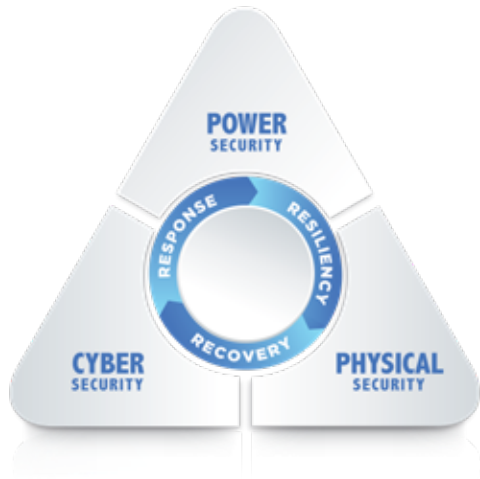


# Power Security for Data Centers

PQube®3e detects power security threats  
and directs effective response and recovery



# Power Security issues are a critical threat that is often overlooked in a total security strategy



Power Security, like Cybersecurity and Physical Security, is a critical dimension of your overall security strategy.

Effective security protocols are built on the same three dimensions of Resiliency, Response and Recovery. Comprehensive Power Security ensures a higher degree of design Resiliency, data driven event Responses, and faster system Recovery.

## Power Security threats come in many shapes & sizes and many of them can be managed proactively



TRANSIENTS



HARMONICS



REACTIVE POWER



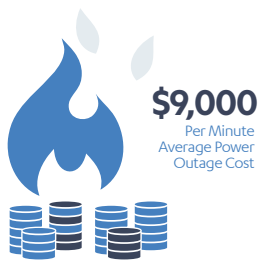
OSCILLATIONS



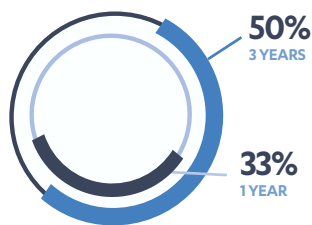
VOLTAGE VARIATIONS



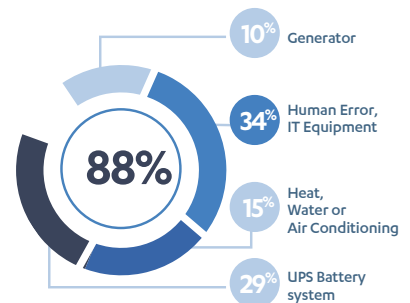
FLICKER



The average cost of a data center power outage was \$740,357 or almost \$9,000 per minute – and the average cost of a data center power outage increased by 38% between 2010 and 2016.



In a recent data center survey, more than 1/3 reported a power outage in the past year, and more than 1/2 reported at least one in the past 3 years.



88% of outages occur as a result of human error or equipment issues due to your power utility.

**Power Security solutions** combine power, power quality, equipment, and operations monitoring and documentation to maximize data-center performance and profitability.

## PQube 3e is a powerful and versatile Power Security solution

- ✓ Constant monitoring enables early, rapid response to power threats
- ✓ Real-time alerts support email and/or SNMP compatible direct connections
- ✓ Precise data and informative graphs support fast diagnostics and direct effective response
- ✓ Environmental sensors including temperature, heat, humidity and vibration extend your security envelope



### PQube 3e is easy to use and affordable



#### Connect it, you're configured.

**Configures itself.** Installs in under 5 minutes. Once installed, PQube 3e auto-detects the main's frequency, wiring configuration, and nominal voltage.

**No software to install.** All you need is a network connection to auto-receive generated GIF graphs or CSV/Excel and PQDIF (IEEE standard) files.

**Integrates seamlessly** into a data center with SNMP compatibility.



#### Compact. Installs in minutes.

**Compact. Install anywhere.** The size of a Rubik's cube - 4"x3"x3". Snap-on to DIN rail; fits into a 19-inch rack and everything in-between.



#### Unparalleled value.

**As low as \$1000/circuit.**

With competitive pricing and 4 circuits per device, PQube 3e can be as low as 1/8th the cost per circuit when compared to other meters.

**System-wide coverage.**

No more compromises with under-monitored circuits. PQube 3e monitored Data Centers have more coverage, at lower cost.

**Best ROI.**

Root cause data analysis saves hours in outage response and remediation but pays for itself in the first 23 seconds saved!

## Why Choose Powerside for your Power Security needs?

Powerside is an established authority in power monitoring

15,000 + Clients

50,000+ Deployed Units

In 50+ Countries

5,000+ Correction Projects Completed

Powerside is a trusted provider to critical industries including:

Data Centers

Medical Institutions

Electric Utilities

Semi-conductors

**EC&M**  
Product of the Year  
2018 Category Winner

# PQube 3e Power Analyzers

Learn why PQube 3e is the best power analyzer money can buy.

**Versatile functionality.** Perform load profile monitoring, load shedding and multiple single-phase measurements with one instrument at the rack level. Record precise power quality events and root cause data to show customers that electricity supply is not the cause of server problems.



## Power analyzer comparison table

	PQube 3e	COMPETITORS			
		1	2	3	4
Multiple 3-phase circuits	✓	✗	✗	✓	✗
Harmonics (up to 50 <sup>th</sup> )	✓	✓	✓	✓	✓
Analog inputs	✓	✓	✓	✗	✓
Environmental parameters	✓	✗	✗	✗	✗
4Mhz high-frequency processor	✓	✗	✗	✓	✗
No software required for event/trend analysis	✓	✗	✗	✗	✗
Email with event & trend data	✓	✗	✗	✗	✓
Supra-harmonics (2-150kHz)	✓	✗	✗	✗	✗
Portable & permanent options	✓	✓	✗	✓	✗
DC voltage, current & power	✓	✗	✓	✗	✗
DIN rail mountable	✓	✗	✗	✗	✓
Unit price index vs PQube 3e	1.0x	0.8x	1.2x	1.3x	1.9x
Price/Circuit index vs PQube 3e	1.0x	3.1x	5.0x	5.3x	7.7x

## Key Monitoring Applications

- Switchgear
- PDU
- Transformer
- Genset
- UPS

*“It configured itself automatically. I dumped the data just to see what was there and it caught a big sag on Phase 1. The graphs, data, and reports were just there without any work. Thanks. It paid for itself already.”*

– Rockbridge Area Network Authority

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