

## Air Differential Pressure Sensors

### Product Description

The Siemens QBM Series Air Differential Pressure Sensors use a well-proven ceramic technology. They deliver temperature-compensated sensor signals for registering airflow in HVAC systems and for the measurement of differential pressures in environmental, laboratory and cleanroom applications.



### Product Numbers

Product Number	Percent Accuracy	Pressure Range Inches WC (Water Column)
QBM3100U025U	+/-1% FS	+/- 0.25
QBM3100U1		1
QBM3100U2.5		2.5
QBM3100U5		5
QBM3100U10		10

### Contents

- Sensor
- Conduit Adapter

### Warning/Caution Notations

<b>WARNING:</b>		Personal injury/loss of life may occur if you do not follow the procedures as specified.
<b>CAUTION:</b>		Equipment damage/loss of data may occur if you do not follow the procedures as specified.

### Required Tools

- Small, Phillips screwdriver
- Small, flat-blade screwdriver
- Adjustable wrench

### Expected Installation Time

30 minutes

### Prerequisites

Even though the device is protected against electro-magnetic interference, installation and cabling must be carried out correctly to ensure interference immunity.

- Use shielded cables for the signal and control lines with the connecting lead of the shield being kept as short as possible. The connection point of the shielding depends on the existing connection conditions.
- Never route signal and control cables together with the trunk line or feeder cables of motors, cylinder coils, rectifiers, and so on. The cables must be routed in conductive and grounded cable conduits. This applies especially to long-distance cables, or environments where the cables are exposed to strong radio waves from broadcast stations.



#### CAUTION:

- Prior to mounting or removing the sensor, verify that the system is depressurized.
- Do not mount sensors in locations subject to high pressure pulses.
- Significant thermal changes in the sensor environment can lead to a zero shift. As a result, the measuring value displayed in a depressurized state will read zero. This kind of drift can be corrected by zero point reset.

## Installation

Recommended mounting positions:

- Vertical, with the pressure connections facing downward, drain off possible condensed water (factory calibration).
- Horizontal, with the cover facing downward.
- Horizontal, with the cover facing upward.

**NOTE:** Mount the transmitter with a minimum 0.39 inches (10 mm) distance to magnetic material. If this is not possible there may be an error of up to -.004 inch WC for transmitters mounted on sheet steel.

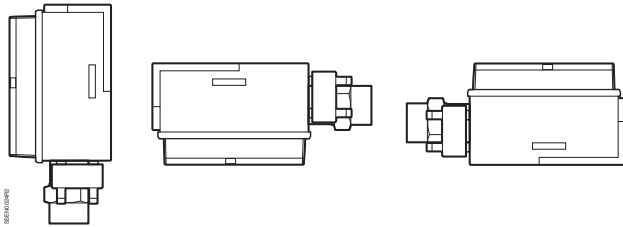


Figure 1. Recommended Mounting Positions.

### ZP – Push Zero Point Reset

The installation position is variable by using the Zero Point Reset button. Pressure variations can be reset after installation.

Ensure the power supply is not interrupted when storing customer settings (ZP – reset).

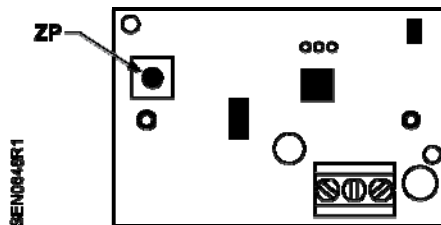


Figure 2. ZP Push Zero Point Reset.

### Wiring Diagram

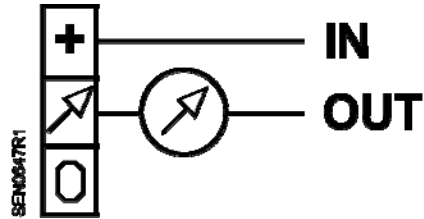


Figure 3. Wiring Diagram, 4 to 20 mA.

### Tubing Connections

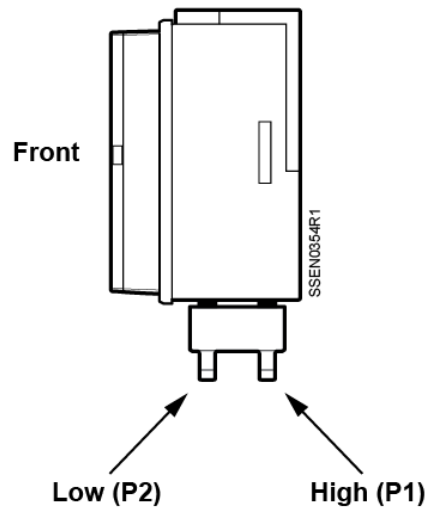


Figure 4. High and Low Pressure Connections.

The installation is now complete.

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