



**Precision
Compliance
Simplicity**

A large, blue industrial power transformer with multiple high-voltage bushings and insulators, situated outdoors in a clear, sunny environment.

UNLEASH CONFIDENCE IN TRANSFORMER QUALITY

**FACTORY PD TESTING
INSTRUMENT FOR IEC
60076-3 COMPLIANCE**

**Ensure every
transformer that leaves
your facility meets the
highest insulation
standards.**

**Our innovative Partial Discharge
(PD) Testing Instrument is tailored
specifically for
routine, type, and special
dielectric tests according to IEC
60076-3, delivering unmatched
reliability and ease of use in
factory environments.**

DESIGNED FOR TRANSFORMER MANUFACTURING EXCELLENCE



High Sensitivity
Detects partial discharges
below 1 picoCoulomb,
ensuring early fault detection
and
robust insulation validation.

**Standards-Based
Assurance**
Fully compliant with IEC
60076-3 for high-voltage
AC testing and partial
discharge
monitoring in transformer
production and testing
lines.

**Single Hardware, Full 3-Phase
Capability.**
One compact device supports
simultaneous PD acquisition on
all three phases, with
synchronized voltage references
—eliminating the need for
multiple instruments
or test reconfiguration.

Software IEC Filtering

The instrument applies software-based digital filtering with a 400 kHz-wide bandwidth in the IEC 60270-compliant frequency range. This ensures standard-compliant PD detection while maintaining the flexibility of wideband acquisition for advanced signal analysis and noise rejection.

Three-Phase Simultaneous Acquisition

3x PD inputs + 3x synchronization inputs in one hardware unit, ideal for full-phase transformer validation.

Compact & Versatile

Suitable for integration into high-throughput production lines, mobile test carts, or fixed lab setups.

Factory-Grade Reliability

Built for harsh test floor environments with robust casing and stable performance.



Acquisition

Sampling Rate	100 MSa/s (10ns time resolution)
Channels	6 simultaneous: 3 PD channels + 3 sync channels
ADC Resolution	14-bit
Analog Bandwidth	32MHz
Acquisition Mode	event-triggered
PD Measurement (range)	10mV-1mV, 50mV-5mV, 200mV-20m,400mV-40mV, 800mV-80mV, 2V-200mV, 4V-400mV
IEC 60270 Software Filtering	Software-based adjustable bandpass filter IEC 60270-compliant
Pulse Resolution	10ns

Synchronization

Input Voltage Range	Auto-ranging up to 80V AC
Filter Bandwidth	Up to 450Hz for accurate zero-crossing detection
Derived Parameters	RMS voltage, frequency

Timing & Analysis

Channel Synchronization	All channels sampled simultaneously
PD Pattern Support	Phase-resolved PD patterns (PRPD)
Multi-Phase Sync Support	True 3-phase synchronization and correlation

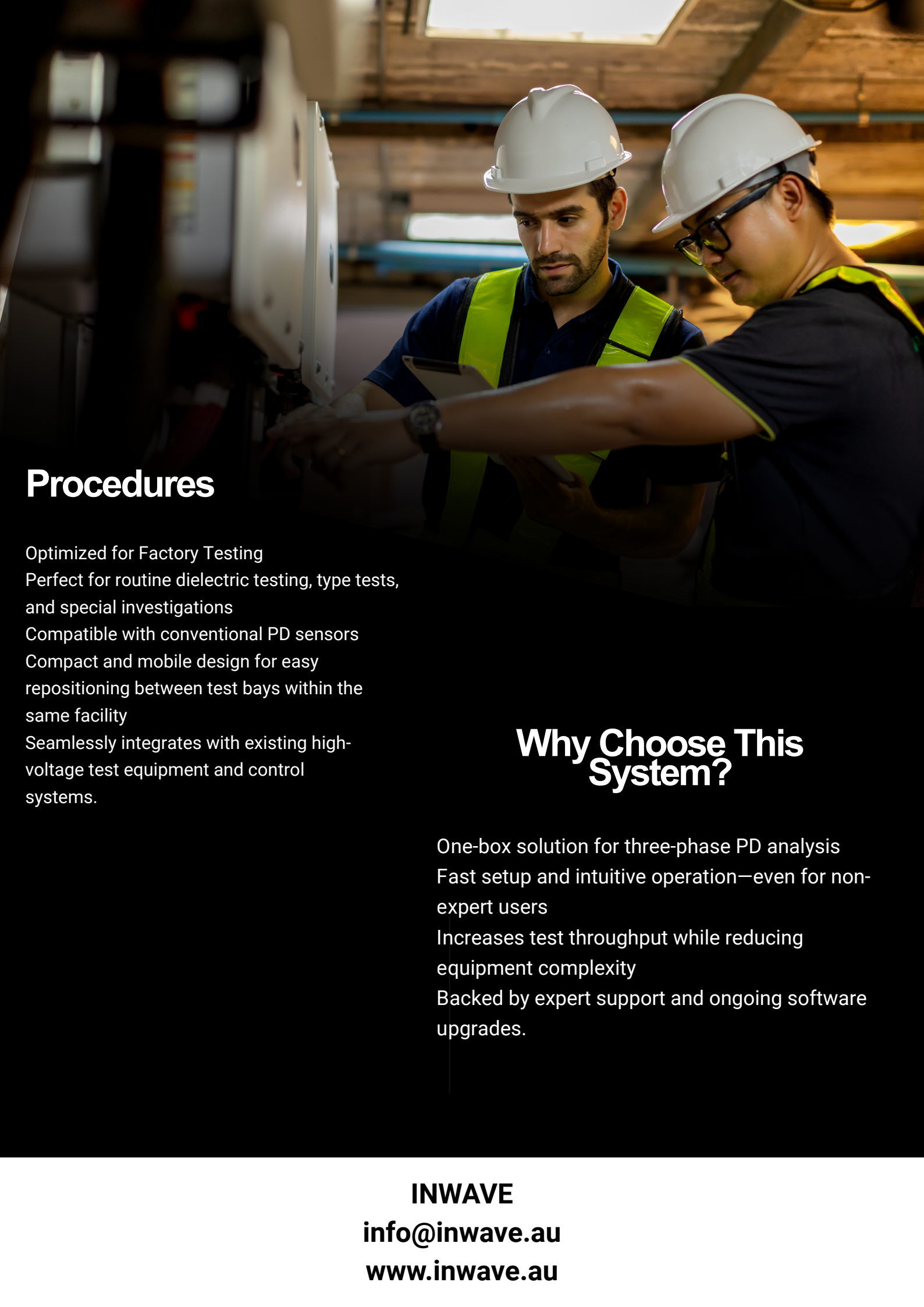
Software Processing

Filtering & Integration	IEC 60270-style filtering, charge estimation
Phase Analysis	Real-time
Reporting	Automatic analysis and reporting as per IEC0076-3

Market comparison

Feature / Capability	TXPD1000	Others
System Type	All-in-one 3-phase PD + voltage reference unit	Modular – requires 3 units for 3-phase measurement
Compliance	Compliant with IEC 60270, workflow analysis and reporting aligned with IEC 60076-3	Compliant with IEC 60270; IEC 60076 requires setup
Analog Bandwidth	32MHz	Up to 35MHz
Sampling Rate (per channel)	100 MSa/s	Up to 125 MSa/s
IEC 60270 Software Filtering	Software-based adjustable bandpass filter IEC 60270-compliant	Hardware-based filters
PD Channels	3 simultaneous PD channels	1 PD per unit (3 units needed for 3-phase)
Voltage Reference Channels	3 simultaneous Sync channels	1 Sync per unit (3 units needed for 3-phase)

QIEC Analysis	Real-time QIEC computation & IEC 60076-3 thresholds comparison	Manual analysis or separate processing
IEC 60270 Software Filtering setting	Automatic SNR analysis and IEC 60270-compliant bandwidth selection tool	Manual setting
Real-time Streaming	Applied Voltage vs Qiec charges over time, PD Waveform, PD Pattern, Sync	PD Waveform, PD Pattern, Sync
Configuration Recall	Load/save full test configurations for repetitive test	Manual or semi-automated setup
Measurement replay	Replay of the measurement including warnings for IEC 60076-3 amplitude threshold analysis	Replay of the full measurement
Automatic Analysis & Reporting	Auto-generated reports with IEC60076-3 compliant interpretation	Manual via external tools
User Interface	Graphical UI + automated workflows	GUI-based, more manual
Form Factor	Portable hard/lab case options available	Lab case only



Procedures

Optimized for Factory Testing

Perfect for routine dielectric testing, type tests,
and special investigations

Compatible with conventional PD sensors

Compact and mobile design for easy
repositioning between test bays within the
same facility

Seamlessly integrates with existing high-
voltage test equipment and control
systems.

Why Choose This System?

One-box solution for three-phase PD analysis

Fast setup and intuitive operation—even for non-
expert users

Increases test throughput while reducing
equipment complexity

Backed by expert support and ongoing software
upgrades.

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