

Model MS5000E-ISA

High-Resolution ER Transmitter (ISA 100)

The MS5000E-ISA is a battery-powered, intrinsically safe, wireless transmitter capable of measuring and transmitting data from all types of electrical resistance (ER) corrosion probes. The instrument is microprocessor-based and features an intuitive menu-driven interface. Additionally, the MS5000E-ISA is designed to mount directly to the ER probe which simplifies installation.

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 MS5000E-ISA takes probe readings on a user-programmable interval. Readings are then transmitted wirelessly using the ISA 100 protocol. Between readings, the instrument remains in a “sleep” mode to conserve main battery power. It is supplied with a Lithium battery pack which has a standard life of 3 years under normal working conditions and is certified to be replaced 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 MS5000E-ISA suitable for use in almost any indoor or outdoor environment. The instrument supports Star or Mesh Network topology with a wireless range of 450 meters with clear line of sight to another instrument or gateway.

The MS5000E-ISA can be seamlessly integrated into existing or new process networks of Honeywell, Yokagawa, CDS, etc. The easily configurable Metal Samples gateway (sold separately) helps to interface Metal Samples wireless transmitters to the process automation host system and improves connection scalability. The gateway can be directly interfaced to PAC/DCS systems through a MODBUS/OPC interface.



Technical Specifications

Model

MS5000E-ISA – ER Wireless ISA 100 Transmitter

Physical Data

Instrument Weight: 5.75 lbs (2.61 Kg)
Total Weight w/ Accessories: 7.75 lbs (3.52 Kg)
Instrument Dimensions: 12.00"H x 5.55"W x 7.61"D (30.48cm x 14.10cm x 19.33cm)
Case Specifications: NEMA 4X / IP66 - stainless steel
Mounting Specifications: Direct-to-probe mount
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

Electrical Data

Power Requirements: 7.2 V lithium battery pack
Typical Battery Life: 3 years

Certifications

IECEX

Ex ia [ia] IIC T4 Ga
-40 Deg C < Ta < 70 Deg C

ATEX

II 1 G Ex ia [ia] IIC T4 Ga
-40 Deg C < Ta < 70 Deg C

FCC and Industry Canada (IC)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions. This device may not cause harmful interference. This device must accept any interference received, including interference that may cause undesired operation.

Communication

ISA100 Wireless Protocol
Range: 450 Meters (Line of Sight)
Network Type: Star or Mesh
Number of Devices: 500

Antenna

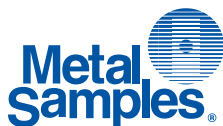
Integrated Omni-Directional
Gain: 2 dBi
Maximum SWR: 2:1

Accessory Items

Meter Prover, Operation Manual, Corrosion Data Management Software

Optional Accessories

Remote Mounting Kit, Wireless Gateway



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