

ER Transmitter

Request A Quote

Model ER-420

The Model ER-420 transmitter is a two-wire ER transmitter for use with ER probes. This version has been developed to meet stringent European CE and ATEX specifications. This transmitter is well suited for plant locations, widely separated monitoring points, and connection into a distributed control system (DCS).

The transmitter has a NEMA 4X enclosure with the option of up to a 100 foot probe cable. A 24 Vdc supply is typically required to power the loop via an approved intrinsic safety barrier (for Zone 1 only). The unit provides isolation between the probe and 4-20 mA circuits. The system is intrinsically safe to USA, Canadian, and European standards.



Specifications

2-Wire Transmitter

Available stainless steel enclosure

Resolution $\pm 0.1\%$ for rapid response

Compatibility

Compatible with all Electrical Resistance (ER) Probes

Switchable Probe Selector to easily adjust between different probe types

Hazardous Area Location Certified

Intrinsically safe (IECEX/ATEX / $c_{CSA_{US}}$)

Certified for use in Class I Zone 1,2 IP 66 rated enclosure

This transmitter is one component of the electrical resistance (ER) corrosion monitoring system, which quantifies metal loss in any liquid, gaseous, or solid environment. System components include probes, remote and portable data loggers, and other accessories to meet specific application requirements.

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Typical System-ER-420 Transmitter



Typical ER-420 assembly set up

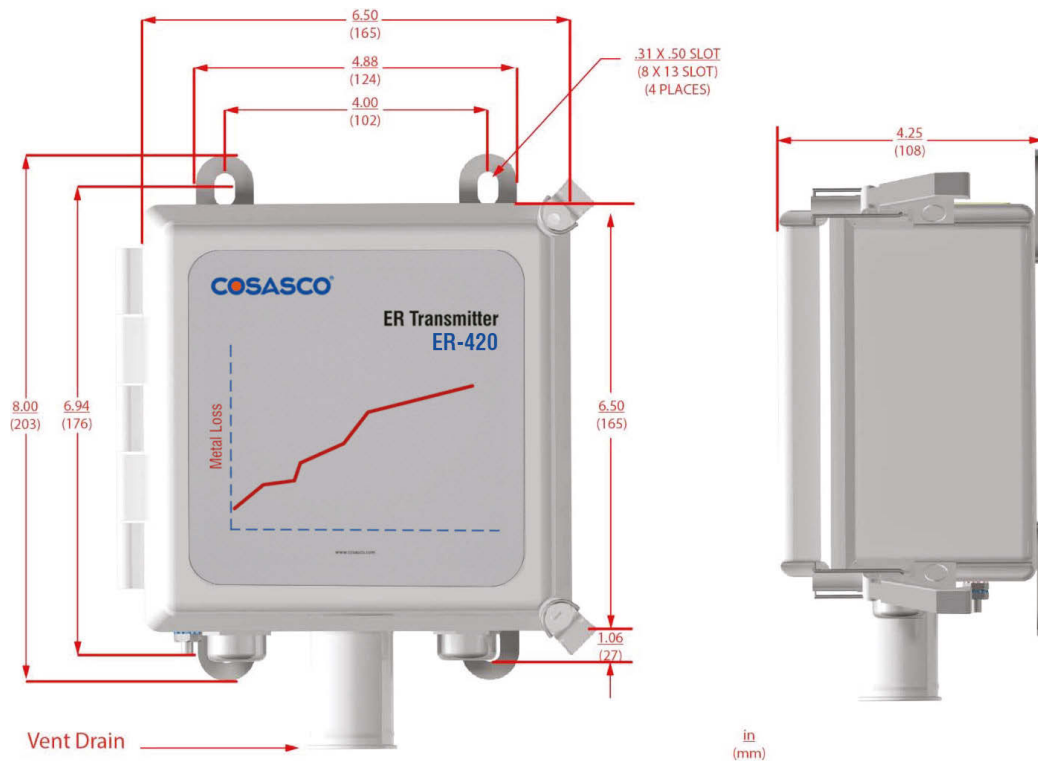
ER Transmitter ER-420

Specifications

Output	4-20 mA	
Ambient Temperature Range	-40° C to 80° C (-40° F to 176° F) Zone 1 or Zone 2 (With Safety Barrier) -40° C to 70° C (-40° F to 158° F) Zone 2 (Without Safety Barrier)	
Supply Voltage Range	10-30 Vdc at 20mA	
Resolution	±0.1%	
Weight	4 lbs. (1.8 kg)	
Enclosures	Fiberglass Polyester NEMA 4X, IP66 or Stainless Steel (316L), IP66	
Probe Cable	100 ft. maximum	
Hazardous Area Certifications	<u>ATEX Certification</u> SIRA 14 ATEX 2304X Ex ib IIC T4 Gb, Ta = -40°C to +80°C <u>IEC Ex Certification</u> IECEx SIR 14.0107X Ex ib IIC T4 Gb, Ta = -40°C to +80°C	<u>North American Certifications</u> CSA Certification: 70026842 CSA _{US} Class I, Zone 1, AEx ib IIC T4 Gc, Ta = -40°C to +80°C CSA Ex ib IIC T4 Gb, Ta = -40°C to +80°C

*Protection type "nA" permits the use of the transmitter without the safety barrier, provided the probe and transmitter are in class I Division 2 or Zone 2 area.

Dimensions



ER-420

Ordering Information

Model	Description
ER-420	ER Transmitter
	Code Cable Type
	0 Standard
	1 Flexible Conduit
	Code Probe Connector Type
	A Inserts: 2000, 3000, 3705
	B Fixed & Adj: 2500, 2520, 2600, 2610, 2620, 3500, 3600, 4000 Series
	S Retractable: 3700* (Standard Cable Only)
	Code Default Probe Element Type**
	W Wire Loop
	T Tube Loop / Flush
	S Strip Loop
SP Cylindrical	
Code Enclosure Type	
0 Fiberglass Polyester NEMA 4X (Standard)	
1 Stainless Steel 316 NEMA 4X	
Code Cable Length	
L Cable Length in Feet (100 ft. Max)	
Code Classified Location	
1 Class I Zone 1	
2 Class I Zone 2	
ER-420 — 0 — B — W — 0 — 10 — 1 ← Example	

*Standard cable type only

**Probe Elements easily selected by rotary switch (wire loop-W tube/flush-Loop-T, Strip loop-S, cylindrical-SP).

See image to the right (rotary switch).

Accessories

Part Number	Description
095786	Intrinsic Safety Barrier for ER-420 (required for Zone 1)
402207	Mounting Bracket Assembly for Pipe
748643	Test Probe Kit (includes wire, cylindrical, tube/strip test probes)



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