

# HCD-P Hydrocarbon Detector Probe with HDPE Enclosure

## Description

Syscor's HCD-P Hydrocarbon Detector with HDPE enclosure probe can detect hydrocarbons (butane and heavier). The HCD-P can only be wired to Syscor's Rapid Deployment External Leak Detection System (ELDS).

## 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). The PA sensors are available in two variations:

- **Standard PA sensor** is a highly robust environmental monitoring device for long term deployment in remote locations or where residual hydrocarbons may be present.
- **Fast-Action PA sensor** is a higher sensitivity hydrocarbon detector for installation around high consequence ecosystems or critical infrastructure.

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

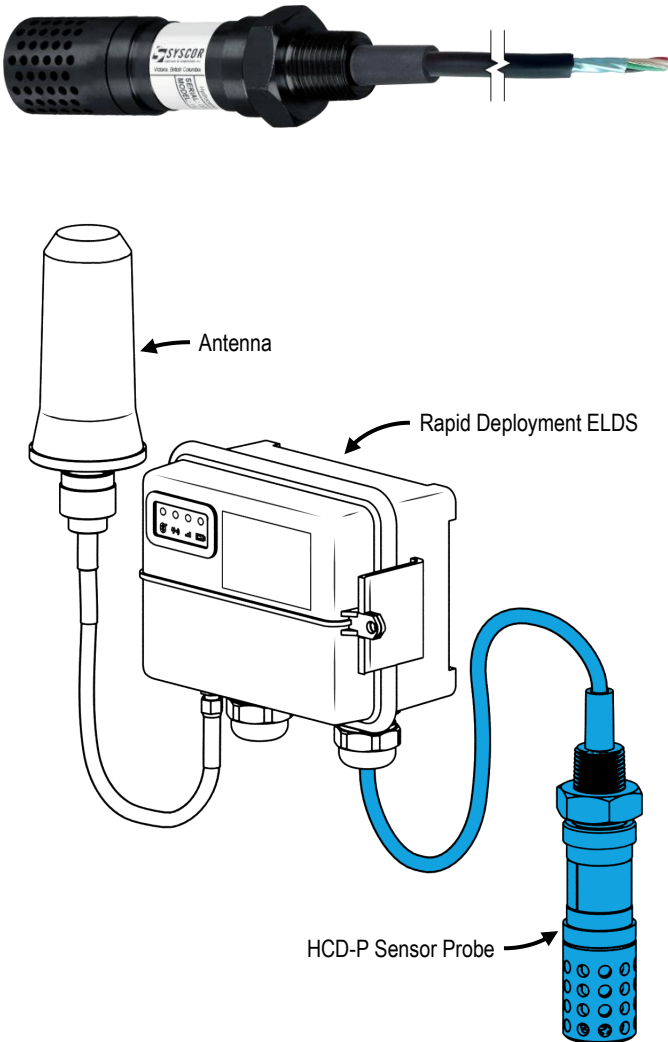
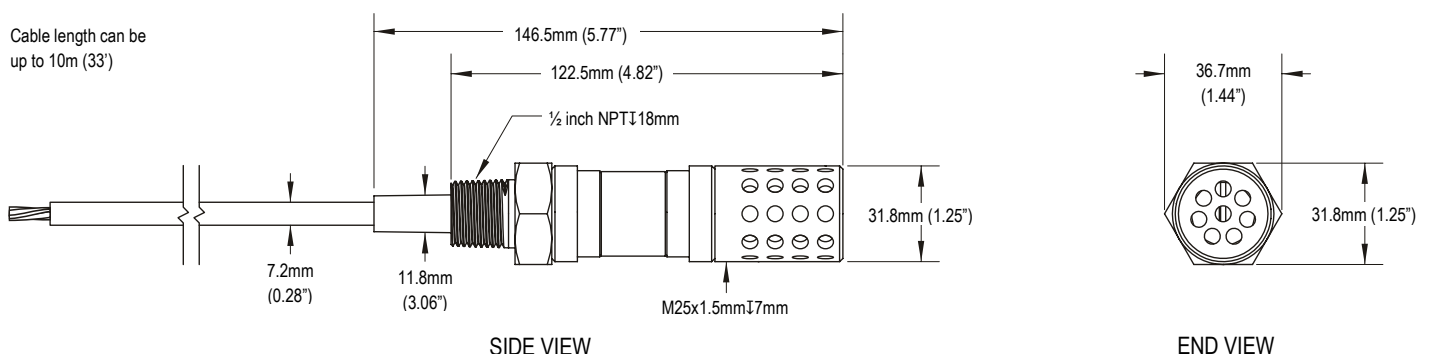


Figure 1. HCD-P Probe wired to a Rapid Deployment External Leak Detection System (ELDS).



## 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: $\pm 0.75^{\circ}\text{C}$ (maximum) from $-20^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ $\pm 1^{\circ}\text{C}$ (maximum) from $-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$
Operating Temp.	$-40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$ [ $-40^{\circ}\text{F}$ to $+140^{\circ}\text{F}$ ]

## Certifications

<i>Rapid Deployment ELDS (CSENSE-A310)</i>	1) C US listed E165880
	2) Class 1, Division II, groups A,B,C,D
	3) T6
	4) Emissions
	a. Contains FCC ID: R17LE910NAV2 & QOQBLE112 b. Contains IC: 5131A-LE910N & 5123A-BGTBLE112
	5) II 3G
	DEMKO 16 ATEX 1717X
	Ex nA IIC T6 Gc

## Learn More

Rapid Deployment External Leak Detection System (ELDS)	<a href="https://syscor.com/downloads/syscor_solution-sheet_rapid-deployment-elds_en_80209.pdf">syscor.com/downloads/syscor_solution-sheet_rapid-deployment-elds_en_80209.pdf</a>
Polymer Absorption (PA) Sensors	<a href="https://syscor.com/technology/pas">syscor.com/technology/pas</a>
Micro-Electro-Mechanical-System (MEMS)	<a href="https://syscor.com/technology/mems">syscor.com/technology/mems</a>