



# Single channel process ozone analyzer 450H

The Model 450H UV Photometric Ozone Monitor is a stable analyzer designed for monitoring process ozone in water treatment plants, critical semiconductor processes, and other applications that require long term stability and high accuracy.

The Model 450H has been designed for ease of use and to deliver excellent accuracy, stability and reliability. It is available in 19" rack mount and NEMA 4X wall mount enclosures.

Operating parameters such as process alarm settings and units of measurement can be easily set in the field using the operator-friendly, menu driven software. Built-in diagnostics provide visual and audible warning signals if operating values deviate beyond acceptable limits, predicting possible future malfunctions.

Test values can be viewed while the Model 450H is operating. These displays, warnings, and self-diagnostics, along with plug-in cards allow the unit to be quickly repaired. In addition, any function that can be set or monitored from the front panel keyboard display can remotely set or viewed through the bi-directional RS-232 prot. Factory calibration is per the International Ozone Association's KI procedure.



## ADVANTAGES

- UV absorption method
- Ranges 0-100, 200, 300, 400 g/m<sup>3</sup> (w/w, g/Nm<sup>3</sup> available)
- Microprocessor controlled
- Built-in diagnostics
- Self-check warning alarms
- Fast response times
- Minimal zero drift
- Programmable concentration alarms
- Pressure, temperature, molecular weight compensation
- No switching valves for measurement
- Internal Flow Control





## TECHNICAL SPECIFICATION

Measuring principle	UV absorption (beer lambert law)
Measurement range	0-100, 200, 300, 400 g/m <sup>3</sup> , Optional: 0-5, 0-10, 0-15, 0-20% w/w 0-100, 200, 300, 400 g/m <sup>3</sup>
Units	Operator selectable: g/m <sup>3</sup> , g/Nm <sup>3</sup> , % w/w
Precision/repeatability	±0.5% of full scale
Resolution	0.1 g/m <sup>3</sup>
Linearity	1%
Zero drift	1% of F.S./month, non-cumulative, no drift with auto zeroing
Compensation	Optional pressure, temperature, molecular weight
Sample flow rate	0.5 to 2 liters/minute
Temperature range	5°C to 45°C
Gas delivery pressure	5 to 30 psig
Response time	<2 seconds to 95%
Relay outputs	Alarm #1, Alarm #2, System OK, 250V at 3A form C relays
Relay mode	Latching/non-latching, operator selectable
Diagnosics	Auto checking with auto alarms
Dimensions (HxWxD)	Rackmount - 7" x 17" x 18.2" (178 x 432 x 463 mm) NEMA 4 - 19.5" x 17.25" x 9.63" (495 x 438 x 245 mm)
Weight	Rackmount - 24 lbs (11 kg), NEMA 4 - 33 lbs (15 kg)
Power	100-240 VAC, 50/60 Hz
Wetted materials	PFA; AlO <sub>3</sub> Kalrez, sapphire, 316 SS; borosilicate glass (filter)
Fittings	1/4 satinless steel compression fittings
Approvals	<b>CE</b>
Analog output (bi-polar)	100mV, 1V, 5V, 10V (operator selectable); 4-20mA or 0-20mA isolated outputs optional
Status outputs (opto-isolated)	System OK; pressure warning; temperature warning; automatic zeroing; UV lamp low; overrange; optics dirty; invalid reading; lowflow (option)
Control inputs	Zero Cal (c.c.)
Serial output	Bi-directional RS-232