



VLF Test System 80 kV

Test with $3 U_0$ for 46 kV cables as stand alone or as optional integration for the Centrix system

Benefits

- ▶ High test power without frequency reduction
- ▶ No polarisation effects as by DC testing
- ▶ Protocolling
- ▶ Breakdown recognition
- ▶ Leakage current measurement

Description

Powerful 0.1 Hz VLF test system with energy recovery for testing of cables with Cosine Rectangular wave voltage according to VDE and IEC.

In accordance with most regulations, cables and joints must be tested after installation or repair. The SebaKMT VLF Test System 80 kV can be used to test cables with operating voltage levels up to 46 kV. The system consists of a control unit and a HV unit. The high test capacity of 2.5 μF permits simultaneous testing of all three phases. Positive and negative DC testing of cables and connected switchgear can be carried out by switching over to DC Mode.

The 0.1 Hz Cosine Rectangular wave form voltage ensures that weak spots in the cable are brought to break-down. The advantages of the VLF method with 0.1 Hz Cosine Rectangular wave voltage have been proved by extensive scientific research as well as practical field tests. The method is recommended in the VDE, the harmonisation document IEC HD 620 and 621 as well as by the IEEE 400.

This VLF Test System 80 kV can be used as stand-alone system or as a fully integrated part of a test and fault location system. The integrated safety system and breakdown recognition provides maximum safety.

Furthermore the leakage current measurement enables qualitative assessment of the cable and the protocolling function permits the storage of the test data for further reporting.

Options

- ▶ Integrated printer
- ▶ HV cable drums - manual or motor driven
- ▶ LV connection cables
- ▶ De-humidifier VLF 60/80 kV**

(*depending on position of HV output)

(**for operation in off shore and humid environment of essential importance)



Technical Data

0.1 Hz VLF operation

	Base	Plus
Output voltage VLF, U_n	0 ... 80 kV _{rms}	0 ... 80 kV _{rms}
Output current	0 ... 12.5 mA	10.5 mA @ 80 kV 12.5 mA @ 60 kV
Testable cable capacitance at 80 kV _{rms}	Max. 2.0 μF	2.5 μF
Testable cable capacitance at 78 kV _{rms}	Max. 2.2 μF	2.7 μF (3 x U_0 for 45 kV cables)

DC Operation

Output voltage DC-	0 ... -80 kV	0 ... -80 kV
Max. neg. output current	-12.5 mA	-12.5 mA
Output voltage DC +	--	0 ... +80 kV
Max. pos. output current	--	12.5 mA
Leakage current measurement	Integrated	
Protocolling	Integrated	
Sheath fault pinpointing	0 ... 10 kV / Duty Cycle 1:3, 1:5, 1:9	
Input voltage	115 V / 230 V $\pm 10\%$, 50/60 Hz, 1900 VA	
Dimensions (W x H x D)	1350 x 1250 x 1100 (1500*) mm	
Weight	380 kg	
Degree of protection	IP 20	
Operating temperature	-25 °C ... +55 °C	
Storage temperature	-40 °C ... +70 °C	

Testable Capacities

