Power cable testing and diagnosis

onsite HIGH VOLTAGE

HV200

DAC Test and Diagnosis System 200 kV

realDAC®
HIGH VOLTAGE

Efficient, integrated diagnostics, comprehensive results

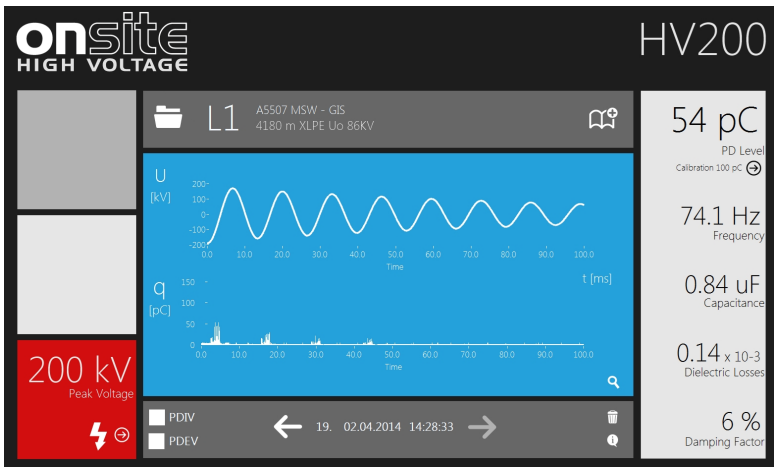
- ✓ Powerful PD monitored DAC withstand testing with application of IEEE, IEC, CENELEC and Cigré recommendations
- ✓ Highly sensitive PD measurement and diagnosis with automatic real-time PD localisation
- ✓ Fully integrated dissipation factor measurement at DAC voltages
- ✓ Easy WIFI based automatic PD range calibration: from 1 pC up to 150 000 pC
- ✓ Compact and lightweight, stored in eight flight cases
- ✓ All in one onsite testing and diagnosis of power cables up to 132 kV
- ✓ Optional dual sided PD measurement and localisation (ds version)

The inventor of realDAC

Technical Data HV200

Max. output voltage	200 kV_{peak} 141 kV_{rms} Precision +/- 1 % Resolution 0.1 kV
Coil inductance	app. 3.5 Henry
Frequency range damped AC	10 Hz … 800 Hz
DAC Test object capacitance range	0.02 … 45 µF
HV energizing current, max.	20 mA, up to 80 mA* *Requires additional HV slave power supply units
PD measuring range	1 pC … 150 nC
PD measuring bandwidth	Acc. to IEC 60270
PD localisation bandwidth	150 kHz … 50 MHz, wide range automatic bandwidth adaptation for short and long cables
PD measuring accuracy	1 pC
PD localisation accuracy	1.0 m down to 0.1 m
TDR joint localisation in calibration mode	Integrated
Dissipation factor estimation range	0.1 … 10.0 % / 1 x 10^{-3} … 10 x 10^{-2}
Analysis software	DAC Explorer software, comprehensive viewing, processing, analysing and reporting of measurement data
Power supply (One HV master power supply unit)	3 phases AC 230/400 V ± 10%, 48 … 63 Hz, 5500 VA
Ambient temperature (operating)	-25 °C … +65 °C, 95%, non-condensing
Net weight	approx. 450 kg (system only)
Dimensions	Ø 760 x H 1300 mm (HV divider unit) Ø 600 x H 1300 mm (Coil unit) Ø 800 x H 1120 mm (HV power supply unit) Ø 600 x H 1120 mm (HV switch unit)
Flight cases	7 cases on wheels, total weight 814 kg (system in flight case and acc. box),

improvements to specifications are subject to change without notice



Damped AC (DAC) testing mode, screen

Applications

- Capable of performing all necessary on-site tests and measurements on all types of power cables up to 132 kV
- After-laying testing of newly installed or repaired cable systems
- Testing in line with IEC 60840, IEEE 400 and CENELEC HD 632 S2
- Routine testing and diagnostics for assessment of service-aged cables
- PD monitored voltage withstand testing and non-destructive diagnostic testing
- Comprehensive PD measurement capabilities according to IEC 60270, IEC 60885-3, IEEE 400.3

Features

- PD monitored withstand test by applying DAC voltage excitations up to 200 kV_{peak}
- Measurement of PD level, PD inception and PD extinction voltage
- Phase resolved PD analysis
- Multiple PD spot localisation in cable insulation and accessories
- Extended diagnosis with tip-up Tan δ values at DAC voltages
- Modular compact DAC system components stored in light-weight flight cases
- Easy to transport in standard trucks/vans or on airplanes
- Low energy consumption, mains supply or only a small external power generator needed
- Flexible arrangement on site if accessibility is limited and space is tight

onsite high voltage group
Töpferstrasse 5 CH-6004 Luzern Phone +41 41 500 51 20 Fax +41 41 500 05 51 info@onsitehv.com www.onsitehv.com