

Product overview

DPT Flow is a device for monitoring and controlling the air flow and for measuring flow rate of centrifugal fans. The flow rate measurement is based on differential pressure values measured directly from the fan. DPT Flow can be used to display the flow value on-site and to send the output value to a control system.


Types available

Type code	Type	Description
EXT-TN-1071665	DPT Flow-D-1000	0...10V, pressure range 0...1000Pa, with LCD display
EXT-TN-1072426	MKS100	Metal duct connector, L=100mm (2 pieces necessary per device)

Technical data

Standards	CE conformity	- 2004/108/EEC EMC directive - 2002/95/EEC RoHS directive
General Data	Power supply	DC 24V / AC 24V(±10%)
	Power consumption	Max. 1W
	Output	0...10V, load min. 1kΩ
	Material	- Housing : ABS - Tubing : PVC, soft
	Pressure connection	Male, D=5mm/6.3mm
	Electrical connection	Screwing terminals, max. 1.5mm ²
	Cable entry	M16
	Dimensions LxWxH	90 x 71.5 x 36mm
	Bursting pressure	50kPa
	Max. pressure	25kPa
	Accuracy	±5Pa + ±1.5% from reading
	Long term stability	Typical <= ±1Pa / year
	Media	Air and non-aggressive gases
	Ambient temperature	-5...+50°C, max. 95% RH, non-condensing
	Storage temperature	-20...70°C
	Protection	IP54 according to EN60529
Weight	150g	

Security advice

The installation and assembly of electrical equipment may only be performed by a skilled electrician.

The modules must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with applications that can result in danger for people, animals or real value.

Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). For the electrical connection, the technical data of the corresponding device is valid.

Sensing devices with transducer should in principle be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of the transducer electronics should be kept constant.

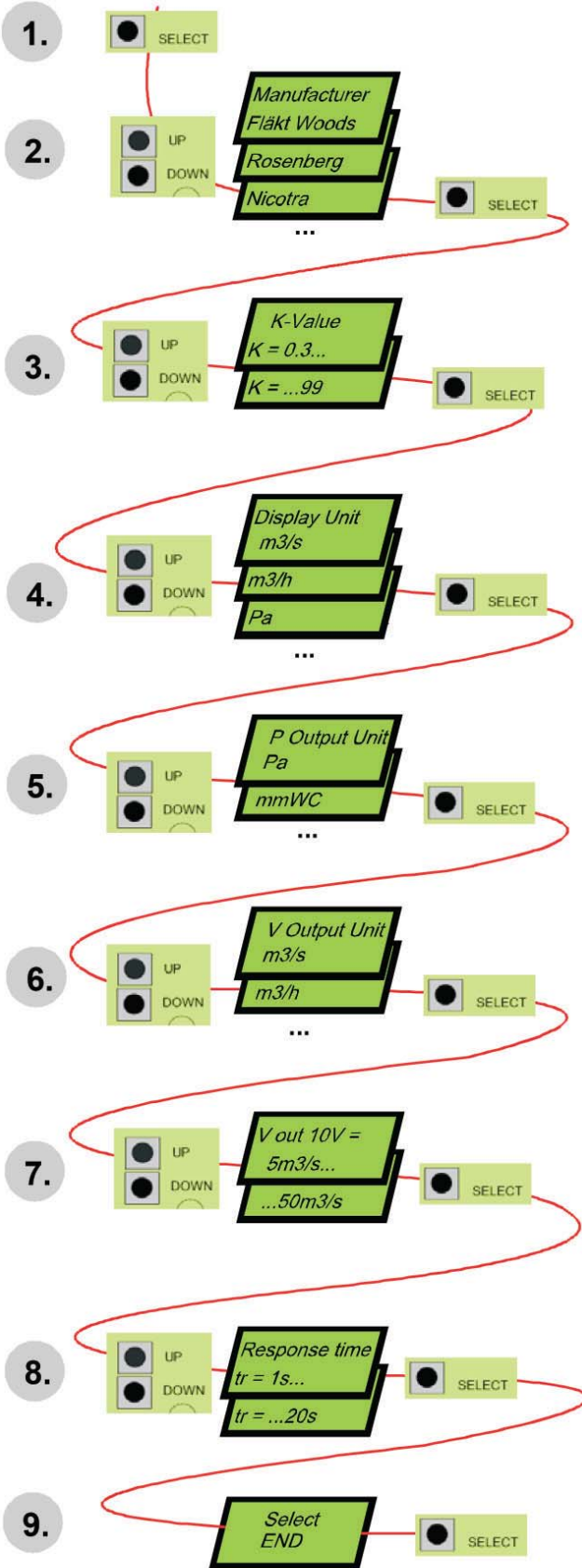
The transducers must be operated at a constant supply voltage (±0.2V). When switching the supply voltage on/off, power surges must be avoided on site.

Mounting advice

- For connecting the device, the process lines must be unpressurised.
- Note the suitability of the device for the medium to be measured.
- Note the maximum pressures.

Installation

A pre-requisite for the operation is a proper installation of all electrical supply, control and sensing leads as well as the pressurised connection line. Before installing the device, the leak tightness of the pressurised connection lines must be inspected.



1. Press Select for > 2 seconds to start the menu.

2. Selection of the manufacturer of FAN.

3. Each fan has its own specific K-value. Please see the right K-value from the datasheet of the fan.

4. Display unit m3/s, m3/h, cfm, l/s, scfh, lpm, kPa, mbar, mmWC, inchWC or Pa.

5. Pressure output unit (and P output scale).

DPT Flow-1000	
0...1000 Pa	
0...1 kPa	
0...10 mbar	
0...100 mmWC	
0...4 inchWC	

6. Flow output unit for defining the V output scale.

7. Vout scale, selectable.

m3/> 10V =	1...50 m3/s
m3/h	> 10V = 4 000 ... 200 000 m3/h
cfm	> 10V = 2000 ... 100000 cfm
l/s	> 10V = 1000 ... 50000 l/s
scfh	> 10V = 100000...6000000 scfh
lpm	> 10V = 60000 ... 3000000 lpm

8. Stepless response time selection (1s ... 20s).

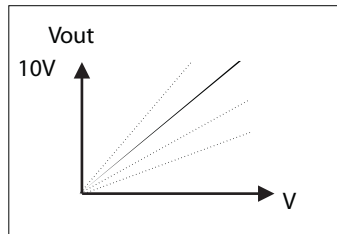
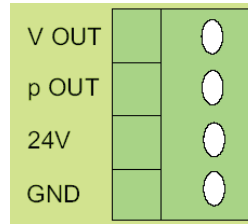
9. Press Select and the device returns to the normal measuring mode.

Zero point calibration

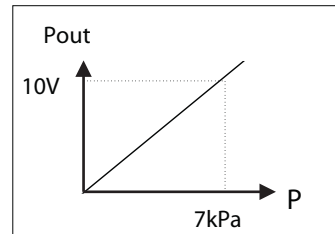
Auto zero element makes the DPT Flow meter maintenance free. Element automatically adjusts the transmitters zero point from time to time, this eliminates the zero point long term drift of the piezoresistive sensing element. During zero point adjustment the output and display values will freeze to the latest measured value. The automatic zero point adjustment takes 4 seconds. Zero point calibration is carried out every 10 minutes normally and during warm up the time is shorter a few times.

Terminal connection plan

V OUT	Output 0...10V
p OUT	Output 0...10V
24V	Supply 24V AC/DC
GND	Ground



Vout scale can be changed



Dimensions (mm)

