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

B2 ELECTRONICS

PDTD90-2

VLF Diagnostics System — Partial Discharge and Tan Delta

The b2 electronics PDTD90-2 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 the b2 HVA90 it forms a complete cable test and diagnostics system up to 90 kVpeak / 64 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
90 kVpeak / 64 kVrms	**1% · 0.1 m**	**0.1 pC**	**Up to 100 km**

KEY FEATURES

- Operating voltage up to 90 kVpeak / 64 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)

Contact Mushor Technology — Authorized b2 electronics distributor in Saudi Arabia

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TECHNICAL DATA — PDTD90-2

Operating voltage	1–90 kVpeak / 1–64 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	~1 nF / ~1 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 112 kVpeak / 78 kVrms; current up to 100 mApeak / 70 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	330 × 280 × 870 mm, 24.7 kg
HV filter	300 × 280 × 720 mm, 30.0 kg

SCOPE OF SUPPLY & OPTIONS

Included	Coupling capacitor, HV filter, PDC1 calibrator 10 pC–10 nC, HV test leads, grounding cables, PD impedance, fiber-optic USB converter, b2 Suite v1.8 licences, wheeled transport cases
Optional	b2 Suite v2 (required for simultaneous PD and TD measurement)
Works with	b2 HVA VLF test sets such as the HVA90

Technical data from b2 electronics datasheet DHV1476 Rev00 and b2hv.com. Specifications are subject to change by the manufacturer without notice.

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