

DOBLE IN-SERVICE TESTING & ASSESSMENT

PDS100

Partial Discharge Surveyor

CHECK IN-SERVICE SUBSTATION EQUIPMENT FOR SIGNS OF INTERNAL INSULATION DAMAGE

The Doble PDS100 Partial Discharge Surveyor is an RFI surveying tool that is designed for use in a live substation. Without the need for outages, the PDS100 can detect partial discharge (PD) in just a few seconds, thus making it an ideal tool for a condition based maintenance program. Whole substations can be quickly surveyed and analyzed.



FEATURES

- Uses RFI technology to identify and locate defects
- Rugged, light-weight, hand-held instrument
- Works with a variety of sensors, probes and antennae for various applications
- Synchronous sampling and display of detector outputs provides discrimination of telecommunication carriers, noise and discharge phenomena
- Signal capture may be synchronized to the power cycle to facilitate phase resolved PD analysis
- PD presence detection through statistical analyses (PAPR and IPWR) on each spectrum measurement
- Built in data storage

BENEFITS

- Safe and effective method for PD detection
- Non-invasive inspection method for substation surveys
- Use as part of a regular inspection/survey or for targeted analyses

PDS100 TECHNICAL SPECIFICATIONS

POWER SUPPLY	
External supply	External DC adaptor, 12 V @ 2 A
DC adapter	85 - 264 V AC (47 - 63 Hz)/ 12 V DC
Internal battery	Li-Ion, 7.2 V, 6.6 Ah
Battery life	> 6 hours
Charging Time	3 hours
DETECTION AND SWEEP FUNCTIONS	
Detector modes	Peak, Average and Separate Peak and Average Mode (SPAM)
Sweep modes	Continuous, Counted and Single Mode
Synchronization	Synthesized phase or wireless synchronized to power frequency
FREQUENCY	
Measurement range	50 MHz - 1000 MHz
Resolution Bandwidth (RBW)	120 kHz / 6 MHz
AMPLITUDE	
Display unit	X/Y-axis: ms - MHz / dBm or MHz / dB μ V
DATA STORAGE AND TRANSFER	
Internal	NV Flash Memory (SD)
External	USB storage class compliant USB Flash Drive / Hard Disk Drive
Data Transfer	USB A/B to and from computer
File Format	XML for use with Doble PDViewer software
Real Time Clock	Battery backed
CONNECTIVITY	
USB 1.1 Host and Client	
LCD SCREEN	
Display	TFT, 6.4: Transreflective
Size	132 x 100 mm / 5.20 x 3.94 in (W x H)
Resolution	640 x 480 pixels, 256 colors
Backlight	LED
MECHANICAL	
Instrument	225 x 310 x 70 mm (WxHxD) 8.85 x 12.20 x 2.25 ins (WxHxD) Weight 2.4 kg / 5.5 lbs
Transport Case	425 x 284 x 155 mm (WxHxD) 16.75 x 11.20 x 6.10 ins (WxHxD) Weight 3.4 kg / 7.5 lbs
Total Weight	6.0 kg / 13.2 lbs incl. instrument, transport case, manuals, CD and charger
ENVIRONMENT	
Enclosure	IP64
Transport Case	IP67
Humidity	0 - 95% non-condensing
Operating temperature	-10°C to + 50°C / 14°F to 122°F
Storage temperature	-20°C to + 70°C / -4°F to 158°F



Doble Engineering Company
Worldwide Headquarters
85 Walnut Street, Watertown, MA 02472 USA
tel +1 617 926 4900 | fax +1 617 926 0528
www.doble.com

USER-FRIENDLY

The PDS100 is a rugged, light-weight and powerful high-tech instrument with a big display and large soft key buttons. The instrument is easy to use and the software enables the operator to record and analyze PD signals and make decisions for further actions.

TECHNOLOGY

The instrument searches for PD in the radio frequency area. Harmful PD will reveal itself by the electromagnetic energy emitted from the area where the activity is. The PDS100 captures the electromagnetic energy in the RF spectrum and displays a "footprint" of the RF interference from partial discharge causing the radiation.

ORDERING INFORMATION

PRODUCT
PDS100 <i>Complete with Case, Antenna, Adapter and PC software</i>
OPTIONAL ACCESSORIES
HFCT Scan for electrical pulses (f<200 MHz) as evidence of PD to earth. Can be clipped on an apparatus ground wire (transformers, dead tank breakers) and connected to a PDS200.
Directional Antenna Provides more specific location of RFI sources. With this combination you not only determine the presence of PD sources, you can also establish the direction of the emissions.
UHF Drain Valve Probe DN50/DN80 Insert into the suspect transformer to find RFI as evidence of partial discharge.
Transient Earth Voltage (TEV) capacitive probe Find PD in metal-clad switchgear and GIS.
Synchronization Sync kit available to allow for more accurate phase resolved PD patterns

Specifications are subject to change without notice.
Doble is ISO certified.
Doble is an ESCO Technologies Company.
MKT_SL_PDS100_08/17