



TELEDYNE INSTRUMENTS
Advanced Pollution Instrumentation
A Teledyne Technologies Company

MODEL **465M**

Process Ozone Monitor



- ▶▶ **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.

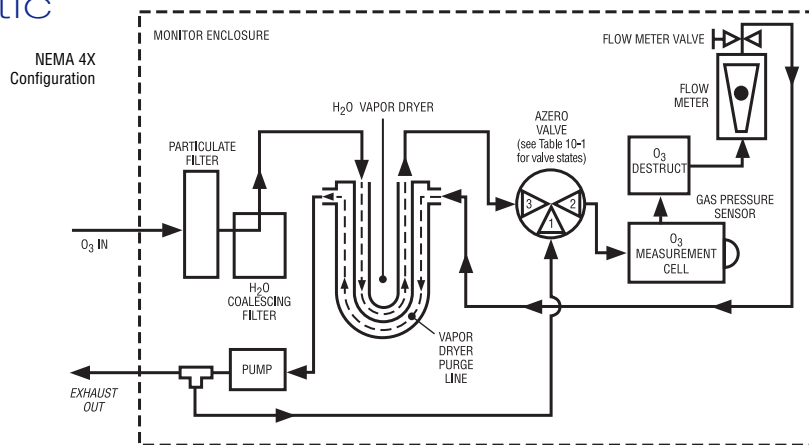


MODEL **465M** Process Ozone Monitor

Specifications

Measurement Principle:	UV Absorption (Beer Lambert Law)	Dimensions (H x W x D):	Rack Mount – 5.22" (133 mm) x 19" (483 mm) x 15.3" (388 mm)
Ranges:	0-1000 ppm to 0-10,000 ppm 0-5g/Nm ³ to 0-50 g/Nm ³ 0-1% w/w to 0-5% w/w		NEMA 4X – 16.01" (407 mm) x 15.77" (401 mm) x 8.02" (204 mm)
Measurement Units:	ppm, % w/w, g/Nm ³	Weight:	Rack Mount – 13.6 lbs (6.17 kg) NEMA 4X – 16.5 lbs (7.5 kg)
Accuracy:	± 1% of Full Scale	Power:	110-240V~, 50/60Hz, 1.1A
Precision/Repeatability:	± 0.5% of Full Scale	Analog Output:	0-5V or 4-20mA isolated output
Display Resolution:	1 ppm, 0.001 % w/w, 0.01 g/Nm ³	Status Outputs:	System OK, Invalid Reading, UV Lamp Fault
Response Time:	<45 seconds to 95%	RS-232 (Optional RS-485):	57.6 Kbaud, DB-9 connector
Compensation:	Pressure, Temperature (NTP = 273.15K, 760mmHg)	Approvals:	CE
Gas Inlet Pressure Range:	11.0 – 16.0 psia	Degree of Protection: (NEMA)	IP65 (NEMA 4X)
Gas Flow Rate:	1.0 – 1.5 LPM		
Temperature Range:	5-45°C		

Schematic



How to Order

Model 465M includes:

- 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"/> 0-5% w/w | <input type="checkbox"/> 0-10,000ppm |
| <input type="checkbox"/> 0-10 g/Nm ³ | <input type="checkbox"/> Other |
| <input type="checkbox"/> 0-20 g/Nm ³ | |

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. M465M/3.08



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