WirelessHART Field Transmitter

Overview

The Syscor Tracker™ WirelessHART Field Transmitter is an intrinsically safe device designed for Zone 0 deployment that integrates seamlessly into any standard WirelessHART network.

The Field Transmitter can be configured to detect inclination, acceleration/vibration and temperature. It can be paired with Syscor's sensor transducer attachments, which are configured to detect a combination of liquid or gaseous hydrocarbons (C_3 and heavier), temperature, acceleration/vibration and water level, depending on site and application requirements.

Sensor readings are communicated, along with network and battery status, via the WirelessHART standard to a WirelessHART Gateway, which in turn routes the data to industry standard monitoring and control systems as required.
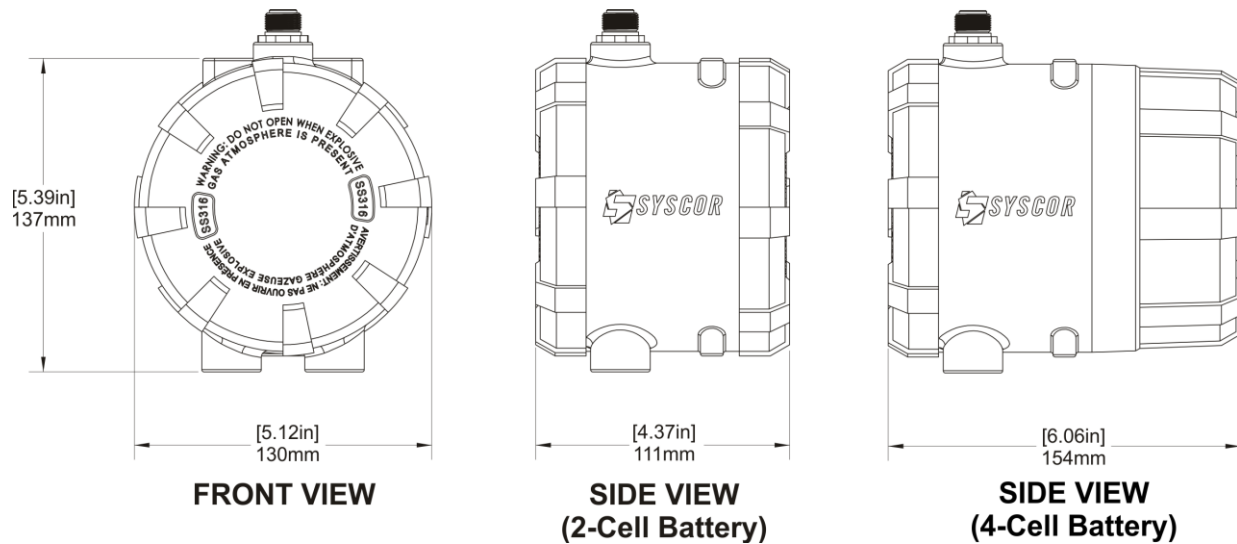
Related Solution Packages

Both the HC-Tracker™ and FR-Tracker™ Solution Packages use WirelessHART Field Transmitters.

- HC-Tracker - Hydrocarbon leak detection in facilities, underground and in water bodies
- FR-Tracker - Floating roof monitoring applications for aboveground storage tanks

Key Features

- Intrinsically safe design for Zone 0 deployment
- Extensively tested and independently qualified devices
- Stainless steel (SS316) construction
- Standard mounting bracket supports U-bolt, strut channel and direct screw mounting
- Self-contained units are easily installed and removed
- Wireless, battery powered units allow rapid deployment
- Intrinsically safe Syscor designed Li-SOCl$_2$ battery packs provide up to 10 years of power
- WirelessHART (IEC 62591) mesh technology creates self-forming, self-healing, scalable, secure networks
- WirelessHART technology allows easy addition and removal of units from an existing network
- Integrates easily with industry standard WirelessHART Gateways

*Field Transmitter PCU with HCD and HCDW sensor transducers and rigid monopole antenna

FRONT VIEW

[5.39in] 137mm

[5.12in] 130mm

SIDE VIEW (2-Cell Battery)

[4.37in] 111mm

SIDE VIEW (4-Cell Battery)

[6.06in] 154mm

Specifications

Functional Specifications

Power Usage	Typical:< 0.1 W
Internal Sensors	Temperature, accelerometer Optional: Inclinometer
External Sensors	2 x 1/2 in. NPT ports for external sensor transducer attachments
Wireless Comm.	WirelessHART IEC 62591 2.4 GHz DSSS
Wireless Data Update Rate	User-selectable; 1 second to 1 hour
Display	4 LED indicators for status and diagnostics

Physical Specifications

Power Supply	Replaceable, intrinsically safe, Li-SOCl$_2$ battery pack; up to 10 yr. battery life depending on application and sampling rate 2-cell battery pack: 7.2V 19.0Ah 136.8Wh 4-cell battery pack 7.2V 38.0Ah 273.6Wh Enclosure: ABS plastic
Communication	Two (2) terminals for communication with HART field communicators
Enclosure	Housing: Stainless steel SS316 Rating: IP67
Antenna Options 2.4GHz	· Omni-directional, flexible whip monopole antenna, N-Type male, straight, 4dBi peak gain · Omni-directional, rigid monopole antenna, N-Type male, straight, 3dBi peak gain · Right hand circular polarized, patch antenna, N-type, 4.9dBi peak gain
Antenna Port	N-Type female
Conduit Ports	1/2 in. NPT
Sensor Wiring Connections	Screw terminals for 4x1 conductor 20 AWG tinned copper wire
Weight	3.75 kg [8.3 lbs.]
Mounting Options	· Standard mounting bracket · Magnetic mounting bracket (optional 3M VHB adhesive for aluminum surfaces)

Performance Specifications

Electromagnetic Compatibility	Meets all relevant requirements of EN 62479:2010 and EN-61326-1:2013
Vibration and Acceleration	Ultra-low-power, high performance, three-axis linear accelerometer Dynamically selectable range: ±2g/±4g/±8g/±16g 1 Hz to 5 kHz sampling frequency Acceleration and velocity detection
Inclinometer (Optional)	High accuracy (0.1°), dual-axis digital inclinometer/accelerometer sensor Digital inclination data, 0.025° resolution Digital acceleration data, 0.244 mg resolution ±1.7 g accelerometer measurement range
Temp. Sensor	±1°C [1.8°F] resolution
Operating Temp.	-40°C to 60°C [-40°F to 140°F]

Product Certifications

Note: Certifications apply to the complete system (PCU + sensors)

USA	Intrinsic Safety: [CSA] 4792360 FCC: 2AAZE-000697
Canada	Intrinsic Safety: [CSA] 4792360 IC: 11413A-000697
Product Markings	North America: CL 1 DV 1 GP C&D T4 Europe: 11 1G Ex ia 11B T4

How to Purchase

Visit syscor.com for more information. Contact Syscor to discuss your specific site and application requirements.

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