Model 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.

Probe shown in photo not included with corrosion meter

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 a 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. Data can also be reviewed on the instrument's LCD 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.

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 and 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

Measurement Type	Range	Resolution
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

ETL LISTED ® 9900750

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

Metal Samples

Metal Samples Company
A Division of Alabama Specialty Products, Inc.
152 Metal Samples Rd., Munford, AL 36268 Phone: (256) 358-4202 Fax: (256) 358-4515
E-mail: msc@alspi.com Internet: www.metalsamples.com
Houston Office: 6327 Teal Mist Lane, Fulshear, TX 77441 Phone: (832) 451-6825