



## MS1500L Handheld LPR Corrosion Data Logger

The MS1500L is a hand-held, battery-powered, intrinsically safe corrosion meter capable of measuring and storing data from all types of 2- or 3-electrode linear polarization resistance (LPR) corrosion probes. The instrument is light weight, microprocessor-based, and features a simple, menu-driven interface using a 12-key keypad and a 4-line LCD display.

Corrosion rate measurements are made using the linear polarization resistance technique. The instrument measures the current required to polarize the electrodes of a probe to a known potential. From the polarization potential and the measured current, polarization resistance can be calculated. Then, using Faraday's law, the instantaneous corrosion rate can be calculated from polarization resistance.

The MS1500L incorporates a high-precision zero-resistance ammeter (ZRA) for measuring galvanic current between electrodes. It also offers a high-precision voltmeter for measuring the open-circuit potential between electrodes.

After performing a measurement, the instrument displays the corrosion rate, current, or potential, depending on the mode selected. The reading can then be stored to memory or discarded. All stored readings are automatically time and date stamped, and are protected by a lithium back-up battery. The instrument can store a maximum of 3,000 readings on up to 100 different probes.

Stored data can be uploaded to any IBM compatible PC as a comma-delimited ASCII text file. Because the data is in ASCII text format, it can be imported into any standard data analysis program such as Microsoft Excel, Lotus 123, or Corel Quattro Pro. Data can also be reviewed on the instrument's LCD



*Probe shown in photo not included with corrosion meter*

display for quick reference.

The MS1500L may also be used as a data transfer unit (DTU) for the [MS3500L](#) Remote Data Logger. Data may be transferred from multiple MS3500L field-based units to the MS1500L, then later transferred to a PC for analysis.

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## Technical Specifications

### **Model**

MS1500L - Handheld LPR Corrosion Data Logger (Ordering # IN1500L)

### **Physical Data**

Instrument Weight:	1.4 lb. (0.64 Kg)
Total Weight w/ Carrying Case & Accessories:	5.26 lb. (2.39 Kg)
Instrument Dimensions:	7.63" H x 4.15" W x 2.0" D (19.38cm x 10.54cm x 5.08cm)
Carrying Case Dimensions:	10" H x 11.75" W x 5.4" D (25.40cm x 29.85cm x 13.72cm)
Operating Temperature:	32° to 122°F (0° to 50°C)
Storage Temperature:	-4° to 158°F (-20° to 70°C)

### **Performance Data**

<b>Measurement Type</b>	<b>Range</b>	<b>Resolution</b>
2-Electrode	0 to 200 mpy	0.01 mpy
3-Electrode	0 to 150 mpy	0.01 mpy
Galvanic	± 999 µA	1 µA
Potential	± 999 mV	1 mV

### **Electrical Data**

Power Requirements:	One 9V Battery
Maximum Probe Cable Distance:	6 ft. (1.83 m)

Output Specifications:

RS-232 Output in Comma-Delimited ASCII Text Format

Intrinsic Safety:



Class I, Division 1  
Groups A, B, C, and D  
Temperature Code T2D  
Class I, Zone 0  
Group IIC, T2D  
Conforms to ANSI/UL Std. 913

### **Special Features**

- Microprocessor-based electronics
- Data storage capacity of 3,000 readings on 100 different probes, with battery backup
- Menu-driven interface using a 12-key keypad and a 4-line LCD display
- Low-battery detection
- Portable

### **Accessory Items**

Carrying Case, 6' Probe Cable (attached), Meter Prover, 6 to 5-Pin Adapter, Galvanic Adapter, Communications Cable and Connector, Operation Manual, Corrosion Data Management Software

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Contact Metal Samples Corrosion Monitoring Systems sales department for pricing and availability.

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