

PDS 60-v4

Portable PD detection and localization system



- Suitable for DAC, VLF CR and VLF Sinusoidal power sources up to 60 kV_{rms}
- Real-time data evaluation and display of results, no post processing needed
- General and localized Phase Resolved PD pattern (PRPD) display for defect type recognition

DESCRIPTION:

Network operators can now get faster and significantly more reliable information about the quality and the condition of their cables. This thanks to the PDS 60-v4 PD detector. For the first time, it has become possible to immediately locate faults in underground cables during the actual PD measurement.

Based on many years of field experience, customer demands and unique innovations, the PDS 60-v4 has been developed. This has been reflected in the PD detector software, it has never been easier to perform PD measurements; starting with real-time data analysis and display of results during the actual measurement, ending with the highest flexibility in creating customized reports.

Furthermore the PD detector software will support the user with the data evaluation by means of so called Phase Resolved Partial Discharge (PRPD) patterns. With help from these PRPD patterns the user is able to distinct between different types of PD defects, such as corona or internal PD. This is of major importance for partial discharges located at terminations; corona discharges are not problematic, whereas internal PD would.

The PDS 60-v4 has been designed for all Megger VLF Sinusoidal, Cosine Rectangular and Damped AC power sources up to 60kV_{rms}. The PDS 60-v4 comes with all accessories needed to perform PD measurements, like the in-house and certified PD calibrator, laptop and connection cables.

FEATURES

- High coupling capacity of 25 nF
- Suitable for DAC, VLF Sinusoidal and VLF CR excitation voltages
- PD measurement acc. to IEC 60270
- Automatic bandwidth adaption
- Fully automatic calibration
- Real-time data evaluation and display of results
- General and localized PRPD display
- Monitored withstand testing

TECHNICAL DATA*

PDS 60-v4

Voltage

Operating Type	max. 60 kV _{eff} DAC, VLF CR und VLF Sinus (0.01 Hz – 0.1 Hz)
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Capacity of HV coupling capacitor	25nF
Sensitivity range	2 pC ... >100 nC
PD self-noise level	< 2 pC
PD impulse repetition	100 kHz

PD localization

Measuring range	0 ... 16,000 m v/2 = 80 m/μs
Propagation velocity v/2	50 ... 120 m/μs
Sampling rate	125 MHz (8 ns)
Bandwidth	3 / 20 MHz (switchable)
Accuracy	1% of the cable length
Resolution	± 1 pC / ± 1 m
Filtering	Analogue and digital
Power supply	24 V via TDS or optional connection box
Weight	35 kg
Dimensions (W x D x H)	39 x 58 x 76 cm

Temperature

Operation	-20 °C ... 55 °C
Storage	-40 °C ... 70 °C
Relative humidity	93% at 30 °C (non-condensing)

PD calibrator

Pulse level	100 pC, 200 pC, 500 pC, 1 nC, 2 nC, 5 nC, 10 nC, 20 nC, 50 nC, 100 nC
Pulse frequency	50 Hz, 60 Hz, 100 Hz or via Light triggered sensor
Power supply	9-volt block battery
Weight	410 gr
Dimensions (W x D x H)	195 x 85 x 35 mm
Temperature	
Operating	-10 °C ... 50 °C
Storage	-30 °C ... 70 °C

SCOPE OF DELIVERY

- PDS 60-v4 PD coupler
- PDS 60-v4 accessoires in bag
- PD calibrator
- Laptop
- SW license incl. 3 hardware keys

ORDERING INFORMATION

Product	Order no.
PDS 60 kV PD measuring system (V4) Set consisting of:	
PDS 60 (V4 "Standard") (1017561) or PDS 60, 4,5 μF, T9 (V4 "High performance") (1017562)	
PD PD calibrator 100 pC till 100 nC	2008807
PD software license main package (3 activations, 5 year duration)	1389
Mandatory selection for TDM-P/VLF Sinus test system	
CB-PDD connection box PD detector PDS 60-v4	1006044
Mains cable 1x (EU: 810000024, UK: 118307335, US: 502025220, AUS: 90020435)	select
Mandatory selection lead set (1x)	
Accessories PD measuring system T9	2018785
Accessories PD measuring system T9 NAFTA	2018786
Mandatory selection preinstalled Notebook (1x)	
Notebook DE	2007127
Notebook EN	2007129
Other languages on request	
Optional HV connection cables:	
PDS HV connection cable + grounding cable T9 3 m	2018769
HV connection cable PD M MC10/10 T9 5m	2018764
HV connection cable PD M MC10/10 T9 10m	2018765
HV connection cable PD M MC10/10 T9 15m	2018766
Optional accessories:	
Diagnostic connection set	890017909
PD-free adapter TE PC-MC-UNI-L, long version (460 mm), incl. thread-adapter M16 to M12	1013564
PD-free adapter TE PC-MC-UNI-K, short version (310 mm), incl. thread-adapter M16 to M12	1013563
Transport case PDS 60-v4	90019220

* The information in this document is subject to change without notice and should not be construed as a commitment by Megger Germany. Megger Germany assumes no responsibility for any errors that may appear in this document.

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