

The WatchGas NEO is one of the most advanced handheld VOC (Volatile Organic Compound) monitors available for ppb (parts per billion) detection.

VOCs include a variety of chemicals such as benzene, alcohols, fuels, paint thinners, industrial solvents and many others, which can have short and long-term adverse health effects. Measuring these compounds is essential for worker protection in industries like oil & gas, fire & hazmat, pharmaceuticals, paints & adhesives, and many others. In addition, VOC monitoring is useful for chemical process control, detecting leaks and other releases to the environment, and in measuring indoor air quality. The NEO offers several models from the most sensitive 1 ppb to a high range up to 15,000 ppm for different applications, and a benzene-specific version (NEO BENZ). Novel designs of the Photo-ionization Detector (PID) and Ultraviolet (UV) lamp provide outstanding sensitivity, stability and reproducibility. Options include real-time data monitoring with a built-in wireless modem using WatchGas Suite application software.



Key Features

- Most accurate and more linear than comparable PIDs
- Most stable ppb-level PID on the market
- Outstanding linearity over full measurement range
- Easy charging on laptop or other USB port
- USB Micro Charger; combination USB-m charging and communications cable
- Powerful battery (run time 24 hours)
- Bluetooth Low Energy (BLE) connectivity standard
- Wireless communication
- Large backlight graphic display
- Lamp glow indicator
- Rugged high quality plastic housing with rubber outer boot

Application Examples

- Confined space measurement
- Measurement in low (ppb) ranges

DETECTOR SPECIFICATIONS

Size	260 x 78 x 58 mm (with boot)
Weight	708 g (24.9 oz) (with boot)
Sensor technology	Photo-ionization sensor with standard 10.6 eV lamp (9.8 eV lamp in MP186)*
Temperature	-20° to 50°C (-4° to 122°F)
Humidity	0% ~ 95% RH (Non-condensing)
Alarm type	High, Low, TWA and STEL alarms Over range alarm, battery low alarm Man-Down alarm with pre-alarm and real-time re-remote wireless notification Low Flow Alarm: Auto pump shutoff at low-flow condition
Alarm signal	Acoustic: 95 dB @ 30 cm Visual: flashing bright red LEDs, and on-screen indication of alarm conditions plus wireless remote alarm notification
Display	128 x 128 graphical LCD, 45 x 44 mm, with LED backlight for enhanced display readability
Direct Readout	Real-time reading of gas concentration (ppb, ppm, mg/m ³ , µg/m ³), PID measurement gas and correction factor, lamp on/off, Man-Down alarm on/ off, battery status, pump status, datalogging on/off, wireless on/off, temperature and time
Calibration	Two/three-point calibration
Datalogging	Standard 12 months at one-minute intervals
Datalogging interval	Storage interval adjustable from 1 to 3,600 seconds
Battery / Run time	Rechargeable Lithium-Ion battery with 24 hours typical operation
Measurement	Pumped
Housing	Durable rubber boot, color coded for different models
Sampling pump	Built-in pump with 2 settings from 300 to 430 cc/min Sample from up to 30 m (100 ft)
Charging and communication	Charging, data download, instrument configuration and firmware upgrades on PC or laptop via Micro USB. Configuration also via BLE using mobile App on Android phone or tablet
Response time T⁹⁰	3 seconds (t ⁹⁰) VOC Mode 45 seconds @ 20°C (68°F) Benzene Tube Mode 120 seconds @ 20°C Butadiene (Tube Mode)
Accuracy	±3% (at calibration point)
Wireless range	1,000 ft (300 m) line of sight
Correction Factors	Integrated Correction Factor list of more than 700 compounds
IP-Rating	IP67, IP66 when turned on
EMI/RFI	Highly resistant to EMI/RFI Compliant with EMC Directive 2014/30/EU
Safety certifications	UL: Class I, Div 1, Group ABCD, T4, -20°C ≤ Tamb ≤ +50°C IECEX: Ex ia IIC T4 Ga ATEX: II 1G Ex ia IIC T4 Ga CE: Conformité Européenne
Warranty	2 Years including lamp and sensor (1-year for 9.8 eV lamp)

SENSOR SPECIFICATIONS

Model	Detectable Gas Ranges	Resolution	Article Number
NEO PID BLUE	0 ppm - 5.000 ppm	0.01 ppm	M011-0004-W00
NEO PID BLUE High Range	0 ppm - 15.000 ppm	0.01 ppm	M011-0005-W00
NEO PID BLUE Extended Range	0 ppm - 20.000 ppm	0.01 ppm	On request
NEO Benzene Specific RED (w/9.8 eV Lamp & Tube Holder)* (NEO Butadiene on request)	0 ppm - 200 ppm Benzene	0.01 ppm	M011-0013-W00
	0 ppm - 10.000 ppm VOC	0.001ppm	
NEO PPB Black	0 ppm - 15.000 ppm	0.001ppm	M011-0006-W00

*9.8 eV lamp detects fewer VOCs than a 10.6 eV lamp does

ORDER INFORMATION

Description	Article Number
Robust Case	M011-3020-W00
Lamp Cleaning Set: PID Lamp Cleaning Solution Finger Protection Cotton Buds Cleaning Wipe	M011-3008-W00
Inlet filters	M490-0004-W05
PID Sensor	M085-3004-W00
USB Charger	M004-3051-W00
USB Cable	M011-3003-W00
Inlet Probe (Flexible)	M011-3012-W00
Inlet/Outlet Luer Adapter	M490-0024-W00
Benzene Seperator Tube (Benzene Only)	M070-0001-W00
Tube Holder Probe for Seperator Tubes (Benzene Only)	M011-2018-W00
Pre-Filter Tube Butadiene 0.1-200ppm (Butadiene Only)	UNI-CF000904

ACCESSORIES



The NEO comes complete with the following items:

- 1x Robust Case
- 1x PID Lamp Cleaning Solution
- 5x Inlet Filters
- 1x USB Charger
- 1x USB-Cable
- 10x Finger Protection
- 20x Cotton Buds
- 1x Cleaning Wipe
- 1x Inlet Probe
- 1x Inlet /outlet Luer Adapter
- 1x Quick Start Guide
- Benzene Separator tube (**NEO Benzene only**)