

EXAMPLE

Faulted cable is 20000 meters long.

The value read in position "I" is 43.8 %

The value read in position "E" is 56,2 %

The cable has the fault at distance:

$$\frac{43,8 \times 20000}{100} = 8760 \text{ m}$$

from the inside end of the cable, or

$$\frac{56,2 \times 20000}{100} = 11240 \text{ m}$$

from the outside end of the cable.

SPECIFICATIONS

Range: 100 m ÷ 100 km @ 40 nF/km

Basic accuracy: ± 0.1 % ± 1 digit

Test frequency: 12.5 Hz , 125 Hz

Power: 9 V PP3 style alkaline cell

Battery life: 1000 measurements

Weight: 400 g

Size: 191 x 102 x 57 mm

TROUBLESHOOTING

No display dim display	Dead battery. Instrument failure.
The display shows 1 %	Broken test leads. Cable to test not connected.
The display shows 50.0%	Cable to test not faulted.
Unstable measurement	Dead battery. Cable to test too short. 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
Agilent E4406A VSA Tester
Agilent 33120A arbitrary waveform generator

SERVICING INFORMATION

If you have questions or need further assistance, please email us at support@agmel.com

Our complete catalog can be viewed, printed or book marked from our website: www.agmel.com

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USER MANUAL

Open locator for metallic cables

Mod. **A994**



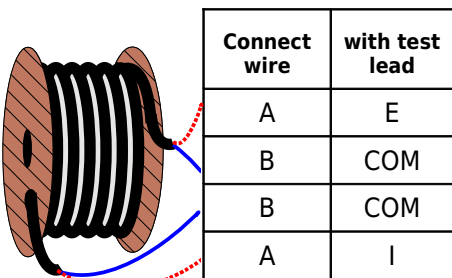
AGMeI



EA994 Rev 4 12/14



- 1 battery holder
- 2 display
- 3 measure switch
- 4 probes connector
- 5 measure led
- 6 measure mode select
- 7 range select



Lead connections

DESCRIPTION

The A994 is an open locator for electric and telephone cables wound 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 broken and "B" is a wire close to "A", 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 clips "COM" to "B" from the inside and the outside end.**

Perform a calibration test: put the range knob in position "Lo", put measure mode knob in position "Ref" and push the measure switch, wait for about six seconds and verify the measure led: if the led is alight, then the range knob is well positioned, otherwise move the knob over position "Mid" or "Hi".

Now that the led is alight, the display will show $100.0 \pm 0.1 \%$, otherwise the cable has some electrostatic charges within or the test leads are broken.

Put the measure mode knob in position "I" and push for about six seconds the measure switch, read on the display the value LI, length of the cable (in percentage to the total cable length) from clip "I" to the open.

Put the measure mode knob in position "E", push the measure switch for about six seconds, read on the display the value LE, length of the cable (in percentage to the total cable length) from clip "E" to the open.

The total of the two measurements $LI+LE$ equals $100.0 \pm 0.1 \%$ and the cable has the fault at distance:

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

from the outside end of the cable, or

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

from the inside end of the cable.

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 "COM" with "E" or "I" for a long time, otherwise the battery life will be reduced.

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

In case of measure of a not faulted cable, the display will show $50.0 \pm 0.1\%$