

Ozone Monitors for Industrial Applications: Models 106-L, 106-M, 106-MH and 106-H™



Standard Enclosure



Industrial Enclosure



OEM Version

For industrial ozone applications, 2B Tech offers the Model 106-L, 106-M, 106-MH and 106-H Ozone Monitors, where L, M, MH and H refer to Low (0-100 ppm), Medium (0-1,000 ppm), Medium-High (0-10,000 ppm) and High (0-20 wt%) ozone concentrations, respectively. These instruments have different optical path lengths in order to accommodate an extremely wide range of ozone concentrations, spanning more than eight orders of magnitude. Additionally, the Model 106-H was designed with a flow-through path that can be pressurized to up to 50 psi for in-line measurements with ozone generators. All four models are available in either a standard enclosure or Industrial enclosure. Multi-channel sampling configurations (3-channel or 6-channel) are available for the Model 106-L, -M, and -MH.

The Model 106 series was designed as an "ozone monitor on a board" in which nearly all of the components are mounted directly to the printed circuit board. Thus, the Model 106 may be purchased without the enclosure for OEM applications. See: [Model OEM-106](#).

The Model 106-L is designed for ambient low measurements down to very low ppb levels and has been designated by the EPA as a Federal Equivalent Method (FEM) for monitoring for compliance with the US Clean Air Act: [EQOA-0914-218](#)

Specifications for Different Optical Benches

Model	Range	Resolution	Precision & Accuracy
106-L	0-100 ppm	0.0001 ppm (0.1 ppb)	Higher of 0.0015 ppm (1.5 ppb) or 2% of reading
106-M	0-1,000 ppm	0.01 ppm	Higher of 0.01 ppm or 2% of reading
106-MH	0-10,000 ppm (0-1 vol%)	0.1 ppm	Higher of 0.05 ppm or 2% of reading
106-H	0-20 wt% O ₂ or Air 0-14 vol%	0.01 wt% 0.01 vol%	Higher of 0.01 wt% or 2% of reading

General Specifications

Measurement Principle	UV Absorption at 254 nm
Measurement Interval	2 s for Models 106-L, 106-M, 106-MH, & 106-H
Data Averaging Options	10 s, 1 min, 5 min, 1 hr
Flow Rate	~1 Liter/min; Up to 20 L/min for Model 106-H
Data Storage	32,736 lines (10 s avg. = 3.8 days; 5 min avg = 113 days)
Choice of Units	ppb, pphm, ppm, $\mu\text{g m}^{-3}$, mg m^{-3} (for Models 106-L and 106-M) ppm, mg m^{-3} (for Model 106-MH) vol%, wt% air, wt% O ₂ (for Model 106-H)
Data Outputs	USB, RS232, 0-2.5 V Analog, 4-20 mA, LCD Display
Power Requirements	100-240 V AC, 50/60 Hz 11-28 V DC, nominally 500 mA at 12 V DC, 6 watt (for Models 106-L, -M, and -MH) 11-28 V DC, nominally 325 mA at 12 V DC, 3.9 watt (for Model 106-H)
Size (standard unit)	3.6 × 7.9 × 9.4 inches (9 × 20 × 24 cm)
Size (Industrial)	16 × 14 × 9.3 inches (40.7 × 25.7 × 23.6 cm) H × W × D
Weight	4.2 lb (1.9 kg) for Model 106-L; 2.8 lb (1.3 kg) for OEM-106-L 3.9 lb (1.8 kg) for Models 106-M, -MH; 2.5 lb (1.1 kg) for OEM-106-M, -MH 4.4 lb (2.0 kg) for Model 106-H; 2.9 lb (1.3 kg) for OEM-106-H ~14 lb (6.4 kg) for Industrial enclosure models

Features

- Measurement based on UV absorption
- Low power consumption; can be battery operated (optional lithium-ion battery)
- Internal data logger with real-time clock
- 2-s measurement interval
- On-board microprocessor with interactive menus includes data averaging options of 10 s, 1 m, 5 m and 1 hr
- USB and RS-232 output of time/date, O₃ concentration, internal temperature and pressure
- Analog output (0-2.5 V and 4-20 mA) of ozone concentration in user-selected units
- Two 2-level relays for control purposes (e.g., control of ozone source or turn warning light on and off); Four 2-level relays on the Industrial models and the optional multi-channel configurations
- Long-life pump (15,000 hr) for Models 106-L, 106-M, and 106-MH
- Bluetooth option for wireless data transmission
- Optional configurations for 3-channel or 6-channel air sampling for Models 106-L, 106-M, and 106-MH