

## EXAMPLE

Faulted cable is 25000 meters long.  
The value read in position "E", LE, is 24.7%, the value LB is 24.7 %.

the cable has only one contact at distance:

$$\frac{24.7 \times 25000}{100} = 6175$$

meters from the Outside end of the cable.

## SPECIFICATIONS

Can test cables with a loop resistance  $\geq 5\text{m}\Omega$  ( $\approx 90\text{ m @ }300\text{ mm}^2$ ) and  $\leq 30\text{ k}\Omega$ .

Range:  $> 100\text{ km @ }300\ \Omega/\text{km}$

Basic accuracy:  $\pm 0.1\% \pm 1\text{ digit}$

Maximum measuring current: 1A

Maximum applied voltage: 70 mV

Power supply: 7.2 ÷ 9V, 6 x AA size  
Alkaline or NiCd/NiMh batteries

Battery life: 1000 measur. @ 100 mΩ

Weight: 520 g

Dimensions: 110 x 204 x 41 mm

## TROUBLESHOOTING

No display dim display	Dead battery. Instrument failure.
Unstable measurement	Dead battery. Cable to test not faulted. Measurement carried out immediately after a voltage test. Cable to test too short. Cable to test not connected. Broken test leads. Instrument failure.

## CALIBRATION

Our instruments are calibrated using the following standards

Datron 4705 Autocal Multifunction Calibrator  
Yokogawa 7563 Precision Digital Thermometer  
GenRad 1686 Digital Capacitance Meter  
Agilent 66309D Mobile Communic. Source  
HP 34401 Multimeter  
HP 34970A Data Acquisition Unit  
Burster 1424 IEEE488 High Precision Decade  
Tettex 3200/BU Standard Resistor  
AOIP 0,01 Ω Standard Resistor  
Tettex Decade Capacitors  
ARCO Standard Capacitors  
JBC 5001 Standard Capacitor  
Lecroy LT264ML Oscilloscope  
Haefely PU12 Impulse tester  
Schaffner NSG431 Electr. Discharge Simulator  
Lecroy 9109 Arbitrary Function Generator  
Norbar 40051 Torque meter  
HP 3577A Network Analyzer

## SERVICING INFORMATION

If you have questions or need further assistance, please email us at [support@agmel.com](mailto:support@agmel.com)

Our complete catalog can be viewed, printed or bookmarked from our website: [www.agmel.com](http://www.agmel.com)

## AGM Elettronica

Via Marziale, 9  
80067 Sorrento (NA)  
Italy

Tel +39 3334288922

Fax+39 081 8071249

[www.agmel.com](http://www.agmel.com)

E-mail: [info@agmel.com](mailto:info@agmel.com)

## USER MANUAL

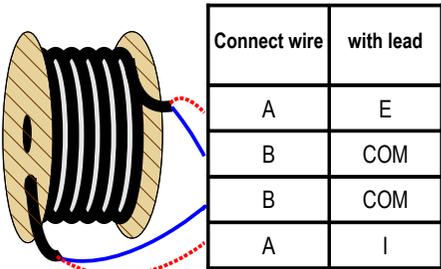
### Short circuit locator for metallic cables

Mod. **A910**





- 1 probes connector
- 2 display
- 3 measure switch
- 4 battery holder
- 5 measure mode select



Lead connections

## DESCRIPTION

The A910 is a short circuit locator for electric, telephone and power cables wind on the reel; it gives the position of the fault from the inside or outside end of the cable, in percentage to the total cable length.

## HOW TO USE IT

Ground the cable to be tested from any electrical charges.

If wire "A" is short with "B", connect the crocodile clips to the cable:

- 1) the crocodile clip "I" to "A" from the inside end.
- 2) the crocodile clip "E" to "A" from the outside end.
- 3) the crocodile clip "COM" to "B" from the outside end.

Perform a calibration test:

turn the measure mode knob to "Ref" and push the measure switch, the display will show  $100.0 \pm 0.1 \%$ , otherwise :

- a) the cable has a total resistance below 5 mΩ

- b) the cable has some electrostatic charges within
- c) the test leads are broken.

Turn the measure mode knob to "E" and push the measure switch, read on the display the value LE, length of the cable (in percentage to the total cable length) from clip "E" to the short.

**Switch the crocodile clip "COM" to wire "B" from the inside end**

push the measure switch, read on the display the value LB; if  $LE = LB \pm 0.1 \%$ , than the cable has just one short at distance:

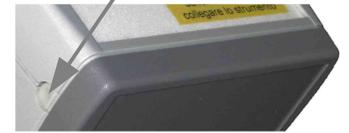
$$\frac{(\text{Value LE}) \times (\text{total length of cable})}{100}$$

from the outside end of the cable.

If  $LE \neq LB \pm 0.1 \%$ , the cable has more than one short and the distance to fault is calculated making use of the program supplied with the instrument.

To measure the distance to fault from the inside end of the cable, turn the measure mode knob in position "I" and push the measure switch.

To remove the battery door push the two gray plastic tabs.



**Be careful to observe battery polarity during installation !**

## WARNINGS AND SAFETY RULES

The locator is protected against electrical charges, but in some conditions these charges on the wire can accumulate and can be dangerous for the technician, therefore

**always ground the cable before any measurement**

Do not short the clips "I" with "E" for a long time, otherwise the battery life will be reduced.

The calibration test is possible only after a cable is connected.

The crocodile clips "I" and "E" are special Kelvin clips, **do not force the opening.**