

Specifications

Inputs	Six, 50Ω
Dynamic Range	±16 mV to ±6.4 V
Noise Rejection	Differential time of flight method
Frequency Bandwidth	1-150 MHz (-3 dB)
Polarity	Dual, positive and negative
No. of Magnitude Channels	16
No. of Phase Windows	60
Line Freq. Synchronization Voltage:	50 mV-10 V at 25, 50 or 60 Hz
External Synchronization	100-240 V at 25, 50 or 60 Hz
PD Simulator	Yes (built-in)
Connection to PC	RS232
Power	100-240 VAC, 50 or 60 Hz
Dimensions (instrument only)	43 cm x 41 cm x 16 cm
	(17" x 16 1/2" x 6")
Weight	9 Kg (20 lbs.)
Minimum Computer requirement	486 Processor, 16 MB RAM
Windows Compatibility	95 & 98

KIT CONTENTS

- **PDA Premium**
 - Six BNC Connection Cables
 - RS232 Cable
 - Power Cord
- External Synchronization Cable
 - Software on CD or Floppy
 - Operating Manual
 - Mil-Spec Fibreglass Carrying Case with LD45PE Foam Insert



Other ADWEL Products and Services for Partial Discharge Analysis:

- **PDA Standard** Partial Discharge Analyzer
 - PDA Termination Boxes
 - Supervision of the installation of PDA systems
 - Turn-key installation of PDA systems
 - Inspection, testing and commissioning of PDA systems
- PD Capacitive Couplers and HFCT's
 - PDA Software
 - Analysis and interpretation of PDA test results
 - PDA testing services
 - Customer training



PDA PREMIUM

Partial Discharge Analyzer

phase resolved PD analysis of high voltage rotating machines



PDA Premium
on line partial discharge testing of generator and motor stator windings

PDA Premium measurements are compatible with those of the **PDA Standard**, the industry *standard* for on-line PD measurements on rotating machines.

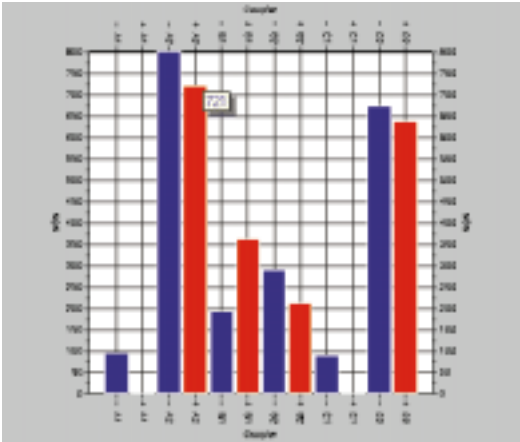
PDA Premium offers several improvements over the original **PDA Standard** (formerly PDA-H) instrument. It provides phase resolved PD data and measures three phases at once. **PDA Premium** can trend the on-line PD test data to show the progression of stator insulation deterioration. The phase resolved results help identify the nature and cause of the signals.

PDA testing during high voltage rotating machine operation can detect serious stator deterioration mechanisms such as slot discharge, internal voids and delaminations as well as wedge and winding looseness. If not detected, monitored, and corrected these problems may lead to the catastrophic failure of a machine.



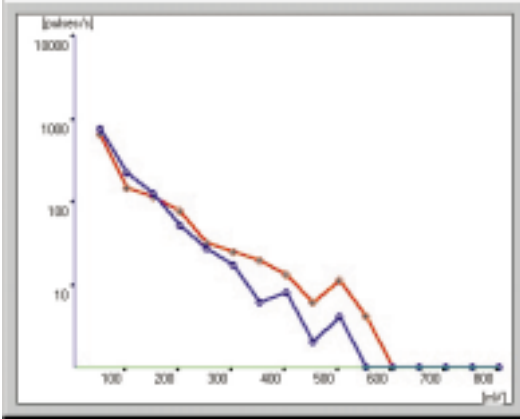
The **PDA Premium** instrument measures partial discharge activity in the stator winding of rotating machines. It can be used on machines equipped with capacitive couplers or High Frequency Current Transformers (HFCT). The **PDA Premium** not only is compatible with the industry pioneer **PDA Standard** (formerly PDA-H), but also provides phase resolved maps, six inputs for 3 phase measurements and an external synchronization input for measurements using HFCTs. **PDA Premium** data can be easily exported to EXCEL® and other major spreadsheets for further analysis and report generation.

NQN Graph



The NQN graph shows the NQN values for each coupler. Qmax values can also be displayed.

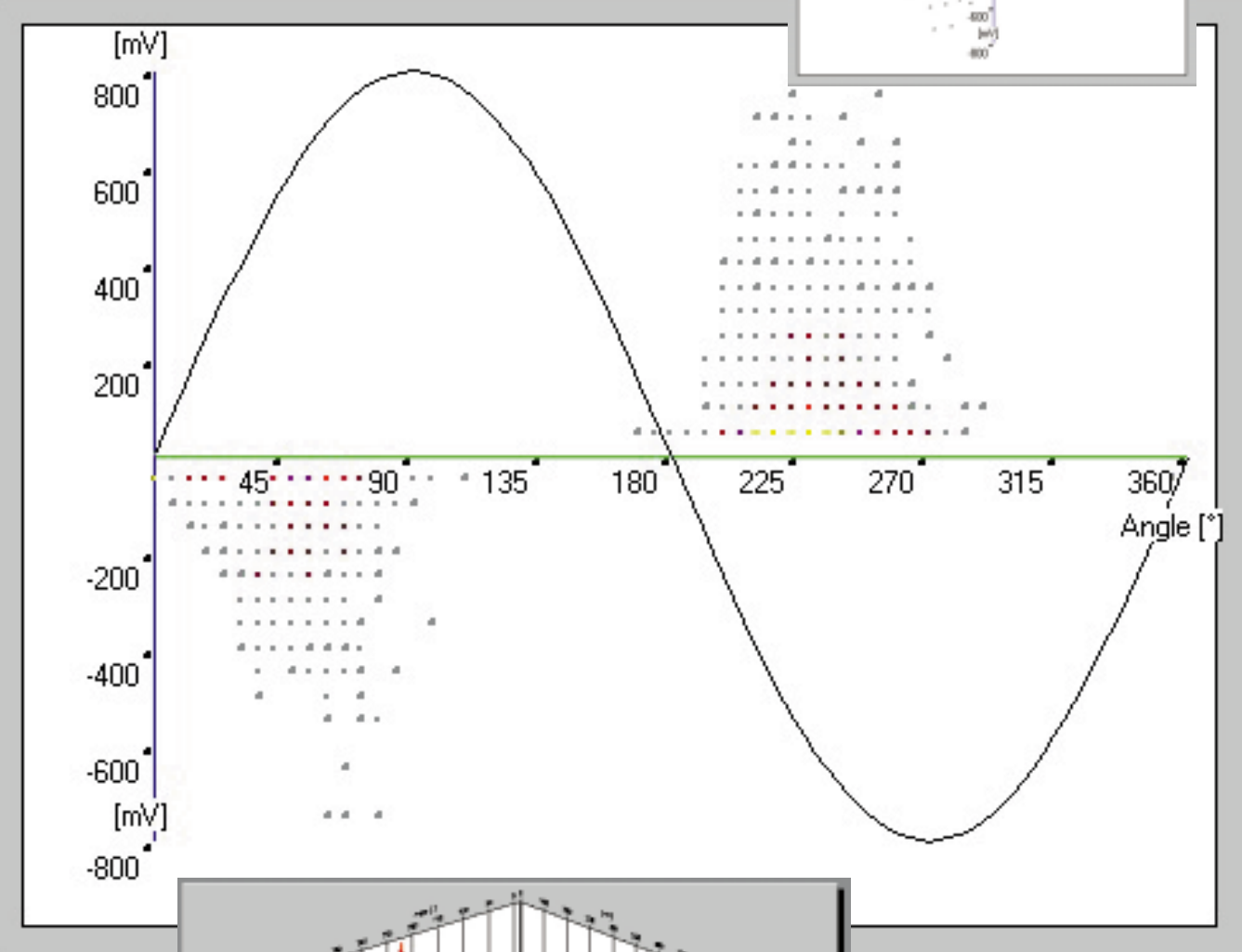
Single PDA Graph



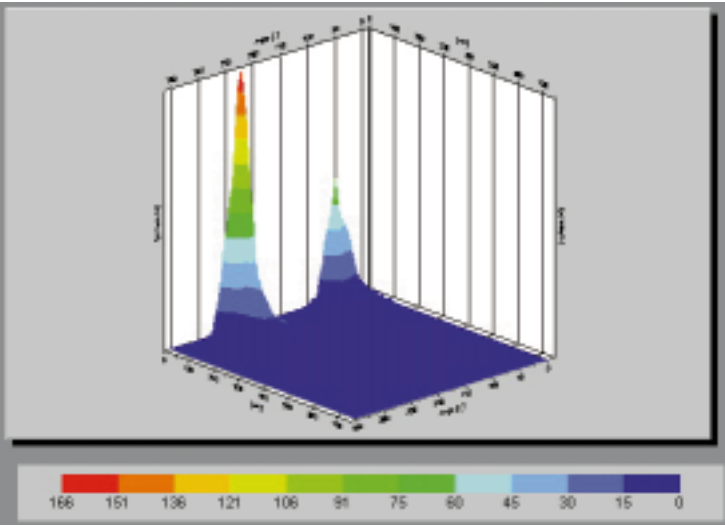
The Single PDA graph shows PD pulse counts versus pulse magnitude for both positive and negative polarity PD pulses.

PHASE RESOLVED PD DATA

Phase resolved results show where the PD is occurring relative to the voltage sine wave. This helps identify the type of PD activity, such as end winding discharge, and confirm the rejection of noise. The surface map shows the PD pulse counts and magnitudes versus phase angle position.



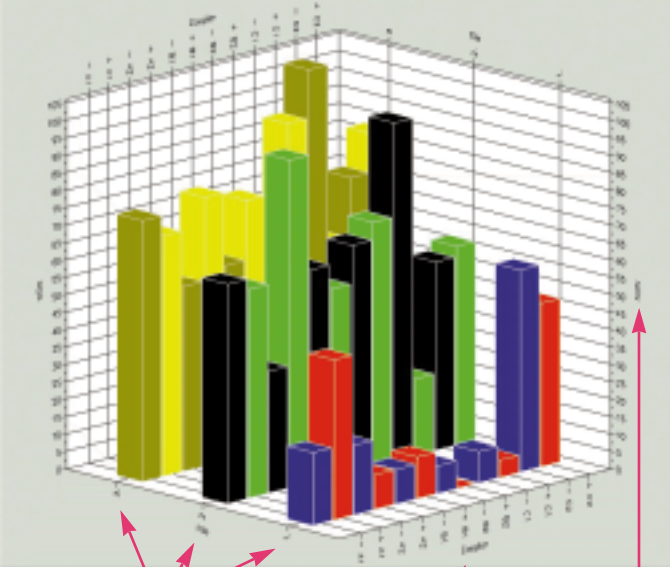
Typical phase resolved map



Surface map

PDA Premium can display the trend in PD activity over time. Trending is the best way to assess stator winding condition. Maintenance personnel can analyze the trends to make condition-based maintenance decisions about their machines.

NQN Trending Display



3 Tests taken on different dates

NQN values

Six couplers showing positive and negative results

The PDA trending graph compares two test results to show any increase in PD activity over time.

Two Files Comparison

