PD-Smart

Applications

Digital, highly advanced, multi-purpose and smart Partial Discharge and Diagnostics System for on-line and off-line PD testing on power apparatus and high voltage insulation systems, for both in-house and on-site applications.
» according to the standard IEC 60270, VDE 0434, ANSI as well as various IEEE standards
» PD quality tests on high voltage equipment
» PD diagnosis on developing insulating materials
» Designed for on-site PD diagnosis tests as well as for manufacturing and research
» PD fault location for power cables

Benefits

» single or multi-channel (scaleable)
» truly parallel and synchronous measurement of phi-Q-N pattern
» stand-alone / handheld mode or remote controlled via LAN and PC
» small compact design for stationary or on site use
» features the well known LDIC Analysis and Diagnostics software
» expandable for various PD / RIV applications up to tan delta / Power Factor

Specifications

PD detection:
» permanent detection of all PD events
» digital, numeric real-time integration of PD events
» integration in time and frequency range
» time range: 100 ns .... 10 µs
» frequency range: center frequency: 0 Hz .... 20 MHz
» band width: 9 kHz, 30 kHz, 100 kHz, 300 kHz, 1 MHz, 3 MHz
» charge evaluation full compatible to IEC 60270, VDE 0434, ANSI
» single pulse detection: < 3 ns
» max. double pulse resolution: <200ns (time range, superposition error < 1 %)
» max. pulse frequency: 2 MHz
» Input frequency range:
» Voltage: DC bis 10 kHz
» PD signal: DC bis 20 MHz
» Input impedance:
» Voltage: 1 MOhm
» PD signal: 50 Ohm
» Input voltage:
» Voltage: 60 V rms (max)
» PD signal: 10 V rms (max)
» Dynamic range:
PD-Smart

- Voltage: 24 bit, 80 dB
- PD signal: 14 bit, 100 dB
- PD input protection:
  - input protection against over-voltage and short-circuit
- PD input coupling:
  - DC, AC, Bias-Tee (optional)
- Additional options:
  - Internal test generator, self-test of the signal way
- Voltage supply:
  - 7 - 20 V DC, power: appr. 8 W,
  - external power supply with power pack (100 - 240 V, 50 - 60 Hz)
- Control:
  - local, remote
- Displays:
  - QVGA-Colour-Display, 4 Status-LED
- Outputs:
  - 1 x LWL-Output,
  - 1 x Ethernet (10, 100, 1000 Mbit) - full-duplex
- Inputs:
  - 2 x BNC (HF PD signal, NF voltage signal),
  - 1 x TTL signal for gating
- Temperature range:
  - 0 °C bis 55 °C (operation)
  - 0 °C bis 70 °C (storage)
- Humidity:
  - 5 % bis 95 %, non-condense

Accessories

- Fault Location modul for PD Location in power cables (Reflectometer method)
- UHF-modul (Verstärkung: 0 dB / 26 dB / 38 dB, Bandbreite 110 MHz bis 1700 MHz)
- Calibrator LDC-5 for external calibration of the PD measuring circuit in pC of apparent charge up to 500 pC
- Charge Injector LDJ-5 for calibration of the PD measuring circuit with charge magnitudes up to 50000 pC
- Measuring impedance LDM-5 or LDM-5/U, for signal and test voltage decoupling (bandwidth 20 MHz, maximum current 5 A, optional 50 A)
- Docking station “Smart Dock”