

# HV400 / 500

## DAC Test and Diagnosis System 400 / 500 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 380 / 400 kV and above
- ✓ Optional double-sided PD measurement and localisation (ds version)

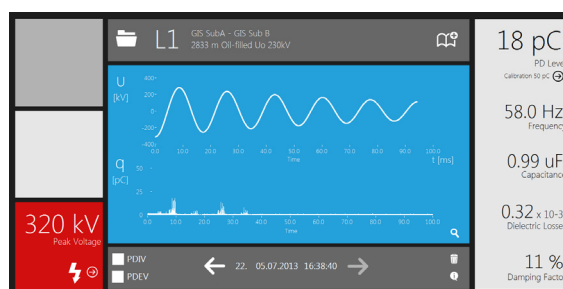
The inventor of **realDAC**

## Technical Data HV400 / 500

Note: This data sheet indicates general figures, exact specifications are provided on project base.

Max. output voltage	400 kV <sub>peak</sub> , 282 kV <sub>rms</sub> 500 kV <sub>peak</sub> , 353 kV <sub>rms</sub> Precision +/- 1 % Resolution 0.1 kV
Coil inductance	app. 7.6 Henry
Frequency range damped AC	10 Hz ... 800 Hz
DAC Test object capacitance range	0.02 ... 15 µF at 400 kV <sub>peak</sub>
HV energizing current, max.	7 mA, up to 28 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)	-20 °C ... +65 °C, 95%, non-condensing
Net weight (HV400)	approx. 770 kg (complete system)
Dimensions (HV400)	Ø 760 x H 1870 mm (HV divider unit) Ø 600 x H 2430 mm (Coil unit) Ø 800 x H 1880 mm (HV power supply unit) Ø 600 x H 1880 mm (HV switch unit)
Flight cases (HV400)	9 cases on wheels, total weight 1235 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 (E)HV power cables
- 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 400 / 500 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