VLF 60 HP test system – High Power
High-performance VLF test system for 36 kV rated cables

- **Ideal for standard compliance testing of long cables such as submarine cables in offshore wind farms**
- **Reporting, breakdown detection and leakage current measurement**
- **Integrated discharge system**

DESCRIPTION

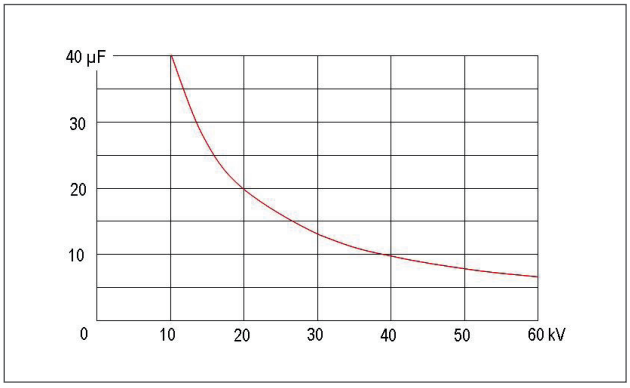
This high-performance 0.1 Hz VLF test system for cables with cosine-rectangular voltages works in accordance with VDE, IEC and IEEE-standards.

According to most regulations, cables and joints must be tested after installation or repair. The VLF 60HP test system can be used to test cables with operating voltage levels up to 36 kV. The system consists of a control unit and an HV unit. The high test capacity of 6.5 µF can simultaneously test all three phases with a standardized 0.1 Hz test frequency. Positive and negative DC testing of cables and connected switchgears can be carried out by switching to DC Mode. Aside from cable and sheath testing, the system can also be used to precisely pinpoint sheath faults (in combination with a step voltage probe like the ESG NT).

Using 0.1 Hz cosine-rectangular voltage, weak spots in the cable can be safely brought to a break-down. The benefits of the VLF method with 0.1 Hz cosine-rectangular voltage have been confirmed by multiple studies and practical field tests. The proven voltage is recommended by the Cenelec HD 620/621, IEC 60502-2, and IEEE 400.2 standard.

The VLF 60HP test system can be used both as a stand alone system (permanently installed in a transportation container for operations such as cable testing on offshore wind-farms) or integrated into a test van system. The integrated safety system and breakdown recognition software maximise safety.

Furthermore, the leakage current measurement enables a qualitative assessment of the cable, and the protocol function allows test data to be printed and stored for further reporting purposes.



Testable capacities

TECHNICAL DATA*

VLF CR-60-HP

0.1 Hz VLF operation	
Wave shape	Cosine-Rectangular
Output voltage	0 … 60 kV_{RMS}
Output current	0 … 12.5 mA (resolution 10 µA)
Frequency	0.1 Hz
Testable cable capacitance	6.5 µF @ 0.1 Hz and 60 kV_{RMS}
DC operation	
Output voltage	0 … ± 60 kV
Breakdown recognition	Integrated
Leakage current measurement	Integrated
Reporting	Integrated
Sheath fault pinpointing	0 … 10 kV / Duty cycle 1:3, 1:5, 1:9
Input voltage	115 V / 230 V ± 10 %, 50 / 60 Hz, 1900 VA
Dimensions (W x H x D)	1350 x 1250 x 1100 (1500**) mm
Weight	380 kg
Protection class	IP 20
Operating temperature	- 25 °C … + 55 °C
Storage temperature	- 40 °C … + 70 °C

FEATURES

- Ideal for testing long 36 kV submarine cables
- High test capacity
- Maximises user safety through automatic discharge of the test object and earth loop monitoring
- Breakdown recognition
- VLF, DC and sheath fault pinpointing in one device

MAXIMUM TEST LENGTH	
10 kV XLPE cable, U_t = 18 kV_{RMS}	Single phase 84 km Three phase 28 km
20 kV XLPE cable, U_t = 36 kV_{RMS}	Single phase 45 km Three phase 15 km
36 kV XLPE cable, U_t = 60 kV_{RMS}	Single phase 27 km Three phase 9 km

ORDERING INFORMATION

Product	**Order no.**
VLF CDR-60-HP incl. manual operated LV and HV cable drum, 50 m	890022222-S
Options:	
Container incl. installation costs	138315319
HV cable drum, 50 m, motor driven	890017195
De-humidifier VLF 60/80 kV***	890018889

* We reserve the right to make technical changes; ** Depending on position of HV output;

*** For use in off shore and high humidity environment of essential importance!

Megger