MUNI MP420

mPower Electronics
Making Powerful Senses
1-866-mPower7

Compact & Lightweight 4-Gas Monitors



The MUNI MP420 is a compact and lightweight 4-gas detector for worker safety at hazarous locations, with four standard sensors for oxygen (O_2), combustibles (LEL), carbon monoxide (CO) and hydrogen sulfide (H_2S). Alternative sensors are lead free oxygen (O_2), low power infrared methane (CH_4), sulfur dioxide (SO_2), and hydrogen cyanide (HCN). 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 2 months when 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, lightweight & wearable
- Auto backlit LCD with large numeric digits
- Easy-to-navigate menu with two buttons
- Battery operation 20 hours with pellistor LEL sensor or 30 days with infrared LEL sensor
- Tri-color status indicators on regular self-diagnosis of sensor, battery and circuit
- Wide angle LED alarms
- 1000 Events log
- Micro-USB Charging adapter
- IP-68 Weather ingress rating
- Replaceable sensors & batteries
- Optional BLE wireless connectivity
- Optional MuniDock for convenient bump & calibration

MUNI Specifications

Detector Specifications

Size	4.33 x 2.36 x 1.10 in (110 x 60 x 28 mm)
Weight	8.0 oz (230 g)
Sensors	• Stardard LEL (Pellistor), O_2, CO and H_2S • Alternatives CH_4 (NDIR*), O_2 (Pb-free^), SO_2 and HCN
Battery	Rechargeable Li-ion pack: ≥ 20 hours (Pellistor) or 30 days (NDIR)
Direct Readout	• Real-time reading of gas concentration • Visual compliance indicator • Battery status • STEL, TWA, peak and minimum values
Display	14-segment LCD, 1.75 x 1.25 in (44 x 32 mm) with LED backlight for enhanced readability
Keypad	2 Operation keys
Calibration	Manual calibration. Dock option allows automatic bump test and calibration
Alarms	• Audible (95 dB @ 30 cm) • Visual (tri-color LEDs) • Vibration
Datalogging	1000 Events (alarms, function tests and calibrations)
Charging and Communication	Charging, data download, instrument setup and firmware upgrades on PC or laptop via PC comm, optional BLE (Bluetooth Low Energy), or MuniDock
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% Relative humidity (non-condensing)
IP Rating	IP-68
Safety Certifications	IECEx Ex da ia IIC T4 Ga c UL us Class I, Div 1, Group ABCD (pending) T4, -20°C ≤ T_{amb} ≤ +50°C ATEX Ex II 1G Ex ia IIC T4 Ga (pending) CE European Conformity (pending)
EMC/RFI	EMC directive: 2014/30/EU
Warranty	1 Years including sensors

Sensor Information

Sensor	Resolution & Range	Response Time (t_{90})
Combustibles		
(Pellistor)	1 - 100% LEL	15 sec
(NDIR)*	1 - 100% LEL CH_4	30 sec
Oxygen (O_2)		
(Galvanic)	0.1 - 30.0% Vol	15 sec
(Lead-free)†	0.1 - 30.0% Vol	15 sec
Hydrogen Sulfide (H_2S)	0.1 - 100 ppm	15 sec
Carbon Monoxide (CO)	1 - 1000 ppm	15 sec
Sulfur Dioxide (SO_2)	0.1 - 20.0 ppm	30 sec
Hydrogen Cyanide (HCN)	0.1 - 50.0 ppm	45 sec

** NDIR CH_4 sensor detects methane and most hydrocarbons, but not all combustible gases such as hydrogen and acetylene. Assessment or approval shall be obtained for practical applications.*

† Pb-free O_2 sensor has a longer life span than galvanic one, but requires more battery power.

Standard

- MP420 detector including rechargeable Li+ battery, selected sensors and alligator clip
- AC Charging adapter
- Calibration cap
- USB Communication cable
- Quick start guide
- Calibration certificate

Optional

- External filters
- BLE Wireless
- MuniDock MP420T bump & calibration station

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