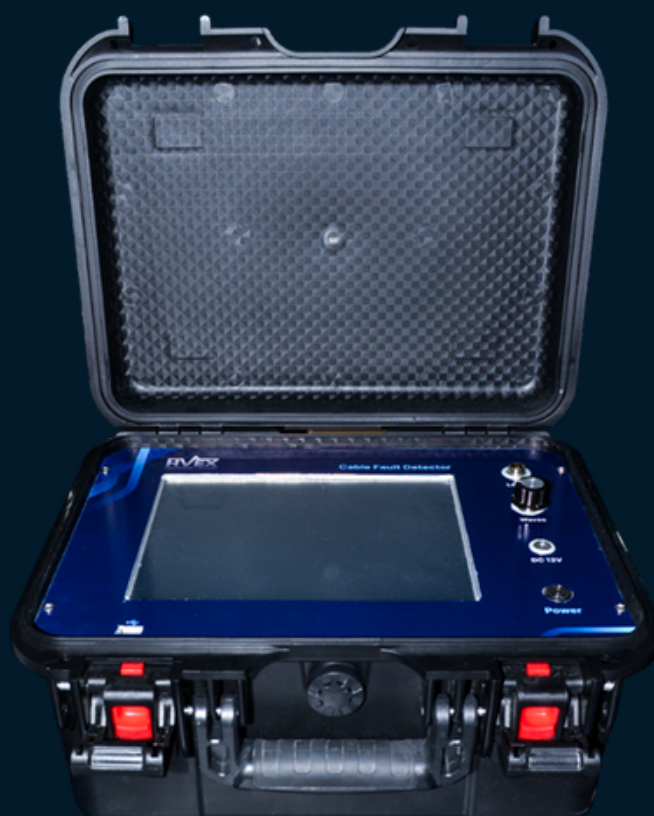


CABLE FAULT DETECTOR

CABLE FAULT DETECTION SYSTEM



CABLE FAULT DETECTOR

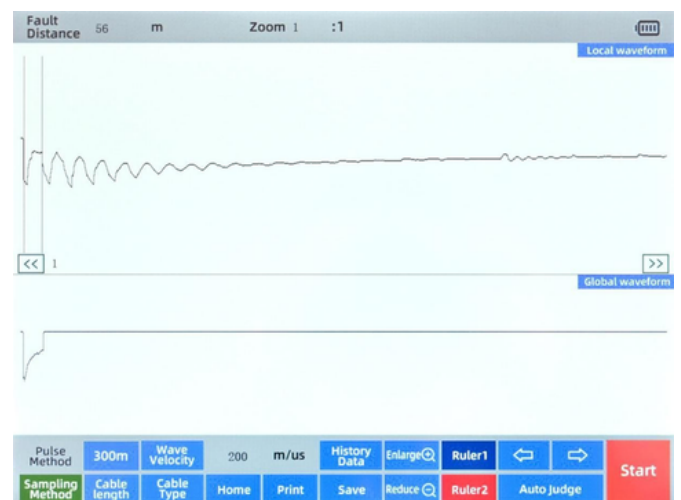
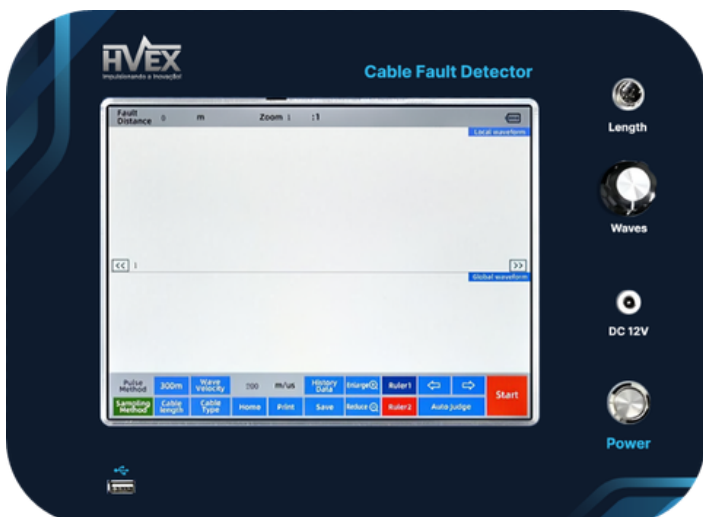
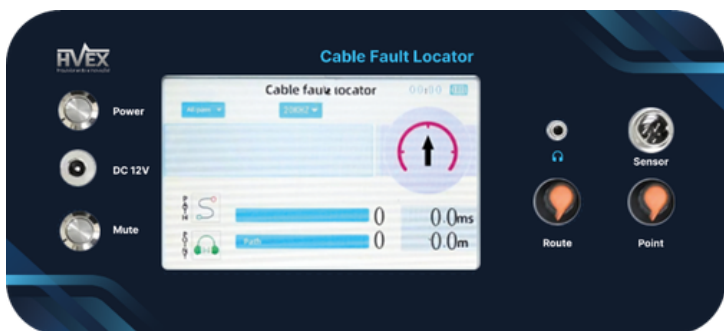
Description

The HVEX cable fault location system combines time-domain reflectometry (TDR), an impulse source and acoustic-magnetic pinpointing. It identifies and locates faults in power cables, including underground cables and cables in conduits.

The tester analyzes reflected pulses to estimate the distance to the fault. The impulse source and acoustic-magnetic locator complement fault location, according to the method and configuration used.

The partial discharge detection module uses UHF. This detection is distinct from apparent charge measurement according to IEC 60270. Such measurement requires a separately purchased partial discharge measurement system, also available from HVEX.

The cable fault detector features various arc reflection methods, low-voltage pulse method, pulse current method, attenuation method, and other new technologies. The set includes distance measurement, cable path integration. The equipment adopts a high-quality PP plastic case, which is compact, easy to carry; user-friendly interface, allowing for quick familiarization and use, providing efficient and accurate cable fault testing. The system test comprises the main system, fault locator, high-voltage impulse source, and cable path tester, used to test all types of cable faults, cable path, underground cable depth.



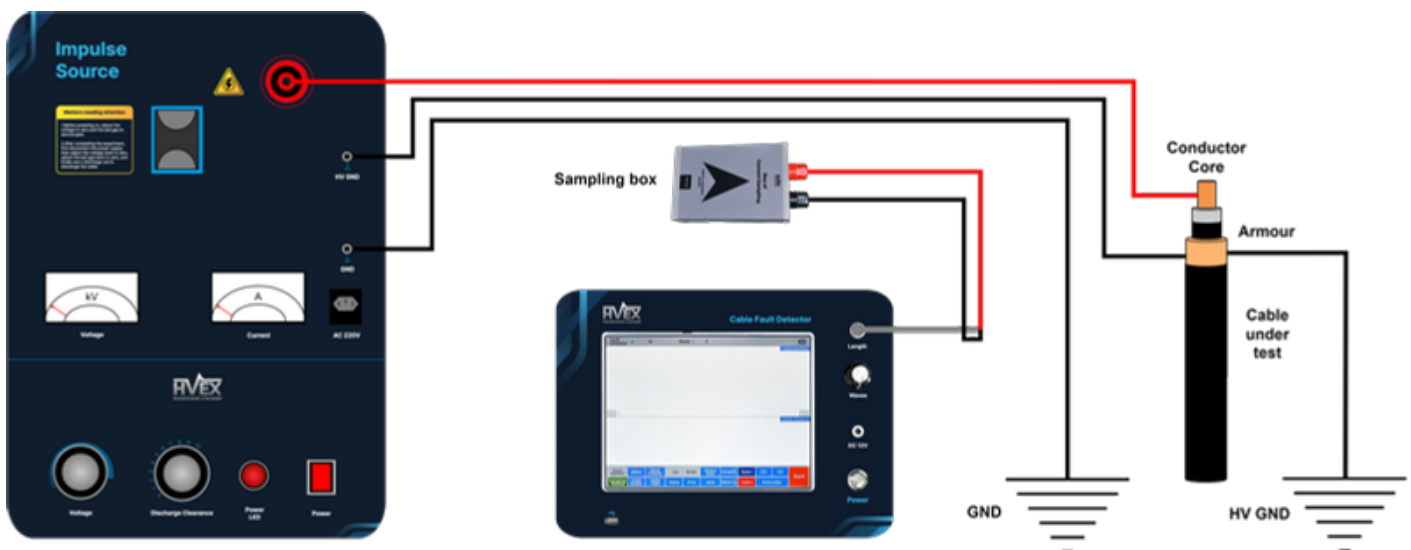
CABLE FAULT DETECTOR

Features

- Used for faults in power cables of different categories, sections, various media, and materials. Fault types include: open circuit, short circuit, low resistance, high resistance leakage, and high resistance flashover fault.
- Features a 10.4-inch industrial-grade touch-sensitive color LCD display, with menu-based operation and text prompts for achieving integration as a human-machine interface.
- Built-in storage/retrieval function, facilitating data and waveform storage, or call for reanalysis.
- Built-in power supply (built-in battery), can be used for an extended period in environments without power supply.
- Small, lightweight, easy to use, with high fault detection success rate and test accuracy.

Operation

The Cable Fault Locator utilizes the principle of reflectometry (using wave reflection) in the time domain, meaning it sends an electrical pulse to the cable, which will be transmitted through the cable. When a change in cable resistance occurs (fault point), the electrical pulse is reflected. The fault locator displays changes in the emission and reflection of the electrical pulse in the time-domain format through a graph presented on the LCD screen, and the distance to the fault can be interpreted directly through the waveform displayed on the screen, as well as presenting the fault location distance.



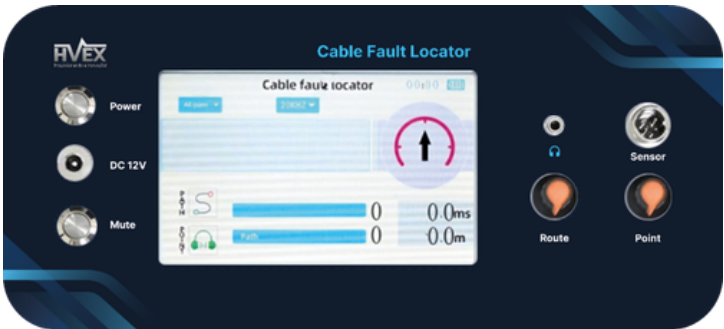
Technical Specifications - Cable Fault Detector Main Case

Power supply	Built-in battery
Continuous operation	> 4 h
Sampling method	Low voltage pulse
	Impact Flashover
Cable length	50 m
	300 m
	1 km
	2 km
	5 km
	10 km
	30 km
	60 km
Wave Speed Setting	Cross-linked ethylene
	PVC
	Oil impregnated paper
	Non-dripping oil
	Unknown
Impact high voltage	≤ 35 kV
Test accuracy and resolution	1 m
Display	10.4" colorful LCD Touch screen
Dimensions	370 x 270 x 220 mm (L, D, H)
Weight	2,5 kg



Technical Specifications - Acoustic Magnetic Cable Fault Locator

Power supply	Rechargeable built-in battery
Battery operation time	> 12 h
Display distance	Minimum: 0,1 m Maximum: 99,9 m
Maximum error	10%
Fixed point method maximum error	0,1 m
Path measurement	Lenght: 20 km Error: 0,3 m
Electromagnetic channel gain	≥ 110 dB
Electromagnetic channel receiver sensitivity	≤ 5 μ V
Sound channel audio amplifier gain	≤ 120 dB
Power frequency suppression ability	> 40 dB
Maximum power consumption	0,7 W



Technical Specifications - High Voltage Impulse Source

Input	220 VAC $\pm$ 10% 50 Hz
Output	0 to 28 kVDC $\pm$ 5% continuously adjustable, 30 mA
Discharge energy	1800 J
Capacitance	4 μ F / 30 kV
Spheres gap	0 to 10 mm (adjustable)
Weight	21 kg
Temperature	- 10 $^{\circ}$ C to 40 $^{\circ}$ C (14 $^{\circ}$ F to 104 $^{\circ}$ F)
Altitude	$\leq$ 1000 m
Relative humidity	$\leq$ 85%



We provide solutions for improvement of electrical energy generation, transmission and distribution efficiency, quality and reliability. With a highly specialized and experienced team in research, development and innovation, HVEX develops tailor-made solutions for Brazilian and foreign markets. Wide range of products with solutions focused on signal transduction, measurement, monitoring and protection.



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