

PD-Guard



Detailed Specifications

Advanced & Reliable On-Line PD-Monitor

PARTIAL DISCHARGE MONITOR

Doble Lemke PD-Guard

- Computer-aided measuring, recording, storing, monitoring and analysis (PRPDA) of PD pulses
- Wideband PD processing
- Continuous PD pulse processing
- PD pattern recognition
- Built-in alarm function with pre-defined alarm level (PD magnitude, PD repetition rate or PD current), threshold level and threshold time can be adjusted individually

In/Outputs

- Analog inputs via TNC connectors
- Digital Ethernet TCP/IP output (10/100 Mbit)
- External trigger
- Status-LEDs for network activity and data communication

Signal processing

- Analog input filter for PD signal
- Amplifier adjustable in linear operation
- A/D conversion (RAW data)
- Programmable digital filters, based on RAW data processing and anti-aliasing
- Peak detection, clipping recognition, detect level (dead band) adjustable
- Processing unit for generation of:
 - Q peak, Phi and U-List
 - amplification factor for auto-ranging
 - cycle time for each measured period

Special Features

- Embedded RTOS-computer
- FPGA-based digital signal processing
- Implemented FFT function for analyzing the measured frequency spectrum to determine noise pulses - the digital filters (filter characteristics) setup is configured via software
- Control LEDs for established data communication with the Data Acquisition Server and for TCP/IP network activity
- Automatic system check when switched on and after 24 hours of operation
- Automatic default setting (attenuation, filters) after a power interruption before communications is re-established with the Evaluation Server
- No mechanical moving parts (no hard disks or fans)
- Designed for wall mounting in any position
- Rugged, compact and light-weight construction

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PD-Guard parameters

Resolution of apparent charge (Qa):	12 bit bipolar
Accuracy of phase resolution:	0.3 degree
PD measuring range (AUTO-ranging):	Up to 100,000 pC attenuation in 6 dB steps up to 90 dB
PD frequency band:	10 kHz to 2,000 kHz
Pulse repetition frequency:	50 kHz
Trigger sources:	Phase, internal external
Power supply:	100 V to 240 V AC, 50/60 Hz, < 30 W

PD-Guard/UHF parameters

Resolution of apparent charge (Qa):	12 bit bipolar
Accuracy of phase resolution:	0.3 degree
PD measuring range (AUTO-ranging):	Up to 50 V attenuation in 2 dB steps up to 62 dB
PD frequency band:	100 Mz to 1 GHz
Pulse repetition frequency:	50 kHz
Trigger sources:	Phase, internal external
Power supply:	100 V to 240 V AC, 50/60 Hz, < 30 W

Pre-configured digital filters

range of low cut-off (40 dB per decade): 100 / 200 / 300 / 400 /
500 / 750 / 1000 /
1500 kHz

range of high cut-off (40 dB per decade): 500 / 1000 / 1500 /
2000 kHz

Note:

Measurements are made in accordance to IEC 60270 for a wide-band PD instrument with the frequency range of 100 - 500 kHz

Data recording

RAW PD recording for:

- PD pulse peak value
- Test voltage value at the time of PD pulse
- Phase angle at the time of PD pulse
- Cycle time of each period
- Number of PD events per period
- Number of periods during measurement

The raw measured data will be pre-processed inside the PD-Guard and transmitted to the PD-Guard Evaluation Server.

For more information, contact

PDinfo@doble.com

or visit

www.doble.com

Environmental conditions

Humidity:	5 to 95 % RH, non condensing
Atmospheric conditions:	no limitation
Max. altitude above sea level:	no limitation

Case:

Designed for wall mounting in any position
Stable, compact and light-weight construction
Conforms with the IP65 standard for operation in an industrial environment

Weight: 6 kg

Computer Server Requirements:

2 GHz CPU
512 MB Memory
Standard PC interfaces (serial, parallel, PS/2, USB)
80 GB hard drive
CD-R/W drive
Color-active-matrix monitor, 15", 1280 x 1024
SVGA graphics controller (AGP)
Ethernet network adaptor (10/100 Mbit)
Network cable (10 m)
Windows XP Professional

Specifications are subject to change without notice.



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Doble is certified ISO 9001:2000
Doble is an ESCO Technologies Company

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