



GM-50

Air Velocity Transmitter



Features

- / Operating ranges up to 75 m/s
(15000 ft/min) in 8 levels
- / Optional LED display
- / 6 different mounting lengths
- / 4...20 mA output
- / Digital filter

Description:

The GM-50 series of air velocity transmitter is the ideal instrument for measuring air velocities in large pipes and ducts. The device uses a mass flow sensor that allows accurate measurement at different flow velocities and temperatures. The rate of cooling in a heated measuring resistance is estimated which is directly proportional to the velocity of flow streaming along. At the output of the GM-50 the measured value can be tapped in the form of a 4 to 20 mA signal selectively in 3- or 4-wire system. In addition, the device has an optionally available LED display on which the measured value is displayed digitally, and an adjustable filter that attenuates the output with the time element of 0.5 to 15 seconds. The result is that a possible turbulent, restive flow does not lead to strong fluctuations in the output and the display. Since the GM-50 as a mass flowmeter always refers its measured values to air pressure and, in this respect, it is calibrated at factory to a standard status, it is possible to recalibrate the sensor to another pressure within the framework of parameterization.

Application:

The flow velocity of air or emission flow is often measured in the air-conditioning, ventilation and building technologies. Modern sensor elements of the GM-50 enable accurate and convenient measurement regardless of the air temperature at an enormously large span of operating range. Outmoded measuring instruments such as apertures, dynamic pressure probes or tubes can be conveniently replaced by the GM-50 with its principle of thermal mass flow measurement. In the course of commissioning, the user has a choice of eight different operating ranges between 0...1.25 and 0...75 m/s respectively 0...250 and 0...15000 ft/min, can customize to existing air pressure and adapt the 4...20 mA value of the output to his evaluator electronics. All settings for the device are performed through two keys and a potentiometer extremely easily.



Technical Specifications:

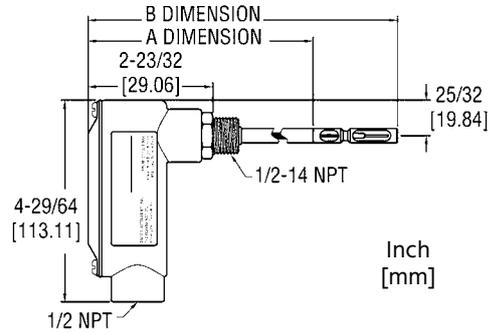
| | |
|---------------------------------|---|
| Media / | clean air and compatible, non-flammable gases |
| Operating range in m/s / | 0..1.25; 0..2.5; 0..5; 0..10; |
| Op. range in ft/min / | 0..15; 0..25; 0..50; 0..75 |
| Accuracy / | 0..250; 0..500; 0..1000; 0..2000; 0..3000; 0..5000; 0..10000; 0..15000 |
| Reaction time / | 3% FS in the temp. range 0..+50°C 4% FS in the temp. range -40..0°C and +50..+100°C |
| Operating temp. / | 1.5 seconds to 95% of final value (outlet filter on minimum value) |
| Ambient temp. / | -40..+100°C |
| Pressure / | 0..+60°C |
| Humidity / | 6.89 bar max. |
| Process connection / | independent |
| Weight / | non-condensing |
| | 1/2"-NPT-male |
| | 357.2 g (377g with Display) |

Electrical Specifications:

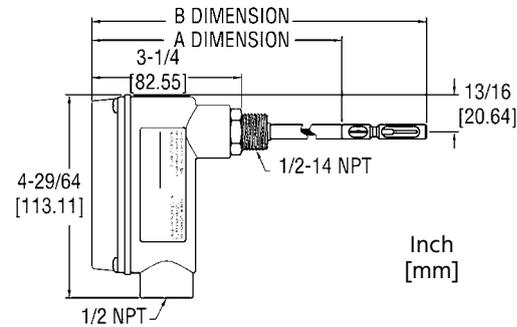
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|----------------------------|--|
| Supply voltage / | 12..35 VDC or 10..16 VAC 1.5 A rating required due to initial power surge drawn by transmitter |
| Power consumption / | 300 mA max. |
| Output / | 4..20 mA, in 3- or 4-wire system |
| Output filer / | 0.5..15 seconds, adjustable |
| Load / | 600 Ohm max. |
| El. connection / | screw clamps |
| Protective switch / | IP66 (no display unit) IP23 (with display unit) |
| Display / | |
| Design: | 4 1/2-digit 1/2" red LED |
| Resolution: | 0.01 m/s |

Dimensions in inch [mm]:

GM-50.0



GM-50.1



Ordering Codes:

| | | | |
|---------------------------------------|---|-----------|----------|
| Order number | GM-50. | 1. | 1 |
| GM-50 Air Velocity Transmitter | | | |
| Digital display / | 0 = no display 1 = with digital display | | |
| Mounting length / | 1 = 152,4 mm (6") 2 = 304,8 mm (12") 3 = 457,2 mm (18") 4 = 609,6 mm (24") 5 = 762,0 mm (30") - (only on request) 6 = 914,0 mm (36") - (only on request) | | |