Platinum Series Hydrocarbon Sensor

For detection and measurement of hydrocarbon gases in the % volume range

The Platinum series sensors contain all the necessary optics, electronics and firmware to provide a linearized, temperature-compensated output. Within the Platinum series are low-power options and dual-gas, high resolution methane / carbon dioxide sensor that provides the capability to simultaneously monitor methane and carbon dioxide in a single sensor package, consuming the power of a single infrared sensor.

The sensors are available in Industrial Ex d IIC Certified, Mining M1 Certified, UL Approved, and Non-Certified versions. Low power and EN50271 / SIL1 certified software versions are also available in most combinations.

Key Features

- Available in 4 power variants, 140mA, 80mA, 15mA and 8mA
- Industrial Ex d IIC Certified, Mining M1 Certified available for all variants
- SIL1 certification available for most variants
- Measures methane from 0 to 100% volume with a resolution of 0.01 % for 0-5% methane and 0.1% for 5-100% volume
- Multiple gas ranges enable the accurate detection of 0-100% vol. methane and 0-2% vol. propane with one sensor
- Offers reduced response times when compared with earlier versions
- Choice of output format - digital output (floating point and binary), direct pellistor replacement or industry standard 0.4 to 2 volts
- Manual calibration option can be performed without digital commands
- User configurable using USB powered Premier Configuration Unit
- Output can be scaled in % volume or % Full Scale
- Internal Flash memory allowing sensor firmware updates via configuration unit
- Enhanced EMC protection
- All sensors carry a 5 year warranty

Specification @ 20 °C (68 °F) ambient temperature

Operating Voltage Range:
3.0-5.0 VDC

Operating current / power (@3VDC)			
Low Power 2	Low Power	Regular Power	High Power
8mA/24mW	15mA/45mW	80mA/240mW	140mA/420mW

Linearity:	
Low Range HC	High Range HC
The output is linear within ± 10% of the applied gas, or ±0.05% volume, whichever is greater.	The output is linear within ±2% of the full scale or ±10% of the applied gas, whichever is greater

Accuracy at 20°C, 1 bar atmospheric pressure, calibration gas applied
±2%

Pressure
Accuracy limits are maintained at pressures within ± 5% of the calibration pressure.

Warm up time
To final zero ± 2% full-scale: approximately 1 minute, some sensors may take longer.

Response time	
T50	T90
<10s	<30s

Span repeatability	
Low Range HC	High Range HC
For 0-5% vol. CH4: ±0.1% vol.	For 0-100% vol. C3H8: ±2% vol. ±1% vol. C3H8
For 0-100% vol. CH4: ±2% vol.	
For 0-2% vol. C3H8: ±0.06% vol.	

Zero repeatability	
Low Range HC	High Range HC
±0.05% vol. CH4 ±0.03% vol. C3H8	±1% vol. C3H8

Long term zero drift	
Low Range HC	High Range HC
±0.05% vol. CH4 ±0.03% vol. C3H8	±2% vol. C3H8

Operating and storage temperature range	
Standard	Extended (XTR)
-20°C to +50°C	-40°C to +75°C
-4°F to +122°F	-40°F to +167°F

Temperature performance *May not be applicable when using gas cross-reference factors
±0.1% vol. or ±10% of applied gas up to 50% of full scale, ±15% of applied gas from 50% to 100% of full scale, or 2% of full scale, which ever is greater.

Humidity range
0 to 95% RH non-condensing

Digital signal format
8 data bits, 1 stop bit, no parity. 2.8V logic level

Standard baud rates
38,400 / 19,200 / 9,600 / 4,800

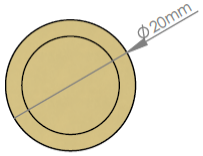
MTBF
>5 years

Warranty
5 years

Hydrocarbon Ranges

Gas Type	Range	Resolution
Methane	0-5% volume	0.01%
Methane	0-100% volume	0.1%
Methane	0-5-100% volume	0-5% vol: 0.01% 5-100% vol: 0.1%
Propane	0-2% volume	0.01%
Propane	0-100% volume	0.1%
Methane & Propane	0-5-100% vol. CH_4 0-2% Vol. C_3H_8	0-5% vol CH_4 : 0.01% 5-100% vol CH_4 : 0.1% 0-2% vol C_3H_8 : 0.01%

Mechanical Detail



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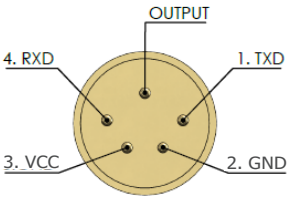

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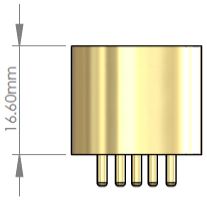

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Compliance and Regulations

Dynament is part of the Process Sensing Technologies Group (PST).

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