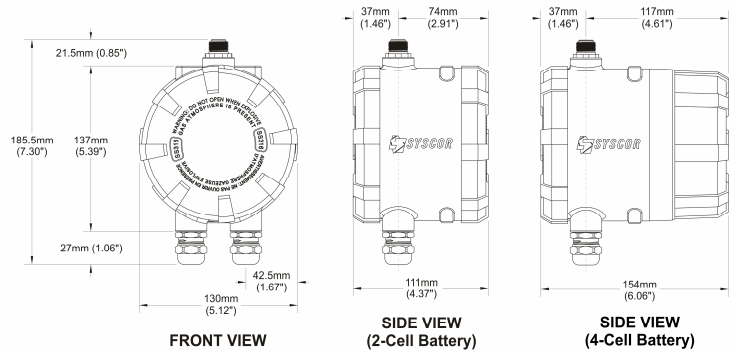


PCU-X00 Repeater

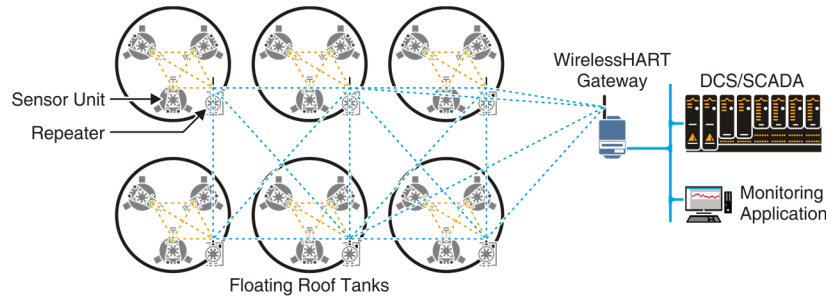


Description

Syscor's WirelessHART PCU-X00 Repeater was developed and qualified, in close cooperation with the petroleum industry, as a network bridge between WirelessHART devices. The Intrinsically Safe Repeater allows a WirelessHART network to expand its effective range, overcoming significant distance or obstruction challenges.

Applications

The Repeater improves performance of the WirelessHART network by increasing density or range. In addition, Syscor's FR-Tracker 2.0 Sensor Units send data to the WirelessHART Gateway via Repeaters installed on the tank's platform railing.



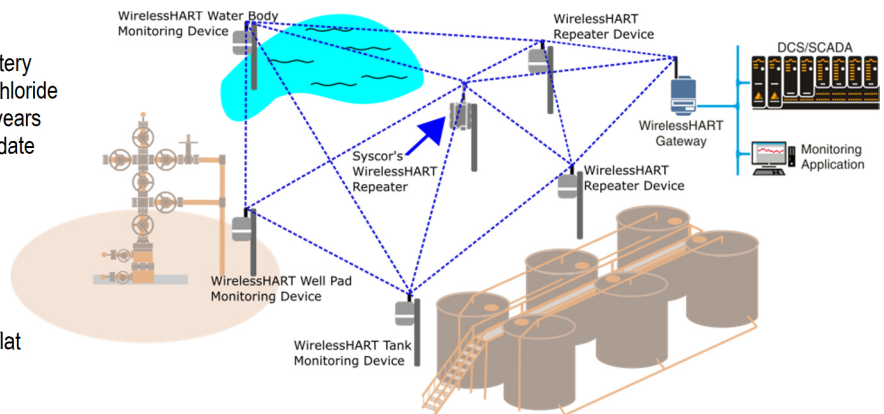
1. Repeater for FR-Tracker 2.0 safety system

Power

The Repeater is powered by Syscor's 841 and 902 Battery Packs that contain high energy density lithium thionyl chloride (Li-SOCl₂) cells. Low self-discharge provides up to 10 years of reliable and predictable power, depending on the update rate.

Installation

Syscor's Universal Mounting Bracket can attach the Repeater to struts, tubing, or equipment. No hot work is required. Optional bracket magnets can be used on flat steel surfaces.



2. Repeater for WirelessHART field devices

WirelessHART Communication

The Repeater utilizes the industry standard WirelessHART protocol, which accounts for roughly 30% of the industrial wireless sensing market.* Data is transmitted from the WirelessHART Gateway to the facility's DCS/SCADA using industry standard interfaces. WirelessHART (IEC 62591) is a secure, full mesh technology capable of self-forming, healing, and scaling.

* <https://www.controlglobal.com/articles/2019/arc-report-details-growth-of-fieldbus-hart-and-ethercat/>

Specifications

Functional Specifications	
Internal Sensors	Temperature
Wireless Comm.	WirelessHART IEC 62591 2.4 GHz DSSS
Wireless Data Update Rate	User-selectable; 1 minute to 1 hour
Physical Specifications	
Power Supply	Field replaceable, Intrinsically Safe, Li-SOCl ₂ battery pack; up to 10 yr. battery life depending on application and update rate 841 Battery Pack: 2-cell, 7.2V 19.0Ah 136.8Wh 902 Battery Pack: 4-cell, 7.2V 38.0Ah 273.6Wh Enclosure: Fully potted, ABS plastic
Communication	Maintenance Port for communication with HART field communicator
Enclosure	Housing: Stainless steel SS316
Antenna Options 2.4-2.5 GHz	<ul style="list-style-type: none"> Omni-directional, 5dBi, Laird FG25005, 349.25mm (13-3/4in.), N-type female, straight Omni-directional, 4.26dBi, Taoglas FW.24.NTY.M, 316mm (12.44in.), flexible whip monopole, N-type male, straight Right Hand Circular Polarization (RHCP) antenna, 4.93dBi, Taoglas WTSP.2400.25.4.40, 25 mm (0.98in.) Omni-directional, 8dBi, Taoglas OMB.242.08F21, 523mm (20.59in.), N-type female connector, straight Optional lightning arrestors are available
Antenna Port	N-Type female
Sensor Probe Ports	1/2in. NPT
Sensor Wiring Connections	Screw terminals for 4x1 conductor 20 AWG tinned copper wire
Weight	3.75kg [8.3lbs.]
Mounting Options	Universal Mounting Bracket

Performance Specifications

Electromagnetic Compatibility	Meets all relevant requirements of EN 62479:2010 and EN-61326-1:2013
Temp. Sensor	8 bit resolution; worst case accuracy $\pm 2^{\circ}\text{C}$ [3.6°F]
Operating Temp.	-40°C to +60°C [-40°F to +140°F]

Product Certifications

Note: Certifications apply to the complete system (Field Transmitter (IP67, Type 4X) + sensor probes (IP68, Type 4X))

USA	FCC: 2AAZE-000697 Intrinsic Safety: [CSA] 70174889 Class I, Division 1, Groups C and D, T4 Class I, Zone 0 AEx ia IIB T4 Ga
Canada	IC: 11413A-000697 Intrinsic Safety: [CSA] 70174889 Class I, Division 1, Groups C and D, T4 Ex ia IIB T4 Ga
Europe	Intrinsic Safety: [SIRA] 18ATEX2249X Ex ia IIB T4 Ga CE ₀₅₁₈

Learn More

Field Transmitter Battery Packs	http://www.syscor.com/downloads/BATTERY01DDS_FT Batteries_2.1.0.pdf
Universal Mounting Bracket	http://www.syscor.com/downloads/BRACKET02DDS_UniversalMountingBracket_2.1.0.pdf
Antennas	https://www.syscor.com/products/antennas
Stackable Monitoring Well	http://www.syscor.com/downloads/TUBING01DDSS_SMonitoringWell_2.1.0.pdf
Monitoring Software	https://www.syscor.com/products/software
PCU-X00 Repeater	http://www.syscor.com/downloads/PCU01DDS_WiHART-Repeater_2.1.0.pdf