

GAS SENSING MODULE (GSM)

DESCRIPTION

The gas sensing module (GSM) is designed to ensure that ambient air being ducted into a SAFEHOUSE habitat is free from flammable and toxic gases, and it is therefore safe to operate inside the welding enclosure. The gas sensing module consists of an air ducting assembly with an integral damper, which can turn to close off the duct if a gaseous hazard is detected.

Gas sensors are sited upstream of the damper and detect the levels of flammable and H₂S gas in the ducted air flow. If the flammable or H₂S gas level in the duct rises above 10% LEL (lower explosive limit) or 5ppm (parts per million) respectively, then the gas sensing module automatically closes the damper, illuminates a red sounder beacon and sets off a sounder to warn of the presence of a potentially dangerous build-up of flammable or toxic gas. The damper cannot be re-opened until the flammable or toxic gas concentration reduces to below alarm level.

A remote flashing beacon may also be connected to the gas sensing module to provide additional warning indication. If the gas sensing module has a remote gas sensor connected, the alarm will activate at 10% LEL, but the damper will stay open allowing safe air in to maintain habitat integrity, while alerting the work party of the hazardous condition. When the welding control module is connected to the gas sensing module, automatic shutdown of hot work tools will occur during any alarm condition.



EQUIPMENT MARKS

MARK	PRODUCT CODE	INTERNAL METHANE SENSOR	METHANE INDICATOR LAMP	INTERNAL H ₂ S SENSOR	H ₂ S INDICATOR LAMP	240V SOCKET OUTLET	RGS SOCKET	MSM SOCKET	OXYGEN DEPLETION SENSOR
1	EL-MN-GSM-01	✓	✓	-	-	-	-	-	-
2	EL-MN-GSM-02	✓	✓	✓	✓	-	-	-	-
3	EL-MN-GSM-03	✓	✓	-	-	✓	-	-	-
4	EL-MN-GSM-04	✓	✓	✓	✓	-	✓	✓	-
5	EL-MN-GSM-05	✓	✓	✓	✓	-	✓	✓	✓

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KEY FEATURES

- FLAMMABLE AND TOXIC GAS DETECTION
- CLOSES A DAMPER TO PREVENT FLAMMABLE OR TOXIC GAS ENTERING THE HABITAT THROUGH THE INLET DUCT
- AUDIO AND VISUAL ALARM ON UNIT
- REMOTE SOUNDER BEACON FOR AUDIO AND VISUAL ALARM INSIDE HABITAT OR REMOTE LOCATION
- SHUTDOWN SIGNAL SENT TO WCM (IF CONNECTED)
- OXYGEN LEVEL MONITORING (MARK 5 ONLY)

AUXILIARY EQUIPMENT

- WCM – WELDING CONTROL MODULE
- RSB – REMOTE SOUNDER BEACON
- RGS – REMOTE GAS SENSOR
- MSM – MULTI-SENSING MODULE
- PDM – PRESSURE DIFFERENTIAL MODULE

TECHNICAL SPECIFICATION

CERTIFICATION	<p>ATEX Cert: Baseefa10ATEX0087X Ex II 2G Ex d e ia ib mb q IIB T4 Gb (Tamb -20°C to +50°C) OR Cert: Baseefa14ATEX0127X Ex II 2 G Ex d e ia ib mb q IIB + H2 T4 Gb (Tamb -20°C to +50°C)</p> <p>UL Cert: 10/UL-BRAE-0002X BR-Ex d e ia m IIB T4 OR BR-Ex d e ia IIB T4,</p> <p>IECEX This item complies with IECEX. Conformity assessment documents are available on request.</p>
OPERATING TEMPERATURE	-20°C to +50°C
DIMENSIONS (L X W X D)^	110cm x 35cm x 82cm
WEIGHT ^	51kg
INPUT VOLTAGE	88-264 VAC 47-63Hz
POWER PLUG TOP OPTIONS	CEAG STAHL APPLETON ATX Others available on request
POWER CONSUMPTION	200W Max
DETECTION RANGE*	0-100% LEL Methane 0-50ppm H2S
ALARM LEVELS*	10% LEL CH4 5ppm H2S

* Other levels and gases available ^ Typical values may vary