

Ozone monitor

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Process ozone monitor 454

The model 454 is a microprocessor based gas monitor for measuring mid to high concentrations of ozone in oxygen or air.

Available in a standard DIN panel mount or a NEMA 4X configuration with a 4-digit LED display, the compact design provides ease of mounting and installation.

The 454 series is available in full scale ranges from 0-1,000 ppm to 0-20% weight, and is factory calibrated in accordance with International Ozone Association standards. The measurement principle is based on the absorption of UV light at 254 nm. As the sample containing ozone flows through the absorption cell, it is exposed to UV light at the 254 nm wavelength. The amount of absorption by ozone is measured by a narrow bandwidth UV detector.

A reference detector measures the lamp output to compensate for changes in light intensity. This method, using a narrow spectrum UV source and a narrow bandwidth detector, provides excellent performance and stability without requiring additional UV filters.

The 454 Series' temperature and pressure compensation normalizes readings to weight/volume. A front panel keypad displays concentration or cell pressure, while LEDs indicate monitoring status. The units employ a state-of-the-art microprocessor design to provide accurate, dependable monitoring of the ozone process.



Advantages

- Ranges from 0 - 1,000 ppm_v to 0 - 20% w/w
- Available in standard DIN panel mount or NEMA 4X (IP-65)
- High visibility, 4-digit display
- Temperature and pressure compensation
- Units in ppm_v, weight% or grams/normal m³
- Narrow bandwidth detector eliminates need for UV filters
- Analog and RS232/485 outputs
- Status LEDs to monitor performance
- Auto zero (NEMA 4X only)
- Internal pump (midlevel units only)
- 316 stainless steel cell
- Optional sample drier



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Technical specification

Range	0-1,000 ppm _v , 0-5,000 ppm _v , 0-10,000 ppm _v 0-5, 0-10, 0-15, 0-20% w/w, 0-25, 0-100, 200, 300, 400 g/Nm ³
Pressure & temperature compensation	Standard
Inlet pressure	3 to 30 psig
Proof pressure	100 psig
Accuracy	1% of full scale
Repeatability	0,5% of full scale
Response time	30 sec. to 95%
Zero drift	1% of full scale/month (non-cumulative)
Temperature range	5 °C to 45 °C
Wetted materials	316 stainless steel, PTFE, sapphire, AlO ₃
Fittings	1/4" stainless steel
Flow	0.5 to 2.0 LPM
Power	90-265VAC, 50/60Hz
Display	4 digit LED readout
Analog output	0-5V full scale; 4-20mA or 0-20mA isolated outputs optional
Zero calibration	Front panel keypad, contact closure input, or auto zero (NEMA only)
Digital outputs	Sensor OK, lamp low, cell dirty, invalid reading, (opto-isolated)
Serial data interface	RS485 or RS232
Dimensions (H x W x D)	DIN High Level: 3.83" x 7.61" x 7.63" (97 x 193 x 194 mm) NEMA 4X High Level: 12.64" x 11.19" x 6.08" (321 x 284 x 154 mm) NEMA 4X Mid Level: 16.5" x 15.3" x 8.45" (419 x 389 x 214 mm)
Weight	DIN High Level: 4.0 lbs. (1.8 kg) NEMA 4X High Level: 9.4 lbs. (4.27 kg) NEMA 4X Mid Level: 16.0 lbs. (7.28 kg)

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