

Model MS3502E / MS3504E

Remote ER Data Logger - Multi-Channel

The MS3502E / MS3504E 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. The MS3502E / MS3504E has two / four probe connectors to allow it to take measurements at two / four different locations.

Corrosion rate measurements are made using a high-resolution electrical resistance method, measuring up to 65,535 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 MS3502E / MS3504E 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. This eliminates the need to remove the MS3502E / MS3504E from its site, or to bring a laptop PC to the site. This can be particularly useful when collecting data from multiple MS3502E / MS3504E Data Loggers. And since the MS3502E / MS3504E is intrinsically safe, data can be downloaded from the unit even in hazardous locations.

The instrument is housed in a stainless steel NEMA 4X / IP 66 enclosure, and all external connections are weather-proof. This makes the MS3502E / MS3504E suitable for use in almost any indoor or outdoor environment.

Technical Specifications

Model

Model MS3502E High Resolution Data Logger with Two Probe Connectors

Model MS3504E High Resolution Data Logger with Four Probe Connectors

(The MS3502E / MS3504E includes a 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
Data Storage:	> 100,000 readings

Electrical Data

Power Requirements:	7.2 V lithium battery pack Tadiran TL5930 (standard) or Xeno XL-205F
Typical Battery Life - MS3502E:	3 years (8 readings per day with both channels enabled)
Typical Battery Life - MS3504E:	3 years (4 readings per day with all four channels enabled)
Maximum Probe Cable Distance:	300 ft. (91 m)

Certifications

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

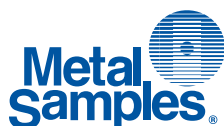
-40 Deg C < Ta < 50 Deg C (with Xeno XL-205F cells)

Special Features

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

Accessory Items

10' Probe Cables - 2 cables with MS3502E, 4 cables with MS3504E (additional cable lengths can be ordered separately), Meter Prover, Operation Manual, Corrosion Data Management Software



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