



Metal Samples

Corrosion Monitoring Systems

MS3011 Rack-Mount LPR Transmitter

The MS3011 is an automatic corrosion transmitter capable of measuring and transmitting data from all types of 3-electrode linear polarization resistance (LPR) corrosion probes.



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, instantaneous corrosion rate is calculated from polarization resistance.

The instrument offers measurement ranges as low as 0 to 0.5 mpy, and as high as 0 to 1000 mpy. The measurement cycle time is also adjustable. Both values are set using switches on the front panel of the instrument. This allows the instrument to be configured to almost any application.

Corrosion Rate is transmitted via current loop. This feature allows data from the instrument to be fed directly to any industrial process computer that accepts analog inputs. The current loop output has a switch-selectable range, making it compatible with most systems.

The MS3011 also offers a programmable alarm circuit. The alarm set-point is adjusted as a percentage of full scale, using a switch on the front panel. The alarm is capable of switching up to 115VAC at 5A, and offers normally-open and normally-closed contacts.

The instrument can be mounted in a standard 19-inch rack, using optional hardware. There is also an optional NEMA-12 weather-proof housing for field-mounting of the instrument.

Technical Specifications

Model

MS3011 - Rack-Mount LPR Transmitter (Ordering # IN3011)

Physical Data

Instrument Weight: 3.36 lb. (1.52 Kg)
Total Weight w/ Accessories: 4.80 lb. (2.18 Kg)
Instrument Dimensions: 3.50"H x 13.88"W x 5.38"D (8.89cm x 35.26cm x 13.67cm)
Mounting Specifications: 3"H x 13"W (7.62cm x 33.02cm) Bolt Pattern,
0.25" (0.64cm) Bolt Hole
Operating Temperature: 32° to 158°F (0° to 70°C)
Storage Temperature: 32° to 158°F (0° to 70°C)

Performance Data

Measurement Type: 3-Electrode LPR
Range: Switch Selectable Ranges from 0.2mpy to 1000mpy
Cycle Time: 0.5 to 50 minutes

Electrical Data

Power Requirements: 120V/240V AC, 50/60 Hz
Output Specifications: Current Loop Output
Range: Switch selectable: 0-40mA, 0-16mA, 0-4mA, 1-5mA,
4-20mA, or 10-50mA

Special Features

- Switch selectable measurement range, cycle time
- Alarm output with variable set point

Accessory Items

Probe Cable, Meter Prover, Operation Manual

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