

# HV300

## DAC Test and Diagnosis System 300 kV



**realDAC**<sup>®</sup>  
HIGH VOLTAGE

### Efficient, integrated diagnostics, comprehensive results

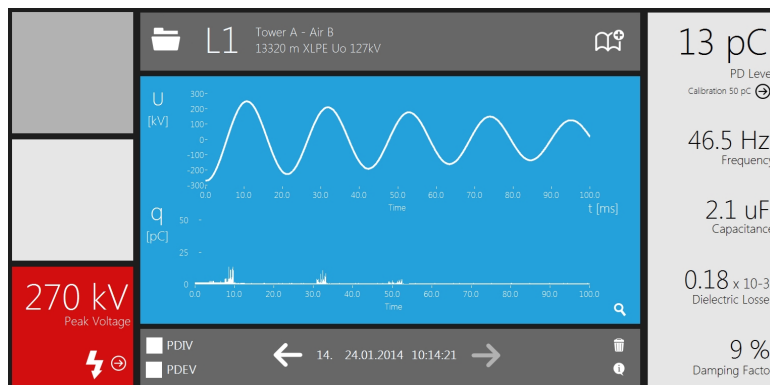
- ✓ Powerful PD monitored DAC withstand testing with application of IEEE, IEC, CENELEC and Cigré recommendations
- ✓ Highly sensitive PD measurement and diagnosis with automatic real-time PD localisation
- ✓ Fully integrated dissipation factor measurement at DAC voltages
- ✓ Easy WIFI based automatic 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 230 kV
- ✓ Optional double-sided PD measurement and localisation (ds version)

The inventor of **realDAC**

## Technical Data HV300

Max. output voltage	300 kV <sub>peak</sub> , 212 kV <sub>rms</sub> Precision +/- 1 % Resolution 0.1 kV
Coil inductance	app. 5.5 Henry
Frequency range damped AC	10 Hz ... 800 Hz
DAC Test object capacitance range	0.02 ... 27 µF
HV energizing current, max.	13.0 mA, up to 50 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	1 x 10 <sup>-3</sup> ... 10 x 10 <sup>-2</sup>
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. 650 kg (complete system)
Dimensions	Ø 760 x H 1800 mm (HV divider unit) Ø 600 x H 2000 mm (Coil unit) Ø 800 x H 1500 mm (HV power supply unit) Ø 600 x H 1500 mm (HV switch unit)
Flight cases	8 cases on wheels, total weight 1005 kg (incl. system)

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 230 kV
- After-laying testing of newly installed or repaired cable systems
- Testing in line with IEC 60840, IEC 62067, 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 300 kV<sub>peak</sub>
- 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