

# ZRA

## ZERO RESISTANCE AMMETER Accurate Low Current Measurement ZM3 Product Series

*Measuring milliamp currents with a conventional ammeter results in inaccurate readings due to loading by the meter.*

*Standard measurement devices insert a resistance into the circuit and report the current as the voltage across the resistance divided by the resistance. In most circuits, where a small current measurement is to be taken, the insertion of this resistance by the ammeter can cause significant error.*

### Features / Benefits:

- Automatic operation
- 4½ Digit High Brightness LED Digital Display Meter
- Measures down to 0.1  $\mu\text{A}$
- 0.5% accuracy over the entire input range
- Temperature stable over the entire operating temperature range from -10°C to +50°C (14°F to 122°F). Extended temperature ranges are also available.
- Powered by 2x9V Alkaline batteries



### Device Function:

The ZM3 counters the effect of the inserted resistance by keeping the voltage drop across the input terminals below a few microvolts. The current used to maintain the null voltage across the terminals is precisely measured, displayed and made available at the output measurement pins. Because there is no burden on the measured circuit, the reported current is extremely precise.

### Ranges:

The Zero Resistance Ammeter has two ranges (0-2 mA and 0-20 mA) both of which are equipped with over range and polarity indication.

**Resolution:** 0.1  $\mu\text{A}$  on 2mA scale and 1.0  $\mu\text{A}$  on 20mA scale.

**Accuracy:** Better than 0.5% over the entire input range.

**Dimensions:** Configured as above  
300 x 250 x 120 mm (L x W x H)  
(11.8 x 9.8 x 4.7 inches)

**Weight:** Configured as above  
1675 g (3.7 lbs.)

### Configurations:

Various configurations are available, ranging from a battery powered field instrument (shown above) to an AC powered lab instrument or an OEM circuit board for use in remote monitoring applications.

Power source options include: 90-240VAC, 12-24VDC, high capacity rechargeable LiIon, Ni-Cd or NiMH batteries.

Extended range of 0 to 200mA is also available.

Please contact us for details via email at [techsupport@corrosionservice.com](mailto:techsupport@corrosionservice.com) or call the office nearest you.

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*For additional information please  
contact the office nearest you.*

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