BM 25 &
BM 25 WIRELESS

## TRANSPORTABLE MULTI-GAS AREA MONITOR

- Up to 5 gases simultaneously
- 103 dB at 3 feet audible alarm
- Ultra-bright flashing signal at 360°
- Run time of 170 hours
- Resistant to harsh environment
- Easily transportable - less than 15 lbs
- 30 devices per network
- 16 independent networks
- More than 0.5 mile RF line of sight
- Data acquisition to a controller

WIRELESS VERSION

CSA   IECEx   CE   INMETRO   ATEX   PC T

The Fixed Gas Detection Experts

The BM 25 packs the benefits of a fixed system area monitor into a rugged, user-friendly and transportable instrument.

It was designed to detect one to five gases for mobile or temporary work applications, team protection, area surveillance or places where fixed detection systems are not suitable.
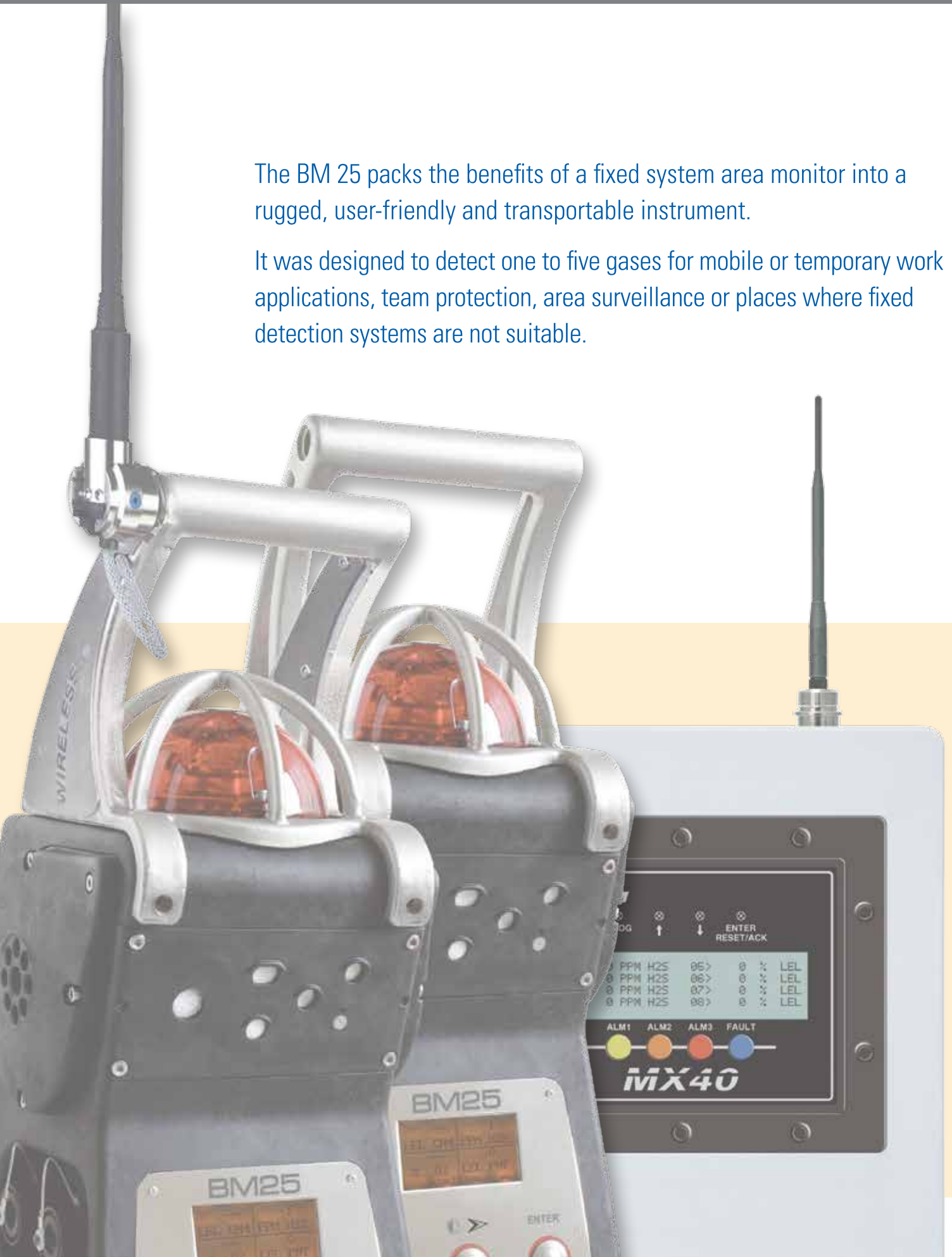
Available as an option, the radio communication allows several BM 25 devices to communicate on the same network or to send information wirelessly to a controller.

The network topology used by the BM 25 is a MESH network. In a mesh network all hosts are connected peer-to-peer without central hierarchy, thereby forming a net-like structure. Consequently, each node can receive, send and relay data. This prevents having sensitive points, which in case of failure, cut the connection of the network. If a node is down, its goes through another route.

Wireless communication is made via a 2.4 GHz radio and emitted power is less than 100 mW. Maximum distance between two communicating devices is 0.6 mile line of sight.

Mesh topology allows fast and simple deployment, high coverage versatility and high fault tolerance. It significantly reduces installation and operating costs of networks. These solutions reproduce the architecture of the Internet while optimizing for wireless.
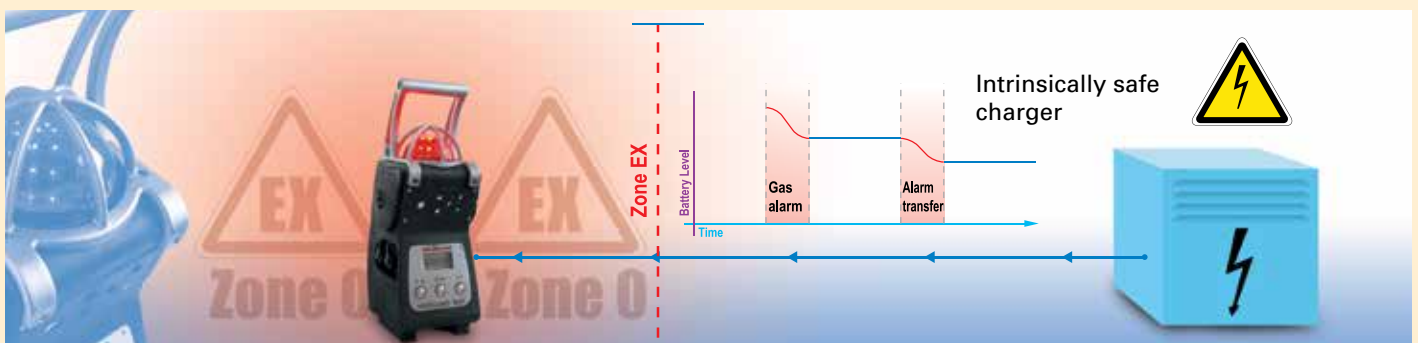
The monitor is equipped with a 360° flashing signal and a 103 dB at 3 feet audible alarm. STEL and TWA values are available as well as a datalogging capacity of more than four months (for 5 gases configuration).

The BM 25 batteries offer up to 170 hours of continuous runtime depending on configuration and take only 4 ½ hours to recharge.

A safe trickle charger is also available for long-term area monitoring in classified zones.

Ultrabright flashing beacon
Powerful audible alarm (103 dB @ 1m)
Run-time up to 170 hours

Stand Alone

Intrinsically safe charger

Trickle charge for long term area monitoring
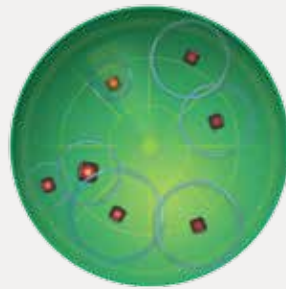
A scalable network

Adding a BM 25 on an existing network has never been so easy as you just need to turn it on. The BM 25 is automatically added on the network

- Up to 30 BM 25 can be meshed on the same network
- Up to 16 networks can coexist with no interference
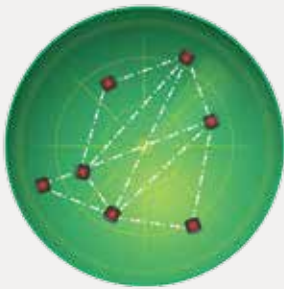
Alarm Transfer

If a BM 25 goes into gas alarm, all BM25s in the network will report a corresponding alarm.

Safety Function Remains

If a BM 25 does not respond or if the network is split, then it is possible to continue to work by the time of the restoration of the network. The gas detection remains effective and each BM 25 would still locally alarm in the presence of gas.
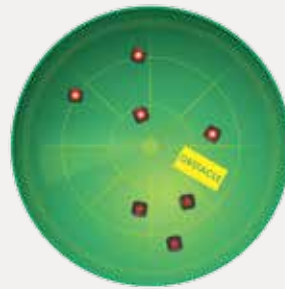
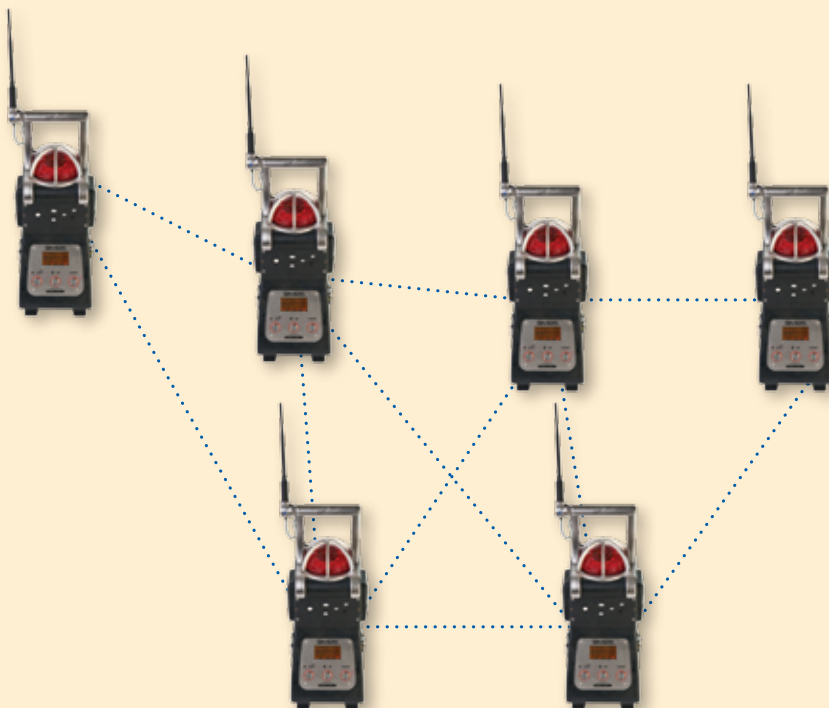**Network Self-Healing**

When the obstacle is gone, the communication resumes automatically. The two groups merge together to form only one group again.
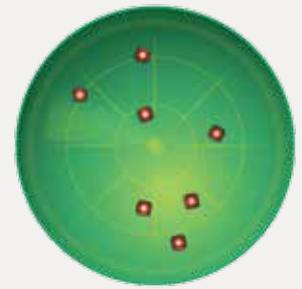
Two-way communication

The BM 25 is durable and versatile. It is suitable for a wide range of industries including refineries and pharmaceutical production. Applications include turnaround work sites, rig overhauls and fence-line surveillance.

Smartwireless HMI

BM 25s send fault status, alarm status and gas measurements to the controller. As soon as one BM 25 fires an alarm, the controller relays the information to all BM 25s on the same network that then turn in Alarm Transfer mode.

MX 40 Controller

The SmartWireless® MX 40 Controller provides operator interface to the network and real time status display of all network devices. Flexible and expandable, a MX 40 network consists of any combination of (up to 16) BM 25 wireless and/or (up to 32) wireless and/or wired sensors, one or more control panels, and alarm warning devices. Command functions include alarm reset, alarm acknowledge, alarm test and radio silence. The control panel displays real time gas concentrations, field device status, battery levels, network RF signal quality and fault diagnostic conditions. Display indications include alarm status, channel, gas reading, battery life & link signal strength. Standard features include removable SD card with datalogging.

The Model MX 40 also allows for expanded use of Oldham addressable I/O modules that include a 4-channel 4-20mA input module (DA-4), a 4-alarm relay output module (RL-4), a 4-channel 4-20mA output module (AO-4), and a 4-relay contact input module (DI-4). Oldham modules can be mounted within the main system enclosure or installed remotely to simplify field wiring.
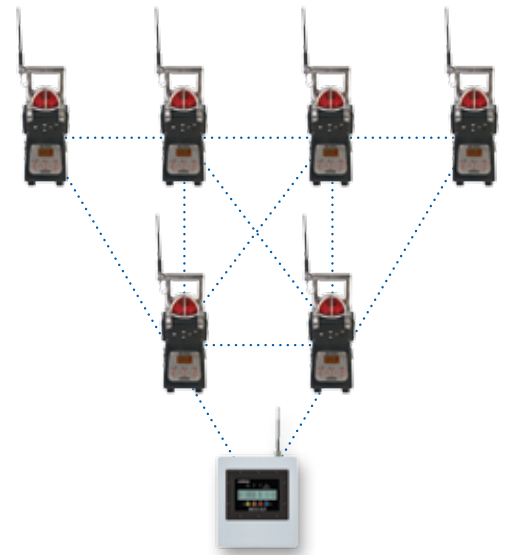
Sitewatch Remote Monitor

SiteWatch is an advanced networking device that provides remote access to any Oldham gas detection system via Ethernet or cellular communication. The SiteWatch Ethernet version provides an IP addressed web page that can be accessed via any web browser and both the Ethernet and Cellular versions provide automated emails for all alarm and fault conditions instantaneously. SiteWatch technology can be embedded into the Oldham or Detcon Model MX 40 and MCX-32 wireless controllers.

The SiteWatch allows web browser access to real time data from the gas detection system that includes: detector type, location/name, gas concentration, gas type and alarm status. In addition, when used with Detcon SmartWireless systems, the data includes battery life and link quality of all devices in the network.
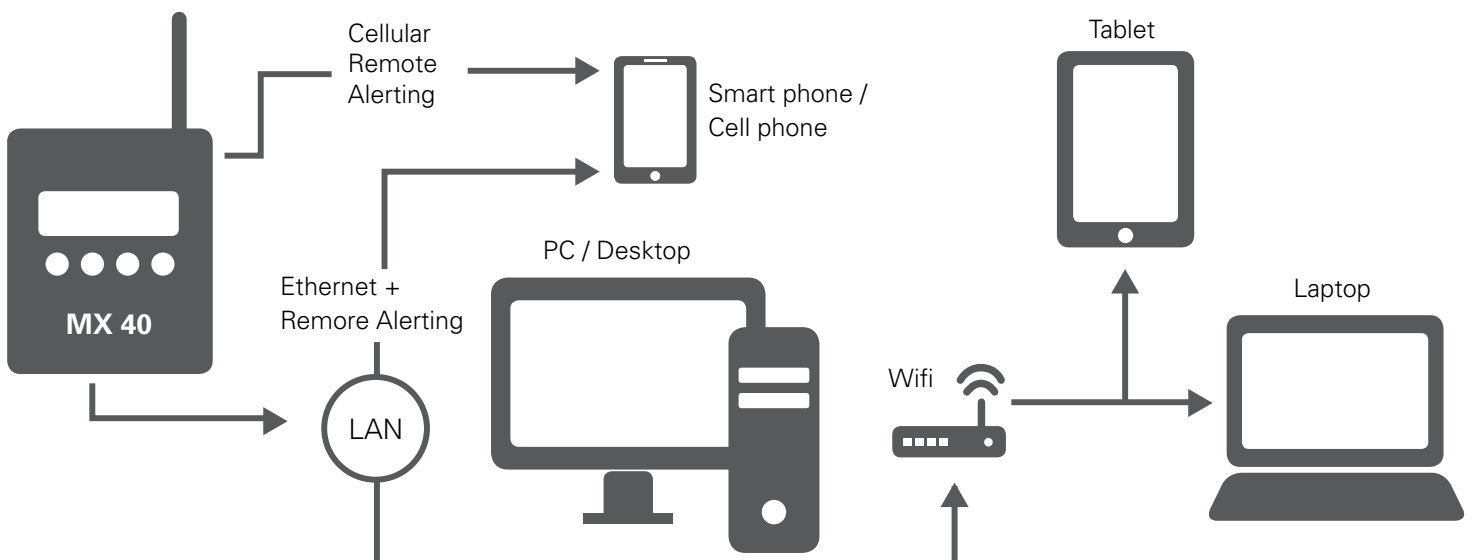
INSTRUMENT WARRANTY:
Two-year warranty, excluding consumables (sensors, filters, etc.)

CASE MATERIAL:
IP66 - Impact resistant polycarbonate

DIMENSIONS:
470 x 180 x 190 mm (16.7" x 7.1" x 7.5")

WEIGHT:
6.8 kg (15 lbs)

DISPLAY
Graphic liquid crystal display with backlight

SENSORS:
Combustible Gas – Catalytic Diffusion
Methane, Propane, Butane, Isobutane, LPG, Ethanol, Pentane – Infrared
Oxygen and Toxic Gases – Electrochemical
CO_2 – Infrared
Isobutylene – PID

MEASURING RANGES:

Combustible Gases:	0-100% LEL in 1% increments
Methane:	0-100% LEL in 1% increments – Infrared
Methane:	0-100% of volume in 1% increments – Infrared
Propane:	0-100% LEL in 1% increments – Infrared
Butane:	0-100% LEL in 1% increments – Infrared
Isobutane:	0-100% LEL in 1% increments – Infrared
LPG:	0-100% LEL in 1% increments – Infrared
Ethanol:	0-100% LEL in 1% increments – Infrared
Pentane:	0-100% LEL in 1% increments – Infrared
Oxygen:	0-30% Volume in 0.1% increments
Carbon Monoxide:	0-1,000 ppm in 1 ppm increments
Hydrogen Sulfide:	0-100 ppm in 1 ppm increments
Hydrogen:	0-2,000 ppm in 1 ppm increments
Sulfur Dioxide:	0-30 ppm in 0.1 ppm increments
Chlorine:	0-10 ppm in 0.1 ppm increments
Nitrogen Dioxide:	0-30 ppm in 0.1 ppm increments
Nitric Oxide:	0-300 ppm in 1 ppm increments
Hydrogen Chloride:	0-30 ppm in 0.1 ppm increments
Hydrogen Cyanide:	0-10 ppm in 0.1 ppm increments
Ammonia:	0-1,000 ppm in 1 ppm increments
Phosphine:	0-1 ppm in 0.01 ppm increments
Arsine:	0-1 ppm in 0.01 ppm increments
Silane:	0-50 ppm in 0.1 ppm increments
Ethylene Oxide:	0-30 ppm in 0.1 ppm increments
Carbon Dioxide:	0-5% of volume in 0.1% increments
Isobutylene:	0-2,000 ppm in 1 ppm increments
Fluorhydric Acid :	0-10 ppm 0.1 ppm increments
Ozone :	0-1 ppm 0.01 ppm increments
Phosgene :	0-1 ppm 0.01 ppm increments
Chlorine Dioxide :	0-3 ppm 0.01 ppm increments
Hydrazine :	0-1 ppm 0.01 ppm increments

WIRELESS NETWORK
2.4 GHz frequency
30 devices per network
16 independent networks
Communication distance : 0.6 mile line of sight

MX 40 :
Up to 32 Devices, Wired or Wireless Up to 16 BM 25
NEMA4X Package
Configurable up to eight zones
Alarm and Fault Condition LEDs
Display Indicates: Field Device Location, Alarm Status,
Channel, Gas Reading, Battery Life & Signal Strength

DATALOGGING CAPACITY:
200,000 measurements

AUDIBLE ALARM:
103 dB @ 1 meter

VISUAL ALARM:
Ultrabright LED beacon visible 360 degrees

OPERATING TEMPERATURE RANGE:
-20°C to +50°C (-4°F to 122°F) sensor dependent

OPERATING HUMIDITY RANGE:
1% to 99% RH sensor dependent

POWER SOURCE (RUN TIME):
NiMH (up to 170 hours operating time, 135 hours in wireless mode)

RECHARGE TIME:
4.5 hours, typical

CERTIFICATIONS:

ATEX & IECEx VERSIONS

BM 25 (standard version)

Without IR sensor:	II 1G / I M1
	Ex ia IIC T4 Ga / Ex ia I Ma
With IR sensor:	II 2G / I M2
	Ex ia d IIC T4 Gb / Ex ia d I Mb

BM 25 W (wireless version)

Without IR sensor	II 1G / I M1
	Ex ia IIB T4 Ga / Ex ia I Ma
	or
	II 2G / I M2
	Ex ia IIC T4 Gb / Ex ia I Mb
With IR sensor	II 2G / I M2
	Ex ia d IIC T4 Gb / Ex ia d I Mb

INERIS 05ATEX0044
IECEx INE 06.0002

CSA VERSION
BM 25 (standard and wireless versions)

Ex d ia IIC T4
Class I, Div 1, Gr ABCD (for Canada Only)
Class I, Div 2, Gr ABCD (for US Only)

AEx d ia IIC T4
Class I, Zone 1 (for US Only)

C22.2 No.152 (% LEL only)
BM25 with pump or PID sensor or infrared sensor for combustible gases is not CSA certified.

OLDHAM

Test and calibration gas
For your safety, test and calibrate your gas monitors regularly.

MONO MIX

PROCON SYSTEMS INC.

ISO 9001:2008 CERTIFIED
ISO 14001:2004 CERTIFIED

BM25MX40Wireless_ENGA4_9Oct2015