Model MS2801L - CorrTran MV

LPR RS-485 Modbus Transmitter

Metal Samples' MS2801L CorrTran MV transmitter measures general corrosion, localized corrosion (pitting), and conductance, and transmits that information to operators via RS-485 Modbus protocol in real time.

The CorrTran MV utilizes state-of-the-art algorithms and data analysis techniques to accurately measure general corrosion rate and pitting. Harmonic distortion analysis (HDA) is applied to improve the performance of the industry-accepted linear polarization resistance (LPR) technique used to measure corrosion rate.

To further enhance the performance, an application-specific Stern-Geary variable (B value) is calculated and updated every measuring cycle. There is no need to manually update the B value because of process changes. During the measurement cycle, CorrTran MV also performs an automated electrochemical noise (ECN) measurement, which in combination with the corrosion rate data can provide a measurement of localized corrosion (pitting).

The CorrTran MV works with Metal Samples three-electrode CorrTran style probes and electrodes. Probes are available in a variety of mounting types and materials to suit almost any type of installation.

Features

- On-line corrosion monitoring, multivariable
- RS-485 Modbus
- General corrosion, localized corrosion (pitting), and conductance monitoring
- Stern-Geary B value automatically updated for changes in the process

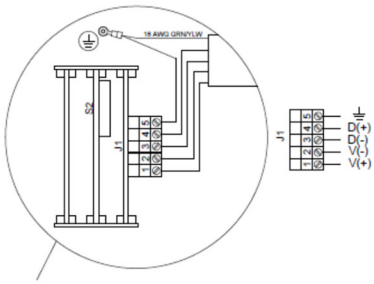
Ordering Information

Transmitter Model			
MS2801L-	CorrTran MV Transmitter – RS-485 Modbus		
	Mounting Type		
	00	Direct Mount	
	06	Remote Mount with 6' (1.8m) Cable	
	12	Remote Mount with 12' (3.6m) Cable	
	XX	Special (Remote Mount with XX' of Cable)	
		Enclosure Type	
		00	Copper Free Aluminum
		01	Stainless Steel 316
MS2801L-	**06**	**00**	**Example of Ordering #**

Technical Specifications

Model	MS2801L CorrTran MV LPR RS-485 Transmitter

Terminal Assignments



Physical Data	
Instrument Weight	3.70 lb (1.67 kg)*
Instrument Dimensions	8.00” x 4.82” x 3.45” (20.32cm x 12.24cm x 8.76cm)
Operating Temperature	-40 to 158°F (-40 to 70°C)
Enclosure Material	Cast Aluminum (Copper-Free) / Stainless Steel 316
Degree of Protection	IP66, NEMA 4X
Electrical Entry	¾ NPT (Other entries available on special request)

*Aluminum

Electrical Data	
Electrical Connection	Power and RS-485 Serial communication
Minimum terminal voltage	11 V
Maximum terminal voltage	30 V
Current Consumption	~30mA

Measurement Data			
Probe Type	3-Electrode LPR		
Measurement Type	**General Corrosion**	**Localized Corrosion**	**Conductance**
Measurement Unit	mpy (mils per year) or mmpy (mm per year)	Unitless	microSiemens (µS)
Measurement Range(s)	Default Range: 0 to 40 mpy (0 to 1 mmpy) Maximum: 1000 mpy (25 mmpy)	Default Range: 0.0 to 1.0 Low Range: 0.0 to 0.3 High Range: 0.3 to 1.0	5 to 333,333
Maximum Measured Error	Excitation voltage < 0.05% of full span Corrosion current measurement <0.2% of full span		
Factory Settings	B value (Stern Geary value): 25.6 mV K value (corrosion constant): 11800 (2e- in reaction)		
Measurement Cycle	4 to 21 minutes (depends on configuration)		

Output Data	
Output Signal	RS-485 Modbus RTU and ASCII protocol
Baud Rate	2400/4800/9600/19.2K selectable
Address	32 Maximum Units (addresses 1 to 32)

Enclosure Specifications	
Explosion Proof	FM, CSA, CENELEC, UL
Protection	IP66, NEMA 4X, 7BCD, 9EFG
Hazardous Location Certifications	
Type of Protection	Ⓔx II 2(1) G Ex db[ia Ga] IIC T5….T4 Gb -40° C ≤ Ta ≤ + 80° C Ex db[ia Ga] IIC T6 Gb -40° C ≤ Ta ≤ + 70° C

Conformity Information	
Directive 2014/34/EU (ATEX)	EN 60079-0 , EN60079-1 , EN 60079-11

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information contact Metal Samples.

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