

BAUR high voltage testing and diagnostics device viola / viola TD



New: Monitored Withstand Test (MWT)
Simultaneous cable testing and tan delta diagnostics in compliance with IEEE 400



Cable testing and tan delta diagnostics in one device

- › High performance and compact
- › Precise and nondestructive determination of the cable condition
- › Easy and quick test setup
- › Automatic testing and diagnostic sequences

The portable and high performance high voltage testing and diagnostics device is available in two different configurations:

viola: Is used for cable and cable sheath testing of electrical equipment and of medium-voltage cables up to 35 kV. Another function is the insulation testing on electrical equipment. The patented VLF truesinus® technology guarantees maximum measurement accuracy.

viola TD: Expands the function scope of viola with the tan delta diagnostics and Monitored Withstand Test (MWT) that combines the cable testing and dissipation factor measurement. This allows for an accurate and comprehensive assessment of the cable condition. In addition, there is minimum load on the cable due to the optimised test duration.

An additional partial discharge measurement is possible in combination with the BAUR partial discharge diagnostics system **PD Portable (Option)**.

Features

VLF testing (viola)

- Testing of electrical equipment and medium-voltage cables up to 35 kV nominal voltage
- Max. test voltage 42.5 kV_{rms} / 60 kV_{peak}
- Voltage shapes: VLF truesinus®, VLF rectangular wave voltage and DC voltage
- VLF truesinus® test technology enables load-independent, reproducible sinusoidal high voltage
- Cable testing according to: DIN VDE 0276-620/621 (CENELEC HD 620/621), IEEE 400.2, IEEE 400-2012
- Cable sheath testing according to IEC 60502/IEC 60229

Dissipation factor measurement (viola TD)

- Reliable tan delta diagnostics of electrical equipment and medium-voltage cables up to 35 kV
- High measurement accuracy 1×10^{-4}
- Continuous display and evaluation of measurement results
- Intuitive interpretation of measurement results

Monitored Withstand Test MWT (viola TD)

- Fully automatic MWT test sequence
- Acceptance (VLF cable testing) and condition evaluation of the cable line in one cycle and in one device
- No additional equipment necessary
- Minimum cable load due to optimised test duration (depends on cable condition)
- Precise and informative measurement results are the basis for condition-based maintenance

General

- Data import/export via USB interface
- Automatic discharging unit
- Integrated cable compartment with HV connecting cable

Technical data

General	
Input voltage	100 ... 260 V, 50/60 Hz
Max. power consumption	1400 VA
Dimensions (W x H x D)	excl. cable compartment
High voltage unit	505 x 503 x 405 mm
operating unit	505 x 433 x 405 mm
total	505 x 854 x 405 mm
Weight (two-part)	19 kg / 57 kg
Ambient temperature (operation)	-10 ... +50 °C
Storage temperature	-20 ... +60 °C
Data interface	USB 2.0
Safety and EMC	Conforms to CE in compliance with Low voltage guideline (EN 61010-1, EN 50191) and EMC guideline (EN 55011, EN 61000-4)
Degree of protection	IP 24
Languages	German, English, Dutch, French, Spanish, Italian, Portuguese, Czech, Polish, Russian, Korean, Malay, Chinese (CN), Chinese (TW)
Output voltage	
Frequency range	0.01 ... 0.1 Hz
VLF truesinus®	1 ... 42.5 kV _{rms} (60 kV _{peak})
VLF rectangular wave voltage	1 ... 60 kV
DC voltage	±1 ... 60 kV
Resolution	0.1 kV
Accuracy	1%
Load range (VLF testing)	1 nF ... 10 µF

Output current	
Measurement range	0 ... 70 mA
Resolution	1 µA
Accuracy	1%
Max. load	1 µF at 0.1 Hz, 42.5 kV _{rms} / 60 kV _{peak} (≈ 4 km)* 3 µF at 0.03 Hz, 42.5 kV _{rms} / 60 kV _{peak} (≈ 12 km)* 10 µF at 0.01 Hz, 40 kV _{rms} / 57 kV _{peak} (≈ 41 km)* * max. cable length at a cable capacitance of 0.24 µF/km
Tan delta dissipation factor measurement (viola TD)	
VLF truesinus®	1 ... 42.5 kV _{rms}
Load range	10 nF ... 10 µF
Accuracy	1 x 10 ⁻⁴
Resolution	1 x 10 ⁻⁶
Measurement range	1 x 10 ⁻⁴ ... 21,000 x 10 ⁻³
Tan delta measurement frequency	0.1 Hz
Automatic detection and compensation of leakage currents	With VSE box (optional)

viola

Standard delivery includes

- High voltage testing device with 10 m HV connection cable (connected)
- Discharge and earth rod GDR 60-204
- Earthing conductor
- Jumper plug for external emergency stop unit
- Excel-based Diagnostic Reporter
- Mains connection cable
- USB memory stick
- User Manual

Options

- Partial discharge diagnostics system PD Portable
- External emergency stop unit with signal lamps (25 m or 50 m)

viola TD

Standard delivery includes

- High voltage testing and diagnostics device with 10 m HV connection cable (connected)
- Integrated tan delta measurement function up to 60 kV_{peak}
- Discharge and earth rod GDR 60-204
- Earthing conductor
- Jumper plug for external emergency stop unit
- Excel-based Diagnostic Reporter
- BAUR tan delta kit
- Mains connection cable
- USB memory stick
- User Manual

Options

- VSE box including connection cable (detection and compensation of leakage currents)
- Partial discharge diagnostics system PD Portable
- External emergency stop unit with signal lamps (25 m or 50 m)