SWG-12

MOBILE CABLE TEST AND FAULT LOCATION SYSTEM

- **Cable testing with DC voltage up to 12 kV**
- **Fault conditioning (burning) with current up to 100 mA @ 12 kV**
- **Detachable reflectometer with touch screen control**
- **TDR, ARC / ARC multi-shot, ICE and DECAY pre-location**
- **Powerful 1100 J surge generator**
- **Surge levels 0 ... 3 / 6 / 12 kV**
- **Advanced safety systems**

Mobile cable test and fault location system SWG-12 is designed for:

- **Testing medium-voltage cables** with DC (rectified) voltage up to 12 kV;
- **Fault conditioning** by burning faulty cable insulation with current up to 100 mA @ 12 kV;
- **Pre-locating cable faults** with the reflectometer RIF-9 based on the low-voltage pulse reflection method (TDR), high-voltage decay method (DECAY), arc reflection method (ARC / ARC multi-shot), and current pulse method (ICE);
- **Pinpointing cable faults** with the acoustic method with 1100 J surge generator and a suitable signal receiver.

SWG-12 is supplied with a detachable reflectometer RIF-9 which is equipped with extra-bright 10.4" display with touch technology, making fault pre-location quick, easy and efficient.

Powerful 1100 J surge generator is accompanied with a surge voltage level switch allowing to achieve maximum surge power at 3, 6 and 12 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-12 features various operator safety assurance systems and provides a reliable and comprehensive solution for complete servicing of medium-voltage voltage cables.

Intertek
ISO 9001
Certificate № 28 110 804001

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high-voltage testing equipment

High-voltage testing (DC)	Output voltage range	0 … 12 kV
	Output current range	0 … 10 mA
	Voltage adjustment type	Continuous
	Indication	Analogue output voltage and current in real time
	Measurement error	± 3 %
Fault conditioning (Burn)	Output DC voltage range	0 … 12 kV
	Output current range	0 … 100 mA
	Voltage adjustment type	Continuous
	Indication	Analogue output voltage and current in real time
	Measurement error	± 3 %
Fault pre-location (RIF-9)	Pre-location methods	▪ TDR ▪ ARC ▪ ARC multi-shot ▪ ICE ▪ DECAY
	Measurement ranges (for shortening coefficient of 1.50 or v/2 = 100 m/µs)	0 … 60 / 120 / 250 / 500 / 1000 / 2000 / 5000 / 10,000 / 20,000 / 50,000 / 120,000 m
	Resolution: ▪ for shortening coefficient of 1.5 (v/2 = 100 m/µs) ▪ for shortening coefficient 1.87 (v/2 = 80.2 m/µs)	 0.5 m 0.4 m
	Distance measurement accuracy	0.2 % of measurement range
	Sampling rate	200 MHz
	Time mark accuracy	0.01 %
	Output impedance range	2 … 100 Ω, resolution 2 Ω
	Probe pulse parameters: ▪ voltage ▪ width range	 45 V 10 ns … 100 µs
	Gain range	- 21 … + 69 dB
	Shortening coefficient range	0.750 … 3.000, resolution 0.001
	Propagation velocity v/2 range	50.0 … 200.0 m/µs, resolution 0.1 m/µs
	Probe pulse parameters: ▪ reflectograms with parameters ▪ data on cable shortening coefficients	 1000 500
Fault pinpointing (Surge)	Surge voltage levels and ranges	▪ 0 …3 kV ▪ 0 … 6 kV ▪ 0 … 12 kV
	Voltage adjustment type within each level	Continuous
	Surge energy at each level	up to 1100 J
	Surge rate	▪ Single discharge, manually triggered ▪ 4 … 20 surges/min, automatic mode
	Indication	Analogue output voltage in real time

Controls and interfaces	Connection interfaces	▪ USB-A (user memory stick, formatted under FAT32) ▪ USB-B (service only)
	Graphical 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
	Internal memory	10,000 test results
Connections	HV cable KEP-12	6 m
	Power supply cable	10 m
	Protective earthing cable KEP-10GCt, copper 10 mm^2, transparent	10 m
	Earthing control cable	6 m
Safety	Protective devices	▪ Overvoltage and overcurrent protection ▪ Overheating protection ▪ Operating grounding ▪ Grounding monitoring system ▪ EMERGENCY STOP button, automatic discharge ▪ Power keylock switch
	Protection rating (according to EN 60529)	IP 30
Power supply and consumption	Supply voltage	230 V ±10 % AC, single phase
	Supply frequency	50 Hz (60 Hz option)
	Power consumption	up to 1.0 kVA
Physical	Dimensions, H × W × D (with RIF-9 installed)	1172 × 775 × 603 mm
	Total weight (with RIF-9, connection cables)	120 kg

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

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