

AFT-1D Air flow transmitter



The AFT-1D has been designed for the measurement of air flow, it gives a voltage or current output proportional to air flow.

With alarm limits it functions in the same way as a 2 limit current monitor.

The transmitter makes possible precise local adjustment and remote measurements, optimisation, and energy monitoring system. As an air flow monitor the AFT-1D can monitor leaks or blocked up ducts, the condition of filters, the freezing of coolers or heat exchangers, state of adjustment, condition of fans etc.

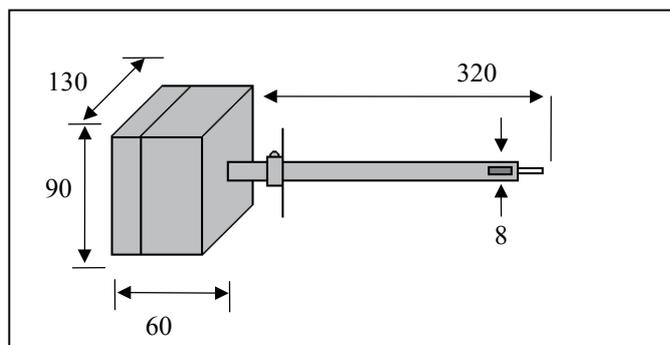
The AFT-1D transmitter works on the hot wire principle. The measurement head has two precise Pt-100 ohm resistance elements so that the temperature difference is kept constant (70°C). The power required to maintain the temperature difference is measured and this is proportional to the air flow rate.

The transmitter measurement and output values may be checked and the unit recalibrated quickly and accurately by connecting it to a PC running special program.

TECHNICAL INFORMATION

Meas. Ranges:	0 - 1 / 5 / 10 / 20 m/s
Outputs:	1) Voltage 0 - 10 V, min.load > 1 Mohm 2) Current 0 - 20 mA or 4 - 20 mA, max load < 500 ohm 3) RS-485 serial port, rate 1200 Baud
Precision:	±3% of reading ±0.1 m/s (incl deviation from linearity)
D/A-conversion	4 uA resolution
Operating temp	-20...+80 °C (measurement head) 0...+50 °C (electronics) temp. dependence < 0.003 %/ °C
Alarm limits:	Additional 2 adjustable upper or lower limits Closing relay contact outputs (max 230 VAC, 2A) hysteresis approx.0.05 m/s
Power supply:	24 VDC ± 10%

CONSTRUCTION

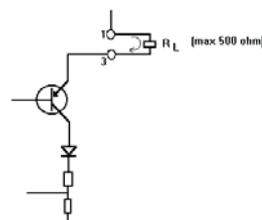


CONNECTIONS

24 VDC Power supply	+	1
	-	2
Curr. output 0(4) – 20 mA	+24V	1
		3
Voltage output 0-10 V	+	4
	-	5
1. Alarm limit output		8
		9
2. Alarm limit output		10
		11
RS-485 serial bus	S+	6
	S-	7

Note

The current output (conn. 3) from the unit and the AFT power supply (-) must be electrically isolated from one another.



ORDER INFORMATION

AFT-1D-X	Air flow rate transmitter, x= range 0-1, 5, 10 or 20 m/s
AFT-1D-X-R2	Air flow rate transmitter with alarm limits
TP-1/10	Surface mounting power supply, 230V 50Hz / 24 VDC 0.4A
TP-1/50	Surface mounting power supply, 230V 50Hz / 24 VDC 1.0A