DTL08

Compact Calorimetric Mass Flow Sensor for Air

- current and voltage outputs for mass flow rate
- limit switch
- additional analogue output for temperature
- measuring range: 0,1...30 m/s
- max. pressure: 10 bar, max. temperature: 80 °C
- insignificant pressure drop
- no moving parts
- unaffected by duct diameter, pressure and temperature

Description:

Model DTL08 mass air flow sensors function according to the proven-reliable calorimetric principle. The sensor tip contains a resistor which is electronically heated. The air flowing around the sensor tip removes heat from it, thus changing its electrical resistance value. A second, unheated resistor detects the air temperature.
The temperature difference between both resistors is proportional to the flow rate and thus to the flow volume. Model DTL08 mass air flow sensors are microprocessor based and come standard with linear analogue outputs for flow rate and temperature as well as a limit contact.

Typical applications:

Model DTL08 mass air flow sensors are economical, high performance units. These devices are used in applications where the flow of straight, non-turbulent air streams has to be measured or monitored. Such applications include the following: HVAC, air-supply systems, air-compressor monitoring, air-consumption measurement, leak monitoring, cooling circuits, and the like.

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Models:

DTL08.ALS...: linear analogue output for air flow,
linear analogue output for temperature,
switch output for flow

DTL08.ALCD...: linear analogue output for air flow,
linear analogue output for temperature,
switch output for flow
LCD-display

Technical Data:

Measuring range:	0,1…30 m/s
Analogue output flow:	4…20 mA (Ra = 200 Ohm) 0…10 V (Ra = 10 kOhm) with dip-switches adjustable: 0,1…1 m/s 0,1…3 m/s 0,1...10 m/s 0,1…16 m/s 0,1…30 m/s
Analogue output temperature:	0…10 V (Ra = 10 kOhm)
Relay output:	1 changeover, 250 VAC, 0,25 A
min. load:	10 mA, 5 VDC
switching point:	adjustable with potientiometer
Transistor output:	open drain, max. 150 mA
conductive:	adjusted switching point understepped
non conductive:	switching point overstepped
Power supply:	24 VDC ± 5 %
Max. power consumption:	4 VA
Accuracy [1]:	± 5 % of measured range end value
Reproducibility [1]:	± 2 %
Temperature range:	
Ambient:	–20 … +50 °C
Medium:	–25 … +80 °C
Temperature gradient:	30 K/min
Max. pressure:	10 bar
Process connection:	threaded PG7 (standard) mounting flange; adapter M16 x 1,5 or G1/2 male thread
Insertion depth:	130 mm, other sensor lengths on request
Sensor diameter:	10 mm
Sensor material:	brass, nickel plated
Electronic housing:	
Material:	plastic
Dimensions:	LxWxH = 56x84x82 mm
Protection cl. (housing):	IP65
Protection cl. (sensor):	IP54

1) Referenz conditions: inlet zone > 10 x DN, outlet zone > 10 x DN, laminar flow, air at 0 °C and 1.013 bar

Order Code:

Order number:	**DTL08.**	**ALS.**	**30.**	**1.**	**0**

Compact calorimetric flowmeter for air

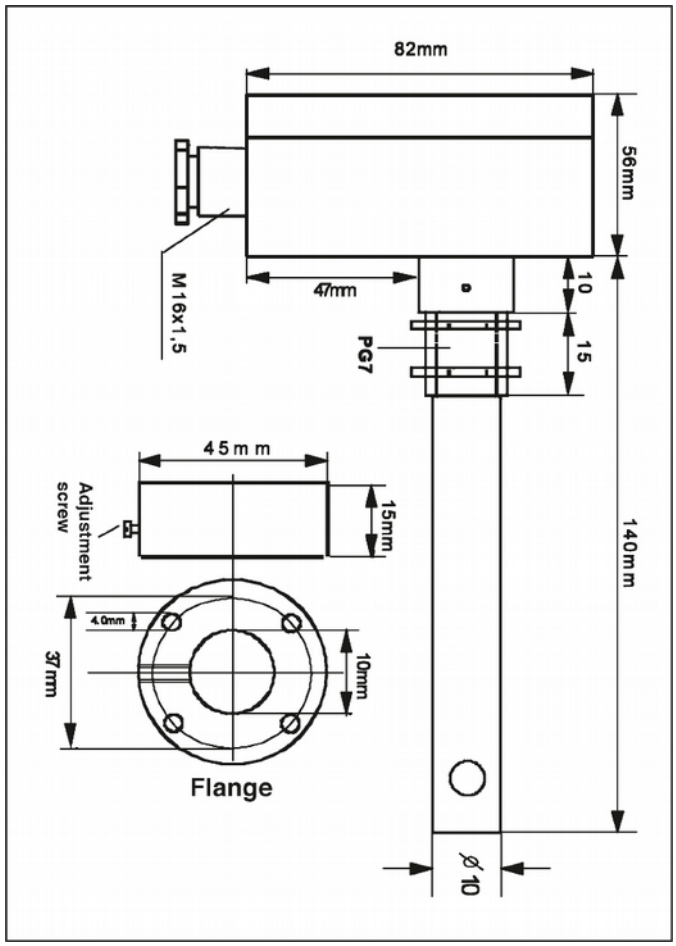
Models:
ALS = analogue outputs for flow and temperature, limit contact
ALCD = additional LCD-Display

Default setting of analogue output:
01 = 0.1…1 m/s
08 = 0.1…3 m/s
10 = 0.1...10 m/s
16 = 0.1…16 m/s
30 = 0.1…30 m/s

Process connection:
1 = PG7 threaded connection (7 mm)
2 = mounting flange
3 = M16x1,5 male (with adapter)
4 = G 1/2 male thread (with adapter)

Options:
0 = without
9 = please specify in plain text

Dimensions:



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