

PDS100



PD SURVEYOR

HANDHELD PARTIAL DISCHARGE (PD) DETECTION WITHOUT THE NEED FOR COSTLY OUTAGES

Quick surveys in live substations

The PDS100 is an RFI surveying tool that is designed for use in a live substation. Without the need for outages or special connections, the unit can detect partial discharge (PD) in just a few seconds thus making it an ideal tool for a condition based maintenance (CBM) program. Whole substations can be surveyed and analyzed. The PDS100 is the perfect tool to detect and locate sources of PD.

- Safe and effective method for PD detection
- Can identify and locate defects using RFI technology
- For non-invasive routine surveys of substations
- Ideal for every service or test team
- Advanced user-friendly diagnostic tool
- Perfect tool for a Condition Based Maintenance (CBM) program

TOGETHER WE POWER THE WORLD®



High-Frequency Current Transformer



A high-frequency current transformer can be clipped on an apparatus ground wire and connected to a PDS100 to confirm internal PD activity. It is possible to scan for electrical pulses ($f < 200$ MHz) as evidence for partial discharge to earth. See and correlate the pulse patterns in time domain (a PDS100 mode).

P/N: TN-80308



UHF Transformer probe

To confirm findings on the outside of transformers a drain valve probe can be inserted. Connect a Doble UHF TX (DN50/DN80) directly on the antenna input of the PDS100 and insert into the suspect transformer to find radio frequency interference (RFI) as evidence of partial discharge. See and correlate the pulse patterns in time domain (a PDS100 mode).

P/N: TN-80322



Transient Earth Voltage (TEV) probes

For finding PD in metal-clad switchgear and internally in transformers, a Doble capacitive TEV probe can be connected directly on the antenna input of the PDS100. Move the sensor across a grounded metal surface to find the location of the strongest signal amplitude.

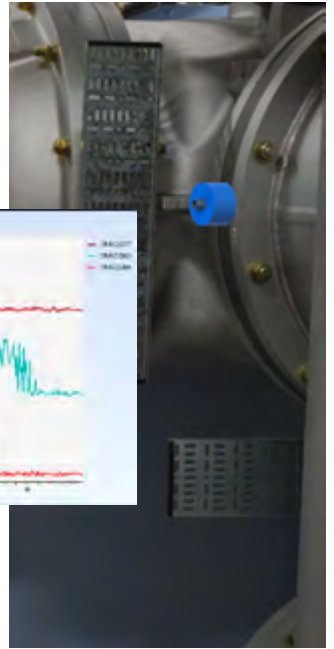
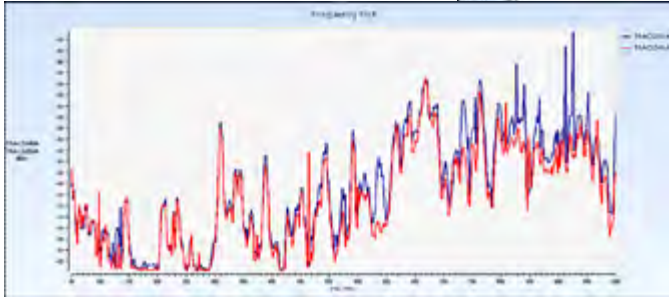
P/N: TN-80307

UHF antennae for GIS joints/spacers

To do a survey of Gas Insulated Substations (GIS), a Doble UHF antenna can be directly connected to the antenna input of the PDS100 and the sensor can be placed across a joint on a GIS to find evidence of partial discharge inside.

See and correlate the pulse patterns in time domain (a PDS100 mode).

PN: TN-80315



UHF antennae for substation survey



Telescopic:

Antenna for wide range capture of UHF signals in open areas. Bandwidth 25-1900 MHz. Length: 310 mm (fully extended).

Duck:

Fixed-length antenna for wide range capture of UHF signals in indoor areas. Bandwidth <1000 MHz. Length: 210 mm.

Whip:

Fixed-length antenna for wide range capture of UHF signals in open areas. Bandwidth 25-1900 MHz. Length: 410 mm.

SENSOR	PART NUMBER	REMARK
Rogovsky coil (HFCT) <200 MHz	TN-80308	(N to BNC cable required)
UHF drain valve sensor	TN-80322	(N to BNC cable required)
TEV capacitive probe	TN-80307	
GIS UHF sensor	TN-80315	
UHF Telescopic antenna	TN-80312	Standard accessory for PDS100
UHF Rubber Duck antenna	TN-80313	
UHF Fixed-length antenna	TN-80311	Standard accessory for PDS100

PDS100

In the tool box for each service team

The PDS100 instrument is ideal to use on a daily basis or during routine substation inspections together with other methods like infrared scanning. The PDS100 should be a part of the basic tool box for all service and test teams.

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 the 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.

Order information

Item

PDS100

Description

Complete with Case, Antenna, Adapter and PC SW

Order no.

TN-80000



Technical Specifications

Power supply:

External supply	External DC adaptor, 12 V @ 2 A
DC adaptor	85 - 264 V AC (47 - 63 Hz)/ 12 V DC
Internal battery:	Li-Ion, 7.2 V, 6.6 Ah
	Battery life > 4 hours

Detection and Sweep functions:

Detector types:	Peak, quasi-peak, RSM and average
Sweep processing:	Continuous, Average, Max Hold and Differential

Frequency:

Measurement range	50 MHz - 1000 MHz
-------------------	-------------------

Amplitude:

Display units	Linear (V, mV, μ V)
	Logarithmic (dBmV, dB μ V)

Data storage/ transfer:

Internal	Flash memory
External	USB storage class compliant
	USB Flash Drive/ USB Hard Disk Drive
Data Transfer	Measurements can be downloaded from a PC

LCD screen:

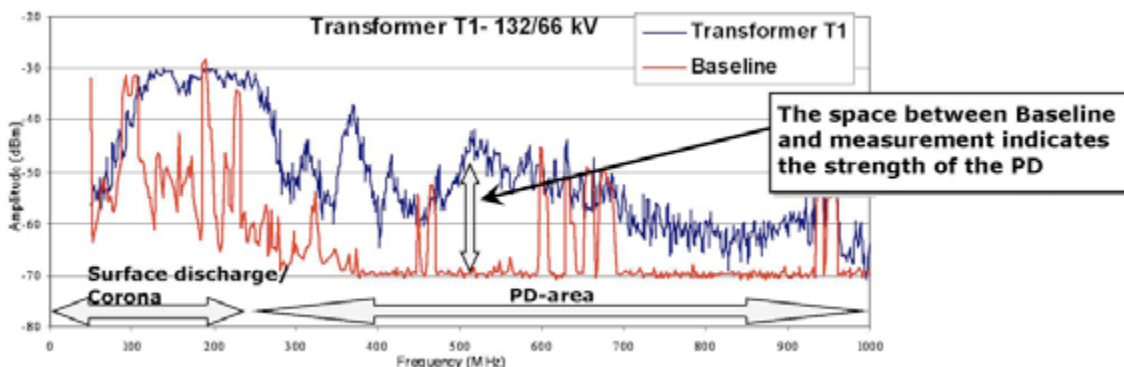
Size (W x H)	132 x 100 mm / 5.20 x 3.94 in
Resolution	640 x 480 pixels, 256 colors

Mechanical:

Size (WxHxD)	350 x 220 x 70 mm /
	8.85 x 12.20 x 2.25 in
Weight	2.4 kg / 5.29 lbs

Environment:

IP classification	IP64 with top covers closed
	IP51 with top covers open
Humidity	0 - 95% non-condensing
Operating temperature	0°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

For more information contact PDinfo@doble.com.

Specifications are subject to change without notice.

Doble is ISO certified
Doble is an ESCO Technologies Company

MKT-SL-PDS100_withAccessories-04/13