

PRESSURE TRANSMITTER

ELTA

>> **Select** models available for next day delivery



PRESSURE TRANSMITTER

Overview

- Three settable working ranges for each model 100/300/500Pa
- Output signal 0 - 10V
- High level of accuracy and stability
- Models with square root output signal
- Quick and easy mounting



Overview

DPT is a transmitter for use with our Demand Control Ventilation system for measuring differential pressure in air and neutral gases for controlling pressure in HVAC systems.

Function

The transmitter consists of a plastic sensor-housing and a membrane of silicon LSR. The differential pressure affects the membrane which is connected to the sensor element. The element is manufactured with state-of-the art technology with a ceramic beam onto which thick-film resistors have been applied. The pressure on the membrane causes a movement which is transferred to the ceramic beam. Flexing of the beam gives changes in resistance. The changes in resistance are transmitted by means of built-in electronics to an analogue output signal. The measuring element gives a rapid response and a high level of accuracy. The properties of the ceramic element ensure that the transmitter has excellent long-term stability.

Sensor Housing

The sensor housing is made of transparent plastic. The cable input is on the left hand side with cable gland. The cover is closed by a single screw and can easily be detached from the hinges when mounting.

Setting the Working Range

The transmitter has three different working ranges depending on the model. The working ranges are set via two dip switches in the lower left corner of the circuit board according to the table shown below. The supply voltage must be disconnected. You can also change the zero point of the pressure measurement by pressing the button above the dip switches.



P		
0 - 500Pa	0	0
0 - 300Pa	0	1
0 - 100Pa	1	0

Mounting

The sensor should be mounted vertically using screws in the mounting holes on the back edge. There are also two mounting holes on the upper side of the sensor housing.

Connection Set

A connection set consisting of tubing and pressure outlets can be supplied as accessory to DPT.

PRESSURE TRANSMITTER

Technical Data

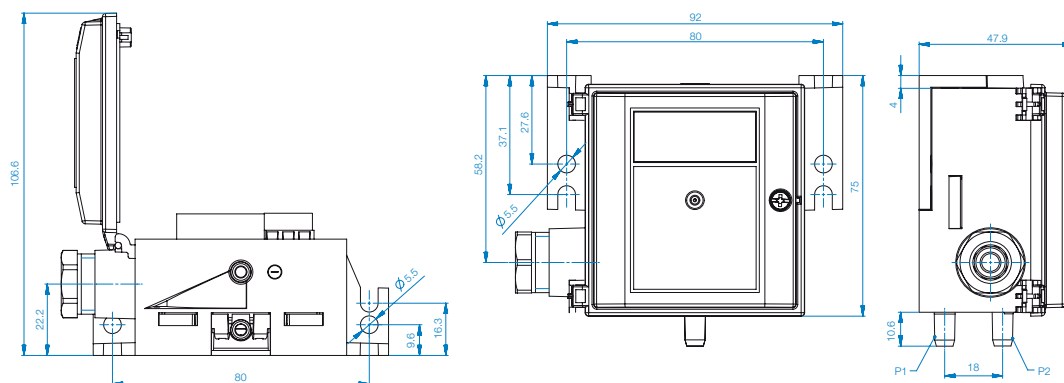
Product Code	Supply Voltage	Power Consumption	Output Signal V	Load Impedance	Maximum Differential Pressure Pa	Pressure Connection	Cable Connection	Cable	Mounting	Material Sensor	
										Housing	Membrane
149-DCV-DPT	24 VAC + 15/-10 or 18 - 33V DC	10mA (0 -10V)	0 - 10	> 10kohm (0 - 10V)	Up to 500	Connection pipes for 6mm tube	Screw terminals. Cable gland with built-in strain relief	Three wire. Flexible cable is recommended	Vertical with pressure connections downwards	Transparent plastic	LSR (Silicon)
Product Code	Form of Protection	Accuracy		Temperature Dependence °C	Ambient Temperature °C	Storage Temperature °C	Dynamic Response Time ms	Resolution	ANS	DTV-ANSLUTNING	
		Linearity	Hysteresis								
149-DCV-DPT	IP54	< +/- 1.0 % fs* for working ranges within 0...100 Pa, for higher working ranges +/- 0.7 % fs*	< +/-1.0% fs	< 0.04% fs	0 - 70	-10 - 70	< 20	Working ranges up to (and including) 100 Pa: < 0.2 % fs*, other working areas: < 0.1 % fs*	Mounting kit with 2m plastic tube & 2 pressure outlets	Pressure connection of metal, angled 90°	

Installation Arrangement

1. Recommended installation arrangement: vertical, with pressure connections facing downward, drain of possible condensed water (factory calibration).
2. Horizontal, cover facing downward. Signal approximately 14 Pa higher than actual pressure.
3. Horizontal, cover facing upward. Signal approximately 14 Pa below actual pressure.

Mount the transmitter with minimum 10mm distance to magnetic material. If this is not possible there is a failure of up to minus 1 Pa for transmitters mounted on sheet steel.

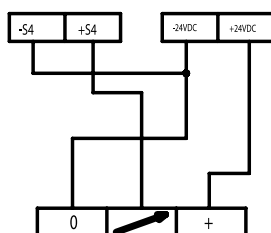
Dimensions



Wiring Diagrams

DTL 0 - 10V

- Supply Voltage 24V AC / 18 - 33V DC
- Output signal 0 - 10V DC
- System neutral



Dimensions are in mm.

* fs = fullscale, the complete sensor range

This product conforms with the requirements of European EMC standards CENELEC EN50081-1 and EN50082-1 and carry the CE-mark.

ELTA

Tel **+44 (0) 1384 275800**
Email **info@eltauk.com**
eltauk.com

149-DCV-DPT-03-2018 Issue A



BS EN ISO 9001:2008 FM 556465



A MEMBER OF  ELTA GROUP