

# SWG-32 PORTABLE MEDIUM & HIGH VOLTAGE CABLE TEST AND FAULT LOCATION SYSTEM

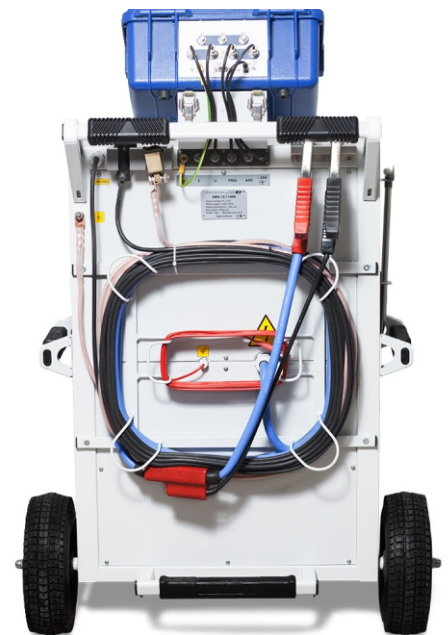
SWG-32 is a 1-phase mobile cable test and fault location system, for buried power cables.

- **Test medium & high -voltage cables** 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 pulse reflection method (**TDR**), Arc reflection method (ARC single shot / **ARC multi-shot**), Current pulse method (**ICE**) and high-voltage decay method (**DECAY**)
- **Pinpointing cable faults** with the acoustic method with 2000 J surge generator and a suitable signal receiver.

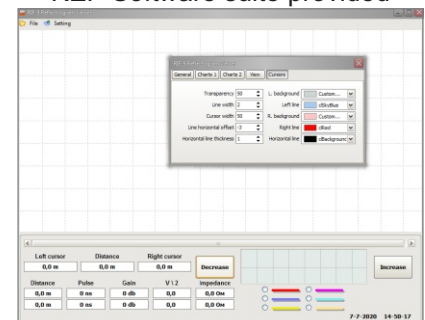
**Powerful 2000 J surge generator** is accompanied with a surge voltage level switch allowing to receive maximum surge power at **8, 16 and 32 kV**. High surge energy enhances the possibilities of fault pinpointing by providing a stronger signal in the conditions of high interference, deeply buried cable or long distance to the place of fault.

**Easy to Operate : Detachable reflectometer** RIF-9 (pre-locator) is equipped with extra-bright 10.4" display with **touch screen** technology & **rotary controller knob**, which makes fault pre-location quick through easy and efficient menu control .

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



KEP Software suite provided



## Operating Mode:

- **Symmetric and Asymmetrical (time domain reflection) measurement**
- **ARC single shot / ARC multi-shot pre-location**
- **Impulse current method (ICE)**
- **Decay method**
- **Surge levels 0 ... 8 / 16 / 32 kV**
- **Fault conditioning (burning) with up to 100 mA @ 32 kV**

# SWG-32 PORTABLE MEDIUM & HIGH VOLTAGE CABLE TEST AND FAULT LOCATION SYSTEM

## Specifications:

|                            |   |   |
|----------------------------|---|---|
| High-voltage testing (DC)  | Output voltage range  | 0 ... 32 kV   |
|                            | Output current range  | 0 ... 10 mA   |
|                            | Voltage adjustment type   | Continuous  |
|                            | Indication  | Analogue output voltage and leakage current in real time  |
|                            | Measurement error   | $\pm 3 \%$  |
| Fault conditioning (Burn)  | Output DC voltage range   | 0 ... 32 kV   |
|                            | Output current range  | 0 ... 100 mA  |
|                            | Voltage adjustment type   | Continuous  |
|                            | Indication  | Analogue output voltage and leakage current in real time  |
|                            | Measurement error   | $\pm 3 \%$  |
| Fault pre-location (RIF-9) | Pre-location methods  | <ul style="list-style-type: none"> <li>• TDR</li> <li>• ARC single shot</li> <li>• ARC multi-shot</li> <li>• ICE</li> <li>• DECAY</li> </ul>  |
|                            | Measurement ranges (for shortening coefficient of 1.50 or $v/2 = 100 \text{ m}/\mu\text{s}$ ) | 0 ... 60 / 120 / 250 / 500 / 1000 / 2000 / 5000 / 10,000 / 20,000 / 50,000 / 120,000 m  |
|                            | Resolution:   | <ul style="list-style-type: none"> <li>• for shortening coefficient of 1.5 (<math>v/2 = 100 \text{ m}/\mu\text{s}</math>)</li> <li>• for shortening coefficient 1.87 (<math>v/2 = 80.2 \text{ m}/\mu\text{s}</math>)</li> </ul> |
|                            | Distance measurement accuracy   | 0.2% of measurement range   |
|                            | Sampling rate   | 200 MHz   |
|                            | Time mark accuracy  | 0.01 %  |
|                            | Output impedance range  | 2 ... 100 $\Omega$ , resolution 2 $\Omega$  |
|                            | Probe pulse parameters:   | <ul style="list-style-type: none"> <li>• voltage</li> <li>• width range</li> </ul>  |
|                            | Gain range  | - 21 ... + 69 dB  |
|                            | Shortening coefficient range  | 0.750 ... 3.000, resolution 0.001   |
|                            | Propagation velocity $v/2$ range  | 50.0 ... 200.0 $\text{m}/\mu\text{s}$ , resolution 0.1 $\text{m}/\mu\text{s}$   |
|                            | Probe pulse parameters:   | <ul style="list-style-type: none"> <li>• reflectograms with parameters</li> <li>• data on cable shortening coefficients</li> </ul>  |
|                            |   | 1000<br>500   |
| Fault pinpointing (Surge)  | Surge voltage range levels  | <ul style="list-style-type: none"> <li>• 0 ... 8 kV</li> <li>• 0 ... 16 kV</li> <li>• 0 ... 32 kV</li> </ul>  |
|                            | Voltage adjustment within each level  | Continuous  |
|                            | Surge energy at each level  | Up to 2000 J  |

# SWG-32 PORTABLE MEDIUM & HIGH VOLTAGE CABLE TEST AND FAULT LOCATION SYSTEM

|                              |   |  |
|------------------------------|---|--|
|                              | Surge rate  | <ul style="list-style-type: none"> <li>• Single discharge, manually triggered</li> <li>• 4 ... 12 surges/min, automatic mode</li> </ul>  |
|                              | Indication  | Analogue output voltage in real time   |
| Controls and interfaces      | Connection interfaces   | <ul style="list-style-type: none"> <li>• USB-A (user memory stick, formatted under FAT32)</li> <li>• USB-B (service only)</li> </ul>   |
|                              | Graphical display <ul style="list-style-type: none"> <li>• Reflectometer RIF-9</li> </ul> | 10.4" colour TFT, 800 × 600 px, resistive touch  |
|                              | Operating modes switch  | Yes  |
|                              | Surge voltage levels switch   | Yes  |
|                              | Secondary control interface   | Rotary encoder   |
|                              | Internal memory   | 10,000 test results  |
| Connections                  | HV cable KEP -40 DC   | 10 m   |
|                              | Power supply cable  | 10 m   |
|                              | TDR connection cable RG -58, 1-phase  | 2.4 m  |
|                              | Protective Earthing cable KEP -10GCt, copper 10 mm <sup>2</sup> , transparent             | 10 m   |
|                              | Earthing control cable (red)  | 10 m   |
| Safety                       | Protection  | <ul style="list-style-type: none"> <li>• Operating against auxiliary grounding control</li> <li>• Chassis potential control</li> <li>• Overvoltage, overcurrent, overheating protection</li> <li>• EMERGENCY STOP button, automatic discharge</li> <li>• Operator lockout key</li> </ul> |
| Power supply and consumption | Supply voltage  | 230 V ±10 % AC, single phase   |
|                              | Supply frequency  | 50 Hz  |
|                              | Power consumption   | 2.0 kVA  |
| Physical                     | Dimensions, H × W × D (with RIF -9)   | 1215 × 764 × 675 mm  |
|                              | Total weight (with RIF -9, connection cables)   | 185 Kg   |
|                              | Protection rating (as per EN 60529)   | IP 30 open, IP65 enclosed  |



**Designed & manufactured by Kharkov Energo Pribor (KEP)**, with its facilities in Ukraine, Europe & U.K ; KharkovEnergoPribor Ltd. is a leading manufacturer of the high voltage electrical test equipment and devices, cable and calibration test vans, with systems having been supplied across 25 countries.

K.E.P products are designed for finding traces of cable lines and locating the faults in them, testing high-voltage equipment, control, relay protection and automation of electrical substations, transformers, bushings and transformer oil.

**ACL Stanlay** is the exclusive distributor of K.E.P, Europe for the Indian market, providing sales , training & after sales service & warranty backup for K.E.P Range. Asian contec ltd under its brand name Stanlay is one of the fastest growing organized manufacturers & suppliers in India of innovative engineering products & solutions for project execution and test and measurement in the Power transmission & distribution utilities, telecommunication , Water - Oil - Gas , Industries, Airport / ports & Engineering research EPC customer groups.

We manufacture and export a wide range of electric & telecom installation products to over 15 countries. In addition, we work with some of the leading companies worldwide in their respective product genres for product development and to supply our customers with cutting edge products . The product suite comprises over 1000 products based on electronic & smart technologies including Underground Utility locating equipments, Cable route locating, Permanent electronic markers for Cables & Pipes, Cable fault locating, Power testing, electrical test and measurement, Cable installation devices, Optical fiber test equipment, optical fiber tools, datacom testers, Gas detectors, non destructive testing equipment for concrete amongst others.

With presence at 7 locations across India, our highly trained team provides pre sales to post sales support for product shipped from our central warehouse at New Delhi - backed up a by a dedicated service engineering team and technicians.