



# Air Flow Transmitter

Catalog Number 1414-IFZ35FGDAA



## Before you Install

In order for the transmitter to operate correctly all the information supplied in this document must be followed.

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**IMPORTANT**

Transmitter must not be mounted near elbows , damper vanes or other restrictions that may cause turbulent air flow. Always install in a straight section of duct.

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## About the Air Flow Transmitter

The Air Flow Transmitter is an airflow transducer which may be used for control, monitoring and regulation of airflow speed in fresh air and ventilation units etc.

The transmitter registers airflow speed according to a thermal principle based on the fact that the cooling action of air increases with airspeed. The action is measured and converted to a 4 to 20 ma or a 0 to 10V signal corresponding to airflow speeds from 0.5 to 8 m/s (100 to 1575 ft/min) or 0.5 to 16 m/s (100 to 3150 ft/min).

The micro-processor based electronics provides an output signal that is linear and corrected for temperature changes. If a standard analog instrument is connected the airflow speed and temperature can be read remotely.

The transmitter has a separate 0 to 10 Vdc output signal for measurement of the air temperature 0 to 50°C (32 to 122°F).

## Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://www.literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

<p><b>WARNING</b></p> 	<p>Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.</p>
<p><b>IMPORTANT</b></p>	<p>Identifies information that is critical for successful application and understanding of the product.</p>
<p><b>ATTENTION</b></p> 	<p>Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard and recognize the consequences.</p>
<p><b>SHOCK HAZARD</b></p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that dangerous voltage may be present.</p>
<p><b>BURN HAZARD</b></p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that surfaces may be dangerous temperatures.</p>

## Install Air Flow Transmitter

The transmitter is mounted in such a way that the airflow passes the sensor head. The power supply cables to the transmitter should be kept separated from high voltage lines where heavy transients may occur.

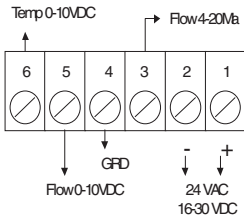
The transmitter can be mounted in airflow channels with a diameter or channel width of 100 to 370 mm (4 in to 15 in)

## Wire and Connect Air Flow Transmitter

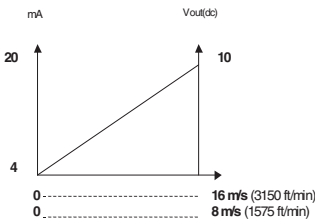
The length of the cable is not critical. Avoid placing it in parallel with other cables, which may induce electrical noise on the voltage signal and thus disturb the function of the transmitter.

The best installation is obtained with a separate cable to the transmitter. It is recommended to use a shielded cable to the transmitter as this improves immunity against noise when it is used in light-industrial areas. The shield should be terminated at the supply point but not terminated at the transmitter.

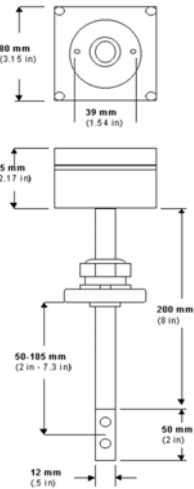
Wiring Diagram



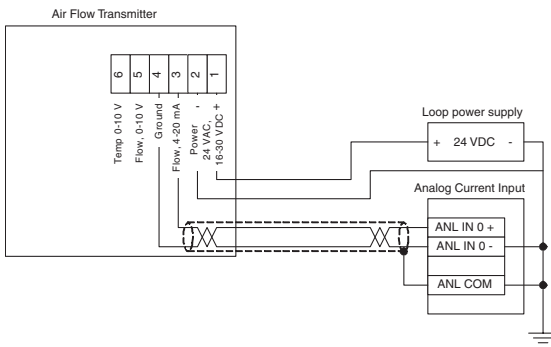
Output Signals Scales



Dimensions



Wire to a Programmable Controller



## Post-installation

The module is delivered with the range set at 0.5 to 8 m/sec (100 to 1575 ft/min). If jumper SW1 is removed on the printed circuit board, the range 0.5 to 16 m/sec (100 to 3150 ft/min) is obtained.

## Maintenance

As the thermal measuring principle is based on the cooling principle of the air, dirt accumulation on the sensor will reduce the measuring accuracy. If the transmitter is used in dirty air, the sensor head should be cleaned at suitable intervals.

## Specifications

### Air Flow Transmitter Specifications

Specification	Value
Airflow speed	0.5...8 m/s (100...1575 ft/m, 0.5...16 m/s (100...3150 ft/m))
Standard current signal	4...20 ma (loop resistance < 500Ω)
Standard voltage signal	0...10V (max. 5mA)
Air temperature	-10°C...+60°C (+14°F...140°F)
Ambient temperature	-20°C...+50°C (-4°F...+122°F)
AC voltage supply	24V ac ±10% (120 ma)
DC voltage supply	16...30V dc (80 ma)
Absolute accuracy	±5% of full scale
Rise time	20 sec
Time constant	5 sec
Depth of insertion in channel	50...200 mm (2...8 in.)
Dimensions (HxWxD)	80 x 80 x 55 mm(3.15 x 3.15 x 2.17 in)

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