Digi-Bridge

Cable/Jacket Fault Locator & DC Hipot

HV Diagnostics

DIGI-BRIDGE

- 12kV Output Capacity!
- Very Accurate Fault Pre-Location
- Long-lasting battery operation
- Sunlight visible color LCD display
- Ability to test very long cables
- Cable/jacket testing, fault pre-location & pinpointing in a single instrument
- Automatic discharge of cable after testing with status voltage monitoring
- Compact and lightweight, yet rugged and highly portable
- Easy to use, intuitive, graphical interface guides the user
- Find faults where traditional thumper impulse reflection methods don't work

DESCRIPTION

The Digi-Bridge is a fully integrated, one piece, automatic, highly accurate, high voltage cable insulation and jacket/sheath testing and fault location instrument. Housed in a rugged IP65 pelican type injection molded case, the Digi-bridge can be used to for both cable insulation and cable sheath integrity testing. Its main function, however, is the precise fault pre-location using the tried and tested bridge fault location technique to locate failures in cable insulation and/or the cable jacket-sheaths.

The Digi-Bridge is particularly useful when traditional thumper impulse reflection (TDR) techniques do not work - for example shorts and resistive type cable faults. In addition, the instrument can be used for cable/jacket fault pinpointing using the step voltage gradient method for direct buried cables. The Digi-Bridge is an extremely portable test instrument with a long lasting, integrated, rechargeable battery allowing both AC (shore power) or DC (battery) operation.

DIGI-BRIDGE

THREE DIFFERENT MODES:

CABLE & JACKET/SHEATH TESTING MODE

The Digi-Bridge allows the testing of the insulation or jacket / sheath of the cable according to IEEE P532. The user enters the maximum test voltage and time, and the unit measures the current and resistance of the load.

BRIDGE FAULT PRE-LOCATION MODE

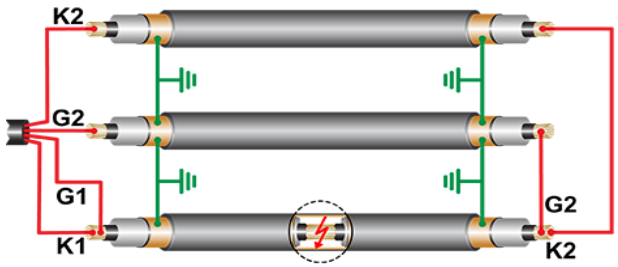
The accurate fault pre-location measuring Digi-Bridge utilizes the classical Murray and Glaser methods of fault location, providing fast and accurate distances to fault according to IEEE1234. Unlike other bridge fault location units that use the voltage drop method, requiring more current and power to achieve the same level of accuracy, the Digi-Bridge uses the traditional bridge methods, requiring a lot less power to accurately locate the fault. With an integrated high voltage DC source, it allows the automatic pre-location of low resistive as well as high resistive cable faults in both the cable insulation and the cable jacket/sheaths. This enables pre-location of faults in shielded transmission class, distribution class and unshielded control and lighting cables. The instrument can be used to locate faults on all types of MV and HV cable types and lengths and with various types of insulation shielding including copper tape, concentric neutral, flat strap, and longitudinally corrugated shields.

FAULT PIN-POINTING MODE

In fault pinpointing mode, the Digi-Bridge applies a defined DC pulse pattern to the cable shield with a simultaneous audio output for pinpointing of direct buried cables jacket/sheath faults according to the step voltage gradient method. The step voltages can be picked up by using the special optional A frame Receiver.

USER INTERFACE & MENU

A menu guided user interface on a bright sunlight visible color LCD screen guides the user through the process, providing important information and clearly highlighting the relevant connection hookups, thus eliminating the confusion often associated with bridge type instruments. The user then simply enters the maximum test voltage and cable length before starting the test. In minutes, the instrument automatically and accurately locates and displays the distance to the fault.



SAFETY FEATURES

The Digi-Bridge includes a powerful integrated discharge device that automatically discharges the cable load after testing is completed. Another safety feature includes a Red HV flashing LED providing the user with a local indication of the remaining decaying voltage in the cable after the HV is switched off. The instrument is powered by an integrated long-lasting rechargeable Li-Ion battery or it can be operated by regular AC mains.

HIGH VOLTAGE TEST LEADS

For ease of use the HV test leads also have suitable HV plugs, instead of using cheap connectors or a non-removable HV test lead, that does not afford the user the ease of use or flexibility to purchase longer test leads for various applications, and often requires a more complex cable HV test lead setup when testing.

Technical Data

Output Voltage	(Adjustable)	0 - 12 kV DC
Voltage Indication		+/- 1% +/- 100 V
Output Current	(@ all voltages)	0 - 10.5 mA
Current Indication		+/- 1% +/- 20 uA
Insulation Resistance		0.1 MΩ - 1 GΩ
Accuracy	(Bridge Fault Location)	+/- 0.1%
Bridge Methods		Murray & Glaser
Bridge Current		0 - 10.5 mA
Fault Pinpointing Mode	(Pulsed)	0.2 kV - 12 kV
Max. Discharge Capacity		10 µF
LCD Display	Sunlight Visible Color	480 x 272
Power Supply		AC 85-264 V / 50-60 Hz (150 VA)
Battery		Li-ion, 12 Ahr
Battery Life		> 10 hrs in HV Mode

Interfaces	USB Port
Operating Temperature	-20°C to 50°C / -4°F to 122°F
Storage Temperature	-40°C to 60°C / -40°F to 140°F
Relative Humidity	Non-Condensing
Dimensions	16.40x8.71x13.15 in / 41.7x22.1x33.4 cm
Weight	12.5 kg / 27 lbs
IP Rating	IP65 (with lid closed)

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