frida and frida TD
BAUR VLF testers and diagnostics devices

- Output voltage up to 26 kV_{rms}
- VLF cable testing with 3 x U_0 for cables up to 15 kV
- Monitored Withstand Test with 3 x U_0 for cables up to 15 kV (frida TD)

MWT

true sinus

New generation in the condition evaluation of cable systems

- Cable testing and dissipation factor measurement in one device
- Easy and quick test assembly
- Automatic testing and diagnostic sequences
- Compact dimensions and lightweight

The portable frida and frida TD devices are used for
- Cable testing
- Cable sheath testing
- Cable diagnostics (frida TD):
  - Dissipation factor measurement
  - Monitored Withstand Test with dissipation factor measurement
  - Partial discharge measurement*

The **VLF testing** makes it possible to locate insulation faults in plastic- and paper-insulated mass-impregnated cables in the shortest of testing times without impairing the quality of the surrounding insulating material.

The **dissipation factor measurement** with 0.1 Hz VLF truesinus® provides differentiated information on the ageing condition of paper-insulated mass-impregnated and PE/XLPE cables. In the case of PE/XLPE cables, the dissipation factor measurement is capable of differentiating between new, slightly or severely "water tree"-damaged cables. This makes it possible to prioritise the need to replace cables.

The **Monitored Withstand Test with dissipation factor measurement** combines the cable testing and dissipation factor measurement, allowing an accurate and comprehensive assessment of the cable condition. In addition, there is minimum load on the cable due to the optimised test duration.

Functions and features

frida and frida TD
- Suitable for continuous operation
- Max. test voltage 26 kV_{rms}
- Voltage shapes: VLF truesinus®, VLF square wave voltage and DC voltage
- Load-independent, reproducible sinusoidal high voltage by means of VLF truesinus® testing technology
- Cable testing according to: IEC 60060-3, IEC 60502.2, CENELEC HD 620/621 (DIN VDE 0276-620/621), IEEE 400-2012, IEEE 400.2-2013
- Cable sheath testing according to IEC 60502/IEC 60229
- Can be expanded in combination with PD-TaD 62:
  - frida: to include the PD diagnostics function
  - frida TD: to include the PD and MWT diagnostics function

frida TD
- Dissipation factor measurement on medium-voltage cables up to 20 kV
- Monitored Withstand Test MWT according to IEEE 400.2
  - MWT with dissipation factor measurement
  - Full MWT with dissipation factor and PD measurement*
- Highly precise dissipation factor measurement with precision of 1 x 10^{-4}
- Detection of leakage currents using VSE box (option)
- Fully automated and individually programmable diagnostic sequences incl. evaluation

*in combination with the BAUR PD-TaD 62 PD diagnostics system and BAUR Software 4.

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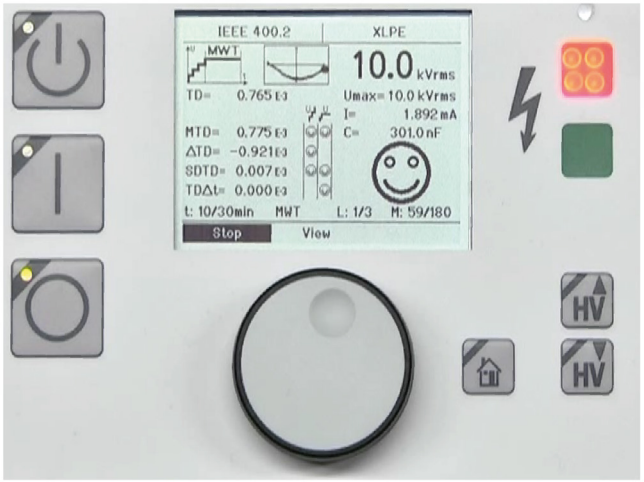
Technical data

Output voltage	
Frequency range	0.01 – 0.1 Hz
VLF truesinus®	1 – 26 kV_{rms} (36 kV_{peak})
VLF square wave voltage	1 – 34 kV
DC voltage	±1 – 34 kV
Resolution	0.1 kV
Accuracy	1%
Load range (VLF testing)	1 nF – 8 µF
Output current	
Measurement range	0 – 14 mA
Resolution	1 µA
Accuracy	1%
Max. capacitive load	0.5 µF at 0.1 Hz, 24 kV_{rms} / 34 kV_{peak} 1 µF at 0.05 Hz, 24 kV_{rms} / 34 kV_{peak} 8 µF at 0.01 Hz, 18 kV_{rms} / 25 kV_{peak}
Dissipation factor measurement (frida TD)	
VLF truesinus®	1 – 26 kV_{rms}
Load range	10 nF - 8 µF
Resolution	1 x 10^{-6}
Accuracy	1 x 10^{-4}
Measurement range	1 x 10^{-4} – 21,000 x 10^{-3}
tan δ measuring frequency	0.1 Hz
Automatic detection and compensation of leakage currents	With VSE box (optional)
BAUR Software 4 for office PC (office installation)	Used to evaluate test and measurement logs

General	
Input voltage	100 – 260 V, 50/60 Hz
Power consumption	max. 300 VA
Reverse voltage protected	up to 13 kV
Degree of protection	IP54 (in closed state)
Data interface	USB 2.0
Dimensions (W x H x D)	438 x 456 x 220 mm
Weight (incl. HV connection cable)	Approx. 22 kg
Ambient temperature (operational)	-10°C to +50°C
Storage temperature	-20°C to +60°C
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU), EMC Directive (2014/30/EU), EN 60068-2-ff Environmental testing
User interface available in 13 languages	Czech, Chinese (CN), Chinese (TW), Dutch, English, French, German, Italian, Korean, Polish, Portuguese, Russian, Spanish



frida standard delivery

- frida VLF tester, incl.
  - HV connection cable, 5 m (fix mounted)
  - GDR 40-136 discharge and earth rod
  - Earth cable, 5 m, with earth terminal
  - Jumper plug for external emergency off unit
  - HV connection set
  - Mains supply cord, 2.5 m
  - User manual
  - Pocket guide

Accessories and options

- External emergency off unit with signal lamps, 25 m or 50 m cable length
- GDR 40-136 discharge and earth rod
- PD-TaD 62 portable PD diagnostics system
- BAUR Software 4 for office PC (office installation)
- Remote control via BAUR Software: Laptop incl.
  - pre-installed Windows operating system
  - pre-installed BAUR Software 4 (cable and cable sheath testing)
  - Carrying bag
  - USB cable 2.0, 3 m

  Optional software functions
  - GIS interface
  - Mapping (available countries on request)

frida TD standard delivery

- frida TD VLF tester and diagnostics device, incl.
  - HV connection cable, 5 m (fix mounted)
  - GDR 40-136 discharge and earth rod
  - Earth cable, 5 m, with earth terminal
  - Jumper plug for external emergency off unit
  - BAUR Software 4 for office PC (office installation)
  - HV connection set
  - tan delta kit
  - Mains supply cord, 2.5 m
  - User manual
  - Additional manual for dissipation factor measurement
  - Pocket guide

Accessories and options

- VSE connection kit (for the detection and compensation of leakage currents)
- External emergency off unit with signal lamps, 25 m or 50 m cable length
- GDR 40-136 discharge and earth rod
- PD-TaD 62 portable PD diagnostics system
- Remote control via BAUR Software: Laptop incl.
  - pre-installed Windows operating system
  - pre-installed BAUR Software 4 (cable and cable sheath testing, TD measurement)
  - Carrying bag
  - USB cable 2.0, 3 m

  Optional software functions
  - GIS interface
  - Mapping (available countries on request)

Information on individual functions and the required system configuration can be obtained from your BAUR representative.