BM 25 & BM 25 WIRELESS

TRANSPORTABLE MULTI-GAS AREA MONITOR

WIRELESS VERSION

- 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 site

CSA   Ex   IECEx

OLDHAM

The BM 25 packs the benefits of a fixed system area monitor into a rugged, user-friendly and transportable instrument.
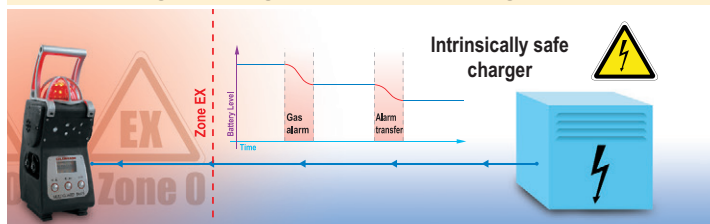
It was designed to detect one to five gases for mobile or temporary work applications, team protection, area surveillance or places where fixed detection systems are not suitable.

Stand Alone

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

Trickle charge for long term area monitoring

Intrinsically safe charger

Zone EX

Battery Level

Gas alarm

Alarm transfer

Time

Zone 0

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 1/2 hours to recharge.
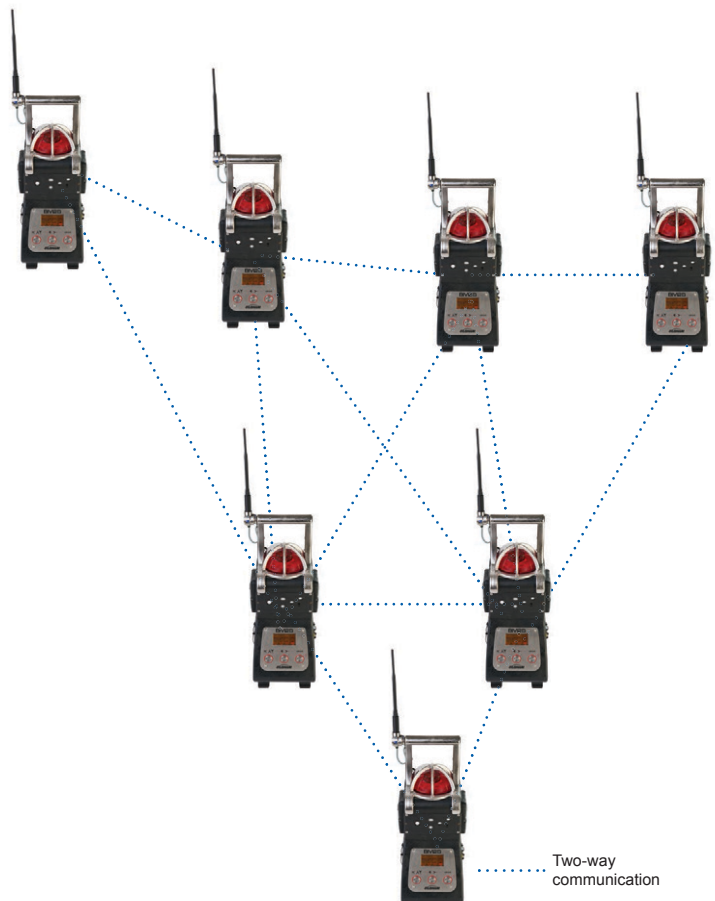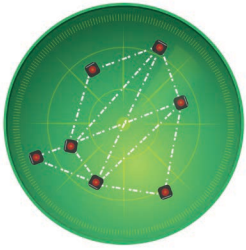
A safe trickle charger is also available for long-term area monitoring in classified zones.

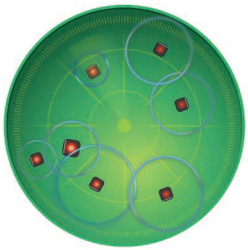Two-way communication

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
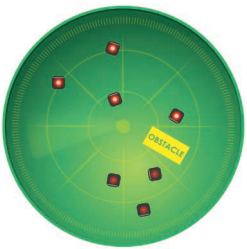- Up to 16 networks can coexist with no interference

Alarm Transfer

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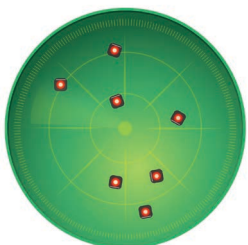
Safety Function Remains

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.
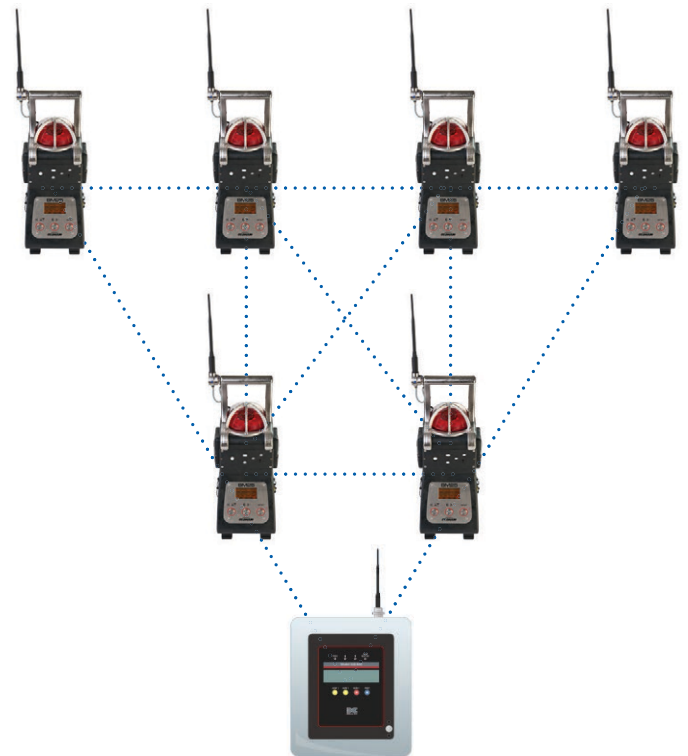
Network Self-Healing

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

Control System

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.

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.

BM 25 & BM 25 WIRELESS

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

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 and BM 25W)

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 25A and BM 25AW)
BM 25 (standard version)
Class I, Division 1, Groups A,B,C,D ; Ex ia d IIC T4

BM 25 (standard version)
Class I, Division 1, Groups C,D ; Ex ia d IIB T4 - PENDING

C22.2 No.152 (% LEL only)
BM 25A with pump or PID sensor or with infrared sensor for combustible gases detection is not CSA certified

Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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