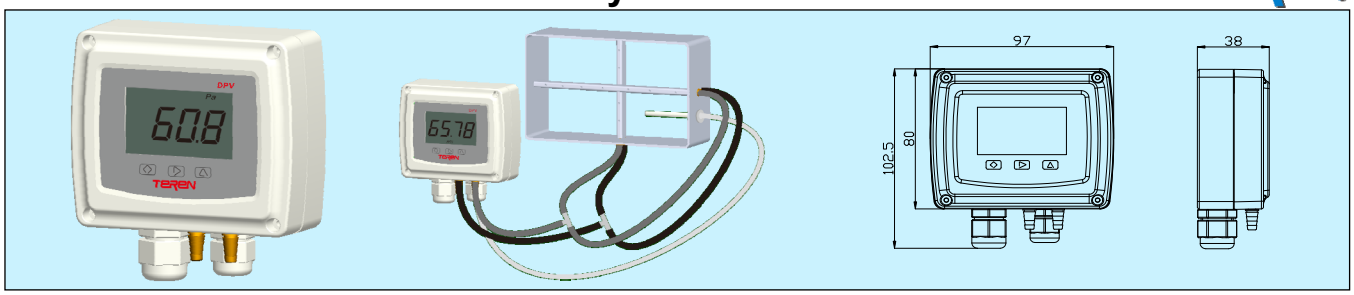
DPV Multi-function Airflow Velocity/Volume Transmitter



Applications & Features

- Apply high accuracy MEMS sensor and digital technology, can measure air velocity/volume of various ventilation, air conditioning systems and equipment
- Good accuracy, temp. compensation and electromagnetic interference (EMI) ability (industrial EMI level 3), for complex EMI environments of industrial systems or equipment
- Multiple ranges and engineering units
- Multiple outputs selection, over voltage and reverse polarity protection, high reliability
- Optional probe for temp. measurement and compensation
- The LCD display and keys can set zero calibration, unit switching, response time, air velocity or volume mode, compensation/coefficient calibration and parameters, etc.
- High protection rate up to IP65

Specifications

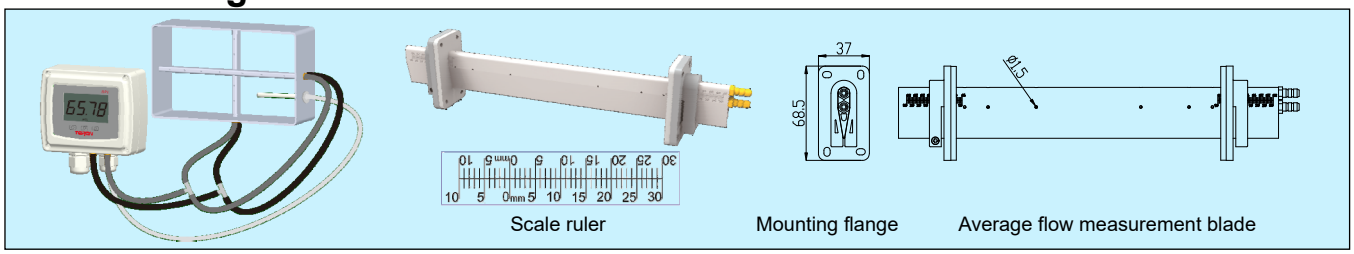
Air velocity/volume:
Medium: non-combustible, non-corrosive air, insensitive to moisture, dust, condensation and oil
Working/Medium Temp.: -20~70°C
Temp. Compensation: 0~50°C
Range: 0-10/30/100m/s, see models
Working Pressure: overload 10xFS(<1kPa)/8xFS(>1kPa)
burst 20xFS(<=1kPa)/10xFS(>1kPa)
Temperature remote probe (Optional):
Cable: white PVC, 4x0.2mm², 2m, -40~85°C, Rins>100MΩ (25°C)
Digital temperature sensor: accuracy 0.2°C@-40~100°C
Range: 0~50°C (others can be set)
Accuracy: DP±0.5%FS; velocity/volume±2%FS; temp.±0.2°C
Long term stability: ±0.5%FS /Year(pressure)
Thermal effect(pressure): <0.03%FS/°C(zero), <0.04%FS/°C (FS)
Response Time: 0.5~30s, can be set by keys
Output: 0~10V, 4~20mA (3 wires), 0-5V, 1 channel for velocity/volume; 2 channels if temperature is selected
Output Load: <500Ω(current), >2kΩ(voltage)
Communication: 1 RS485/Modbus, R/W enable, 9600 bps, terminal resistance settable
Display and Keys: large LCD (with unit and backlight (N/A for 4~20mA output)) and 3 touch keys
Display resolution: 0.1 m/s, 1 m^3/h or 0.1°C
Display update time: <1s
Power: current 18.5~35VDC (R_L=500Ω), 8.5~35VDC (R_L=0Ω), voltage 16~28VAC/16~35VDC；with consumption 1.5VA
Process Connection: 5mm ID tubing
Zero set: easy to reset by keys
Work Temp.: -20~70°C, 0~95%RH (Non cond.)
Storage Temperature: -30~85°C, 0~95%RH (Non cond.)
Medium Temperature: -40~100°C
Housing: fire retardant PC(UL94V-0), copper nozzle
Protection: IP65
Matched Sensor: flow sensor like AFMB or similar pitot
Weight: 220g (without temperature sensor and cable)
Approval: CE, meet EN61326-1 for industrial equipment

Models

Model	DPV				Multi-function Airflow Velocity/Volume Transmitter
Range		1 2 3			0-10m/s(0-125Pa) 0-30m/s(0-1000Pa) 0-100m/s(0-10000Pa)
Output			1 2 E 8		0-10VDC 4-20mA (3 wires) 0-5VDC RS485/Modbus RTU
Temp.*				0 1	N/A Remote temperature probe

*Temperature option is supplied with a remote temperature probe and provides the same output as velocity/volume output signal

AFMB Average Flow Measurement Blade



Scale ruler Mounting flange Average flow measurement blade

Applications & Features

- Installed in square or circular duct, is an easy and low cost way of measuring air velocity and volume
- Stably and accurately measure the total, static and velocity pressure, and the square root of the velocity pressure is proportional to the air velocity
- Good for various air conditioning systems, vacuum cleaning, especially high temperature and dusty air or high flow rate systems, such as laboratory, air circulation test equipment, smoke purification and exhaust systems, etc.
- Apply with the DPV transmitter, or similar meters or gauges
- There are -10~30mm scale ruler at the two ends, which can help to confirm the insertion is exactly in the middle of the duct, to give better measurement accuracy. And the flange can give reliable duct installation with very good air tightness

Specifications

Length: 100~3000mm, see models
Velocity range: 3~100m/s(9~10000Pa)
Accuracy: <3% (related with the install position, quantity of blades installed and the matched DP transmitter)
Repeatability: <0.3%
Operating temperature: up to 85°C
Max pressure: 1 bar (static pressure)
Coefficient: 0.82
Material: Die cast aluminum, nickel-plated copper nozzle, PC flange
Note: once installed, it is recommended to adjust the readout of the matched transmitter to the value of another precision air flow meter, to complete a calibration to improve the accuracy

Models

Model	Length(mm)	Model	Length (mm)
AFMB-100	100 mm	AFMB-630	630 mm
AFMB-125	125 mm	AFMB-800	800 mm
AFMB-160	160 mm	AFMB-1000	1000 mm
AFMB-200	200 mm	AFMB-1500	1500 mm
AFMB-250	250 mm	AFMB-2000	2000 mm
AFMB-315	315 mm	AFMB-2500	2500 mm
AFMB-400	400 mm	AFMB-3000	3000 mm
AFMB-500	500 mm	Other lengths can be customized(100-3000mm)	