

## 2. GAS & AIR PRESSURE SENSORS (MK8 SERIES)

Gas pressure sensors can be used for the following purposes:

- Gas Valves Proving System (VPS) and/or gas pressure limits when used with an MM system.
- Gas pressure limits only when used with an MM system.

Air pressure sensors can be used for the following purposes:

- Combustion air pressure proving when used with an MM system.
- Draft pressure control when used with the Mk8 MM.

The gas and air pressure sensors can also be used for gas / air pressure monitoring application when used with the Mk8 DTI.



| Specifications               |                                                         |
|------------------------------|---------------------------------------------------------|
| IP Rating                    | 65                                                      |
| NEMA Rating                  | 4                                                       |
| Check type                   | Self-check                                              |
| Channels                     | Dual channel                                            |
| Communication                | Digital (RS485) and analogue                            |
| Max. Operating Temperature   | 85°C (185°F)                                            |
| Min. Operating Temperature   | -25°C (-13°F)                                           |
| Housing                      | Aluminium                                               |
| Wiring connection            | 2m (6.5ft) flying lead, pre-wired, screened             |
| Installation                 | 90° vertical (+/-10°)                                   |
| Pressure measuring port      | ¼" parallel NPT / BSP female                            |
| Differential pressure port   | 1/8" parallel NPT / BSP female                          |
| Supplied with                | ¼" tapered NPT / BSP male nipple                        |
| Flying lead connector torque | 1 to 3Nm max. tighten by hand only, do not over-tighten |
| Warranty                     | 2 years limited warranty                                |

**Gas and Air Pressure Sensors Range**Gas Pressure Sensors Range

| Part #  | Pressure Range |       |      | Zero Range |        |       |
|---------|----------------|-------|------|------------|--------|-------|
|         | mbar           | "wg   | PSI  | mbar       | "wg    | PSI   |
| MM80006 | ±68            | ±27   | ±1   | ±1.36      | ±0.54  | ±0.02 |
| MM80008 | ±344           | ±138  | ±5   | ±6.88      | ±2.76  | ±0.1  |
| MM80011 | ±1034          | ±415  | ±15  | ±20.68     | ±8.3   | ±0.3  |
| MM80012 | ±2068          | ±831  | ±30  | ±41.36     | ±16.62 | ±0.6  |
| MM80014 | ±6894          | ±2770 | ±100 | ±137.88    | ±55.4  | ±2    |

Air Pressure Sensors Range

| Part #  | Pressure Range |     |     | Zero Range |       |       |
|---------|----------------|-----|-----|------------|-------|-------|
|         | mbar           | "wg | PSI | mbar       | "wg   | PSI   |
| MM80005 | ±68            | ±27 | ±1  | ±1.36      | ±0.54 | ±0.02 |
| MM80013 | ±137           | ±55 | ±2  | ±2.74      | ±1.1  | ±0.04 |

**ATEX Certified Gas and Air Pressure Sensors**

An ATEX approved range of the gas and air pressure sensors is also available for use in Hazardous Environments application where Explosion Proof equipment is required.

Classification: Ex Na IIC Gc

ATEX Certified Gas Pressure Sensors Range

| Part #      | Pressure Range |       |      | Zero Range |        |       |
|-------------|----------------|-------|------|------------|--------|-------|
|             | mbar           | "wg   | PSI  | mbar       | "wg    | PSI   |
| MM80006/EXP | ±68            | ±27   | ±1   | ±1.36      | ±0.54  | ±0.02 |
| MM80008/EXP | ±344           | ±138  | ±5   | ±6.88      | ±2.76  | ±0.1  |
| MM80011/EXP | ±1034          | ±415  | ±15  | ±20.68     | ±8.3   | ±0.3  |
| MM80012/EXP | ±2068          | ±831  | ±30  | ±41.36     | ±16.62 | ±0.6  |
| MM80014/EXP | ±6894          | ±2770 | ±100 | ±137.88    | ±55.4  | ±2    |

ATEX Certified Air Pressure Sensors Range

| Part #      | Pressure Range |     |     | Zero Range |       |       |
|-------------|----------------|-----|-----|------------|-------|-------|
|             | mbar           | "wg | PSI | mbar       | "wg   | PSI   |
| MM80005/EXP | ±68            | ±27 | ±1  | ±1.36      | ±0.54 | ±0.02 |
| MM80013/EXP | ±137           | ±55 | ±2  | ±2.74      | ±1.1  | ±0.04 |

**Gas / Air Pressure Sensor's Ports**

The sensor has 2 pressure ports:

- Gas/ air pressure measuring port: used to measure the gas / air pressure.
- Differential pressure port: used as a reference to measure the atmospheric pressure, therefore it should always be exposed to atmospheric pressure.

**Gas / Air Pressure Sensor's Selection**

When selecting a gas pressure sensor for a specific application, it is necessary that the sensor's measuring range should be the closest to the gas pressure range of the application.

For example; a gas pressure sensor is required for the purpose of valve proving and gas pressure limits for a boiler with maximum gas pressure supply of 170mbar, therefore MM80008 should be selected. MM80011, MM80012, MM80014 or MM80006 should not be used.

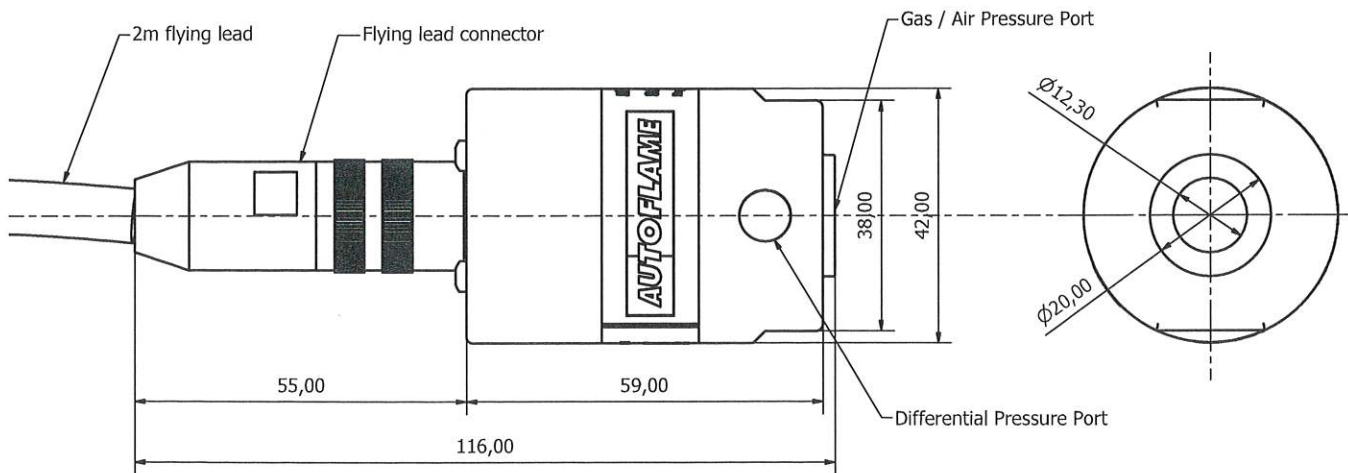
**Wiring Gas / Air Pressure Sensor to an MM**

For the purpose of VPS, gas pressure limits and air pressure proving, the sensors can be wired as follows:

| Wire Colour |         | Mk8 MM Terminal           | Mini Mk8 MM Terminal |
|-------------|---------|---------------------------|----------------------|
| Brown       | RS485 - | 31                        | 29                   |
| Purple      | RS485 + | 32                        | 30                   |
| Blue        | 0V DC   | 33                        | 48                   |
| Red         | 15V DC  | 34                        | 49                   |
| Screen      |         | Do not connect at MM side |                      |

The screen wire on the flying lead is only used when connecting the sensor's lead to the MM / DTI through a terminal block, it must not be connected on the MM / DTI side.

**Drawing and Dimensions**



All dimensions in mm, 1 inch = 25.4mm.