SWG-32

MOBILE CABLE TEST AND FAULT LOCATION SYSTEM

- **Cable insulation testing with DC voltage up to 32 kV**
- **Fault conditioning (burning) with current up to 100 mA @ 32 kV**
- **Detachable reflectometer with touch screen control**
- **TDR, ARC / ARC multi-shot, ICE and DECAY pre-location**
- **Surge generator up to 2000 J with 0 ... 8 / 16 / 32 kV surge levels switch**
- **Advanced safety systems**

Mobile cable test and fault location system SWG-32 is designed for:

- **Testing cable insulation** with DC voltage up to 32 kV;
- **Fault conditioning** by burning faulty cable insulation with current up to 100 mA @ 32 kV;
- **Pre-locating cable faults** with the reflectometer RIF-9 based on the low-voltage impulse reflection method (TDR), and high-voltage decay method (DECAY), single impulse (ARC) and multiple impulse (ARC multi-shot) arc reflection method, and impulse current method (ICE);
- **Pinpointing cable faults** with an acoustic method with 2000 J surge generator and a suitable signal receiver.

SWG-32 is supplied with the detachable reflectometer RIF-9 which is equipped with extra-bright 10.4" display with touch control, making the process of fault pre-location quick, easy and efficient.

Powerful 2000 J surge generator is accompanied by a surge levels switch which allows to achieve the maximum surge impulse energy at 8, 16 and 32 kV. High surge energy enhances the possibilities of fault pinpointing by delivering a stronger signal in the conditions of high interference, deep cable burial or long distance to the place of a fault.

SWG-32 features various operator safety assurance systems and provides a reliable and comprehensive solution for complete servicing of low- and medium-voltage cables.

Intertek
ISO 9001
Certificate № 28 110 804001

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high-voltage testing equipment

DC testing	Output voltage adjustment and indication range	0 … 32 kV
	Output current indication ranges	0 … 10 mA
	Indication	Analogue indication of output voltage and current in real time
	Relative voltage and current indication error	± 3 % of full range
Fault conditioning (burning)	Output DC voltage adjustment and indication range	0 … 32 kV
	Output current (open-circuit run)	up to 100 mA
	Voltage adjustment type	Continuous
	Indication	Analogue indication of output voltage and current in real time
	Relative voltage and current indication error	± 3 % of full range
Fault pre-location	Pre-location methods	▪ TDR (impulse reflection method) ▪ ARC / ARC multi-shot (single impulse / multiple impulse arc reflection method) ▪ ICE (impulse current method) ▪ DECAY (voltage decay method)
	Fault detection ranges (for velocity factor 1.50 v/2 = 100 m/µs)	0 … 60 / 120 / 250 / 500 / 1000 / 2000 / 5000 / 10 000 / 20 000 / 50 000 / 120 000 m
	Fault detection resolution: ▪ for velocity factor 1.50 (v/2 = 100 m/µs) ▪ for velocity factor 1.87 (v/2 = 80.2 m/µs)	 0.5 m 0.4 m
	Distance to fault detection accuracy	0.2 % of selected range
	Sampling rate	200 MHz
	Time mark accuracy	0.01 %
	Output impedance adjustment range	2 … 100 Ω, resolution 2 Ω
	Probe pulse parameters: ▪ voltage ▪ width adjustment range	 45 V 10 ns … 100 µs
	Gain adjustment range	minus 21 … + 69 dB
	Velocity factor adjustment range	0.750 … 3.000, resolution 0.001
	Propagation velocity (v/2) adjustment range	50.0 … 200.0 m/µs, resolution 0.1 m/µs
	Internal memory of the reflectometer: ▪ historical measurements with associated settings ▪ reference cable propagation velocity (v/2) records	 up to 1000 up to 500

Fault pinpointing with acoustic method	Surge voltage levels and adjustment ranges	▪ Level 1: 0 …8 kV ▪ Level 2: 0 … 16 kV ▪ Level 3: 0 … 32 kV
	Surge energy at each level	up to 2000 J
	Surge rate	▪ Single pulse, manually triggered ▪ 4 … 12 surges/min, automatic mode
	Indication	Analogue indication of output voltage in real time
Controls and interfaces	Connection interfaces	▪ USB-A (user memory stick, FAT32) ▪ USB-B (PC connection) ▪ RS-485 (service only)
	Display (reflectometer RIF-9)	10.4" colour TFT, 800 × 600 px, resistive touch
	Operating modes switch	Manual
	Surge voltage levels switch	Manual
	Secondary control interface	Rotary encoder with "ENTER" button
Connections	HV test cable (KEP-40)	10 m
	Power supply cable	10 m
	Protective earthing cable (KEP-10GCt)	10 m
	Earthing control cable	10 m
Safety	Grounding	▪ Protective earthing ▪ Operating grounding ▪ Continuous grounding monitoring system ▪ Automatic discharge device
	Protection	▪ Overvoltage ▪ Overcurrent ▪ Overheating
	High voltage switch off	▪ EMERGENCY STOP button ▪ Power keylock switch
	Ingress protection rating (according to EN 60529)	IP 30
Power supply and consumption	Mains supply voltage	230 VAC, ± 10 %
	Mains supply frequency	50 Hz (60 Hz option)
	Power consumption	up to 2.0 kV•A
Physical	Dimensions, H × W × D (with RIF-9 installed)	1215 × 764 × 675 mm
	Total weight (with RIF-9 and connection cables)	185 kg

Specifications are subject to change without notice. Pictures are for illustration purposes only.

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