

# Fault Location Scope

PCA101



Power

## Power Cable Analyzer

The PCA101 was developed to assist power cable fault location technicians in pre-locating and pre-determining distances to faults existing in power cables. It gives a direct reading in meters to the fault distance. Fault distances can also be determined from the far end of the cable by simply moving two cursors to any two points on the display screen. It is capable of locating low resistance (that is any fault lower than about 120 ohms or infinity ohms) or high resistance faults with the help of any standard impulse generator and the AE101 high voltage coupling unit.

## Operating Modes

The unit is capable of pre-locating distance to fault in three distinct modes.

### TDR

In the TDR (Time domain Reflectometer) mode the instrument transmits a pulse which is reflected off the far end of the cable. Any impedance mismatches (i.e. Joints, open or short circuits) along the cable are also reflected. The waveforms are easy to analyze.

## Impulse Current

In the Impulse Current Mode a high voltage discharge generated by a surge generator is applied to a faulty cable until the fault breaks down. Thus the surge energy is then reflected back to its source. Upon arriving at the source it is reflected back into the cable. This continues until the energy is depleted. The PCA101 will capture and store the current waveform flowing in the cable and display it for analysis.

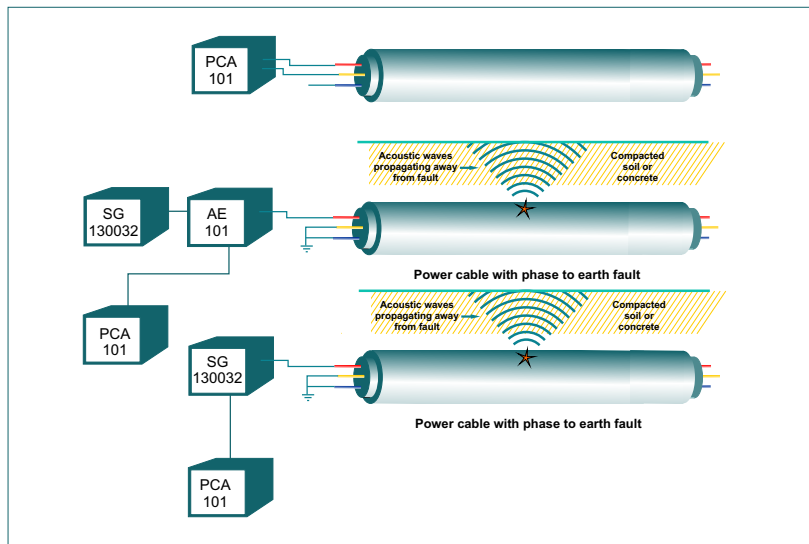
## ARC-Echo

In the ARC-Echo mode the instrument is connected to the faulty cable via the AE101 Coupling unit. This unit provides the suitable isolation and filtering required to superimpose a TDR waveform on top of the high voltage surge generated by the surge generator. When the high voltage energy arrives at the fault it temporarily breaks it down causing a short term short circuit. The waveforms are simple and easy to analyze and look exactly like TDR waveforms.





## Application



## Specifications

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Weight	3Kg
Size	300 x 300 x 130 mm
Controls	Watertight front panel with integrated multi-function tactile membrane switches
Power source	Rechargeable NiMH battery pack (charger with standard accessories)
Battery life	Approximately 4 hours for continuous use
Display	240 x 320 Pixel Transmissive LCD with multi-level greyscaling (permanently backlit)
Enclosure	Scratch resistant PVC enclosure with lifetime guarantee.

### Standard Accessories

1. Padded canvas carry case
2. All necessary cables
3. Switch mode battery charger and power supply
4. Operator manual



Optional: Surge Generators and AE101

### Products available

**Surge Generators** SG 200032, SG 130032, SG 50016, SG 7505  
**Cable Identification System** CI75, CI200  
**Burndown Unit** BU 3500  
**Ground Microphone Amplifier** GMA105  
**Cable Reel System** CRS30  
**DC Pressure Testers** 2010PT  
**AC Pressure Testers** 3010PT  
**Combination Pressure Testers (AC+DC)** 5010PT, 7010PT, 10010PT, 3042PT  
**VLF Pressure Testers** VLF20  
**Fault Pre-Locators** PCA101+AE101  
**Test Vans & Trailers**  
**Sheath Fault Locators** SFL16



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