



**TELEDYNE INSTRUMENTS**  
*Advanced Pollution Instrumentation*  
A Teledyne Technologies Company

MODEL **465M**

# Process Ozone Monitor



- ▶▶ **Standard one year warranty**
- ▶▶ **UV Absorption Method**
- ▶▶ **Microprocessor controlled**
- ▶▶ **Menu driven software**
- ▶▶ **Ranges 0-1000 ppm to 0-10,000 ppm**
- ▶▶ **Built-in diagnostics**
- ▶▶ **Self-check warning alarms**
- ▶▶ **Fast response times**
- ▶▶ **Minimal zero drift**
- ▶▶ **Sample Conditioning System for sampling from humid environments (NEMA 4X only)**
- ▶▶ **Programmable concentration alarms**
- ▶▶ **Temperature and pressure compensation (standard)**
- ▶▶ **Optional Ethernet**

The Model 465M is a microprocessor based medium range ozone monitor for measuring process ozone concentrations in water treatment, food processing, and research applications. The design has been specifically optimized for applications requiring the measurement of ozone at near-ambient pressure such as water treatment contactor off-gas measurement. The Model 465M has been designed to give accurate and stable readings over long time periods with little or no maintenance or calibration. The Model 465M is available in a 19" rack mount or NEMA 4X wall mount enclosure.

The sensor module contained in the Model 465M 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.

Built-in diagnostics provide warning signals in case operating parameters are out of range. Test values can be viewed while the Model 465M is operating. These displays, warnings, and self-diagnostics, along with the modular design, allow maximum uptime. In addition, any function that can be set or monitored from the front panel can be remotely set or viewed through the bi-directional RS-232 port.

***FREE Customer Support by telephone and email for the life of the instrument***



## MODEL 465M

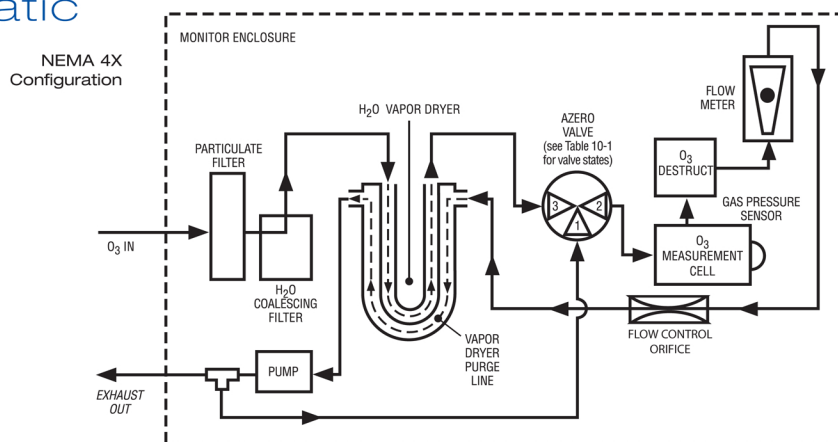
# Process Ozone Monitor

## Specifications

Measurement Principle:	UV Absorption (Beer Lambert Law)
Ranges:	0-1000 ppm to 0-10,000 ppm 0-5g/Nm <sup>3</sup> to 0-50 g/Nm <sup>3</sup> 0-1% w/w to 0-3% w/w
Measurement Units:	ppm, % w/w, g/Nm <sup>3</sup>
Accuracy:	± 1% of Full Scale
Precision/Repeatability:	± 0.5% of Full Scale
Display Resolution:	1 ppm, 0.001 % w/w, 0.01 g/Nm <sup>3</sup>
Response Time:	<45 seconds to 95%
Compensation:	Pressure, Temperature (NTP = 273.15K, 760mmHg)
Gas Inlet Pressure Range:	11.0 – 16.0 psia
Gas Flow Rate:	0.8 LPM
Temperature Range:	5-45°C

Dimensions (H x W x D):	Rack Mount – 5.22" (133 mm) x 19" (483 mm) x 16.1" (409 mm) NEMA 4X – 17.1" (434 mm) x 15.87" (403 mm) x 6.90" (175 mm)
Weight:	Rack Mount – 13.6 lbs (6.17 kg) NEMA 4X – 17.2 lbs (7.8 kg)
Power:	100-240V~, 50/60Hz, 74W Max
Analog Output:	0-5V or 4-20mA isolated output
Status Outputs:	System OK, Invalid Reading, UV Lamp Fault
RS-232 (Optional RS-485):	57.6 Kbaud, DB-9 connector
Approvals:	CE
Degree of Protection:	IP65 (NEMA 4X)

## Schematic



## How to Order

### Model 465M includes:

- Standard one year warranty
- Internal sample pump
- Temperature and pressure compensation
- Analog output
- Status output
- RS232 (MODBUS RTU)
- Flowmeter
- Ozone Destructor
- Auto-Zero Valve
- Sample Conditioner (NEMA 4X only)

### Specify range:

- |   |                                      |
|---|--------------------------------------|
| <input type="checkbox"/> 0-2% w/w               | <input type="checkbox"/> 0-5000ppm   |
| <input type="checkbox"/> 0-3% w/w               | <input type="checkbox"/> 0-10,000ppm |
| <input type="checkbox"/> 0-10 g/Nm <sup>3</sup> | <input type="checkbox"/> Other       |
| <input type="checkbox"/> 0-20 g/Nm <sup>3</sup> |                                      |

### Specify output voltage:

- |                               |                                 |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> 0-5V | <input type="checkbox"/> 4-20mA |
|-------------------------------|---------------------------------|

### Additional Options:

- ☐ Ethernet (MODBUS TCP/IP)
- ☐ Deduct: Sample Conditioner (NEMA 4X only)
- ☐ Rack Mount
- ☐ NEMA 4X Enclosure

Specifications subject to change without notice. Printed documents are uncontrolled. SAL000022 B (DCN 5245) M465M/12/08/08.



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