

## Confined Space Entry Monitors



The POLI multi-gas meters offer 4-gas monitoring of toxic gases, oxygen (O<sub>2</sub>), combustibles (LEL), carbon dioxide (CO<sub>2</sub>) and volatile organic compounds (VOCs). The POLI MP400P is an advanced model with built-in pump that allows a full selection of sensors for a wide range of applications, including Confined Space Entry, while the POLI MP400 is a basic, 4-gas diffusion detector for worker safety at hazardous locations. Smart sensors carry calibration and ID information with them for quick exchange in the field during Hazmat response. Specific sensors include electrochemical (EC) for carbon monoxide (CO), hydrogen sulfide (H<sub>2</sub>S), ammonia (NH<sub>3</sub>), hydrogen cyanide (HCN), hydrogen chloride (HCl), chlorine (Cl<sub>2</sub>), chlorine dioxide (ClO<sub>2</sub>), nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), ethylene oxide, methyl mercaptan, and others. Also available are pellistor for LEL level combustibles, non-dispersive infrared (NDIR) for Vol% level CO<sub>2</sub> or methane, and photo-ionization detector (PID) for ppm level VOCs. Use of combination CO/H<sub>2</sub>S or SO<sub>2</sub>/H<sub>2</sub>S and CH<sub>4</sub>/CO<sub>2</sub> sensors allows up to 6 gas measurements in a single instrument. The MP400/400P has rugged construction and easy-to-learn 2-button operation. The unique Man-Down alarm feature notifies team workers wirelessly if a user becomes incapacitated.





### Features, Functions and Benefits

- Wide selection of “plug-and-play” Smart Sensors (carry calibration data)
- 4 Sensor slots for up to 6 gas measurements using combination sensors
- 16-Hour rechargeable Li-ion battery (diffusion version)
- Pump-off switch and low-power sensor options save battery for longer operation
- 360-Degree LED alarm bar and Man-Down alarm; Flip screen
- USB Micro charger & communications cable
- Optional POLI MonoDock station for automated bump test and calibration
- 6 Months continuous datalogging
- Durable double shot outer case
- Wireless remote team communication available (see mSquad & mPlatoon datasheets)
- Mobile App for POLI simulation and training in smartphone or tablet



**POLI MonoDock**

## Detector Specifications

<b>Size</b>	5.74 x 3.31 x 1.65 in (140 x 84 x 42 mm)
<b>Weight</b>	15.5 oz (435 g)
<b>Sensors</b>	Over 30 interchangeable and field-replaceable sensors including PID for VOCs, EC for Toxic and O <sub>2</sub> , Pellistor for LEL, and NDIR for LEL, Vol% & CO <sub>2</sub>
<b>Response Time (t<sub>90</sub>)</b>	<ul style="list-style-type: none"> <li>• 15 seconds (LEL/CO/H<sub>2</sub>S/O<sub>2</sub>)</li> <li>• Others vary – see TA Note 4 at <a href="http://www.mpowerinc.com">www.mpowerinc.com</a></li> </ul>
<b>Battery</b>	Rechargeable Li-ion pack: 16 hours in diffusion mode, 12 hours with pump
<b>Direct Readout</b>	<ul style="list-style-type: none"> <li>• Real-time reading of gas concentration</li> <li>• PID measurement gas and correction factor,</li> <li>• Visual compliance indicator</li> <li>• Battery status</li> <li>• Datalogging on/off</li> <li>• STEL, TWA, peak and minimum values</li> <li>• Man-Down alarm on/off</li> </ul>
<b>Display</b>	128 x 128 graphical LCD, 1.77 x 1.73 in (45 x 44 mm), with LED backlight for enhanced readability. Automatic screen “flip” feature
<b>Keypad</b>	2 Operation keys
<b>Sampling</b>	Built-in pump (MP400P) or diffusion (MP400)
<b>Calibration</b>	Manual calibration or automated using POLI Docking Box.
<b>Alarms</b>	<ul style="list-style-type: none"> <li>• Audible (95 dB @ 30 cm)</li> <li>• Visual (flashing bright red LEDs)</li> <li>• Vibration</li> <li>• On-screen indication of alarm conditions</li> <li>• Man-Down alarm with pre-alarm</li> <li>• Panic Alarm (manual)</li> </ul>
<b>Datalogging</b>	Continuous datalogging (6 months for 4 sensors at 1-minute intervals, 24 hours/day and 7 days/week)
<b>Charging and Communication</b>	Charging, data download, instrument setup and firmware upgrades on PC or laptop via PC comm, cradle, travel charger, or docking station.
<b>Temperature</b>	-4° to 122°F (-20° to 50°C)
<b>Humidity</b>	0% to 95% Relative humidity (non-condensing)
<b>IP Rating</b>	IP-65 (pump versions); IP-67 (diffusion versions)
<b>Safety Certifications</b>	 Class I, Div 1, Group ABCD T4, -20°C ≤ T <sub>amb</sub> ≤ +50°C  Ex ia IIC T4 Ga  II 1G Ex ia IIC T4 Ga  European Conformity
<b>EMC/RFI</b>	EMC directive: 2014/30/EU
<b>Warranty</b>	<ul style="list-style-type: none"> <li>• 2 Years on instruments</li> <li>• 2 Years on sensors for LEL, LEL/Vol, O<sub>2</sub>, CO, CO<sub>2</sub>, H<sub>2</sub>S, SO<sub>2</sub>, HCN, NO, NO<sub>2</sub>, and PH<sub>3</sub></li> <li>• 1 Year on other sensors</li> </ul>

## Sensor Options<sup>‡</sup>

Sensor	Range	Resolution
<b>PID<sup>P</sup></b>	0-200 ppm 0-2000 ppm 0-10000 ppm	0.01 ppm 0.1 ppm 1 ppm
<b>Oxygen (O<sub>2</sub>)</b> <b>Lead Wool Lead-Free</b>	0-30%Vol 0-30%Vol	0.1%Vol 0.1%Vol
<b>Combustibles (LEL%)</b>	0-100%LEL	0.1%/1%LEL
<b>NDIR Methane (LEL%)</b>	0-100%LEL	1%LEL
<b>NDIR Methane (Vol%)</b>	0-100%Vol	0.1%Vol
<b>Dual-Range LEL%/Vol%</b>	0-100%Vol	1%LEL
<b>NDIR Dual-gas Methane + CO<sub>2</sub></b> <b>CH<sub>4</sub> CO<sub>2</sub></b>	0-100%LEL 0-50000 ppm	1%LEL 10 ppm*
<b>NDIR Bio-gas Methane + CO<sub>2</sub></b> <b>CH<sub>4</sub> CO<sub>2</sub></b>	0-100%VOL 0-100%VOL	1%VOL 1%VOL
<b>CO<sub>2</sub> (Carbon Dioxide)</b>	0-50000 ppm	10 ppm"
<b>CO (Carbon Monoxide)</b>	0-1000 ppm	1 ppm
<b>H<sub>2</sub>S (Hydrogen Sulfide)</b>	0-100 ppm 0-1000 ppm	0.1 ppm 1 ppm
<b>CO + H<sub>2</sub>S</b> <b>CO H<sub>2</sub>S</b>	0-500 ppm 0-200 ppm	1 ppm 0.1 ppm
<b>SO<sub>2</sub> + H<sub>2</sub>S</b> <b>SO<sub>2</sub> H<sub>2</sub>S</b>	0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
<b>NH<sub>3</sub> (Ammonia)<sup>P</sup></b>	0-100 ppm 0-500 ppm	1 ppm 1 ppm
<b>Cl<sub>2</sub> (Chlorine)<sup>P</sup></b>	0-50 ppm	0.1 ppm
<b>ClO<sub>2</sub> (Chlorine Dioxide)<sup>P</sup></b>	0-1 ppm	0.01 ppm
<b>H<sub>2</sub> (Hydrogen)</b>	0-1000 ppm	1 ppm
<b>HCl (Hydrogen Chloride)<sup>P</sup></b>	0-15 ppm	0.1 ppm
<b>HF (Hydrogen Fluoride)<sup>P</sup></b>	0-20 ppm	0.1 ppm
<b>HCN (Hydrogen Cyanide)<sup>P</sup></b>	0-100 ppm	0.1 ppm
<b>NO (Nitric Oxide)</b>	0-250 ppm	1 ppm
<b>NO<sub>2</sub> (Nitrogen Dioxide)<sup>P</sup></b>	0-20 ppm	0.1 ppm
<b>N<sub>2</sub>O (Nitrous Oxide)</b>	0-1000 ppm	10 ppm <sup>†</sup>
<b>PH<sub>3</sub> (Phosphine)</b>	0-20 ppm 0-1000 ppm	0.01 ppm 1 ppm
<b>SO<sub>2</sub> (Sulfur Dioxide)</b>	0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
<b>ETO (Ethylene Oxide)<sup>P</sup></b>	0-100 ppm	0.1 ppm
<b>CH<sub>3</sub>SH (Methyl Mercaptan)</b>	0-10 ppm	0.1 ppm
<b>THT (Tetrahydrothiophene)<sup>P</sup></b>	0-40 ppm	0.1 ppm

<sup>P</sup> Use in pumped models is strongly preferred \* 200 ppm deadband

<sup>†</sup> 100 ppm deadband <sup>‡</sup> See TA Note 4 for all sensor specifications

Android



iOS



Scan 2-D barcode to find **POLI Training App** on a mobile device App store and simulate all functions of an actual POLI.

\* Due to ongoing research and product improvement, specifications are subject to change without notice \*