NEO Photo-ionization Detector

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

NatchGas

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 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 Photoionization 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 mPower Suite application software.

Key features:

- Smaller and lighter weight 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
- ISM Wireless communication at longer distances and with no subscription fees
- Large backlight graphic display
- Lamp glow indicator
- Rugged, stainless-steel housing with rubber outer boot





Application Examples:

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



Detector specifications

Size	230 x 74 x 55 mm (9.1 x 2.9 x 2.2 in) (with boot)
Weight	708 g (24.9 oz) (w/boot)
Sensor	Photo-ionization sensor with standard 10.6 eV lamp (9.8 eV lamp in MP186)*
Response time T ₉₀	3 seconds
Accuracy	±3% (at calibration point)
Battery / Run time	Rechargeable Lithium-Ion battery with 24 hours typical operation
Keypad	4 Operation keys
Sampling Pump	Built-in pump with 3 settings from 300 to 430 cc/min Sample from up to 100 ft (30 m)
Display	128 x 128 graphical LCD, 1.77 x 1.73 in (45 x 44 mm), with LED backlight for enhanced display readability
Direct Readout	Real-time reading of gas concentration (ppb, ppm, mg/m3, µg/m3), 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
Alarms	Audible (95 dB @ 30 cm), visual (flashing bright red LEDs), and on-screen indication of alarm conditions plus wireless remote alarm notification High, Low, TWA and STEL alarms Over range alarm, battery low alarm Man-Down alarm with pre-alarm and real-time re-mote wireless notification
Datalogging Capacity	Standard 12 months at one-minute intervals Storage interval adjustable from 1 to 3,600 seconds
Calibration	Two/three-point calibration
Low Flow Alarm	Auto pump shutoff at low-flow condition
Charging and communication	Charging, data download, instrument setup and firm-ware upgrades on PC or laptop via Micro USB Wireless data and alarm status transmission via built-in RF modem
Wireless range	1,000 ft (300 m) line of sight
Correction Factors	Integrated Correction Factor list of more than 200 compounds
IP Rating	IP-66 when turned on / IP-67 when turned off
EMI/RFI	Highly resistant to EMI/RFI Compliant with EMC Directive 2014/30/EU
Safety certifications	UL/cUL: Class I, Div 1, Group ABCD IECEx: Ex ia IIC T4 Ga ATEX: II 1G Ex ia IIC T4 Ga CE: Conformité Européenne
Temperature	-20° to 50°C (-4° to 122°F)
Humidity	0% to 95% Relative humidity (non-condensing)
Attachments	Durable rubber boot, color coded for different models; Tube holder for MP186
Warranty	2 Years including lamp and sensor (1-year for 9.8 eV lamp)

For more information

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WatchGas

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WatchGas is dedicated to continuously improving its products. Therefore, the specifications and features mentioned in this datasheet are subject to change without notice.