

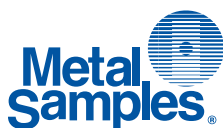
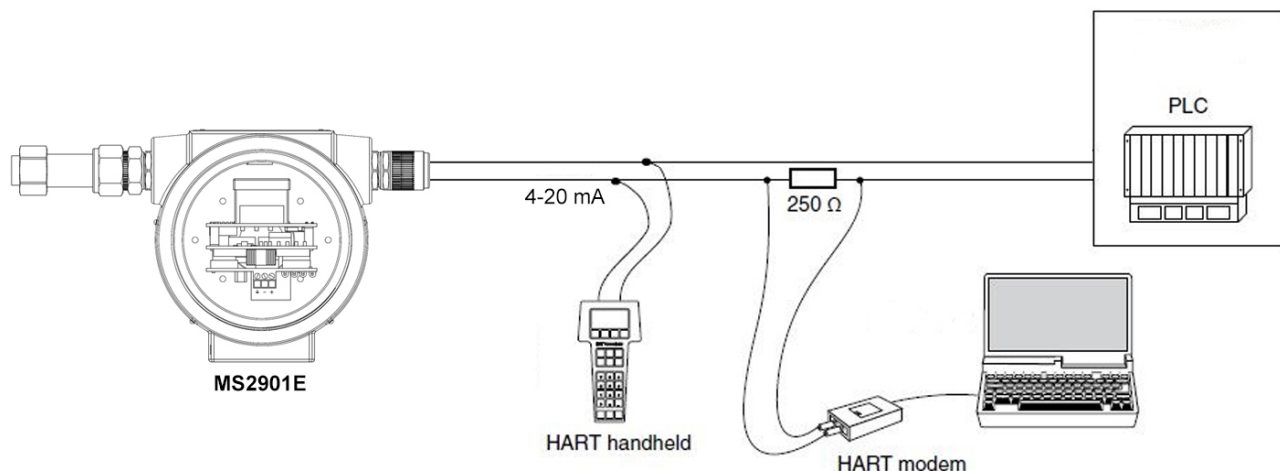
Model MS2901E

High Resolution ER Transmitter 4-20 mA / HART Output

Metal Samples' new compact MS2901E ER Transmitter (ERT) measures all types of electrical resistance (ER) corrosion probes using state-of-the-art algorithms and data analysis. The new high-resolution, 16-bit measurement provides faster response, obtaining corrosion rates in hours instead of days. Metal loss gets updated and transmitted after each measurement cycle in the form of 4-20mA /HART signal.

The transmitter is provided in a weather-proof (IP 66 / NEMA-4X) and explosion proof enclosure (cast aluminum or stainless steel). It is designed to be mounted directly to the probe, but can also be mounted nearby using the optional mounting kit and a customer-supplied mounting pole.

The MS2901E is completely loop-powered with an in-built isolator, so installation is simple. No external isolator/barrier is necessary. A two-wire connection is all that is required for both instrument power and data transmission. Setup is also simple, using a set of switches to select the probe type to be measured.



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Technical Specifications

Model

MS2901E - High Resolution ER 4-20mA HART Transmitter, Direct Mount

MS2901E-XX* - High Resolution ER 4-20mA HART Transmitter, Remote Mount

*XX = Cable length in feet, up to 30 feet maximum, in 5-foot increments.

Physical Data

Instrument Weight:	5.25 lb. (2.38 Kg)
Total Weight w/ Accessories:	7.31 lb. (3.31 Kg)
Instrument Dimensions:	
Cast Aluminum enclosure:	9.0"H x 5.3"W x 5.0"D (22.86cm H x 13.46cm W x 12.70cm D)
Stainless Steel enclosure:	9.5"H x 5.4"W x 5.4"D (24.13cm H x 13.72cm W x 13.72cm D)
Operating Temperature:	-40° to 158°F (-40° to 70°C)
Storage Temperature:	-40° to 158°F (-40° to 70°C)
Enclosure Material:	Cast Aluminum (Copper-Free) or Stainless Steel
Mounting Specifications:	Direct probe mount or Remote mount (up to a 2.5" (6.35cm) dia. pole)

Performance Data

Measurement Type:	ER measurement using any standard ER probe type (Wire Loop, Tube Loop, Cylindrical, Flush, Strip, etc.)
Range:	0-100% of probe life
Resolution:	0.0015% of Probe Life (16-bit)
Cycle Time:	~1 Minute

Electrical Data

Connection:	4 to 20 mA with HART, 2 Wire
Power Requirements:	11 to 28 VDC
Current Consumption:	4 to 22.5 mA Maximum 20mA without alarm/22.5mA with alarm
Electrical Connection:	1/2" NPT entry with Ex Gland 3/4" or other entries are available with adaptors*
Maximum Probe Cable Distance:	30 ft (9.1 m)

Output Data

Output Signal:	4-20mA output with HART protocol
Alarm Signal:	- Current Output Configurable - Digital interface
Load:	- min. 250 Ohms for HART Communication

Hazardous Location Certifications

Europe and Worldwide (ATEX and IECEx)	II 2(1) G Ex db [ia Ga] IIC T6....T4 Gb II 2(1) D Ex tb [ia Da] IIIC T85°C ...T130°C Db - 40°C ≤ Tamb ≤ + 70°C Ex db [ia Ga] IIC T6....T4 Gb Ex tb [ia Da] IIIC T85°C ...T130°C Db - 40°C ≤ Tamb ≤ + 70°C ATEX Certificate No: ITS14ATEX27981X IECEx Certificate No: IECEx ITS 14.0010X
USA and Canada (ETL)	Class I, Zone 1, AEx db [ia Ga] IIC T6....T4 Gb Class I, Division 2, Groups A, B, C & D, T6...T4

Hazardous Location Certifications – Enclosure

Case Specifications:	Explosion Proof (FM, CSA, UL) IP 66, NEMA 4X, 7BCD, 9EFG
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Included Accessories (Direct-Mount Model)

Meter Prover, Operations Manual

Included Accessories (Remote-Mount Model)

Meter Prover, Operations Manual, Probe Cable, Mounting Hardware Kit

*Contact Metal Samples for special cables and cable entries.