

→ DAC H300

A class of compact, lightweight, and versatile DAC cable test systems featuring withstand voltage test, PD analysis and PD localization

The Damped Alternating Current (DAC) high voltage H300 by ohv diagnostic is an exceptionally compact, lightweight, and versatile class of systems for testing and diagnosis of high voltage transmission cables up to 230 kV rated voltage. It is programmable and features automatic withstand voltage test, partial discharge (PD) measurement and analysis as well as PD localisation. Control and analysis are user-friendly using the ohv-suite which is the common software platform for the complete range of ohv diagnostic products.

DAC cable testing is an advanced analysis and diagnosis concept, not only a basic "good or bad" measurement tool. It allows to assess the cable insulation condition of newly installed, repaired or service-aged cable systems and thus supports asset management. The measuring modes include

- Voltage withstand test at voltage level representing operational stress and above,
- Partial discharge measurement, analysis, and location along complete cable systems and
- Estimation of loss factor ($\tan \delta$).

DAC voltage test and PD analysis allow reliable detection of

- Insulation deficiencies caused by installation or laying,
- Deficiencies of the cable accessories, i.e., joints and terminations
- Cable insulation deterioration due to aging processes.



The ohv cable test systems can be designed to meet the specific maximum test voltage as per request. The test system comes in rugged and robust transportation and storage cases which are easy to ship by train, truck or even airplane to the cable test site.

Test Features

- Withstand voltage test
- PD measurement, analysis, and location
- Loss factor estimation
- Cable testing as per IEC60060-3, IEEE P400.4/D7

On Site Performance

- Maximum charging and peak voltage 288 kV
- 4 units approx. 700 kg total
- Rugged and robust transportation and storage cases
- Easy and intuitive operation with ohv diagnostic software Suite

DAC H300

| System Layout | |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Unit 1 | High Voltage Direct Current (HVDC) Generator |
| Unit 2 | High Voltage Switch |
| Unit 3 | Oscillator Impedance |
| Unit 4 | Measuring and Coupling Capacitor |
| Voltages | |
| Power Supply | 3 phase, 380 V, 48...63 Hz, 4 kVA |
| DAC Output Voltage | max. 288 kV _{peak} / 204 kV _{RMS} (rating adaptable to customer request) |
| DAC Frequency Range | 30 Hz...500 Hz (according to IEC 60270) |
| Operation | |
| Test Object Capacity | 30 nF...3 µF (corresponding to approximately 13 km cable) |
| Joint Locating | Integrated in calibration mode |
| PD Measuring range | 5 pC...100 nC |
| PD Measuring resolution | 1 pC |
| PD Location | Wide-band, 100 kHz...20 MHz, automatic adjustment |
| Software | ohv diagnostic Suite included |
| Safety | Grounding rod Voltage control |
| Environmental Sensors | Humidity and Temperature |
| Operating range | Temperature: 0...50°C Humidity: 5...90% rel. humidity (RH), non-condensing |
| Mass | Approximately 700 kg in 4 units (depending on voltage rating) |
| Dimensions | 4 units in transportation and storage boxes each 800 x 800 mm footprint and 1,200...2,100 mm height (depending on voltage rating) |

Scope of Supply

- DAC system including HVDC power supply, combined HV switch, oscillator coil and measuring / coupling capacitor in 4 rugged transportation and storage cases
- Power supply, grounding and HV connection cable set, grounding rod, calibrator
- Rugged cable and accessory transportation and storage cases
- ohv diagnostic software Suite
- Operating manual

Changes and modifications by ohv without any previous notice. Ohv is not liable for any technical or printing errors.