

MODEL 452

Process Ozone Sensor



Compact design (12.3 in² footprint)

Ranges from 0 - 5% to 0 - 20% w/w

Temperature and Pressure Compensation

Units of weight % or grams/Normal m³

Narrow Band detector eliminates need for UV filters

Analog and RS485/RS232 outputs

Status outputs to monitor operation

Available for high purity applications

The Model 452 is a microprocessor-based gas sensor for measuring high concentrations of ozone in oxygen or air with accuracy and dependability. The measurement principle is based on the absorption of UV light at 254nm. Readings are available in % by weight, or grams/Normal cubic meter. Temperature and pressure compensation up to 3 Bar Absolute is a standard feature (with pressure compensation up to 3 Bar Absolute dependent upon range). Its compact size allows for easy installation in process applications.

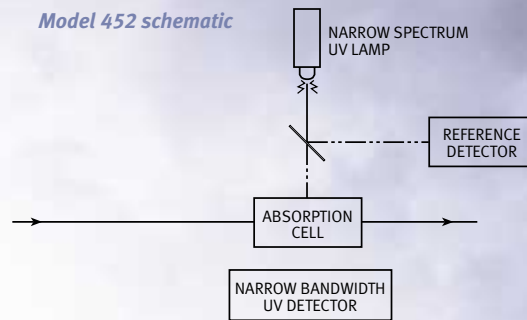
The flow pattern is a straight through design (eliminating turns and elbows), reducing exposed surface area. The 452 uses detectors which have a very narrow band of spectral sensitivity, eliminating the need for UV band pass filters which are subject to deterioration by UV or humidity. Two detectors are used: one for the ozone measurement, and the other to compensate for changes in UV lamp intensity. This unique design provides a sensor which will operate for extended periods without calibration or maintenance. The sensor offers both analog and RS485/RS232 outputs as well as 4 opto-isolated status outputs to indicate sensor operation or failure modes. Input/output and power input connections are made through the 15-pin D-sub connector. For high purity applications, the 452 manifold is available in 316L, 10Ra finish, and 1/4" VCR fittings.

MODEL 452



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Model 452 schematic



SPECIFICATIONS

Range:	0 – 5, 0 – 10, 0 – 15, 0 – 20% w/w. 0 – 100, 200, 300, 400 g/Nm ³
Pressure Comp.:	up to 3 Bar absolute.
Proof pressure:	115 psia
Repeatability:	1% of Full Scale.
Response Time:	2 sec. to 95%
Zero Drift:	1% Full Scale/month (non -cumulative)
Temperature range:	5°C to 45°C
Wetted Materials:	316 Stainless Steel, PTFE, Sapphire
Fittings:	1/4" stainless steel compression
Flow:	0.5 to 5 LPM
Power:	+15 volts @ 1.5A max.
Analog Output:	0 – 5V Full Scale
Zero Cal :	Contact Closure Input
Digital Outputs:	Sensor OK, Lamp Low, Cell Dirty, Invalid Reading, (Opto-isolated)

Serial data Interface:	RS485 or RS232
Dimensions including fittings:	
Length:	5.13" (130.3mm)
Width:	2.13" (54.1 mm)
Height:	6.69" (169.9 mm)
Weight:	2.8 lbs. (1.27 kg)

Options:

- AC power adapter
- High purity (VCR fittings, 316L, 10 Ra finish)
- External Ozone Destructor
- External Particulate Filter

HOW TO ORDER

Model 452 Process Ozone Sensor

Includes:

- Wetted materials:
316SS, PTFE, sapphire
- 1/4" SS compression fittings
- RS485/232 interface
- Pressure/Temperature Compensation

■ Standard ranges (specify):

- | | |
|---|--|
| <input type="checkbox"/> 0 – 5% weight | <input type="checkbox"/> 0 – 100 g/Nm ³ |
| <input type="checkbox"/> 0 – 10% weight | <input type="checkbox"/> 0 – 200 g/Nm ³ |
| <input type="checkbox"/> 0 – 15% weight | <input type="checkbox"/> 0 – 300 g/Nm ³ |
| <input type="checkbox"/> 0 – 20% weight | <input type="checkbox"/> 0 – 400 g/Nm ³ |

For more information on API's family of monitoring instrumentation products, call us or visit our website at www.advpol.com