up to 51st order (V, I); THD per phase
Sequence Components	Positive, Negative, Zero (V & I)
Crest Factor	Voltage and Current (per phase)
DC Components	Voltage DC (Vdc), Current DC (Idc) (per phase)
IEC Standard	IEC 61000-4-30 Class S methodology

Waveform & Visualization	
Waveform Recording	6 channels (3V + 3I)
Oscillography	Voltage & current waveform capture for PQ events & inrush
Harmonic Views	Table + bar graph (up to 51st order)
Waveform Views	Multi-phase and single-phase zoom
Inrush Views	Waveform, RMS trend, summary values
Dip/Swell RMS	RMS event display with thresholds

User Interface & Communication	
Display/UI	Tablet app (7–11 inch Android); Cloud web dashboard
Connectivity	USB, WiFi
Cloud Platform	Historic trends, alarms, Excel/PDF reports; secure multi-device access
Route & Asset Management	Asset lists, photos, repeatable audits
Customization	Custom line colors + dark mode

Power Quality Events	
Voltage Dips & Swells	Detection with configurable thresholds
Flicker	IEC-compliant short-term (Pst, 10 min) and long-term (Plt, 2 hr)
Inrush Current	Configurable trigger; up to 10 min recording; waveform + RMS trend; values: IRms, Imax, wave peaks & times
Interruptions	IEC-compliant RMS voltage <1% of nominal (Un) for >1 cycle

Data & Storage	
Inrush Recording	Up to 10 minutes
Event Log	10,000 events
Snapshots	Up to 1000
Min/Max	Records extreme values during sessions
Storage Duration	2 weeks to several years (depending on configuration)
Downloads	PDF & Excel reports

Hardware & Environmental	
Battery	Li-polymer 4.2 V 4000 mAh
External Supply	Supported
Enclosure	Rugged portable design, IP50

Safety	
Voltage clips	IEC/EN 61010-31 1000V CAT IV
Clamp CT	IEC/EN 61010-32 600V CAT III
Flexible CT	IEC/EN 61010-32 1000V CAT III, 600V CAT IV

Flexible CT

50mm dia, 600 A

100mm dia, 1000 A

150mm dia, 3000 A

Clamp CT

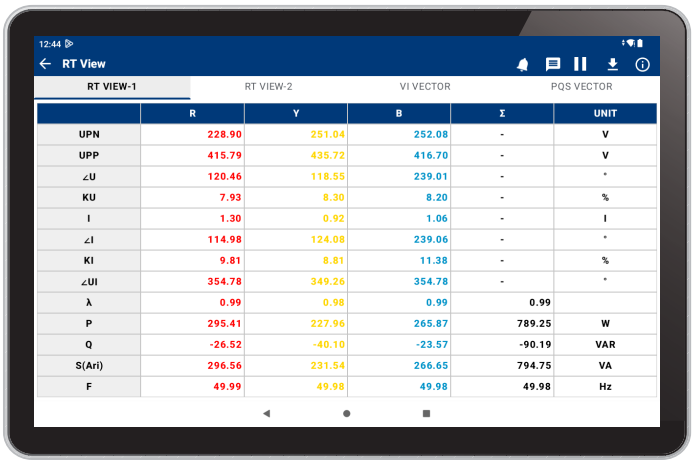
8mm dia, 10 A

13mm dia, 100 A

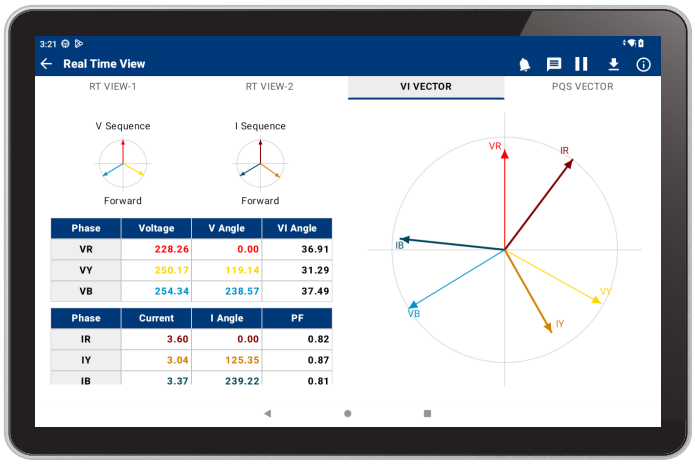
50mm dia, 1000 A

Flexible Current Input Module:

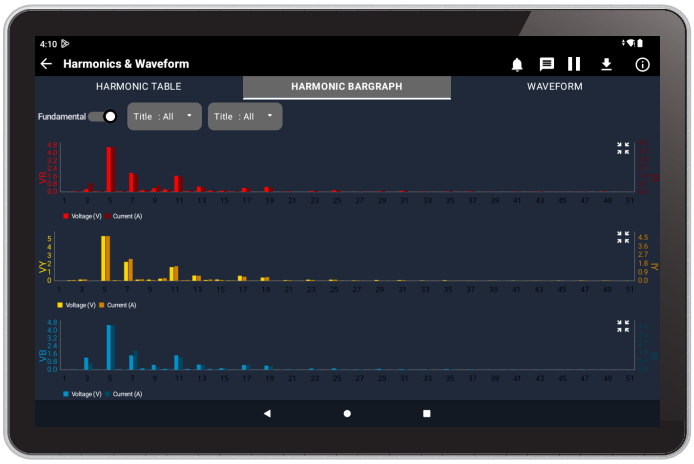
Universal adapter for CTs from 10 A clamp to 3000 A Rogowski (353 mV output)



All key PQ metrics live

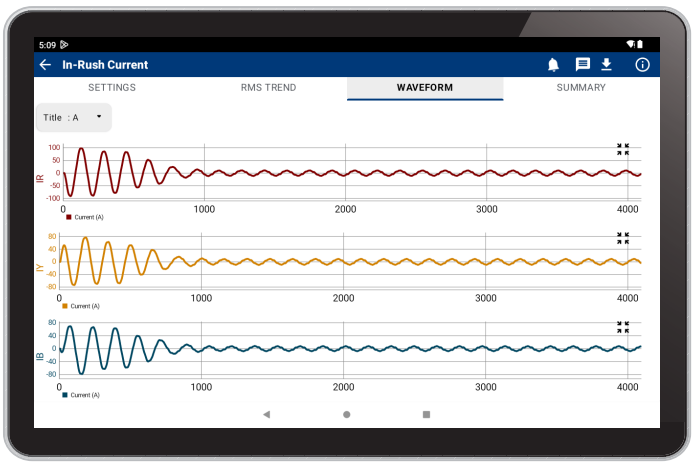


Voltage, current & power phasors



Harmonics up to 51st order

Multi-phase PQ waveforms



Inrush waveform & RMS trends

Dip & swell RMS trend

What's Included

PQS-1001

- PQS-1001 Main Unit
- Flexible Current Input Module
- Clamp & Rogowski CTs (selected)
- Tablet App license
- Cloud package

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