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Please contact us for product questions or purchasing

WirelessHART

HCD Hydrocarbon Detector Probe

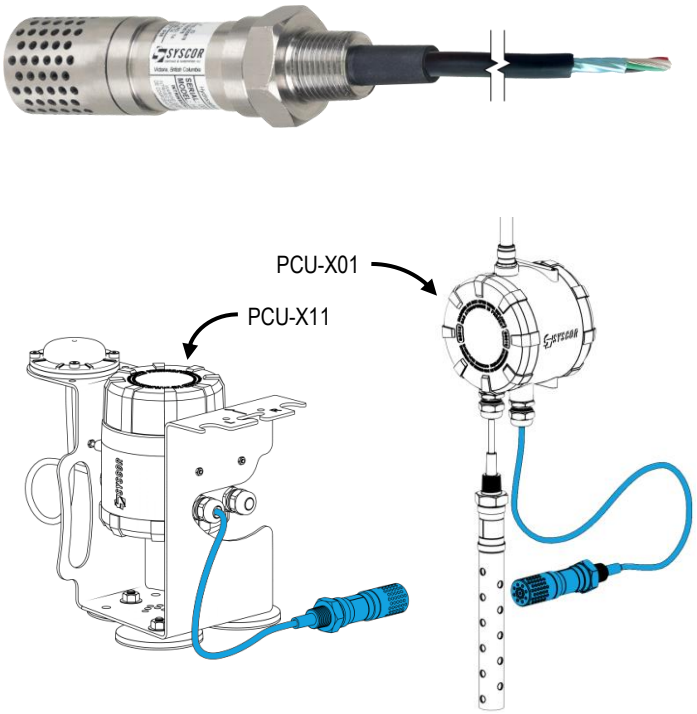


Figure 1. HCD Probes in typical configurations with a PCU-X11 Inclinometer and a PCU-X01 Sensor Hub.

Description

Syscor's HCD Hydrocarbon Detector Probe can detect hydrocarbons (butane and heavier), measure temperature, and measure acceleration/vibration. The probe connects to a PCU-X01 Sensor Hub or PCU-X11 Inclinometer.

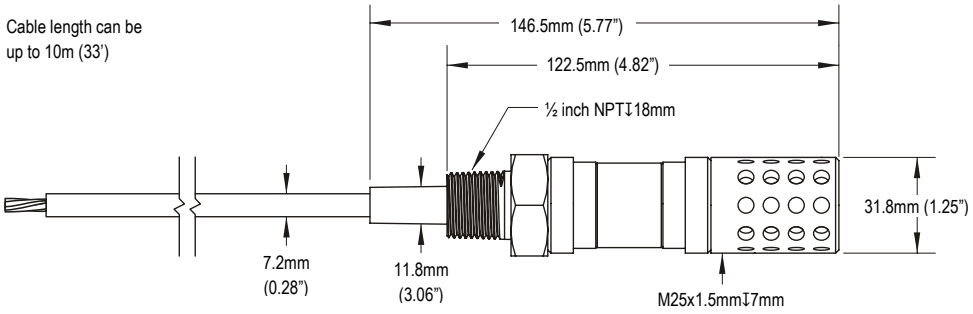
Detection and Measurement Capabilities

Hydrocarbon Detection: Syscor has developed and qualified, in close cooperation with the petroleum industry, a new generation of hydrocarbon detection Polymer Absorption (PA) Sensors. The probe contains two PA Sensors (for redundancy) built with Syscor's proprietary formulations. The PA sensors have a high signal-to-noise ratio, methane immunity, are corrosion proof, and are designed to operate for up to 30 years (5 years under water).

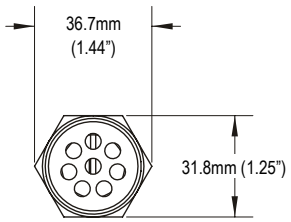
Temperature Measurement: Low power digital temperature sensor.

Acceleration/Vibration Measurement: A sealed, durable, MEMS sensor, referenced to gravity.

The HCD Probe is capable of self-calibration in the field.



SIDE VIEW



END VIEW

Innovation driven by safety

Specifications

Functional Specifications	
Power Usage	Nominal < 0.1 W
Sensor Features	Hydrocarbon Detection (butane and heavier), Temperature, Accelerometer (see Performance Specifications)
Communication	Proprietary serial protocol to PCU-X01 or PCU-X11
Physical Specifications	
Enclosure	Stainless steel SS316 IP68, Type 4X
Wiring	4x1 conductor (red, black, white, green) 20 AWG tinned copper
Weight	400g [14.1oz.]
External Connections	Must be connected to port 1 or port 2 on a PCU-X01 or PCU-X11. If two sensor probes are connected to same PCU, then the total combined cable length for Intrinsically Safe operation cannot exceed 10m (33ft.).
Performance Specifications	
Polymer Absorption (PA) Sensors	Detects all hydrocarbons (butane and heavier) in air and water.
Accelerometer	Ultra-low-power, high performance, three-axis linear accelerometer; Dynamically selectable range from 0g to 16g; Acceleration and velocity detection
Temp. Sensor	Resolution: 12 bits (0.0625°C) Accuracy: ±0.75°C (maximum) from -20°C to +85°C ±1°C (maximum) from -40°C to +125°C
Operating Temp.	-40°C to +60°C [-40°F to +140°F]

Certifications

USA	*FCC: 2AAZE-000697* *Intrinsic Safety:* *CSA 19CA70174889X* *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 19CA70174889X* *Class I, Division 1, Groups C and D, T4* *Ex ia IIB T4 Ga*
Europe	*Intrinsic Safety:* *SIRA 18ATEX2249X* *Ex ia IIB T4 Ga* *CE2813*
IECEx	*Intrinsic Safety:* *IECEx CSA 18.0031X* *Ex ia IIB T4 Ga*

Learn More

PCU-X01 Sensor Hub	syscor.com/downloads/syscor_spec-sheet_pcux01-wirelesshart-sensorhub_en_80175.pdf
PCU-X11 Inclinometer	syscor.com/downloads/syscor_spec-sheet_pcux11-wirelesshart-inclinometer_en_80177.pdf
Polymer Absorption (PA) Sensors	syscor.com/technology/pas
Micro-Electro-Mechanical-System (MEMS)	syscor.com/technology/mems
Stackable Monitoring Well	syscor.com/downloads/syscor_spec-sheet_stackable-monitoring-well_en_80184.pdf