

MUNI MP42X Series

Compact & Lightweight 4-Gas Monitors



The MUNI MP42X is a compact and lightweight 4-gas detector for worker safety at hazardous locations, with four standard sensors for oxygen (O₂), combustibles (LEL), carbon monoxide (CO) and hydrogen sulfide (H₂S). Alternative sensors are sulfur dioxide (SO₂), low power infrared methane (CH₄) for LEL, and lead-free oxygen (O₂-LF). The detector is packaged in a robust housing with no moving parts. Its battery power offers 2 work shifts of run time for a standard 4-gas detector, and up to 30 days run time using a low-power infrared sensor. The simple, 2-button operation results in ultimate ease of use and significantly reduced time spent training the user.

Features, Functions and Benefits

- Compact, robust, lightweight & wearable
- Auto backlit LCD with large numeric digits
- Easy-to-navigate menu with two buttons
- 4 Fixed sensor configurations with 7 sensor options; non-interchangeability reduces monitor cost
- Battery operation 18 hours with pellistor LEL sensor; up to 30 days with low-power infrared LEL methane sensor
- Tri-color status indicators on regular self-diagnosis of sensor, battery & circuit
- Wide angle LED alarms
- 1000 Events log
- Combination charge adapter / micro-USB PC interface cable
- IP-68 weather ingress rating
- Optional BLE wireless connectivity
- Optional MuniDock or CaliCase for convenient bump & calibration







MuniDock



CaliCase Docking Station

Detector Specifications

Size	4.33 x 2.36 x 1.18 in (110 x 60 x 30 mm)
Weight	8.0 oz (230 g)
Sensor Options	<ul style="list-style-type: none"> • LEL (Pellistor), LEL CH₄ (NDIR[†]), O₂-LF[‡], O₂ (galvanic), CO, H₂S and SO₂ • Replaceable but not interchangeable
Battery	Rechargeable Li-ion pack. Run time up to 18 hours with Pellistor LEL 30 days with NDIR LEL and O ₂ LF
Direct Readout	<ul style="list-style-type: none"> • Real-time reading of gas concentration • Visual compliance indicator • Battery status • STEL, TWA, peak and minimum values
Display	Segment LCD, 1.75 x 1.25 in (44 x 32 mm) with LED backlight for enhanced readability
Keypad	2 Operation keys
Calibration & Bump Test	Manual with calibration cup. MuniDock single-bay (MP420T) or CaliCase 4-bay (MP342) options allow automated bump test and calibration and printing certificates
Alarms	<ul style="list-style-type: none"> • Audible (95 dB @ 30 cm) • Visual (tri-color LEDs) • Vibration
Datalogging	1000 Events (alarms, function tests and calibrations)
Charging and Communication	<ul style="list-style-type: none"> • Charging with AC adapter or cable to PC • PC comm for data download, monitor setup & firmware upgrades via cable, optional BLE (Bluetooth Low Energy), or MuniDock
Charge Time	4.5 hours to full charge with AC adapter
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% RH (non-condensing)
IP Rating	IP-68
Safety Certifications	 Ex da ia IIC T4 Ga  Class I, Div 1, Group ABCD T4, -20°C ≤ T _{amb} ≤ +50°C  II 1G Ex da ia IIC T4 Ga  European Conformity
EMC/RFI	EMC directive: 2014/30/EU
Warranty	2 Years including sensors 3 Years with CH ₄ (NDIR)/O ₂ (LF)/H ₂ S/CO

Model Options

Model	Sensor Configuration	Part No.
MP424	LEL / O ₂ / CO / H ₂ S	M020-0024-000
MP425	LEL / O ₂ -LF / CO / H ₂ S	M020-0025-000
MP427	NDIR-LEL / O ₂ -LF / CO / H ₂ S	M020-0027-000
MP428	NDIR-LEL / O ₂ -LF / SO ₂ / H ₂ S	M020-0028-000

Sensor Information

Sensor*	Resolution & Range	Response Time (t ₉₀)
Combustibles (NDIR)[†] (Pellistor)	1 - 100%LEL 1 - 100%LEL CH ₄	15 sec 30 sec
Oxygen (O₂) (Galvanic) (Lead-free)[‡]	0.1 - 30.0% Vol 0.1 - 30.0% Vol	15 sec 15 sec
Hydrogen Sulfide (H₂S)	0.1 - 100 ppm	15 sec
Carbon Monoxide (CO)	1 - 1000 ppm	15 sec
Sulfur Dioxide (SO₂)	0.1 - 20.0 ppm	30 sec

* Sensors are replaceable but NOT interchangeable. Sensor configuration must be decided at time of purchase because each configuration has a unique circuit board.

[†] NDIR CH₄ sensor detects methane and most hydrocarbons, but not some combustible gases such as hydrogen, acetylene and carbon disulfide. Contact mPower for assessment or approval for use in practical applications.

[‡] Pb-free (LF, Lead-free) O₂ sensor has a longer life span than the galvanic version, but requires more battery power.

Standard

- MP42X detector including rechargeable Li+ battery, selected sensors & alligator clip
- AC Charging adapter
- Calibration cap
- USB Communication cable
- Quick start guide
- Calibration certificate

Optional

- External filters
- BLE Wireless
- MuniDock 1-bay (MP420T) and CaliCase 4-bay (MP342) bump & calibration stations

Distributed By: _____

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