

# GENERAL PURPOSE INDUSTRIAL AIR VELOCITY/ TEMPERATURE TRANSMITTER/INDICATOR

**Ω OMEGA®**

**FMA1000  
Series**



Optional†

6 OD x 305 mm L (¼ x 12")  
sensor probe included with  
4.5 m (15') cable

- ✓ Measures Air Velocities up to 50.8 m/sec (10,000 FPM)
- ✓ Measures Air Temperature up to 121°C (250°F)
- ✓ 1.5% Full Scale Accuracy (Velocity)
- ✓ 0.5% Full Scale Accuracy (Temperature)
- ✓ 3 Different Sensor Probe Configurations: Fixed Probe with Top or Right Angle Back Mount, or Remote Probe with 4.5 m (15') Cable
- ✓ Hot Wire Air Velocity Sensor Design
- ✓ 250 msec Response Time Programmable up to 2 Seconds
- ✓ Economical 6 OD x 305 mm L (¼ x 12") Insertion Probe Design
- ✓ Backlit LCD Displays Air Velocity and Air Temperature Simultaneously
- ✓ Air Velocity and Air Temperature can be Displayed in Different Engineering Units
- ✓ Monitors Maximum and Minimum Air Velocity and Temperature
- ✓ Dual Linear Analog Outputs for Air Velocity and Temperature
- ✓ High and Low Velocity Alarm Voltage Outputs
- ✓ USB PC Interface with Windows® Based PC Software
- ✓ NEMA 4X (IP65) Industrial Enclosure

The FMA1000 Series industrial air velocity/temperature transmitter/indicator measures and displays air velocity as well as air temperature in research and development labs, HVAC applications, and other manufacturing processes. The sensor design is based on three RTD elements, one measures air temperature and the other two measures air velocity by measuring the heat loss from the RTD sensor as it cools down by the air flow. The FMA1000 series offers many standard features such as display of air velocity and temperature, two analog outputs corresponding to air velocity and temperature, high and low voltage alarm outputs, PC serial interface, and Windows® based PC interface software. The FMA1000 displays the air velocity in different engineering units such as FPM, m/sec, miles/hour, and km/hour. The air temperature is displayed in °C or °F.



FMA1000 units feature a large, easy to read, backlit LCD.

Shown smaller than actual size.

## SPECIFICATIONS

**Air Velocity Ranges:** 0 to 500, 0 to 1000, 0 to 2000, 0 to 5000, 0 to 10,000 FPM

**Air Temperature Range:** -40 to 121°C (-40 to 250°F)

**Accuracy:**

**Air Velocity:** 1.5% full scale or 12 FPM whichever larger

**Air Temperature:** 0.5% full scale

**Air Velocity/Temperature Probe:** Stainless steel, 6 OD x 305 mm L (¼ OD x 12")

**Air Velocity/Temperature Sensor:** Three RTDs, 100 and 1000 Ω

**Sensor Probe Pressure:** 150 psig maximum

**Display:** Backlit LCD, 32 x 51 mm (1.25 x 2")

**Response Time:** 250 msec up to 2 seconds

**Analog Output (Air Velocity):** 4 to 20 mA, 0 to 5 Vdc, or 0 to 10 Vdc

**Analog Output (Air Temperature):** 0 to 5 Vdc

**Operating Ambient Temperature:**

**Sensor Probe:** -40 to 121°C (-40 to 250°F)

**Electronic Case:** 0 to 50°C (32 to 122°F)

**Alarms:** High and low alarm voltage outputs, corresponding to air velocity

**Power:** 15 to 24 Vdc, 200 mA

**Case Dimensions:** 114 H x 89 W x 33 mm D (4.5 x 3.5 x 1.3")

**Weight:** 230 g (0.5 lb)

FMA1001R-V1, with remote sensor probe and 4.5 m (15') cable, smaller than actual size.



Power and output cable

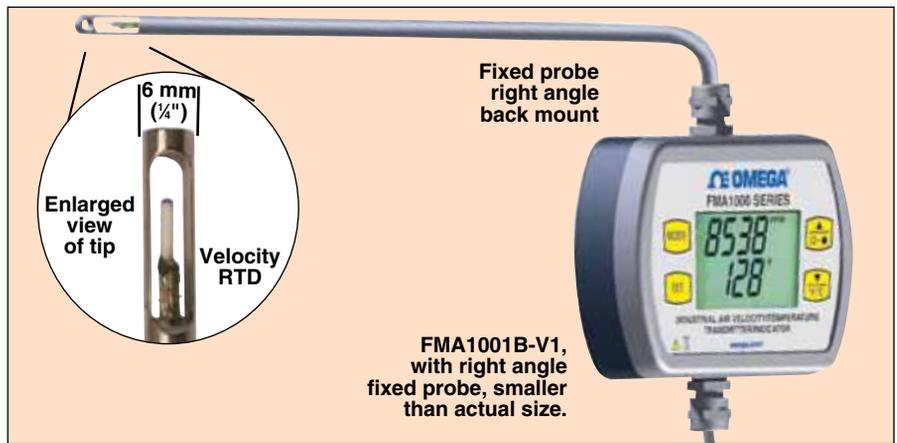
Sensor probe

FMA1001A-V1, with top mount fixed probe, smaller than actual size.

Fixed probe top mount



Power and output cable



Fixed probe right angle back mount

FMA1001B-V1, with right angle fixed probe, smaller than actual size.

## To Order

Model No.	Range: m/sec (FPM)	Description
FMA1001A-*.**	0 to 5.08 (0 to 1000)	Air velocity/temperature transmitter, fixed probe top mount
FMA1002A-*.**	0 to 25.4 (0 to 5000)	
FMA1003A-*.**	0 to 50.8 (0 to 10,000)	
FMA1004A-*.**	0 to 2.54 (0 to 500)	
FMA1005A-*.**	0 to 10.16 (0 to 2000)	
FMA1001B-*.**	0 to 5.08 (0 to 1000)	Air velocity/temperature transmitter, fixed probe right angle back mount
FMA1002B-*.**	0 to 25.4 (0 to 5000)	
FMA1003B-*.**	0 to 50.8 (0 to 10,000)	
FMA1004B-*.**	0 to 2.54 (0 to 500)	
FMA1005B-*.**	0 to 10.16 (0 to 2000)	
FMA1001R-*.**	0 to 5.08 (0 to 1000)	Air velocity/temperature transmitter, remote probe
FMA1002R-*.**	0 to 25.4 (0 to 5000)	
FMA1003R-*.**	0 to 50.8 (0 to 10,000)	
FMA1004R-*.**	0 to 2.54 (0 to 500)	
FMA1005R-*.**	0 to 10.16 (0 to 2000)	



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

## Accessories

Model No.	Description
CAL-3-FLOW†	NIST traceable 4-point calibration certificate
TX8-100	8 conductor shielded cable, PVC insulation, 30.5 m (100') spool
FPW-15	+15 Vdc power supply
PSR-24S	Regulated 24 Vdc @ 400 mA power supply, screw terminal
PSR-24L	Regulated 24 Vdc @ 400 mA power supply, stripped leads
SSLK-14-14	Compression fitting, 1/4" tube OD, 1/4 NPT
T-FER-1/4	1/4" PTFE ferrules (10 pack) for use with SSLK-14-14 compression fitting

\* Specify output type add suffix "-MA" for 4 to 20 mA, "-V1" for 0 to 5 Vdc, or "-V2" for 0 to 10 Vdc, no additional cost.

\*\* For 95 mm (3.75") short probe add suffix "-S" to model number for additional cost.

† Unit is NIST traceable up to 8500 FPM.

Comes complete with 305 mm (12") long sensor probe, power/output cable, Windows based PC interface software and cable, 4-point of certificate of compliance and operator's manual.

**Ordering Examples:** FMA1002A-MA, air velocity/temperature transmitter, 0 to 5000 FPM range, fixed probe top mount, 4 to 20 mA output (velocity), 0 to 5 Vdc output (temperature), and CAL-3-FLOW, NIST traceable 4-point calibration certificate.

FMA1001R-V1, air velocity/temperature transmitter, 0 to 1000 FPM range remote probe with 4.5 m (15') cable, dual voltage outputs.