



Real-time data delivered to your network.

Microcor® wireless transmitter is based on Cosasco's flagship corrosion and erosion measurement technology. It delivers real-time, continuous data directly from the field.

Specification	Communication Option	
	WirelessHART	ISA100 Wireless
Wireless Range (clear line of sight)	1000 ft (300 m)	1500 ft (450 m)
Transmitter Battery Life	3 Years	3 Years
Wireless Devices Supported	Up to 100	Up to 500
Network Type	Inherently Mesh	Mesh or Star Topology
System Integration	Emerson, Endress & Hauser, Siemens, and other WirelessHART networks	Yokogawa and other ISA100 Wireless Networks
Certifications	Hazardous Area Locations (Class I, Zone 1)	Hazardous Area Locations (Class I, Zone 1)

Operating Specifications

Stability of Reading

Typically $\pm 0.01\%$ of span on reference probe

Accuracy

Less than 0.001 mil (dependent on probe)

Real World Speed of Response

1 mpy = 8 hrs 20 mins

2 mpy = 4 hrs 10 mins

5 mpy = 1 hr 40 mins

7 mpy = 1 hr 12 mins

10 mpy = 50 mins

Data Transmit Rate

10 to 60 minutes

(15 minutes for 3 year battery life)

Communication

2.4 GHz IEEE 802.15.4.

- WirelessHART Protocol (MWT-3905-0-0)
- ISA100 Wireless Protocol (MWT-3905-0-2)

Ambient Temperature Range

-40C to +70C (-40F to +158F)

Antenna

Integrated Omni-directional Antenna

Impedance: 50 Ω

Gain: 2dBi

Maximum SWR: 2:1

Maximum radio power output: 10 mW

Physical Specifications

Enclosure

Rating: IP66

Materials:	Housing:	6061-T6 ALUM 316 Stainless Steel
	Paint:	Polyester Enamel over Epoxy Primer

Power supply

7.2 V Lithium Power Module

Power Module life: 3 years (Typical)

Hazardous Area Location Certified.

(Replacement okay in hazardous

locations).

Weight

Aluminum Housing: 7.5 lbs. (3.4 kg) with Lithium
Power Module Installed Stainless

Steel

Housing: 15.3 lbs. (6.9 kg) with Lithium Power
Module

Dimensions: See below

Optional Remote Mounting Kit for Pole or Wall Mounting

Metal Bracket (supplied) for direct wall mount and adjustable
U-Bolt mounting for 2" pipe size vertical or horizontal pole
mounting

Probe Mounting

Directly to probe via Probe Adapter (PN 745092, 745093,
745114). For remote locations probe can be directly connected
to M-310 / M-320 via a cable, P/N 748497. See chart below for
options

Product Certifications

Telecommunication Compliance

All wireless devices require certification to ensure that they adhere to regulations regarding the use of the RF spectrum. Nearly every country requires this type of product certification. Cosasco is working with governmental agencies around the world to supply fully compliant products and remove the risk of violating country directives or laws governing wireless device usage. The M-310 / M-320 is currently certified with the governmental agencies of Australia, Canada, European Union, and United States. Additional country approvals are in currently in progress and will be posted as soon as certification is verified. Please contact Cosasco or visit our website for the latest country certifications.

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. This device must be installed to ensure a minimum antenna separation distance of 20 cm from all persons.

ATEX certification

Sira 19ATEX1044X

Ex db ib [ib Gb] IIC T4 Gb, $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$

Enclosure: NEMA 4, IP 66

For use only with Power Module P/N 748400

North American Certifications

CSA Certification: CSA 19 CA 70197955X

CSAUS AEx db ib [ib Gb] Class 1, Zone 1, IIC T4 Gb, $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$ CCSA Ex db ib [ib Gb] Class 1, Zone 1, IIC T4 Gb, $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$

Enclosure: NEMA 4, IP66

For use only with Power Module P/N 748400

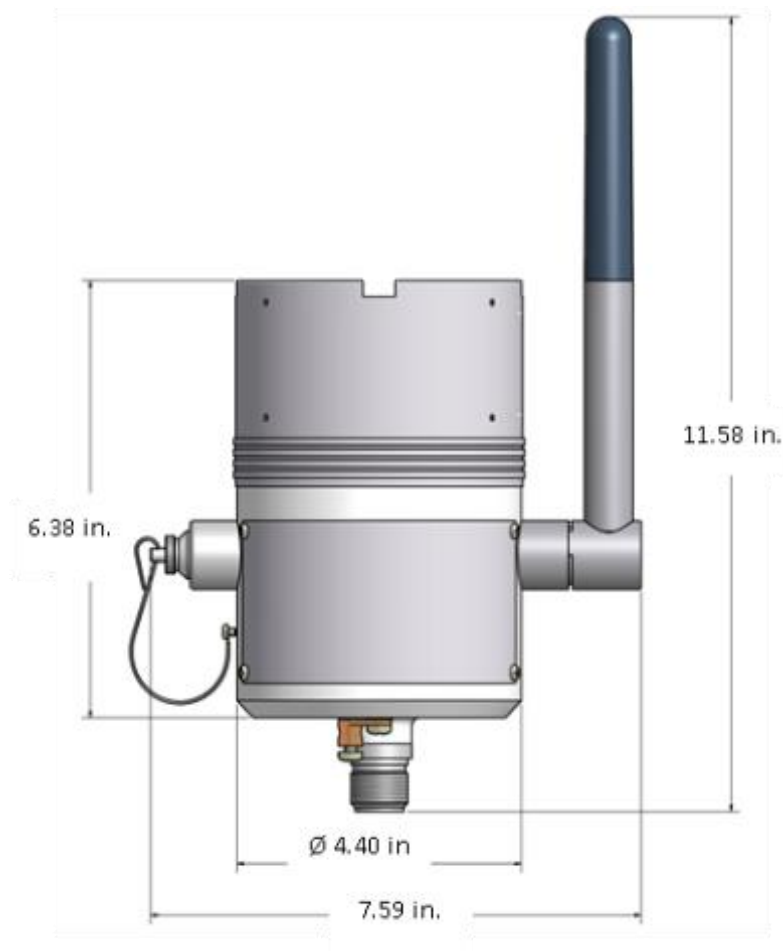
IECEX Certification

IECEX SIR 19.0018X

Ex db ib [ib Gb] IIC T4 Gb, $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +70^{\circ}\text{C}$

Enclosure: NEMA 4, IP 66

For use only with Power Module P/N 748400

Dimensions

Ordering Information for ISA100 Wireless



Microcor ER Wireless Transmitter-ISA100 Wireless

Model	Description	
MWT-3905	Microcor ER Wireless Transmitter with ISA100 Radio	
	Code	Housing
	0	Aluminum
	1	Stainless Steel 316 SS
		Code
		Radio
		2
		2.4 GHz ISA100 Wireless - Integral Antenna
MWT-3905	0	2

← Typical Order Number

Example: MWT-3905 - 0 - 2

System Requirements

Field Wireless Management Station

See R-Y410 Field Wireless Management Station Data Sheet

Field Wireless Access Point

See R-Y510 Field Wireless Access Point Data Sheet.

Microcor® High Sensitivity Probes

See Microcor® Probes Data Sheet

Probe Adapters

Model M2000 & M3000 series probes P/N 745092

Model M4000 & S4000 series probes
 P/N 745093 (For permanent connection at 2500 PSI max)
 P/N 745093H (For permanent connection at 2500 PSI max)
 P/N 745114 (For permanent connection at 10,000 PSI max when used with pressure retaining covers P/N 740095)
 P/N 745114H (For permanent connection at 10,000 PSI max when used with pressure retaining covers P/N 740095)

Cables (Transmitter to Probe Cable with Transmitter Mounting Bracket)

Part No.	Description	
748497	M-320 Remote Mounting Kit	
	Code	Cable Type
	0 ²	Cable Assembly Only (Requires Probes Adapter)
	1	Retractable (unarmored)
	2	Retractable (armored)
	3	Retrievable (armored) 2500 PSI
	4	Retrievable (unarmored) 2500 PSI
	5	Retrievable (armored) 10,000 PSI
	6	Retrievable (unarmored) 10,000 PSI
		Code
		Cable Length
		L
		Length in Feet (15 ft max)
748497	1	5

← Typical Order Number

Accessories

COSASCO® Wireless Extender

Model	Description	
MWT-3905-WE	Cosasco Wireless Extender (includes mounting bracket)	
	Code	Radio
	0	Aluminum
	1	Stainless Steel 316 SS
		Code Housing
	2	2.4 GHz ISA100 Wireless - Integral Antenna
MWT-3905-WE	0	0

← Typical Order Number

7.2 V Lithium Power Module P/N 748400

M-320 Installation Kit -
ISA100 Wireless

P/N 702406-MWT-ISA (includes Wireless Field Tool for transmitter configuration)

Ordering Information for **WirelessHART**

Model	Description	
MWT-3905	Code	Housing
	0	Aluminum
	1	Stainless Steel 316 SS
		Code Radio
	0	2.4 GHz Wireless HART7 - Integral Antenna
MWT-3905	0	0

← Typical Order Number

System Requirements

Wireless Gateways

See R-1420 or R-1410 Data Sheets.

Checkmate DL-W Wireless Configurator

P/N Checkmate DL-W

Microcor® ER Probes

See Microcor® ER Probes Data Sheet, Bulletin No. 150 for ordering information.

Microcor® Erosion Probes

See Microcor Erosion Probes Data Sheet, Bulletin No. 700 for ordering information.

Probe Adapters

Model M2000 & M3000 series probes
Model M4000 & S4000 series probes

P/N 745092

P/N 745093 (For permanent connection at 2500 PSI max)

P/N 745093H (For permanent connection at 2500 PSI max)

P/N 745114 (For permanent connection at 10,000 PSI max when used with pressure retaining covers P/N 740095)

P/N 74114H (For permanent connection at 10,000 PSI max when used with pressure retaining covers P/N 740095)

Cables (Transmitter to Probe Cable with Transmitter Mounting Bracket)

Part No.	Description		
748497	M-310 Remote Mounting Kit		
	Code	Cable Type	
	1	Retractable (unarmored)	
	2	Retractable (armored)	
	3	Retrievable (armored) 2500 PSI	
	4	Retrievable (unarmored) 2500 PSI	
	5	Retrievable (armored) 10,000 PSI	
	6	Retrievable (unarmored) 10,000 PSI	
	Code	Cable Length	
	L	Length in Feet (15 ft. max)	
748497	1	5	← Typical Order Number

Accessories

COSASCO® Wireless Extender

Model	Description		
MWT-3905-WE	Cosasco Wireless Extender (includes mounting bracket)		
	Code	Radio	
	0	Aluminum	
	1	Stainless Steel 316 SS	
	Code	Housing	
	0	2.4 GHz Wireless HART7 - Integral Antenna	
MWT-3905-WE	0	0	← Typical Order Number

7.2 V Lithium Power Module P/N 748400

M-310 Installation Kit -
WirelessHART7 P/N 702406-MWT