

QVM62.1 Air Velocity Sensor



Product Description

This sensor is used to measure the air velocity in a duct and provide a 0 to 10V signal to a controller that is proportional to the velocity. This allows the controller to maintain a constant airflow in the duct, balance out pressure fluctuations (supply or exhaust air control), or just monitor the flow in a duct. The Air Velocity Sensor is generally used for modulating fan control in primary applications to set the basic volume flow.

Product Number

QVM62.1

Warning/Caution Notations

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

Required Tools

- Pencil
- Hammer
- Center hole punch
- Screwdrivers
- Four - #8 x 1/2-inch sheet metal screws
- Electric drill with 1/8-inch and 7/8-inch drill bits

Expected Installation Time

45 minutes

Prerequisites

Field wiring must be pulled to installation location.

Installation

Probe Mounting Flange and Sensor

1. Determine the depth of insertion required for the probe and assemble the extension tube and/or probe end cap onto the primary sensor head tube.

NOTE: If the insertion depth required is less than or equal to 5.7 inches (145 mm) the extension tube may be removed by disconnecting the probe cable at the transducer head, and sliding the extension tube off the cable. (With the extension tube installed, the probe's depth of insertion is 11.8 inches [300mm].) If the extension tube is removed, be sure to reinstall the probe's end cap on the cable before rewiring it to the transducer head.

2. Position the probe mounting flange on the duct where will be installed. Lightly tap the screw heads to create drill marks for the mounting screw holes.

NOTE: Install the sensor in the ductwork in a location where the airflow is not turbulent. Do not place it close to dampers, registers, or bends in ductwork.

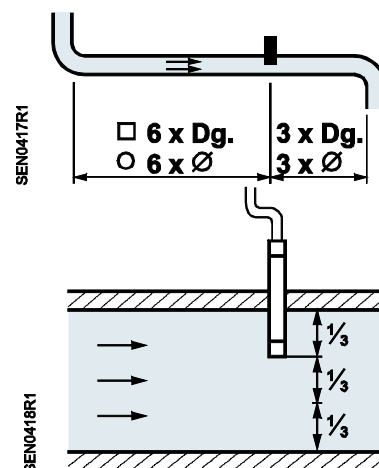


Figure 1. Mounting Locations.

3. Draw a line between opposite drill marks, farthest from each other, and make a drill mark with the punch, at the intersection of the two lines.
4. Drill four 1/8-inch holes for the mounting screws at the points labeled "A", and a 7/8-inch diameter hole at the point labeled "B" (see Figure 2).

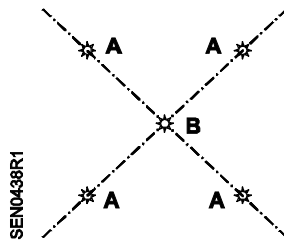


Figure 2. Mounting Screw Locations.

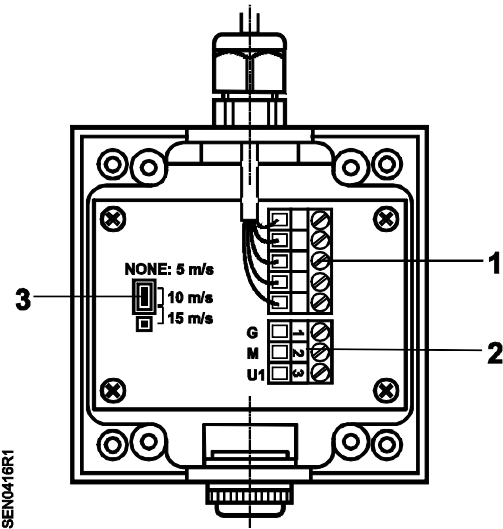
5. Secure the flange to the duct using the screws included with the flange and insert the probe into the duct. **Do not** tighten the mounting screw at this time.

Transducer

1. Remove the cover from the transducer head unit.
2. Hold the base on the duct or structure to which it is to be mounted and mark the center positions of the four mounting holes.

NOTE: Make sure there is enough slack in the probe's cable so that, if necessary, the probe can be removed for servicing or replacement.

3. Make drill hole marks with the punch at the mounting hole points, and drill four 1/8-inch holes.
4. Secure the transducer head to its mounting location with four #8 x 1/2-inch sheet metal screws.
5. Set jumper for desired airflow range (see Figure 3).
6. Connect the Field wiring to the transducer head connector (see Figure 3).



- 1 Terminal block for connection to the immersion stem
- 2 Terminal block for connection to controller
- 3 Plug-in unit for setting the three velocity ranges. The following applies:

No plug-in jumper = 0 to 5 m/s
 Plug-in jumper on 1 and 2 = 0 to 10 m/s (factory setting)
 Plug-in jumper on 2 and 3 = 0 to 15 m/s

Figure 3. Wiring and Setting Elements.

7. Reinstall the cover

CAUTION:

The sensor head connections are not protected against 24 Vac operating voltage.



If the unit power supply lead being connected to terminal G is live during the installation of the sensor, contact with any of the sensor head terminals can irreparably damage the unit.

8. Set the probe's depth of insertion and position the arrow on the probe cap so that it points in the direction of the airflow.
9. Tighten the mounting screw located on the side of the mounting flange (see Figure 4).

The installation is now complete.

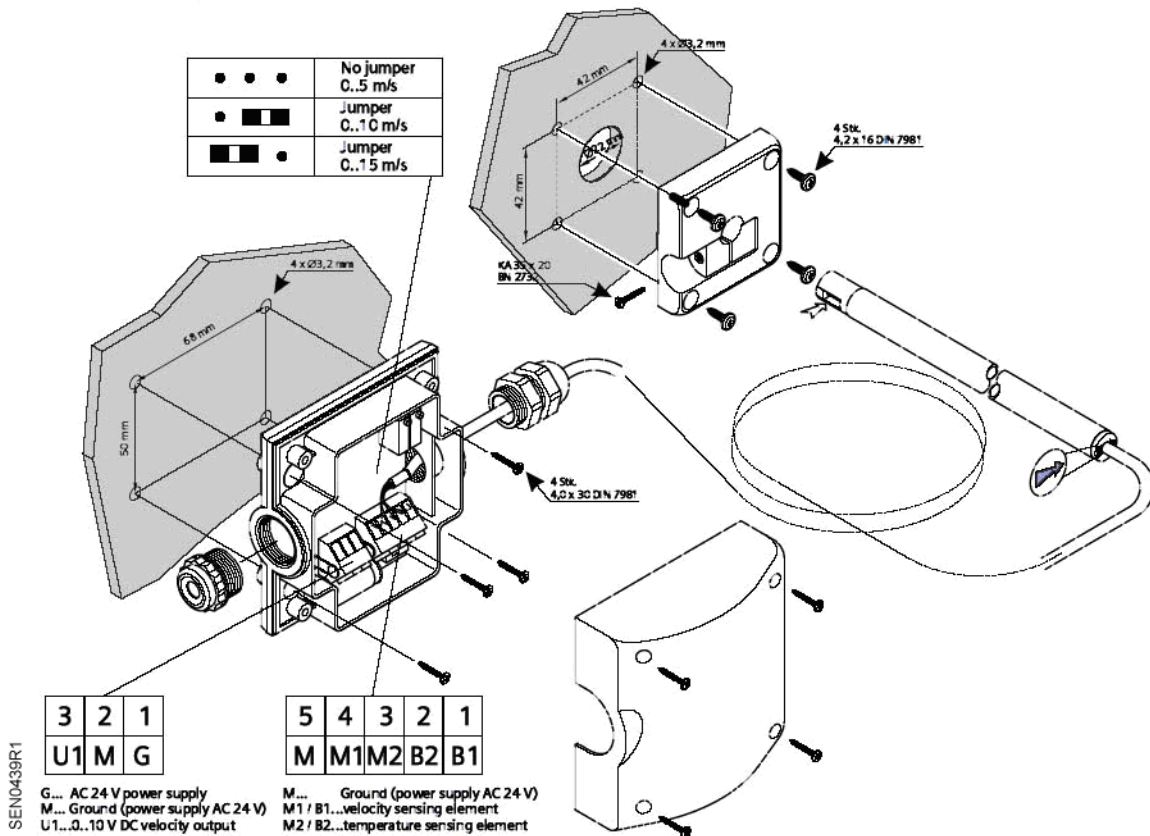


Figure 4.

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