

1-phased test system with automatic operating mode selection and optional 3-phased LV measurement

Fault location module with 2-, 3- or 4-step surge generator (thumper)

Resistance measurement

Ranges	1 kΩ, 5 MΩ, 100 MΩ
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Voltage	1000 ... 5000 V in 100 V steps
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DC Test with breakdown recognition

Voltage	0 ... 40 kV, I_{max} 750 mA
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Leakage current	0 ... 1; 1 ... 10; 10 ... 100 mA with automatic measuring area setting
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Cable sheath testing

Voltage	0 ... 5 kV; 0 ... 10 kV; I_{max} 750 mA
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Cable fault location – Prelocation methods

Pulse reflectometry, ARM® Multishot, Decay method, ICE current pulse method, IFL Intermittent fault localisation
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Pulse reflectometry (Teleflex)

Operating modes	Symmetric/asymmetric reflection measurement, differential and comparative measurement, IFL (for intermittent faults)
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Automatic functions	Determination of cable length and fault distance, amplification, measurement range
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Amplification	Default: -37 ... +37 dB; ProRange: max. 22 dB
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Measurement range	20 m ... 1.280 km (for $v/2 = 80 \text{ m}/\mu\text{s}$); resolution 0.1 m
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Runtime factor $v/2$	10 ... 149.9 $\text{m}/\mu\text{s}$
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Precision	0.1 % of measurement range
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Sampling rate	400 MHz
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Output Impedance	10 ... 2.000 Ω
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Pulse width	20 ns ... 10 μs
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Pulse voltage	30 ... 160 V
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HV prelocation methods**ARM® Multishot (15 fault patterns per surge pulse)**

Surge voltage	0 ... 32 kV (opt. 0 ... 25 kV)
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Decay method

Voltage	0 ... 40 kV
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ICE - Current pulse method

Surge voltage	0 ... 32 kV (opt. 0 ... 25 kV)
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Fault conversion

0 ... 8 kV, 750 mA; 0 ... 20 kV, 0.1 A
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Cable fault location – Pinpointing methods**Acoustic pinpointing**

Voltage levels	0 ... 4; 0 ... 8; 0 ... 16; 0 ... 32 kV
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optional	0 ... 3; 0 ... 6; 0 ... 12.5; 0 ... 25 kV
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Surge energy	1.000 J or 2.000 J in every voltage range
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Surge sequence	6 ... 20 surges/min; individual surge; automatic; controllable
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Step voltage method

Output voltage; Current	0 ... 5 kV; 0 ... 10 kV; I_{max} 750 mA
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Pulse duty factor	1:3; 1:4; 1:6 (low hazard potential due to clocked DC voltage)
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Weight

starting from 140 kg

Connection of the test system

HV connection	Economy 25:	25 m, 1-phased cable; manual cable drum
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	Economy 50:	50 m, 1-phased cable; manual cable drum
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	Pro:	50 m, 1-phased cable; motor-driven cable drum
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LV connection	Economy:	50 m mains/protective earth cable, 10 m auxiliary earth; manual cable drums
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	Comfort:	50 m mains/protective earth cable, 10 m auxiliary earth; belt pull cable drums
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Reflectometer connection	Economy:	50 m, 3-phase coax-cable; manual cable drum
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	Comfort:	50 m, 3-phase coax-cable; belt pull cable drum
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External emergency stop unit	Economy:	15 m connection cable
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	Comfort:	50 m connection cable; belt pull cable drum
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Test & Diagnostics module	
VLF-voltage testing according to DIN VDE 0276	
VLF CR 40 test system	
Voltage	0 ... 40 kV _{eff}
Max. load	4.8 µF bei 40 kV _{eff} @ 0.1 Hz
Prüfsystem VLF CR 60	
Voltage	0 ... 40 kV _{eff}
Max. load	2 µF bei 60 kV _{eff} @ 0.1 Hz
Prüfsystem TDM 4540	
CR / 50 Hz Slope	
Voltage	0 ... 40 kV _{eff}
Max. load	5.5 µF bei 36 kV _{eff} @ 0.1 Hz
Sine	
Voltage	0 ... 45 kV
Max. load	0.6 µF bei 32 kVeff @ 0.1 Hz (10 µF bei geringerer Spannung / Frequenz)
DAC (option)	Für zerstörungsfreie TE-Diagnose
Voltage	0 ... 32 kV _{eff}
Max. load	7 µF bei 20 kV _{eff}
PD Diagnosis with 50 Hz Slope-Technology (option)	
tanDelta-Diagnosis and Monitored Withstand Test (option)	
Weight	
starting from 100 kg	

Operating system and display for Fault Location, Testing & Diagnostics	
Operating system	Linux
Memory	8 GB RAM, 8 GB Cfast SSD for system recovery, at least 320 GB HDD
Display	Touch Display 21.5", 1.920 x 1.080 (16:9), Full HD
Database	Automatic backup of all measurements
Data export format	PDF, cableBook database
Data synchronisation	USB 3.0

Add-on features (optional)	
GPS Receiver	Location of the test system in the database software
Remote control	Important system functions can be controlled via mobile devices (3G)
Additional display	

Safety and protection equipment	
Earth monitoring	Operational earth and protective earth to station earth
Step voltage	Auxiliary earth to vehicle chassis
Monitoring	Key switch, rear door switch, emergency stop switch (int./ext.) EN 50919
Supply voltage	Overvolt protection, undervoltage protection, residual current circuit breaker
Isolating transformer	3.6 kVA

System supply an operating conditions	
Input Voltage	230 V, 50 Hz (110 V, 60 Hz)
Power consumption	< 3 kVA
Operating temperature	- 10°C ... + 55°C
Storage temperature	- 25°C ... + 70°C

System supply and comfort (optional)	
Travel Power generator 5 kVA	
Electric heating 2.000 W	
Air conditioning on car roof	

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