DOBLE ON-LINE MONITORING

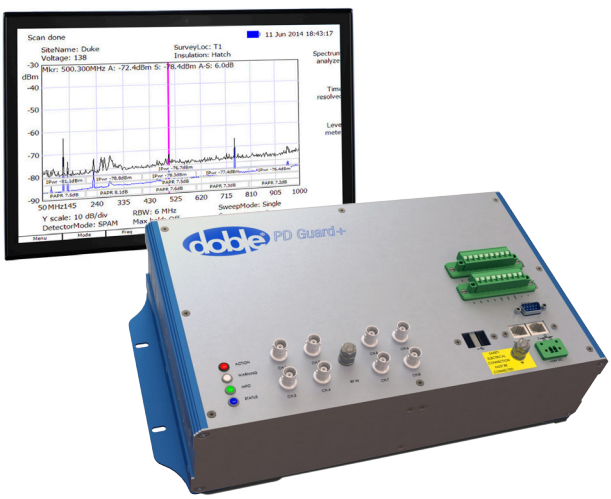
doblePRIME PD-GUARD

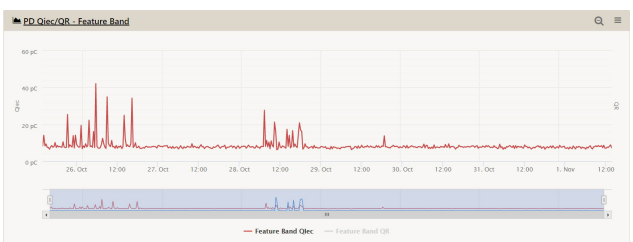
Partial Discharge Analyzer

FOR THE CONTINUOUS MONITORING OF PARTIAL DISCHARGE

The doblePRIME PD-Guard continuously monitors partial discharge (PD) in transformers, rotating machines, cables and switchgear including GIS and metal clad. It analyzes RF emissions in the HF, VHF and lower UHF ranges. Install on critical assets and configure using a computer, tablet or web-enabled device to monitor PD activity. The doblePRIME PD-Guard provides local alarms and will communicate data and notifications across standard interface channels and through to networked supervisory systems. The Doble PRIME PD GUARD includes multiple PD analysis capabilities, including both Peak-to-Average-Power-Ratio (PAPR) and making measurements which meet IEC 60270, QIEC. QIEC is a useful analysis, and the addition of PAPR extends the frequency range for more extensive and focused diagnostics.

The doblePRIME PD-Guard works with a variety of sensors including antenna for airborne PD, CTs for individual or bundled conductors, UHF drain valve probes for in-tank applications and bushing tap connectors. Designed to fit your monitoring program, the doblePRIME PD-Guard can operate as a standalone device or as part of a doblePRIME Condition Monitoring Platform.





FEATURES

- An independent PD monitoring system, configured via computer, tablet or web-enabled device
- Visual alert status indication
- Built-in Expert System learns PD behavior and indicates changes in frequency and/or severity of measured PD levels
- Alarm relays for external notification
- Broadband RF signal detection including peak, average and quasi-peak
- Quasi-peak detector is designed in the spirit of the CISPR 16-1-1:2010 EMI standard and in line with best field practices
- Extensive diagnostic tools including QIEC (IEC 60270 compliant), quadratic rate, phase resolved analyses and PAPR, which extends the range of QIEC to broaden diagnostic capabilities

BENEFITS

- Monitor PD in critical and high-risk assets
- Save costly equipment by quickly reacting to rapid insulation deterioration warnings
- Identify problem areas, diagnose the severity of the situation and plan action and intervention
- Plan for further testing, maintenance and replacements in a proactive, risk management approach
- Use as a standalone product, networked to existing SCADA system, or as part of a doblePRIME Condition Monitoring Platform

doblePRIME PD-GUARD TECHNICAL SPECIFICATIONS

TUNERS (BOTH)	
Inputs	4 or 8 channels, multiplexed
Connector	BNC
Input impedance	50 Ω
Maximum Input	+10 dBm for reading (+25 dBm with optional attenuation)
Dynamic range	60 dB
Detection types	Peak, quasi-peak and average detector
Sweep processing	Continuous, Average, Max Hold and differential
RFI TUNER 1	
Bandwidth	50 kHz to 50 MHz
Resolution Bandwidth	9 kHz / 120 kHz
Noise floor	Approximately -90 dBm for peak detect or -100 dBm for average detect (RBW 9 kHz)
RFI TUNER 2	
Bandwidth	50 MHz to 1000 MHz
Accuracy	± 100 kHz
Resolution bandwidth	120 kHz / 1 MHz / 6 MHz
Noise floor	Approximately -80 dBm for peak detect or -90 dBm for average detect (RBW 6 MHz)
EMI MODE	
Bandwidth	50 kHz to 100 MHz (seamless sweep using both tuners)
Resolution bandwidth	9 kHz / 120 kHz
AC SYNCHRONISATION	
Wired sync to external AC source	
MEASUREMENT MODES	
RF modes	Spectrum Oscilloscope (Time resolved) Level meter
Results output	IPwr (Integrated Power) PAPR (Peak-Average Power Ratio) PRPD (Phase Resolved PD) QIEC (IEC 60270 compliant) Quadratic rate (QR)
CPU, MEMORY AND BUSES	
Host CPU	Intel/Marvell PXA270 @ 500MHz
Memory	64MB RAM, 32MB flash

STORAGE
On board data storage of 32GB

PERIPHERALS
USB 1.1 host and client controllers RS485 network interface (Modbus RTU Slave) Ethernet interface (Modbus TCP Server, HTTP, VNC, WebDAV Server) Status LED (Condition, Info, Warning, Action) Status Relay, 240VAC 5A (Condition, Info, Warning, Action)

ENVIRONMENTAL	
Humidity	0-95% non-condensing
TEMPERATURE	
Operating temperature	-20°C to +50°C
Extended temperature	-40°C to +75°C
Storage temperature	-20°C to +70°C

MECHANICAL DATA	
Height	200mm / 7.9 in
Width	330mm / 13.0 in
Depth	82mm / 3.2 in
Weight	2kg / 4.4 lbs
Construction	Anodized aluminum

MOUNTING OPTIONS
Panel mount DIN Rail Rubber feet

POWER SUPPLY	
External supply	24 V DC @ 1 A
An optional power adapter can be supplied to suit global mains voltage	

Ask about complete enclosure solutions with specific environment, network and power options.

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