

## Confined Space Entry Monitors






The POLI multi-gas meters offer 4- or 5-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), hydrogen fluoride (HF), 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 hydrocarbons, 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 sensors allow up to 5 gas measurements in a single instrument. The MP400P has rugged construction and easy-to-learn 2-button operation. The unique Man-Down alarm feature notifies nearby workers if the user becomes incapacitated.

### Features, Functions and Benefits

- Wide selection of “plug-and-play” Smart Sensors
- 16-Hour rechargeable Li-ion battery
- Pump-off switch saves battery for longer operation time
- Automatic flow fault on pump
- 360-Degree LED alarm bar
- Man-Down alarm
- USB Micro charger & communications cable
- Flip screen
- 6 Months continuous datalogging
- Durable double shot outer case
- Wireless remote communications available (see mSquad & mPlatoon datasheets)



## 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% and CO <sub>2</sub>
<b>Response Time (t90)</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 sensor specification sheet</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 or diffusion
<b>Calibration</b>	Manual calibration.
<b>Accuracy</b>	+/-5% for H <sub>2</sub> S, CO, O <sub>2</sub> +/-3% LEL for LEL +/-10% for most of others
<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> </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 CaliCase.
<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 <b>IECEX</b> Ex ia IIC T4 Ga  II 1G Ex ia IIC T4 Ga (pending)  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 pellister LEL, and O<sub>2</sub>, CO, H<sub>2</sub>S, SO<sub>2</sub>, HCN, NO, NO<sub>2</sub>, and PH<sub>3</sub> EC sensors</li> <li>• 1 Year on other sensors</li> </ul>

## Sensor Options

Sensor	Range	Resolution
<b>PID</b>	0-2000 ppm	0.1 ppm
<b>Oxygen (O<sub>2</sub>)</b>	0-30%Vol	0.1%Vol
<b>Combustibles (LEL%)</b>	0-100%LEL	1%LEL
<b>Hydrocarbons (Vol%)</b>	0-100%Vol	0.1%Vol
<b>CO<sub>2</sub> (Carbon Dioxide)</b>	0-50000 ppm	100 ppm
<b>CO (Carbon Monoxide)</b>	0-1000 ppm	1 ppm
<b>H<sub>2</sub>S (Hydrogen Sulfide)</b>	0-100 ppm	0.1 ppm
	0-1000 ppm	1 ppm
<b>CO + H<sub>2</sub>S</b>	<b>CO</b> 0-500 ppm	1 ppm
	<b>H<sub>2</sub>S</b> 0-200 ppm	0.1 ppm
<b>SO<sub>2</sub> + H<sub>2</sub>S</b>	<b>SO<sub>2</sub></b> 0-20 ppm	0.1 ppm
	<b>H<sub>2</sub>S</b> 0-100 ppm	0.1 ppm
<b>NH<sub>3</sub> (Ammonia)</b>	0-100 ppm	1 ppm
	0-500 ppm	1 ppm
<b>Cl<sub>2</sub> (Chlorine)</b>	0-50 ppm	0.1 ppm
<b>ClO<sub>2</sub> (Chlorine Dioxide)</b>	0-1 ppm	0.01 ppm
<b>H<sub>2</sub> (Hydrogen)</b>	0-1000 ppm	10 ppm
<b>HCl (Hydrogen Chloride)</b>	0-15 ppm	0.1 ppm
<b>HF (Hydrogen Fluoride)</b>	0-10 ppm	0.1 ppm
<b>HCN (Hydrogen Cyanide)</b>	0-100 ppm	1 ppm
<b>NO (Nitric Oxide)</b>	0-250 ppm	1 ppm
<b>NO<sub>2</sub> (Nitrogen Dioxide)</b>	0-20 ppm	0.1 ppm
<b>PH<sub>3</sub> (Phosphine)</b>	0-20 ppm	0.01 ppm
<b>SO<sub>2</sub> (Sulfur Dioxide)</b>	0-20 ppm	0.1 ppm
	0-100 ppm	0.1 ppm
<b>C<sub>2</sub>H<sub>4</sub>O (Acetaldehyde)</b>	0-20 ppm	0.1 ppm
<b>ETO (Ethylene Oxide)</b>	0-100 ppm	0.1 ppm
<b>CH<sub>3</sub>SH (Methyl Mercaptan)</b>	0-10 ppm	0.1 ppm
<b>HCHO (Formaldehyde)</b>	0-10 ppm	0.01 ppm



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