

Model MS3500E

Remote ER Data Logger

The MS3500E is a battery-powered, intrinsically safe, remote data-logger capable of measuring and storing data from all types of electrical resistance (ER) corrosion probes. The instrument is microprocessor-based and features a simple, menu-driven interface.

Corrosion rate measurements are made using a high-resolution electrical resistance method, measuring up to 65535 probe units. Essentially, the instrument measures the resistance of the probe element which changes over time, as metal loss occurs. The rate of change is directly proportional to corrosion rate. This method finds a wide variety of applications since it can be used in conductive and nonconductive environments such as petroleum, chemical, water, soil, or even atmosphere.



The MS3500E takes probe readings on a user-programmable logging interval. Readings are time and date stamped as they are taken, then stored to memory. Between readings, the instrument remains in a “sleep” mode to conserve main battery power. The instrument’s memory is capable of storing more than 100,000 readings, and is stored in non-volatile Flash memory.

Stored data can be uploaded to any 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.

Stored data can be downloaded directly to a certified USB storage device or via Bluetooth (option on Model MS3520E). This eliminates the need to remove the MS3500E from its site, or to bring a laptop PC to the site. This can be particularly useful when collecting data from multiple MS3500E Data Loggers. And since the MS3500E is intrinsically safe, data can be downloaded from the MS3500E even in hazardous locations.

The MS3500E also offers an optional 4-20mA current loop output. This feature allows data from the instrument to be fed directly to any industrial process computer that accepts analog inputs.

The instrument is housed in a stainless steel NEMA 4X / IP 66 enclosure, and all external connections are weather-proof. This makes the MS3500E suitable for use in almost any indoor or outdoor environment.

Technical Specifications

Model

MS3500E - Basic Model

MS3510E - Basic Model + 4-20mA Current Loop Output

MS3520E - Basic Model + Bluetooth

(Models MS3500E & MS3510E include USB interface)

Physical Data

Instrument Weight:	11.94 lb. (5.42 Kg)
Total Weight w/ Accessories:	13.64 lb. (6.19 Kg)
Instrument Dimensions:	11.50" H x 8.94" W x 4.00" D (29.21cm x 22.71cm x 10.16cm)
Case Specifications:	NEMA 4X / IP66 - stainless steel
Mounting Specifications:	10.75" H x 6" W (27.31cm x 15.24cm) Bolt Pattern 0.3" (0.76cm) Diameter Bolt Holes
Operating Temperature:	-40° to 158°F (-40° to 70°C)
Storage Temperature:	-40° to 158°F (-40° to 70°C)

Performance Data

Measurement Type:	ER measurement using any standard ER probe type (Wire Loop, Tube Loop, Cylindrical, Flush, Strip, etc.)
Range:	0-65535 Probe Life Units (Displayed as 0.00 to 1000.00)
Resolution:	0.0015% of probe life
Download Method:	Directly to certified USB storage device or via Bluetooth (MS3520E)
Data Storage:	> 100,000 readings

Electrical Data

Power Requirements:	7.2 V lithium battery pack
Typical Battery Life:	3 years at 1 hour measurement interval
Bluetooth (MS3520E only):	Class v2.0
Range:	10 meters
Output Specifications:	Optional 4-20mA Current Loop Output (MS3510E)

Certifications

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-40 Deg C < Ta < 70 Deg C (with Tadiran TL5930 cells)

-40 Deg C < Ta < 50 Deg C (with Xeno XL-205F cells)

Special Features

- Microprocessor-based electronics
- Menu-driven interface
- Low-battery detection
- Large internal memory for more storage
- IP66 enclosure

Accessory Items

10' Probe Cable, Meter Prover, Communications Cable and Connector*, Current Loop Connector*, Operation Manual, Corrosion Data Management Software

**Based on model*



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