

## HY-OPTIMA™ 1720 Intrinsically Safe In-line Process Hydrogen Analyzer (Air)

### Description

H2scan's HY-OPTIMA™ 1720 in-line, real-time hydrogen specific process analyzers are designed for ease of use, interface flexibility and process control. The HY-OPTIMA™ 1720 is an intrinsically safe, solid-state sensor that is configured to operate in air background gas streams with up to 95% relative humidity and temperatures up to 65°C. It is ideal for the detection of hydrogen within processes where real-time monitoring can increase plant safety, improve process diagnostics and enhance maintenance management.

### Performance

Hydrogen Sensitivity Range:  
0.4% to 5% hydrogen by volume at 1 ATM  
Typical Response Time: T90 of 60 sec. maximum  
Ingress Protection: IP64 capable  
Recommended Verification Interval: 90 days  
Product Life Expectancy: 10 years  
Accuracy: ± (0.03 x indication + 0.2) percent  
Hydrogen-by-volume

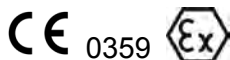
### Interface Options

Power Barrier Input Voltage: 24 VDC nominal  
Power Barrier Input Voltage Range: 20 VDC to 28 VDC  
Intrinsically Safe Sensor Input Voltage: 10 VDC  
Sensor Input Voltage Range: 5 VDC to 28 VDC  
Input Power: 10 W  
Analog Output: 4 mA to 20 mA  
Serial Communication Options: RS422

### Operating Conditions

Process Gas Temperature Range: -20°C to 65°C  
Process Gas Humidity: 0% to 100%  
Gas Flow Rate: 0.1 slpm to 50 slpm  
Gas Pressure: 0 to 7 bar gauge, 0 to 100 psi gauge  
Operating Temperature Range: -20°C to 40°C  
Operating Humidity: 0% to 95% RH (non-condensing)  
Storage Temperature Range: -40°C to 50°C  
Calibration Background Gas: Air

### Certifications



II 1 G, Ex ia II H2, d+d IIB T3  
II 2 G, Ex ib II H2, ib d IIB T3  
ITS07ATEX25634X

### Included Accessories

Intrinsically Safe Power Barrier  
Armored Power / Analog Cable: 4 m  
Calibration Cup

### Optional Accessories

Single Channel Intrinsically Safe Analog Output Barrier  
(with or without relays)

Single Channel Intrinsically Safe RS422 Serial Interface  
Barrier

Serial Interface Cable: 4 m (custom lengths available)  
Armored Power/Analog Cable (custom lengths available)

### Adapter Fittings

½ in. MNPT thread  
½ in. FNPT thread  
-8 SAE/MS thread size  
... and many other industry standards.

### Dimensions

Total Length: 10.3 in.  
Length of Enclosure: 6.8 in.  
Length of Tube: 2.9 in.  
Width: 3.4 in.



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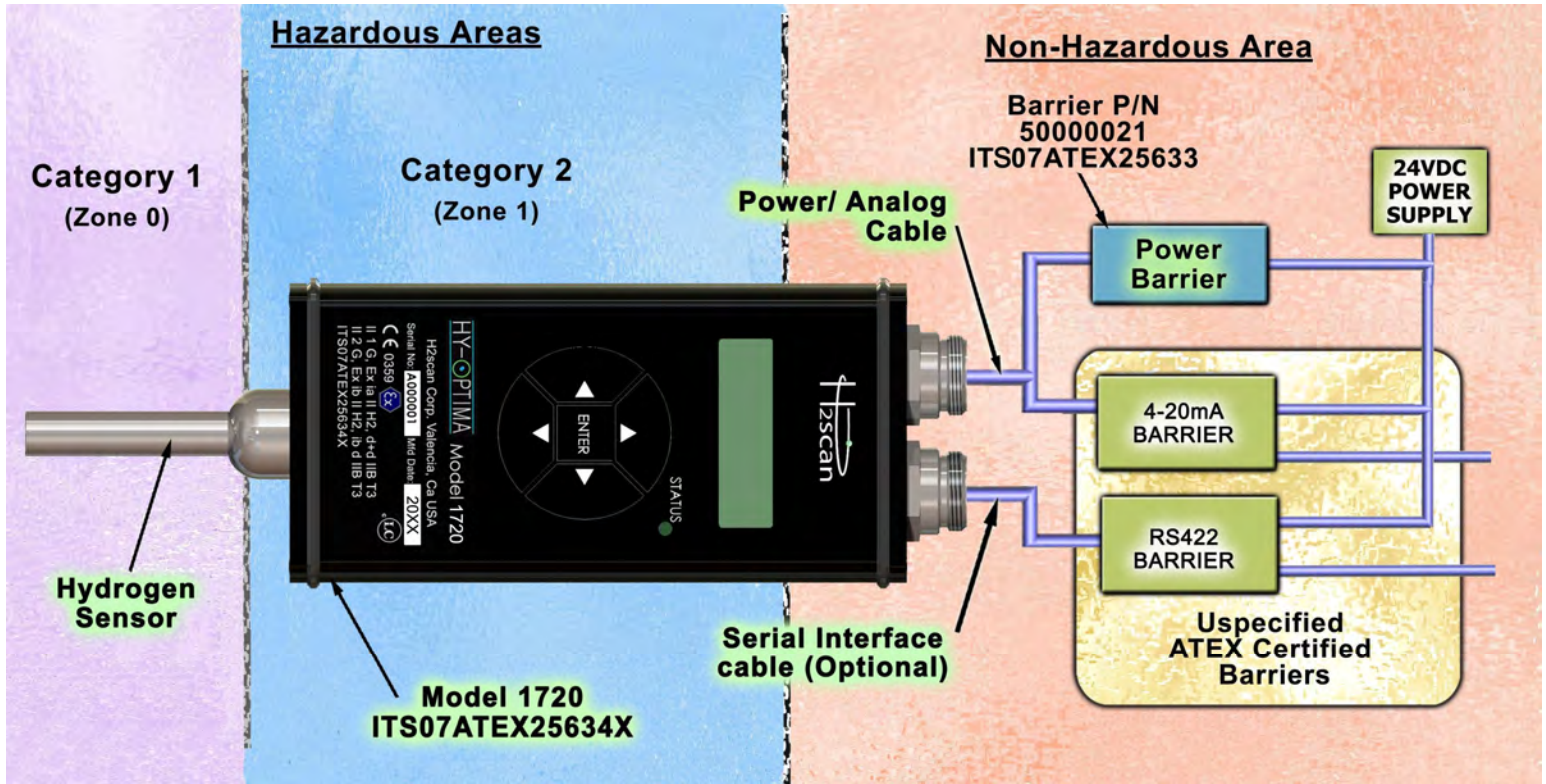


Figure 1: Hazardous Area Installation and Attachment



Figure 2: Dimensions (inches)