

System Classic

Test Van System



Modular, single or three phase test van system for testing and fault location of power distribution cables in low and medium voltage networks

sebaKMT



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The System Classic offers maximum variability of the instrumentation variants of the test van system. There is a choice of two different central automatic control units to operate the modular system.

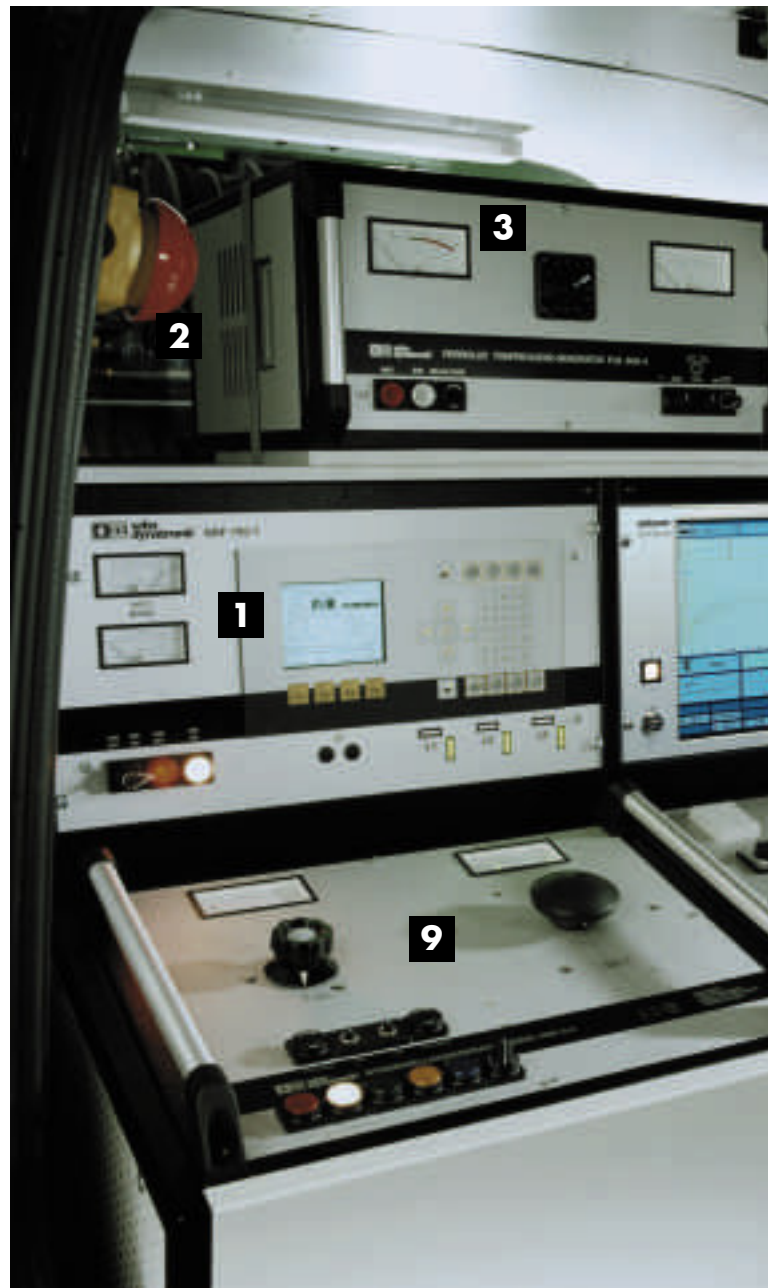
We offer the technical parameters for cable testing, surge energy for pinpointing, burning function, and sheath fault location as separate instruments, or all combined in one multi-purpose unit in single or three phase models to meet specific customer wishes.

The high-voltage compartment contains all high-voltage modules, discharge facilities and cable drums to connect to the test object. The access to the high-voltage compartment is secured by a safety circuit with door contacts. The operators compartment contains all control modules.

The following prelocation methods can be integrated into the system:

- Reflection measurement
- Active or passive ARM - filter
- Impulse current method up to 32 kV
- Voltage decay up to 130 kV

Effective cable testing, maintaining the cable integrity of PE, XLPE and paper insulated cables with the patented 0.1 Hz Cosine Square Voltage, can be optionally integrated.



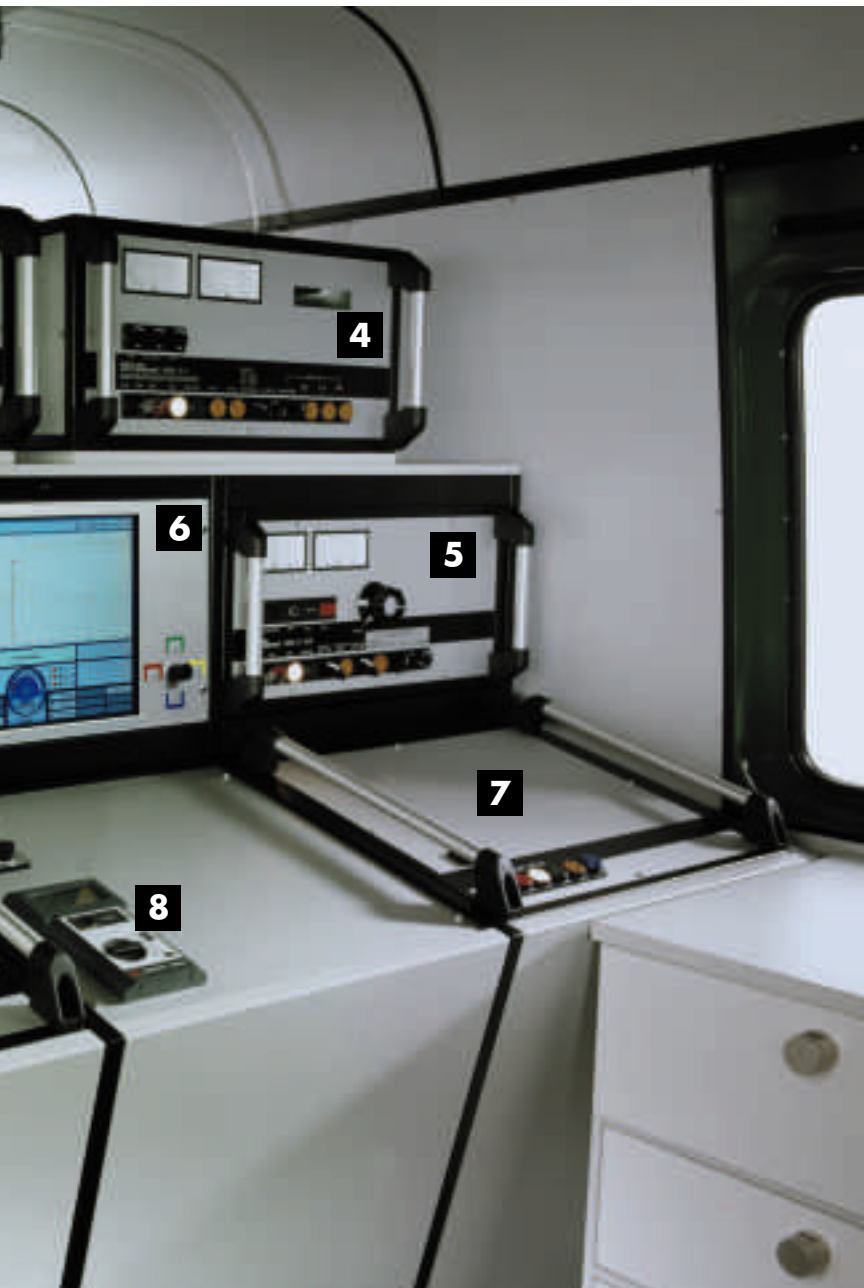
Interior of the System Classic (combination suggestion)

Features

- Individual instrumentation with stand-alone units or one multi-purpose unit
- Choice between a manual, air insulated HV-switch or an SF₆ gas insulated HV-switch for combined mode and phase selection
- Comprehensive safety concept for the operator. Automatic avoidance of operating errors and indication and shut-off of unsafe conditions (e. g. insufficient grounding)
- Optimised prelocation methods for longer cable distances (over 4 km) by active ARM – measurement
- To extend the possibilities of a reflectometer options can be connected such as a low voltage auto-reclosure, test unit for overhead power lines, or a mains separation filter
- Stand-alone units can be removed from the frame (e. g. for servicing purposes) and can be operated individually. The remaining system stays operational



Test Van in Action



The operators compartment

- 1** Automatic control equipment
- 2** Emergency-off switch
- 3** Audio frequency system
- 4** Sheath testing and fault location device
- 5** High-voltage testing device
- 6** Reflectometer
- 7** Arc reflection filter
- 8** Insulation testing
- 9** Surge wave generator

Standard – automatic control unit NSF 7-3 and NSF 7-1 (semiautomatic)

Automatic control unit with manual operation via one or three turn-push-levers for the mains interlock and to operate the high-voltage switch HMK 70-3. With circuit breaker, mains-voltmeter, key-operated main switch and display elements for the safety circuit according to VDE 0104.



Automatic control unit NSF 10

Automatic system control (3-phase) with an SF₆ – insulated HV-switch.



High-voltage modules

The rugged and powerful high-voltage test systems allow DC testing up to 70 kV or 130 kV. The solid-state high-voltage transformer is absolutely maintenance-free and short-circuit proof. In addition a burning device of up to 14 kV burning voltage can be installed.

If space or weight limits are an issue, a multi-purpose unit might be the answer. It could include, for example a burner and a DC-testing device. The multi-purpose unit for fault locating and cable testing with DC or VLF consists of a versatile basic equipment and various additional units, that can adapt to the respective technical requirements. The advantage is a smaller system with the same performance features as a full-size test van.

The high-voltage surge generators supply a continuously adjustable voltage of 0 ... 2 / 4 / 8 / 16 / 32 kV as well as single pulse or repetitive surge release. The surge energy can, system dependant, amount from 1000 J to 3500 J.

Our sheath testing and fault location devices permit the prelocation and pinpointing of sheath faults of up to 5 kV and sheath testing of up to 10 kV.

Reflectometer Teleflex M

The Teleflex M is a modern, computerized reflectometer for fault location in power cable networks. The menu-driven operation and the automated testing cycles provide an especially easy handling. The received test data can be printed out directly via a connected printer or filed and analysed with the databank software Winkis.



Technical Data

	Standard	Optional/Alternative
Automatic Control Unit / HV - switch		
	NSF 7 (1- / 3-phased) turn - push - switch / air insulated switch	NSF 10 Automatic system control / SF6 - insulated switch
Insulation and resistance measurement		
		Megger BM 222 or similar up to 1000 V through external jacks
HV-testing		
DC-testing	0...50 kV / I_N : 15 mA / I_{max} : 50 mA (HPG 50-H) or 0...70 kV / I_N : 15 mA / I_{max} : 50 mA (HPG 70-H) or 0...130 kV / I_N : 15 mA / I_{max} : 50 mA (HPG 70-D)	
VLF-testing		VLF 54 kV 0.1 Hz Cosine Rectangular Voltage maximum testing capacity 5 μ F
Sheath testing		0...5 kV (MMG 5; MFM 5-1) 0...10 kV (MMG 10)
Prelocation		
Reflection measurement with Teleflex M	Measuring methods 3-phase Direct, comparative, differential, average VGA color display	Evaluation and databank Software Winkis
HV Modes: ARM® measurement	passive with LSG 300: 0...8 kV / 0...16 kV / 0...32 kV	aktive with LSG-3E: 2kV / 0...8 kV / 0...16 kV / 0...32 kV (2390 J)
Voltage Decay	0...70 kV	0...130 kV
Impulse Current Method	0...8 kV / 0...16 kV / 0...32 kV	0...2 kV / 0...4 kV
Burning	BT 3 with 0...10 kV, 6 steps up to I_{max} 110 A	BT 5000-1 to 14 kV
Pin-pointing		
Acoustic and distance method with surge generator	0...8 kV / 0...16 kV / 0...32 kV, 1750 J in each range Adjustable surge rate 3...30 s Digiphone Directional acoustic listening device	0...2 kV / 0...4 kV, 1200 J Raise in surge energy up to 2400 J
Audio frequency		FLG 50 or FLG 200 Frequencies: 491 Hz / 982 kHz / 8.44 kHz, Impedance: 0.5 Ω ...1 k Ω Audio Frequency Receiver FLE 10
Sheath fault location		0...5 kV DC max. 1.5 A Earth fault locator ESG 80-2
Power supply and dimensions		
Mains	230 V, 50 Hz	120 V, 60 Hz Generator operation 5 kVA
Weight	depending on chosen components	

ISO 9001:2000

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KABELMESSTECHNIK GmbH

Product Range: Instruments and Systems for Fault Location in Power and Telecommunication Networks
and for Leak Detection in Water Distribution Systems • Cable and Pipe Locators • Seminars • Service • Contracting
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Technical data subject to change without notice.

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