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VALUE ADDED DISTRIBUTOR

Authorized distributor of **b2 electronics** in the Kingdom of Saudi Arabia

B2 ELECTRONICS

PDTD200-2

VLF Diagnostics System — Partial Discharge and Tan Delta

The b2 electronics PDTD200-2 is a portable VLF diagnostics system for medium-voltage cables, designed for use with b2 HVA VLF test sets. It includes both a partial discharge (PD) unit and a Tan Delta (TD) unit, so the condition of the cable insulation can be assessed with both methods. Together with a b2 HVA120 or HVA200 test set it forms a complete cable test and diagnostics system; b2 specifies this combination for the 120 to 200 kV range, and the PDTD200-2 itself is rated up to 200 kVpeak / 141 kVrms. According to b2, it suits XLPE, PE, EPR and PILC cables up to 100 km long, as well as rotating machines and transformers.



PD faults are located in real time with 1% accuracy and a resolution of 0.1 pC and 0.1 m, with a PD background level below 10 pC. Cables of different lengths are measured at constant frequency, so results can be compared with earlier measurements across the grid.

OPERATING VOLTAGE	PD LOCALIZATION	PD RESOLUTION	CABLE LENGTH
200 kVpeak / 141 kVrms	**1% · 0.1 m**	**0.1 pC**	**Up to 100 km**

KEY FEATURES

- Operating voltage up to 200 kVpeak / 141 kVrms (sine wave)
- PD and Tan Delta units in one system
- For MV cables up to 100 km (XLPE, PE, EPR, PILC)
- PD localization with 1% accuracy, 0.1 pC and 0.1 m resolution
- PD background level below 10 pC
- PD measuring range 0.1 pC to 100 nC, 100 MHz bandwidth
- Setup and calibration per IEC 60270; Tan Delta per IEEE 400.2
- Simultaneous PD and TD measurement with b2 Suite v2 (optional)

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TECHNICAL DATA — PDTD200-2

Operating voltage	1–200 kVpeak / 1–141 kVrms, sine wave
Operating frequency	0.01–0.1 Hz in 0.01 Hz steps (default 0.1 Hz)
Test types	Partial discharge, Tan Delta, simultaneous PD and TD
Coupling capacitor / HV filter	~0.75 nF / ~0.75 nF
PD measuring range	0.1 pC to 100 nC, background level < 10 pC
PD localization	0.1 m to 100 km, 1% of cable length, resolution 0.1 pC and 0.1 m
Propagation velocity (v/2)	10–150 m/µs
Sample rate / bandwidth	Up to 250 MS/s / 100 MHz
Signal amplification	0–52 dB (channel 1), 0–72 dB (channel 2)
Tan Delta	Resolution 1×10^{-5}, accuracy $\pm 1 \times 10^{-4}$ (10 nF–10 µF)
TD voltage / current metering	Voltage up to 218 kVpeak / 152 kVrms; current up to 150 mApeak / 105 mArms
Compliance	IEEE 400.2 and 400.3, HD 620, CEI EN 50393, IEC 60270, IEC 60502-2
Power	110–240 V, 50/60 Hz, max. 240 VA; PD built-in battery 6 V, 42 Wh (about 4 h at full load); TD on D-size batteries (about 2 test weeks)
Data / software	USB type B; b2 Suite v1.8 included, b2 Suite v2 optional
Operating temperature	−5 to +45 °C
Coupling capacitor	1,780 mm long × Ø 660 mm, 90.0 kg
HV filter	1,780 mm long × Ø 660 mm, 90.0 kg

SCOPE OF SUPPLY & OPTIONS

Included	Coupling capacitor, HV filter, PDC1 calibrator 10 pC–10 nC, aluminium flex HV test leads, grounding cables, PD CC USB cable 10 m, Bluetooth USB adapter, rechargeable D batteries with charger, b2 Suite v1.8 licences
Optional	b2 Suite v2 (required for simultaneous PD and TD measurement)
Works with	b2 HVA VLF test sets such as the HVA120

Technical data from b2 electronics datasheet DHV1478 Rev00 and b2hv.com. Specifications are subject to change by the manufacturer without notice.

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