

# SWG-32

## MOBILE CABLE TEST AND FAULT LOCATION SYSTEM



- **Detachable reflectometer**
- **ARC single-shot / ARC multi-shot pre-location**
- **Surge generator up to 2000 J**
- **Surge levels 0 ... 8 / 16 / 32 kV**
- **Fault conditioning (burning) with up to 100 mA @ 32 kV**
- **Advanced safety systems**

### Description

SWG-32 is a trolley-mounted mobile cable test and fault location system, designed for:

- **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 single-shot / ARC multi-shot), and current pulse method (ICE);
- **fault conditioning** through burning faulty cable insulation with current up to 100 mA @ 32 kV;
- **pin-pointing cable faults** with the acoustic method with 2000 J surge generator;
- **testing high-voltage cables** with direct current voltage up to 32 kV.

Detachable reflectometer RIF-9 is equipped with extra-bright display with touch screen technology, which makes fault pre-location quick, easy and efficient.

Powerful surge generator with up to 2000 J is accompanied with a surge voltage level switch allowing to receive maximum surge power at 8, 16 and 32 kV. This solution provides the necessary power for accurate cable faults pin-pointing with the acoustic method at different voltage levels.

SWG-32 provides a reliable, safe and comprehensive solution for a complete servicing of high voltage cables.



#### KHARKOVENERGOPRIBOR LTD.

9, Generala Momota Str.,  
Kharkiv, Ukraine, 61075

#### CONTACT FOR ORDER

[www.kep.ua](http://www.kep.ua)  
[info@kep.ua](mailto:info@kep.ua)  
▪ Tel. +38 (057) 393-20-28  
▪ Fax +38 (057) 393-10-69



high-voltage  
testing equipment



<b>Power supply and consumption</b>	Supply voltage	230 V $\pm$ 10 % AC, single phase
	Supply frequency	50 / 60 Hz
	Power consumption	2.0 kVA
<b>High-voltage testing (DC)</b>	Output voltage range	0 ... 32 kV
	Output current range	0 ... 10 mA
	Voltage adjustment	Continuous
	Indication	Analogue output voltage and leakage current in real time
	Relative accuracy	$\pm$ 3 %
<b>Fault conditioning (burn)</b>	Output DC voltage range	0 ... 32 kV
	Output current range	0 ... 100 mA
	Voltage adjustment	Continuous
	Indication	Analogue output voltage and leakage current in real time
	Relative accuracy	$\pm$ 3 %
<b>Fault pinpointing (surge)</b>	Surge voltage range levels	– 0 ... 8 kV – 0 ... 16 kV – 0 ... 32 kV
	Voltage adjustment within each level	Continuous
	Surge energy at each level	2000 J
	Surge rate	– Single discharge, manually triggered – 4 ... 12 surges/min, automatic mode
	Indication	Analogue output voltage in real time
<b>Fault pre-location (reflectometry)</b>	Pre-location methods	– TDR – ARC single-shot – ARC multi-shot – ICE – DECAY
	Measurement ranges (for shortening coefficient of 1.50 or $v/2 = 100$ m/ $\mu$ s)	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/ $\mu$ s)	– 0.5 m
	– for shortening coefficient 1.87 ( $v/2 = 80.2$ m/ $\mu$ s)	– 0.4 m
	Distance measurement accuracy	0.2 % of measurement range
	Sampling rate	200 MHz

	Time mark accuracy	0.01 %
	Output impedance	2 ... 100 $\Omega$ , resolution 2 $\Omega$
	Probe pulse parameters: – voltage – width	– 45 V – 10 ns ... 100 $\mu$ s
	Gain	- 21 ... + 69 dB
	Shortening coefficient range	1000 ... 3000, resolution 0.001
	Propagation velocity v/2 range	50.0 ... 200.0 m/ $\mu$ s, resolution 0.1 m/ $\mu$ s
	Probe pulse parameters: – reflectograms with parameters – data on cable shortening coefficients	– 1000 – 500
<b>Controls and interfaces</b>	Connection interfaces	– USB-A (user memory stick, formatted under FAT32) – USB-B (service only)
	Display – reflectometer RIF-9	– 10.4" colour TFT, 800 x 600 px, resistive touch
	Operating modes switch	Manual
	Surge voltage levels switch	Manual
	Secondary control interface	Rotary encoder
	Internal memory	10,000 test reports
<b>Connections</b>	HV test cable KEP-70	6 m
	Power supply cable	6 m
	TDR connection cable, 1-phase	2.4 m
	Protective earthing cable KEP-10Gct, copper 10 mm <sup>2</sup> , transparent	6 m
	Earthing control cable (red)	6 m
<b>Safety</b>	Grounding	Continuous grounding monitoring system
	Step voltage monitoring	Chassis potential control
	Protection	Overvoltage, overcurrent, overheating
	Emergency	Emergency stop button, operator keylock switch, automatic discharge
	Protection rating (as per EN 60529)	IP 20
<b>Physical</b>	Dimensions, HxWxD (with RIF-9)	1160x762x670 mm
	Weight (with RIF-9 and cables)	190 kg

Actual product appearance may differ.

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