UNI 321

mPower Electronics
Making Powerful Senses
1-866-mPower7

2- or 3-Year Maintenance-Free CO, H_2S and O_2 Detectors

The UNI 321 is a disposable, maintenance-free version of the UNI single gas monitor. It detects H_2S, CO or O_2 in a selection of models with continuous operating lives of 24 months (MP102) or 36 months (MP103). MP102RT runs 2 years but has a hibernation feature that allows up to 3 years operation. The detectors have a large LCD providing maximum readability in the field. MP102 and MP103 display remaining battery run time, while MP102RT displays real-time concentrations. Six bright red LEDs allow for quick alarm notification. Constructed of strong and durable material, the UNI 321 is designed to be comfortable, yet drop-resistant. The UNI detectors can easily be bump tested and calibrated with Single Docking Box or CaliCase System.

Features, Functions and Benefits

- Simple GO, NO-GO!
- No Maintenance needed for life of instrument
  (except when used under extreme conditions)
- Low cost of ownership
- Large Display shows remaining operating time (MP102 & MP103) or concentration display (MP102RT)
- Durable Housing
- Solid stainless-steel Alligator Clip
- 50% larger single-cell Battery
- Daily functional Self-Test
- 50 Event Datalogging
- Docking Stations for calibration and event download
- UL Classification Class 123, Groups ABCDEFG

UNI Docking Box

CaliCase Docking Station

UNI 321 Specifications

Detector Specifications

Size	3.46 x 2.44 x 1.3 in (8.8 x 6.2 x 3.3 cm)
Weight	4.4 oz (125 g)
Response time (t90)	15 seconds
Display	• MP102 & MP102: remaining operating time or alarm condition • MP102RT: real-time concentration and alarm condition
Alarm type	• High & Low alarms • Over range alarm • Low battery alarm
Alarm signal	• 95 dB @ 30 cm • Bright red LEDs • Built in vibrator
Calibration	Manual zero (UNI Docking Box or CaliCase/MP300T1 allow 2-point calibration, zero and span)
Event log	Up to 50 alarm events (Requires separate IR reader or docking station to download)
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
IP rating	IP-67
EMI/RFI	EMC directive: 2014/30/EU
Safety Certifications	c UL us Class I, Div 1, Group ABCD Class II, Div 1, Group EFG Class III, Div 1 T4, -20°C ≤ T_{amb} ≤ +50°C **IECEx** Ex ia IIC T4 Ga **ATEX** CE Ex II 1G Ex ia IIC T4 Ga
Operating life	• 2 years for MP102 • 3 years for MP103 • 2 years for MP102RT plus up to 1 more year if hibernation is used

Model Options

Gas	Range	Model	Display	P/N
CO (Carbon Monoxide)	1 – 500 ppm	MP103	Time left	M016-0001-000
		MP102	Time left	M015-0001-000
		MP102RT	Conc.	M015-0001-RT0
H_2S (Hydrogen Sulfide)	0.1 – 100 ppm	MP103	Time left	M016-0002-000
		MP102	Time left	M015-0002-000
		MP102RT	Conc.	M015-0002-RT0
O_2 (Oxygen)	0.1 – 30%	MP102	Time left	M015-0003-000

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UNI 321 RT

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2- and 3-Year Maintenance-Free CO or H_2S Detectors

The UNI 321 is a disposable or maintenance-free version of UNI single gas detector. It detects hydrogen sulfide (H_2S) or carbon monoxide (CO) in a selection of models with operating lives of 24 months (MP102) or 36 months (MP103). The detectors have large LCDs providing maximum readability in the field. Six bright red LEDs allow for quick alarm notification. Constructed of strong and durable material, the UNI 321 is designed to be comfortable, yet drop-resistant. The UNI detectors can easily be bump tested and calibrated using the CaliCase System or Docking Box accessories.

Features, Functions and Benefits

- Real-time Readings with Hibernation up to 1 year
- Automatic Internal Self-test every 24hr
- No Maintenance needed for life of instrument
  (except when used under extreme conditions)
- Low cost of ownership
- Large Display
- Durable Housing
- Solid stainless-steel Alligator Clip
- 50% larger single-cell Battery
- 50 Event Datalogging
- Docking Station for calibration and bump testing
- Event download via USB link through docking station to mPower Suite Software
- ATEX and UL Classification Class-I II III, Group ABCDEFG certifications

CaliCase Docking Station

UNI Docking Box

UNI 321RT Specifications

Detector Specifications

Size	3.46 x 2.44 x 1.3 in
Weight	4.4 oz (125 g)
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Alarm type	• High & Low alarms • Over range alarm • Low battery alarm
Alarms Setup	User programmable by push buttons on instrument or docking station via USB link to mPower Suite Software
Alarm signal	• 95 dB @ 30 cm • Bright red LEDs • Built in vibrator
Calibration	Manual zero (Cali Case/Docking Box allows 2-point calibration, zero and span)
Event log	Up to 50 alarm events
Response time (t90)	15 seconds
Backlight	Push button on demand backlight, on when in full alarm
Hibernation	MP102 up to 1-year hibernation MP103 hibernation not offered
Battery	3.6 V, 2700 mAH Lithium AA EVE14505, replaceable
IP rating	IP-67
Accessories	Calibration Cap and tubing
EMI/RFI	EMC directive: 2014/30/EU
Safety Certifications	c UL us Class I, Div 1, Group ABCD Class II, Div 1, Group EFG Class III, Div 1 T4, -20°C ≤ T_{amb} ≤ +50°C **IECEx** Ex ia IIC T4 ATEX Ex II 1G Ex ia IIC T4 CE European Conformity
Operating life Warranty (Run Time)	• 2 years for MP102 – Hibernate • 3 years for MP103

Model Options

Gas	Range	Model	P/N
H_2S (Hydrogen Sulfide)	0.1 – 100 ppm	MP102	M015-0002-R00
		MP103	M016-0002-R00
CO (Carbon Monoxide)	1 – 500 ppm	MP102	M015-0001-R00
		MP103	M016-0001-R00

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UNI

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Single Gas Detectors

The UNI MP100 offers a simple, personal protection for a wide array of toxic gas and oxygen (O_2) measurement applications. In addition to common sensors such as carbon monoxide (CO), hydrogen sulfide (H_2S), nitrogen dioxide (NO_2), ammonia (NH_3) and sulfur dioxide (SO_2), we offer less-common sensors including chlorine (Cl_2), chlorine dioxide (ClO_2), hydrogen chloride (HCl), hydrogen fluoride (HF), phosphine (PH_3), ozone (O_3), methyl mercaptan and ethylene oxide (ETO). Special oxygen monitors are available with long-life lead-free sensors or with inverted alarms for inert gas applications. The monitors have a large LCD providing maximum readability in the field and are made with six bright red LEDs allowing for quick alarm notification. Constructed of strong and durable material, the UNI is designed to be comfortable, yet drop-resistant. The UNI series can easily be bump tested and calibrated with the mPower CaliCase Station or Docking Box.

Features, Functions and Benefits

- 50% larger (AA versus 2/3 AA) Lithium Battery
- Widest choice of sensors on the market
- Large display
- 50 Event datalogging
- Low cost of ownership
- Solid stainless-steel alligator clip
- Durable housing
- Fast bump, calibration or download using single Docking Box or CaliCase 4-Bay Docking Station
- UL Classification Class I, II, III, Groups ABCDEFG

UNI Docking Box

CaliCase Docking Station

UNI Specifications

Detector Specifications

Size	3.46 x 2.44 x 1.3 in (88 x 62 x 33 mm)
Weight	4.4 oz (125 g)
Sensors	Electrochemical
Response time (t90)	15 seconds ($CO/H_2S/O_2$) Others vary, see individual sensor specifications in TA Note 4
Battery	Replaceable AA size Lithium battery, up to 3 years operation without frequent alarms
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Alarm Type	• High, Low, STEL & TWA alarms adjustable • Over-range alarm • Low battery alarm
Alarm Signal	• 95 dB @ 30 cm • Bright red LEDs • Built in vibrator
Calibration	2-point calibration, zero and span, power on zero (user-selectable)
Docking Stations for Cal & Bump	UNI Single Docking Box CaliCase 4-Bay Docking Station
Event Log	Up to 50 alarm events
IP Rating	IP-67
EMI/RFI	EMC directive: 2014/30/EU
Safety Certifications	c UL us Class I, Div 1, Group ABCD Class II, Div 1, Group EFG Class III, Div 1 T4, -20°C ≤ T_{amb} ≤ +50°C **IECEx** Ex ia IIC T4 Ga **ATEX** CE Ex II 1G Ex ia IIC T4 Ga
Sensor Life	CO & H_2S expected operating life 5 years, others 1 to 2 years as per warranty
Warranty	2 years on O_2, CO, H_2S, SO_2, HCN, NO, NO_2, and PH_3 units including sensor; 1 year on others

Sensor Specifications

Gas	Range/ Resolution (ppm)	Detector P/N
CO (Carbon Monoxide)	1000/1	M001-0023-000
H_2S (Hydrogen Sulfide)	100.0/0.1	M001-0054-000
	1000/1	M001-0060-000
O_2 (Oxygen)	25/0.1%	M001-0032-000
O_2 (Oxygen) Lead-Free	30/0.1%	M001-0095-000
O_2 Inert Alarms	25/0.1%	M001-0093-000
NH_3 (Ammonia)	100/1	M001-0006-000
	500/1	M001-0090-000
Cl_2 (Chlorine)	50.0/0.1	M001-0004-000
ClO_2 (Chlorine Dioxide)	1.00/0.01	M001-0072-000
H_2 (Hydrogen)	2000/1	M001-0019-000
HCl (Hydrogen Chloride)	15.0/0.1	M001-0008-000
HF (Hydrogen Fluoride)	20.0/0.1	M001-0014-000
HCN (Hydrogen Cyanide)	100/0.1	M001-0005-000
NO (Nitric Oxide)	250/1	M001-0015-000
NO_2 (Nitrogen Dioxide)	20.0/0.1	M001-0011-000
O_3 (Ozone)	5.00/0.01	M001-0009-000
PH_3 (Phosphine)	20.00/0.01	M001-0016-000
SO_2 (Sulfur Dioxide)	20.0/0.1	M001-0007-000
	100.0/0.1	M001-0091-000
ETO (Ethylene Oxide)	200.0/0.1	M001-0069-000
CH_3SH (Methyl Mercaptan)	10.0/0.1	M001-0077-000
THT (Tetrahydrothiophene)	40.0/0.1	M001-0085-000

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UNI MP100T & MP300T1

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Docking Stations for Single Gas Detectors

The UNI Docking Box (MP100T) and UNI CaliCase (MP300T1) are docking and calibration stations for the UNI and UNI 321 Single Gas Detectors. The MP100T is a single docking box for one instrument and the MP300T1 handles up to four a UNIs simultaneously. They both provide the three functions of 1) semi-automated calibration or bump testing, 2) data downloading and 3) uploading instrument configuration. In addition, all calibrations and bump tests performed on the docking units are stored in on-board memory as a compliance record. The docking stations are designed to handle the most commonly measured gases such as oxygen (O_2), carbon monoxide (CO), hydrogen sulfide (H_2S), ammonia (NH_3) hydrogen cyanide (HCN) and sulfur dioxide (SO_2). Both docking systems have rechargeable batteries and are portable for remote use.

Features, Functions and Benefits

- Bump testing, calibration, configuration and data recording on a single platform
- Simple, single-button operation
- Fast – up to 4 units bumped or calibrated simultaneously (on MP300T1)
- 1999 or 100,000 calibration or bump record storage
- Portable, using battery power for up to 1000 bump tests
- Robust – All-in-one hard case

UNI Docking Box

UNI Docking Box and CaliCase Specifications

Single Docking Box MP100T Specifications

Size	9.2 x 7.5 x 4.3 in (23.5 x 19.0 x 10.7 cm)
Weight	3.3 lbs. (1.5 kg)
Number of Units	One (1)
Battery	Rechargeable Lithium battery, up to 1000 bump tests on a single charge
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Event Log	1999 Calibration or Bump records
Power & Communications Connection	USB (Type A)
Test Gas Supply	• Cylinder & demand flow regulator (not included) outside Docking Box • Built-in pump for air or test gas
Gas Connections	• Quick-connects for 6-mm o.d. tubing: • Test gas inlet for calibration/bump • Air inlet for zeroing • Exhaust outlet for guiding toxic gases away from operator
Recommended Gases	All gases offered in UNI sensors except for ozone, chlorine dioxide, hydrogen chloride*, hydrogen fluoride*, chlorine, phosgene and arsine* * May calibrate with surrogate gas
Safety Certifications	For use in non-hazardous locations
Warranty	1 year

CaliCase (MP300T1) Specifications

Size	21.9 x 14.1 x 7.3 in (55.6 x 35.8 x 18.5 cm)
Weight	20 lbs. (9.1 kg)
Number of Units	Up to Four (4)
Battery	Rechargeable Lithium battery, up to 1000 bump tests (4000 instrument tests) on a single charge
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Event Log	100,000 Calibration or Bump records
Power & Communications Connection	USB (Type A)
Test Gas Supply	• Cylinder (not included) & regulator inside CaliCase • Built-in pump for air or test gas
Gas Connections	• C-10 Demand-flow regulator and all gas supply connections included • Exhaust outlet hose barb for guiding toxic gases away from operator
Cylinder Specifications	• Max 14.25 x 3.5 in. (36.2 x 8.9 cm) • Pressure ≤725 psi • CGA C-10 connection
Recommended Gases	All gases offered in UNI sensors except for ozone, chlorine dioxide, hydrogen chloride*, hydrogen fluoride*, chlorine, phosgene and arsine* * May calibrate with surrogate gas
Safety Certifications	For use in non-hazardous locations
Warranty	1 year

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NEO

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Photo-ionization Detectors

The NEO is one of the most advanced handheld VOC (Volatile Organic Compound) monitors available for ppb (parts per billion) detection. 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 filter tube version (NEO BENZ) for benzene-specific or butadiene-specific measurements. In addition to the standard continuous read-out, a Leak Detection and Repair (LDAR) mode is included. Novel designs of the Photo-ionization Detector (PID) and Ultraviolet (UV) lamp provide outstanding sensitivity, stability and reproducibility. Includes real-time data monitoring using mPower Suite software via cable to a PC or via Bluetooth to an Android phone or tablet.

Features, Functions and Benefits

- 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
- Search Mode for LDAR Sampling
- Filter tube version for benzene- or butadiene-selective measurements
- Large backlight graphic display
- Lamp glow indicator
- Rugged, stainless-steel housing with rubber outer boot

NEO Specifications

Detector Specifications

Size	9.1 x 2.9 x 2.2 in (230 x 74 x 55 mm) (with boot)
Weight	24.9 oz (708 g) (w/boot)
Sensor	Photo-ionization sensor with standard 10.6 eV lamp (9.8 eV lamp in MP186)*
Response Time	3 sec (t_{90}) VOC Mode 45 sec @ 68°F (20°C) Benzene Tube Mode (MP186)
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/m^3, $\mu g/m^3$), 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
Operating Modes	• Continuous readout with realtime data download to PC • Individual sampling mode for Leak Detection & Repair
Alarms	• Audible (95 dB @ 30 cm), visual (flashing bright red LEDs), and on-screen indication of alarm conditions • High, Low, TWA and STEL alarms • Over range alarm, battery low alarm • Man-Down alarm with pre-alarm and real-time remote wireless notification
Datalogging Capacity	• Standard 12 months at one-minute intervals • Storage interval adjustable from 1 to 3,600 seconds • 9999 LDAR sample points storage
Calibration	Two/three-point calibration
Low Flow Alarm	Auto pump shutoff at low-flow condition
Charging and Communication	Charging, data download, instrument configuration and firmware upgrades on PC or laptop via Micro USB. Configuration also via BLE using mobile App on Android phone or tablet
BLE Range	10 m (33 ft) line of sight
Corr. Factors	Integrated Correction Factor list of > 700 compounds
IP Rating	IP-66/67
EMI/RFI	Highly resistant to EMI/RFI Compliant with EMC Directive 2014/30/EU
Safety Certifications	c UL us Class I, Div 1, Group ABCD, T4 IECEx Ex ia IIC T4 Ga ATEX Ex II 1G Ex ia IIC T4 Ga CE European Conformity
Temperature	-4° to 122°F (-20° to 50°C)
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)

Model Options

Model Number	VOC Range (ppm)	Part No.
MP181 (NEO PPM)	0.01-5,000	M011-0004-000
MP182 (NEO EXT)	0.01-15,000	M011-0005-000
MP184 (NEO PPB)	0.001-15,000	M011-0006-000
MP185 (NEO SEMI) (w/o MicroUSB)	0.001-15,000	Special Order
MP186 (NEO BENZ)* (w/9.8 eV Lamp & Tube Holder)	0.01-200 Benzene or Butadiene 0.005-10,000 VOC	M011-0013-000

* 9.8 eV lamp detects fewer VOCs than does 10.6 eV lamp

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MUNI MP420

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Compact & Lightweight 4-Gas Monitors

The MUNI MP420 is a compact and lightweight 4-gas detector for worker safety at hazardous locations, with four standard sensors for oxygen (O_2), combustibles (LEL), carbon monoxide (CO) and hydrogen sulfide (H_2S). Alternative sensors are 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 extended 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
- Up to 4 replaceable sensors out of 7 choices; non-interchangeability reduces monitor cost
- Battery operation 24 hours with pellistor LEL sensor; extended time with low-power infrared LEL 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

MUNI Specifications

Detector Specifications

Size	4.33 x 2.36 x 1.18 in (110 x 60 x 30 mm)
Weight	8.0 oz (230 g)
Sensors	• Stardard: LEL (Pellistor), O_2 LF‡, CO & H_2S • Alternatives: CH_4 (NDIR‡), SO_2 and HCN • Replaceable but not interchangeable
Battery	Rechargeable Li-ion pack: up to 18 hours with Pellistor; extended run time with NDIR
Direct Readout	• 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	• Audible (95 dB @ 30 cm) • Visual (tri-color LEDs) • Vibration
Datalogging	1000 Events (alarms, function tests and calibrations)
Charging and Communication	• 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
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 T4, -20°C ≤ T_{amb} ≤ +50°C ATEX Ex II 1G Ex da ia IIC T4 Ga CE European Conformity
EMC/RFI	EMC directive: 2014/30/EU
Warranty	2 Years including sensors 3 Years with CH_4(NDIR)/O_2(Lead-free)/H_2S/CO

Sensor Information

Sensor*	Resolution & Range	Response Time (t_{90})
1. Combustibles (Pellistor)	1 - 100% LEL	15 sec
or (NDIR)†	1 - 100% LEL CH_4	30 sec
2. Oxygen (O_2) (Galvanic)	0.1 - 30.0% Vol	15 sec
or (Lead-free)‡	0.1 - 30.0% Vol	15 sec
3. Hydrogen Sulfide (H_2S) or	0.1 - 100 ppm	15 sec
Hydrogen Cyanide (HCN)	0.1 - 50.0 ppm	120 sec
4. Carbon Monoxide (CO) or	1 - 1000 ppm	15 sec
Sulfur Dioxide (SO_2)	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 CH_4 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) O_2 sensor has a longer life span than the galvanic version, 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

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MUNI MP420T & MP342

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Docking Stations for Multi-Gas Detectors

The MuniDock (MP420T) and MUNI CaliCase (MP342) are docking and calibration stations for the MUNI Multi-Gas Detectors. The MP420T is a single docking box for one instrument and the MP342 handles up to four MUNIs simultaneously. They both provide the three functions of 1) semi-automated calibration or bump testing, 2) data downloading and 3) uploading instrument configuration. All calibrations and bump tests performed on the docking units are stored in on-board memory as a compliance record. Operation is simple: after initial set up, just place the MUNI in the bay in communication mode, and push start. All calibrations and bump test results are stored in on-board memory as a compliance record downloadable separate from the instruments themselves. The docking stations are designed to operate with the four commonly measured gases oxygen (O_2), carbon monoxide (CO), hydrogen sulfide (H_2S), methane (CH_4), plus a second gas input for alternate gases. These stations have rechargeable batteries and are portable for remote use.

Features, Functions and Benefits

- **Simple & Fast**: One-button operation for either bump test or calibration
- **High Capacity**: 2,000 calibration or bump record storage in reliable FLASH Memory
- **Convenient**: Records can be downloaded without the MUNI in place
- **Portable**: Battery power for up to 1000 bump tests
- **Robust**: All-in-one hard case s

MuniDock

MUNI MuniDock and MUNI CaliCase Specifications

MuniDock MP420T Specifications

Size	9.2 x 7.5 x 4.3 in (23.5 x 19.0 x 10.7 cm)
Weight	4.4 lbs. (2.0 kg)
Number of Units	One (1) MUNI Monitor
Battery	Rechargeable Lithium battery, up to 1000 bump tests on a single charge
Temperature	32°F to 122°F (0°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Event Log	2000 Calibration or Bump records
Power Connection	On-board battery rechargeable by 12V DC wall adapter or on PC using USB (Type A) charge/comm cable
Communications	USB (Type A)
Test Gas Supply	• Cylinder(s) & regulator(s) (not included) outside MuniDock • Demand flow regulator(s) required • Built-in pump for air or test gas
Gas Connections	• Quick-connects for 6-mm o.d. tubing: • 2 Test gas inlets for calibration/bump • Air inlet for zeroing • Gas outlet for safe exhaust

Calibration Gases	• Gas mix with up to 4 gases:
	  • Oxygen
	  • Carbon Monoxide
	  • Hydrogen Sulfide
	  • Methane
	• Alternate gases including Hydrogen Cyanide and Sulfur Dioxide

Safety Certifications	For use in non-hazardous locations
Warranty	1 year

CaliCase (MP342) Specifications

Size	21.9 x 14.1 x 7.3 in (55.6 x 35.8 x 18.5 cm)
Weight	20 lbs. (9.1 kg)
Number of Units	Up to Four (4) MUNI Monitors
Battery	Rechargeable Lithium battery, up to 1000 bump tests (4000 instrument tests) on a single charge
Temperature	-4°F to 122°F (-20°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Event Log	100,000 Calibration or Bump records
Power & Communications Connection	USB (Type A). On-board battery rechargeable by 12V DC wall adapter
Test Gas Supply	• Cylinder (not included) & regulator inside CaliCase • Built-in pump for air or test gas
Gas Connections	• C-10 Demand-flow regulator and all gas supply connections included • Exhaust outlet hose barb for guiding toxic gases away from operator
Cylinder Specifications	• Max 14.25 x 3.5 in. (36.2 x 8.9 cm) • Pressure ≤1300 psi • CGA C-10 connection

Recommended Gases	• Gas mix with up to 4 gases:
	  • Oxygen
	  • Carbon Monoxide
	  • Hydrogen Sulfide
	  • Methane
	Alternate gases including Hydrogen Cyanide and Sulfur Dioxide

Safety Certifications	For use in non-hazardous locations
Warranty	1 year

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POLI MP400T

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1-866-mPower7

Docking Station for Multi-Gas Detectors

The POLI MonoDock (MP400T) is a docking and calibration station for the POLI Multi-Gas Detectors. The MP400T provides fast and easy calibration or bump testing: just place the POLI in the bay, connect the cable, and push start. All calibrations and bump test results are stored in on-board memory as a compliance record downloadable separate from the instruments themselves. The docking station is designed to operate with the four commonly measured gases oxygen (O_2), carbon monoxide (CO), hydrogen sulfide (H_2S), methane (CH_4), ammonia (NH_3), hydrogen cyanide (HCN), plus isobutylene for PID, and several other toxic gases. The MonoDock has rechargeable batteries and is portable for remote use. Two versions of the MonoDock are offered: one for pumped POLI instruments and one for diffusion POLI instruments.

Features, Functions and Benefits

- **Simple & Fast**: One-button operation for either bump test or calibration
- **High Capacity**: 2,000 calibration or bump record storage in reliable FLASH Memory
- **Convenient**: Records can be downloaded without the POLI in place
- **Portable**: Battery power for up to 1000 bump tests
- **Robust**: All-in-one hard case

POLI MonoDock

POLI MonoDock Specifications

POLI MonoDock MP400T Specifications

Size	9.2 x 7.5 x 4.3 in (23.5 x 19.0 x 10.7 cm)
Weight	4.4 lbs. (2.0 kg)
Number of Units	One (1) POLI Pump Monitor
Battery	Rechargeable Lithium battery, up to 1000 bump tests on a single charge
Temperature	32°F to 122°F (0°C to 50°C)
Humidity	5 to 95% relative humidity (non-condensing)
Event Log	2000 Calibration or Bump records
Power & Communications Connection	USB (Type A)
Test Gas Supply	• Cylinder(s) & regulator(s) (not included) outside MonoDock • Demand flow regulator(s) preferred • Diffusion POLI: Built-in pump in MonoDock • Pumped POLI: Untilizes POLI pump
Gas Connections	• Quick-connects for 6-mm o.d. tubing: • 2 Test gas inlets for calibration/bump • Air inlet for zeroing

Calibration Gases*	• Gas mix with up to 4 gases:
	  • Oxygen (O_2)
	  • Carbon Monoxide (CO)
	  • Hydrogen Sulfide (H_2S)
	  • Methane (CH_4)
	• Isobutylene (C_4H_8, for PID)
	• Carbon dioxide (CO_2)
	• Ammonia (NH_3)
	• Hydrogen cyanide (HCN)
	• Nitric oxide (NO)
	• Phosphine (PH_3)
	• Sulfur dioxide (SO_2)
	• Ethylene oxide (ETO)
	• Methyl mercaptan (CH_3SH)
	• Tetrahydrothiophene (THT)

Safety Certifications	For use in non-hazardous locations
Warranty	1 year

* Operation with other toxic gases is not available at this time. Check with mPower for availability.

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Ver 0.3

POLI MP400/MP400P

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Confined Space Entry Monitors

The POLI multi-gas meters offer 4-gas monitoring of toxic gases, oxygen (O_2), combustibles (LEL), carbon dioxide (CO_2) 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_2S), ammonia (NH_3), hydrogen cyanide (HCN), hydrogen chloride (HCl), chlorine (Cl_2), chlorine dioxide (ClO_2), nitric oxide (NO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ethylene oxide, methyl mercaptan, and others. Also available are pellistor for LEL level combustibles, non-dispersive infrared (NDIR) for Vol% level CO_2 or methane, and photo-ionization detector (PID) for ppm level VOCs. Use of combination CO/H_2S or SO_2/H_2S and CH_4/CO_2 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

POLI MonoDock

- 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 Specifications

Detector Specifications

Size	5.74 x 3.31 x 1.65 in (140 x 84 x 42 mm)
Weight	15.5 oz (435 g)
Sensors	Over 30 interchangeable and field-replaceable sensors including PID for VOCs, EC for Toxic and O_2, Pellistor for LEL, and NDIR for LEL, Vol% & CO_2
Response Time (t90)	• 15 seconds (LEL/CO/H_2S/O_2) • Others vary – see TA Note 4 at www.mpowerinc.com
Battery	Rechargeable Li-ion pack: 16 hours in diffusion mode, 12 hours with pump
Direct Readout	• Real-time reading of gas concentration • PID measurement gas and correction factor, • Visual compliance indicator • Battery status • Datalogging on/off • STEL, TWA, peak and minimum values • Man-Down alarm on/off
Display	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
Keypad	2 Operation keys
Sampling	Bulit-in pump (MP400P) or diffusion (MP400)
Calibration	Manual calibration or automated using POLI Docking Box.
Alarms	• Audible (95 dB @ 30 cm) • Visual (flashing bright red LEDs) • Vibration • On-screen indication of alarm conditions • Man-Down alarm with pre-alarm • Panic Alarm (manual)
Datalogging	Continuous datalogging (6 months for 4 sensors at 1-minute intervals, 24 hours/day and 7 days/week)
Charging and Communication	Charging, data download, instrument setup and firmware upgrades on PC or laptop via PC comm, cradle, travel charger, or docking station.
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% Relative humidity (non-condensing)
IP Rating	IP-65 (pump versions); IP-67 (diffusion versions)
Safety Certifications	Class I, Div 1, Group ABCD T4, -20°C ≤ T_{amb} ≤ +50°C IECEx Ex ia IIC T4 Ga ATEX Ex II 1G Ex ia IIC T4 Ga CE European Conformity
EMC/RFI	EMC directive: 2014/30/EU
Warranty	• 2 Years on instruments • 2 Years on sensors for LEL, LEL/Vol, O_2, CO, CO_2, H_2S, SO_2, HCN, NO, NO_2, and PH_3 • 1 Year on other sensors

Sensor Options‡

Sensor	Range	Resolution
PID[P]	0-200 ppm 0-2000 ppm 0-10000 ppm	0.01 ppm 0.1 ppm 1 ppm
Oxygen (O_2) Lead Wool **Lead-Free**	0-30%Vol 0-30%Vol	0.1%Vol 0.1%Vol
Combustibles (LEL%)	0-100%LEL	0.1%/1%LEL
NDIR Methane (LEL%)	0-100%LEL	1%LEL
NDIR Methane (Vol%)	0-100%Vol	0.1%Vol
Dual-Range LEL%/Vol%	0-100%Vol	1%LEL
NDIR Dual-gas CH_4 **Methane + CO_2 CO_2**	0-100%LEL 0-50000 ppm	1%LEL 10 ppm*
NDIR Bio-gas CH_4 **Methane + CO_2 CO_2**	0-100%VOL 0-100%VOL	1%VOL 1%VOL
CO_2 (Carbon Dioxide)	0-50000 ppm	10 ppm”
CO (Carbon Monoxide)	0-1000 ppm	1 ppm
H_2S (Hydrogen Sulfide)	0-100 ppm 0-1000 ppm	0.1 ppm 1 ppm
CO + H_2S CO **H_2S**	0-500 ppm 0-200 ppm	1 ppm 0.1 ppm
SO_2 + H_2S SO_2 **H_2S**	0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
NH_3 (Ammonia)[P]	0-100 ppm 0-500 ppm	1 ppm 1 ppm
Cl_2 (Chlorine)[P]	0-50 ppm	0.1 ppm
ClO_2 (Chlorine Dioxide)[P]	0-1 ppm	0.01 ppm
H_2 (Hydrogen)	0-1000 ppm	1 ppm
HCl (Hydrogen Chloride)[P]	0-15 ppm	0.1 ppm
HF (Hydrogen Fluoride)[P]	0-20 ppm	0.1 ppm
HCN (Hydrogen Cyanide)[P]	0-100 ppm	0.1 ppm
NO (Nitric Oxide)	0-250 ppm	1 ppm
NO_2 (Nitrogen Dioxide)[P]	0-20 ppm	0.1 ppm
N_2O (Nitrous Oxide)	0-1000 ppm	10 ppm†
PH_3 (Phosphine)	0-20 ppm 0-1000 ppm	0.01 ppm 1 ppm
SO_2 (Sulfur Dioxide)	0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
ETO (Ethylene Oxide)[P]	0-100 ppm	0.1 ppm
CH_3SH (Methyl Mercaptan)	0-10 ppm	0.1 ppm
THT (Tetrahydrothiophene)[P]	0-40 ppm	0.1 ppm

[P] Use in pumped models is strongly preferred * 200 ppm deadband
† 100 ppm deadband ‡ 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 **

mSQUAD

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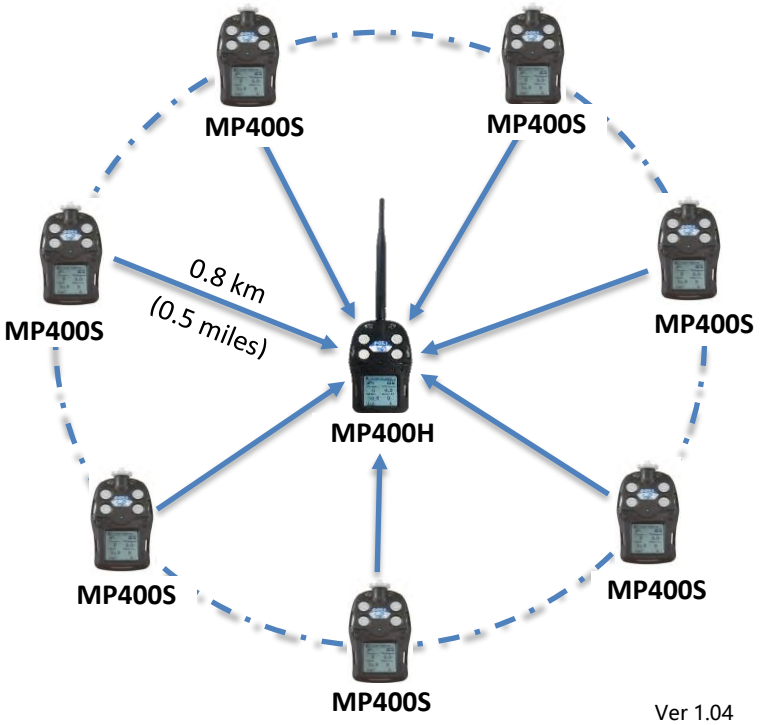
Mobile Wireless Multi-Gas Team Warning System

The mSquad System is a quickly-deployable set of mobile multi-gas meters that communicate wirelessly to a Squad leader up to 0.8 km (0.5 miles) distant. The system is ideal for Hazmat Response, firefighters, temporary venue protection, etc. An mSquad consists of one Head monitor (MP400H) and up to 7 Soldier monitors (MP400S) that communicate with each other. Each 4- or 5-gas monitor has options for a full range of sensors for toxic gases, oxygen (O_2), combustibles (LEL) and carbon dioxide (CO_2). The MP400S can also have a PID for volatile organic compounds (VOCS). In addition to high gas concentration alarms, all Squad units receive any Man-Down alarms to notify them remotely of a worker in distress. All the Squad monitors are Class I Division I certified to operate in hazardous zones. The entire mSquad is mobile, running on batteries for up to 12 hours. The MP400S and MP400H have rugged construction and easy-to-learn 2-button operation.

Features, Functions and Benefits

- Remote, wireless real-time readings and alarms including Man-down
- Up to 8 remote 4- or 5-gas monitors
- Up to 0.8 km (0.5 miles) distance to Squad Head
- All mSquad units alarm if any one unit has an alarm condition
- Mobile system operation
- 12-hour continuous operation on single Li-ion battery charge.
- USB Micro cable for battery charging and direct PC communication
- Wide selection of sensor types



Ver 1.04

mSQUAD Specifications

MP400S and MP400H Specifications

Size	5.7 x 3.3 x 1.7 in (140 x 84 x 42 mm) w/o Antenna
Weight	15.5 oz (435 g)
Sensors	Interchangeable and field-replceable: PID for VOCs (MP400S only), EC for Toxic & O_2, Pellistor for LEL, and NDIR for LEL, Vol% & CO_2
Response time (t90)	• 15 s (LEL/CO/H_2S/O_2) MP400S • 20 s (LEL/CO/H_2S/O_2) MP400H • Others vary up to 120 s
Sampling	MP400S - Internal pump; MP400H - Diffusion
Battery	8-36 hr (depending on sensors and pump installed)
Direct Readout	• Real-time reading of gas concentration • PID measurement gas and correction factor, • Battery status • STEL, TWA, peak and minimum values • Man-Down alarm on/off
Display	128 x 128 graphical LCD, 1.77 x 1.73 in (45 x 44 mm), with LED backlight and auto “flip” screen
Range	0.8 km (1/2 mile) between MP400H and MP400S
Frequency	ISM band (902-928 MHz) FCC Part 15 approved
Calibration	Zero and span calibration. Single or multiple sensor simultaneous calibration settings
Monitors	Up to 8 per mSquad (1 MP400H plus 7 MP400S)
Alarms	• Audible (95 dB @ 30 cm) • Visual (flashing bright red LEDs) • Vibration • On-screen indication of alarm conditions • Man-Down alarm and manual Panic alarm
Wireless Alarm Notification	Alarm on any monitor sent to all others in mSquad for 5 seconds, then remains on at MP400H
Datalogging	Continuous datalogging (6 months for 4 sensors at 1-minute intervals, 24 hours/day and 7 days/week)
Direct PC Comm and Charging	USB cable for charging, data download, instrument setup and firmware upgrades on PC or 100-240V AC charger, or CaliCase.
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% Relative humidity (non-condensing)
IP Rating	IP-65 MP400S (pump); IP-67 MP400H (diffusion)
Safety Certifications	Class I, Div 1, Group ABCD T4, -20°C ≤ T_{amb} ≤ +50°C **IECEx** Ex ia IIC T4 Ga ATEX Ex II 1G Ex ia IIC T4 Ga CE European Conformity
EMC/RFI	EMC directive: 2014/30/EU
Warranty	• 2 Years on instruments • 2 Years on sensors for pellister LEL, and O_2, CO, H_2S, SO_2, HCN, NO, NO_2, and PH_3 EC sensors • 1 Year on other sensors

Sensor Options

Sensor		Range	Resolution
PID		0-200 ppm 0-2000 ppm	0.01 ppm 0.1 ppm
Oxygen (O_2)	**Lead Wool** **Lead-Free**	0-30%Vol 0-30%Vol	0.1%Vol 0.1%Vol
Combustibles (LEL%)		0-100%LEL	1%LEL
Hydrocarbons (Vol%)		0-100%Vol	0.1%Vol
Dual-Range LEL%/Vol%		0-100%Vol	1%LEL
CO_2 (Carbon Dioxide)		0-50000 ppm	100 ppm
CO (Carbon Monoxide)		0-1000 ppm	1 ppm
H_2S (Hydrogen Sulfide)		0-100 ppm 0-1000 ppm	0.1 ppm 1 ppm
CO + H_2S	**CO** **H_2S**	0-500 ppm 0-200 ppm	1 ppm 0.1 ppm
SO_2 + H_2S	**SO_2** **H_2S**	0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
NH_3 (Ammonia)		0-100 ppm 0-500 ppm	1 ppm 1 ppm
Cl_2 (Chlorine)		0-50 ppm	0.1 ppm
ClO_2 (Chlorine Dioxide)		0-1 ppm	0.01 ppm
H_2 (Hydrogen)		0-1000 ppm	1 ppm
HCl (Hydrogen Chloride)		0-15 ppm	0.1 ppm
HF (Hydrogen Fluoride)		0-20 ppm	0.1 ppm
HCN (Hydrogen Cyanide)		0-100 ppm	0.1 ppm
NO (Nitric Oxide)		0-250 ppm	1 ppm
NO_2 (Nitrogen Dioxide)		0-20 ppm	0.1 ppm
PH_3 (Phosphine)		0-20 ppm 0-1000 ppm	0.01 ppm 1 ppm
SO_2 (Sulfur Dioxide)		0-20 ppm 0-100 ppm	0.1 ppm 0.1 ppm
C_2H_4O (Acetaldehyde)		0-20 ppm	0.1 ppm
ETO (Ethylene Oxide)		0-100 ppm	0.1 ppm
CH_3SH (Methyl Mercaptan)		0-10 ppm	0.1 ppm
THT (Tetrahydrothiophene)		0-40 ppm	0.1 ppm

Typical Battery Run Times

Sensor Configuration	Monitor	Pump	Time
NDIR LEL/VOL/O_2/CO/H_2S	MP400H	None	36 hr
	MP400S	Off	36 hr
	MP400S	On	24 hr
NDIR LEL/VOL/PID/O_2/CO+H_2S	MP400H	None	20 hr
	MP400S	Off	20 hr
	MP400S	On	15 hr
Pellistor LEL/O_2/CO/H_2S	MP400H	None	12 hr
	MP400S	Off	12 hr
	MP400S	On	10 hr
Pellistor LEL/PID/O_2/CO+H_2S	MP400H	None	10 hr
	MP400S	Off	10 hr
	MP400S	On	8 hr

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

mPLATOON

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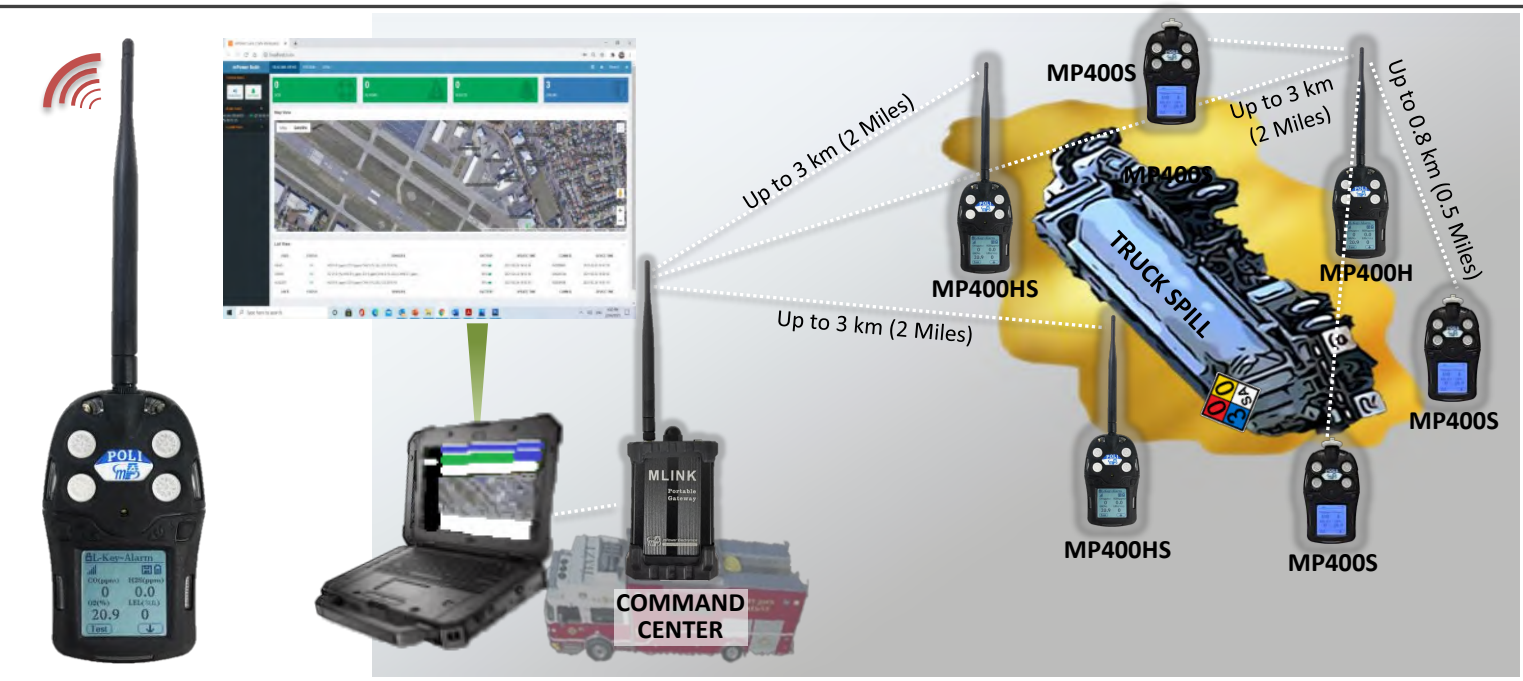
1-866-mPower7

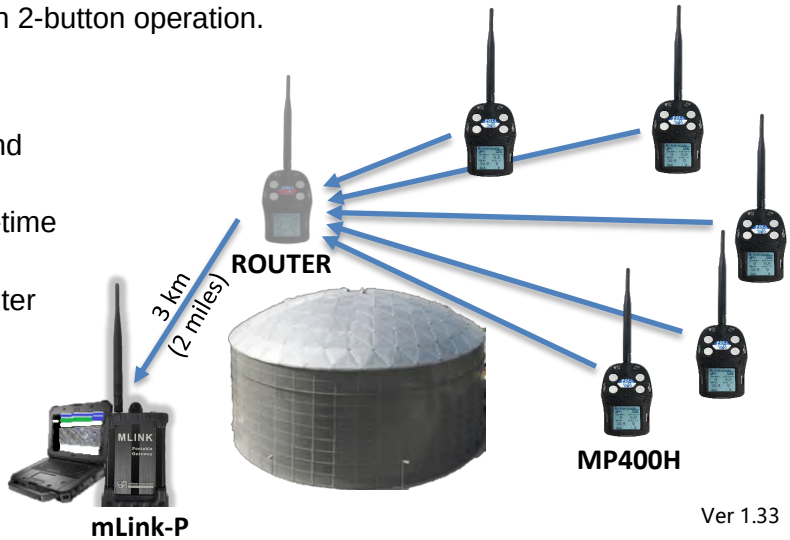
Rapidly Deployable Wireless Multi-Gas Detection



The mPlatoon is a rapidly deployable (minutes) set of POLI multi-gas monitors that communicate wirelessly in real time to a central command station (mLink-P and computer) with full mapping and alarm software. The mLink can communicate up to 3 km (2 miles) line-of-sight distance directly to multiple MP400HS monitors. It can also connect over that distance to an MP400H, which can host a sub-network of up to 7 MP400S monitors within 0.8 km (0.5 miles). The central mLink modem receives gas readings and any alarm conditions and transmits them by wireless BLE to a local Windows PC or other device within 10 m (33 ft.). The mPower Suite platform can handle up to 32 remote monitors. Each 4- or 5-gas monitor has options for a full range of sensors for toxic gases, oxygen (O_2), combustibles (LEL) and carbon dioxide (CO_2). The monitors can be worn on the body or mounted magnetically onto any steel surface for rapid placement in situations like hazmat spills, refinery turnarounds or temporary venue protection. The rechargeable batteries run for up to 2 days. Specific sensors include electrochemical (EC) for carbon monoxide (CO), hydrogen sulfide (H_2S), ammonia (NH_3), hydrogen cyanide (HCN), hydrogen chloride (HCl), chlorine (Cl_2), nitric oxide (NO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), methyl mercaptan, and others. Also available are pellistor for LEL level combustibles, and non-dispersive infrared (NDIR) for Vol% level CO_2 or hydrocarbons. Use of combination CO/H_2S or SO_2/H_2S sensors allows up to 5 gas measurements in a single instrument. The POLI has rugged construction and easy-to-learn 2-button operation.

Features, Functions and Benefits

- Remote, mobile, wireless real-time readings and alarms including Man-down and Panic.
- Up to 32 remote 4- or 5-gas monitors for a one-time license fee, shown on map overview.
- Up to 3 km (2 miles) line-of-sight distance. Router allows communication around obstructions
- All POLI MP400H/S/HS units alarm if any one unit has an alarm condition.
- Up to 2-day operation on single Li-ion battery charge using new low-power sensors.



Ver 1.33

mPLATOON Specifications

mLink-P & Platform Specifications

Size	5.0 x 3.6 x 1.9 in. (13 x 9.1 x 5.7 cm) w-o/Antenna 12 x 3.6 x 1.9 in. (30 x 9.1 x 5.7 cm) w/Antenna
Weight	16 oz (450 g)
IP & Temp.	IP54; -4° to 131°F (-20° to 55°C)
Power Supply	Rechargeable Li-ion battery; ≥24 hrs run time
Frequency	ISM band (902-928 MHz) FCC Part 15 approved
Range	Up to 3 km (2 miles) line-of-sight
RF	2.5 dBi Antenna
No. of Devices	Up to 32 Wireless POLI units
Certifications	Wireless: FCC Part 15; Safety: Non-haz. loc. only

MP400H/S/HS Specifications

Size	5.7 x 3.3 x 1.7 in (140 x 84 x 42 mm) w/o Antenna
Weight	15.5 oz (435 g)
Sampling	Diffusion (MP400H & MP400HS); Pump (MP400S)
Battery	Rechargeable Li-ion pack, typical run time: • 1 Day – Using NDIR LEL sensor • 2 Days – Using EC sensors only
Direct Readout	• Real-time gas concentrations; Battery status • STEL, TWA, peak and minimum values
Display	128 x 128 graphical LCD, 1.77 x 1.73 in (45 x 44 mm), with LED backlight for enhanced readability.
Calibration	Manual calibration. MonoDock option allows auto-mated calibration on individual POLI units
Frequency	ISM License-free band (902-928 MHz)
RF	2.5 dBi Antenna; 20 dBm Peak power
Wireless Comm	Poll gas concentration readings from Software on Android phone or tablet via mLink-P
Alarms	Push Notification via mLink-P, plus local audible (95 dB @ 30 cm) and visual (flashing LEDs) alarms
Direct Comm and Charging	USB cable for charging, download, configuration and upgrades on PC or 100-240V AC charger.
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% Relative humidity (non-condensing)
IP Rating	IP-67 (IP-65 for MP400S)
Safety Certifications	Class I, Div 1, Group ABCD T4, -20°C ≤ T_{amb} ≤ +50°C **IECEx** Ex ia IIC T4 Ga ATEX Ex II 1G Ex ia IIC T4 Ga CE European Conformity
EMC/RFI	EMC directive: 2014/30/EU
Warranty	• 2 Years on instruments; 1 year on exotic sensors • 2 Years on sensors for pellistor LEL, and O_2, CO, H_2S, SO_2, HCN, NO, NO_2, and PH_3 EC sensors

Sensor Options

Sensor Types	Interchangeable: EC for Toxic and O_2, Pellistor for LEL, and NDIR for LEL, Vol% and CO_2
Response time (t90)	• 20 s (LEL/CO/H_2S/O_2) • Others vary up to 120 s

Sensor	Range	Resolution
PID	0-2000 ppm	0.1 ppm
Oxygen (O_2) Lead Wool	0-30%Vol	0.1%Vol
Lead-Free	0-30%Vol	0.1%Vol
Combustibles (LEL%)	0-100%LEL	1%LEL
High Resolution version	0-100%LEL	0.1%LEL
NDIR Methane (Vol%)	0-100%Vol	1%Vol
Dual-Range version	0-100%Vol	1%LEL
CO_2 (Carbon Dioxide)	0-50000 ppm	100 ppm
CO (Carbon Monoxide)	0-1000 ppm	1 ppm
H_2S (Hydrogen Sulfide)	0-100 ppm	0.1 ppm
	0-1000 ppm	1 ppm
CO + H_2S CO	0-500 ppm	1 ppm
H_2S	0-200 ppm	0.1 ppm
SO_2 + H_2S SO_2	0-20 ppm	0.1 ppm
H_2S	0-100 ppm	0.1 ppm
NH_3 (Ammonia)	0-100 ppm	1 ppm
	0-500 ppm	1 ppm
Cl_2 (Chlorine)	0-50 ppm	0.1 ppm
$COCl_2$ (Phosgene)	0-1 ppm	0.01 ppm
H_2 (Hydrogen)	0-1000 ppm	1 ppm
HCl (Hydrogen Chloride)	0-15 ppm	0.1 ppm
HCN (Hydrogen Cyanide)	0-100 ppm	0.1 ppm
NO (Nitric Oxide)	0-250 ppm	1 ppm
NO_2 (Nitrogen Dioxide)	0-20 ppm	0.1 ppm
PH_3 (Phosphine)	0-20 ppm	0.01 ppm
	0-1000 ppm	1 ppm
SO_2 (Sulfur Dioxide)	0-20 ppm	0.1 ppm
	0-100 ppm	0.1 ppm
ETO (Ethylene Oxide)	0-100 ppm	0.1 ppm
CH_3SH (Methyl Mercaptan)	0-10 ppm	0.1 ppm
THT (Tetrahydrothiophene)	0-40 ppm	0.1 ppm

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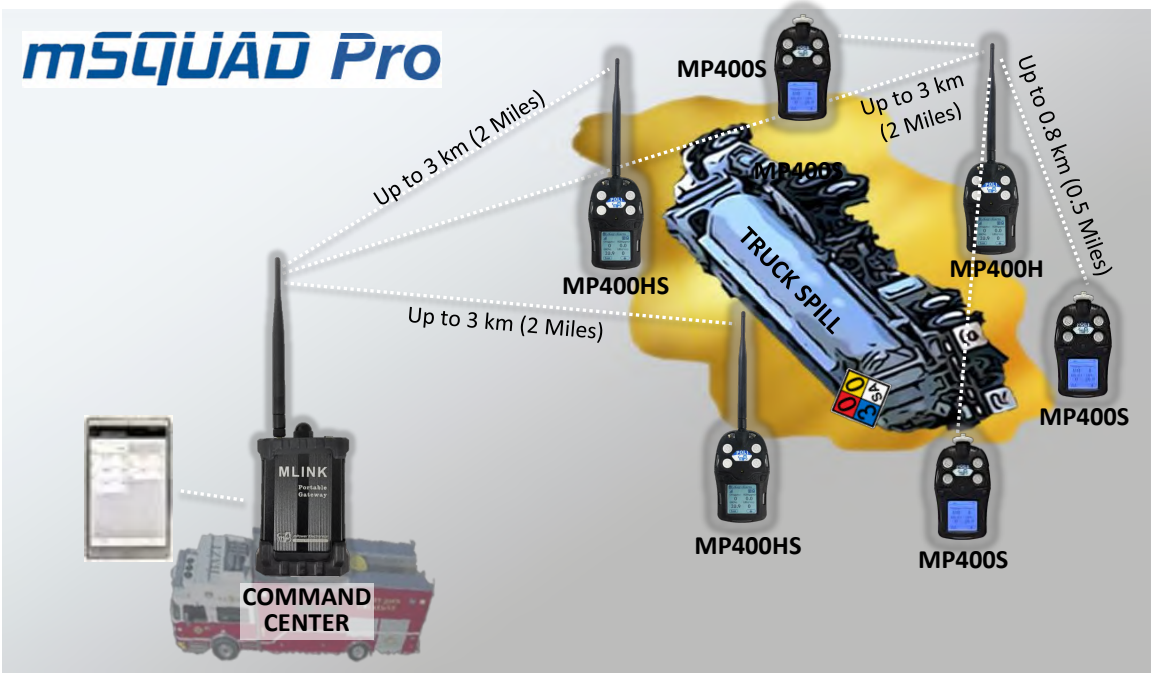
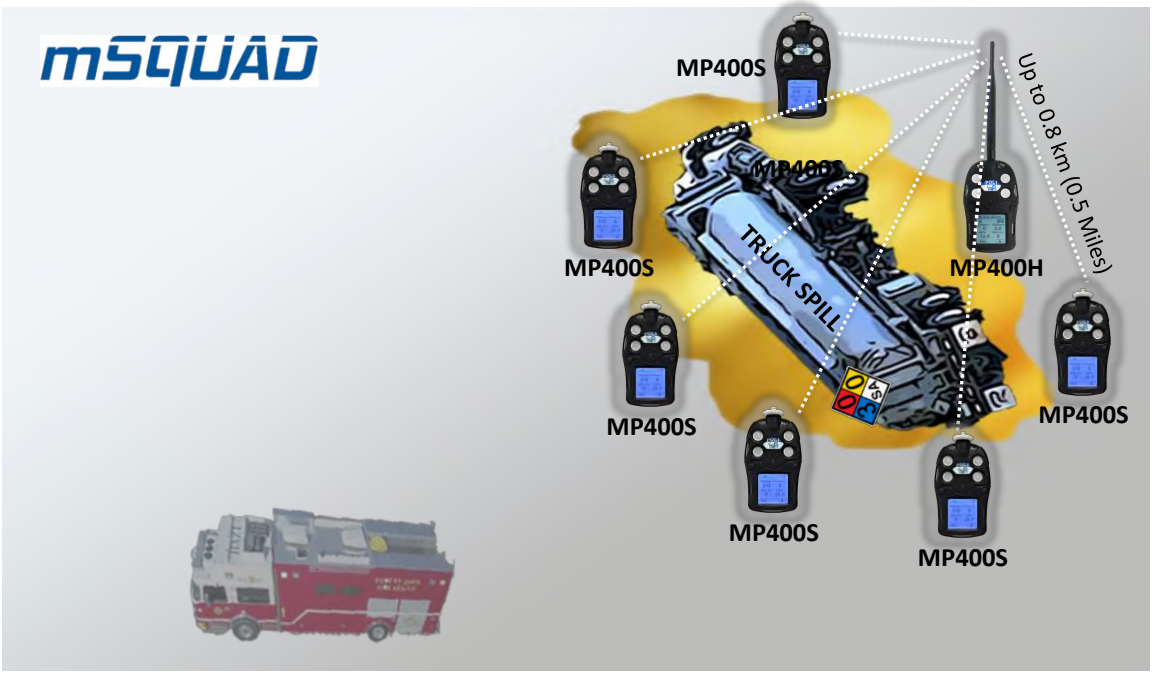
** Due to ongoing research and product improvement, specifications are subject to change without notice **

mPLATOON Basic Versions



mSquad Pro

- All the functions of an mPlatoon except computer and map software
- Remote interface uses mobile device (Tablet or Smartphone)
- Mobile App included at no extra fee



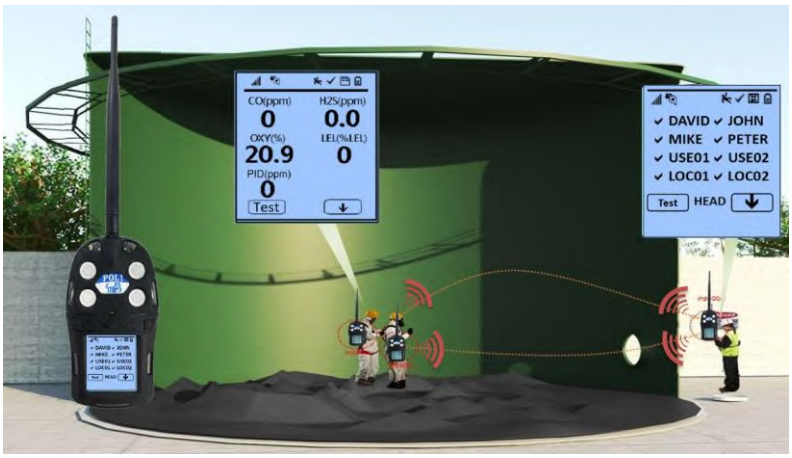
mSquad

- Mobile, Local-area monitoring; local Alarm and Man-Down warnings
- MP400H communicates with up to 7 MP400S Monitors
- Firmware included at no extra fee

mPLATOON & mSQUAD

Applications

- HazMat & Emergency Response
- Tank Cleaning & Confined Space Entry
- Plant Turn-arounds
- Marine and Offshore Wells
- Public Venue Protection
- Fire Overhaul



mPower POLI MP400S/H/HS Monitor

Each mPower MP400H or MP400HS Multi-Gas Monitor communicates to the command station via 915 MHz radio. MP400S communicates via its host MP400H.

- **Intrinsically safe (Class I, Division 1)**
- **Up to 5 gas measurements in each monitor**
- **Selection of 20+ gas sensors**
- **Programmable custom location identifiers**
- **Displays gas alarm notification, Man-Down alarm and Panic Alarm on monitors and mPower RT software.**
- **Magnetic mount option for quick deployment.**
- **Light-weight (1 lb) for easy portability or hand-held operation**
- **IP-67 rated weather resistance (IP-65 for MP400S)**

mPLATOON

mPower mLink-P Portable Gateway

The mPower mLink-P is a radio transmitter with 915 mHz that enables the POLI MP400H to communicate wirelessly for a Real-Time gas detection communication with mPower RT Software.

- **mLink-P allows communications to the mPower Suite RT Software up to 3 km (2 Miles) line-of-sight**
- **Bluetooth communications up to 10 m (33 feet) to Windows computer w/mPower Suite RT software**
- **Rechargeable battery for operations of up to 18 hours. Main power by 100-240V micro USB Adapter for continuesly operation.**
- **Size 5 x 3.6 x 1.9 in. (13 x 9 x 6 cm) w/2.5 dBi Antenna**
- **Optional: 10 feet extender Antenna cable w/5 dBi Antenna for longer range**
- **IP-54 rated weather resistance**

mPower Suite RT (Real-time) Software

The mPower Suite RT Software with mLink-P transmitter receives real time sensor and alarm readings from the POLI MP400H or MP400HS multi-gas detectors. As a result, Emergency responders, commanders or safety managers can quickly respond to any real-time threat of gas alarms or incapacitated workers.

- **mPower Suite RT Software operates on Windows 7 & 10.**
- **Can be used with a Ruggedized Military-spec laptop**
- **Map display gives overview of monitor locations**
- **Displays Real-Time gas concentrations and alarm notifications for up to 32 detectors**
- **Displays battery status, and alarms for Man-down, Panic, and Calibration status**
- **One-time software license fee saves cost for large systems or when expanding**