

## DIFFERENTIAL PRESSURE TRANSDUCER

### FOR THE DIFFERENTIAL PRESSURE RECORDING AND CONTROL IN COMBINATION WITH EASYLAB AND TCU-LON-II

Differential pressure transducers based on the static measurement principle for the room or duct pressure control in combination with EASYLAB controllers TCU3 or LABCONTROL controllers TCU-LON-II

- Suitable for air and non-aggressive media
- For use in laboratories, clean rooms in the pharmaceutical and semiconductor industries, operation theatres, intensive care units, and offices with very demanding control requirements
- Constructions with calibration certificate to meet GMP requirements

## Application □

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### Application

- Differential pressure transducer for the LABCONTROL system
- For the room or duct pressure control in combination with EASYLAB controllers TCU3 or with TCU-LON-II
- For the room and duct pressure monitoring in combination with monitoring systems TPM
- For use in laboratories, clean rooms in the pharmaceutical and semiconductor industries, operation theatres, intensive care units, and offices with very demanding control requirements

## Description □

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### Variants

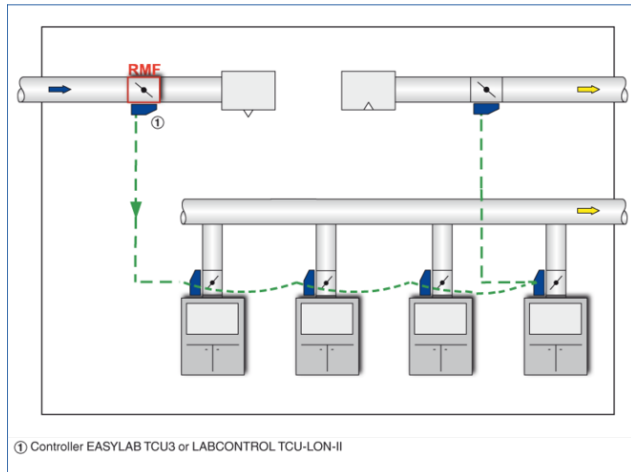
- DPS50: Measuring range  $\pm 50$  Pa
- DPS100: Measuring range  $\pm 100$  Pa
- 699: Measuring range  $\pm 50$  or  $\pm 100$  Pa
- 699-LCD: Measuring range  $\pm 50$  or  $\pm 100$  Pa, with differential pressure display
- GB404: Measuring range  $\pm 100$  Pa
- GB604-CAL: Measuring range  $\pm 100$  Pa, with calibration certificate to meet GMP requirements (Good Manufacturing Practice)
- Choose a sufficient measuring range above/below the setpoint pressure

## INFORMACIÓN TÉCNICA

## Functional description

Static differential pressure transducers function according to the static differential pressure measurement principle. The sensor is a cylinder that consists of two chambers (one for positive pressure and one for negative pressure) separated by a diaphragm. If there is equal pressure in both chambers, the diaphragm is in the middle between the chambers and is not deformed. If there is a pressure difference, the diaphragm deforms towards the chamber with the negative pressure. The degree by which the diaphragm deforms is a measure for the differential pressure. This is why the voltage signal is proportional to the differential pressure.

### Principle of operation – room pressure control



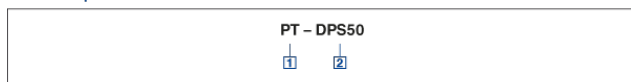
### Static differential pressure transducer DPS

Supply voltage	24 V AC $\pm$ 10 %
Power rating	1.8 VA
Output signal	0 – 10 V DC; 5 mA max.
Media	non-aggressive gases
Measuring range	$\pm$ 50 Pa or $\pm$ 100 Pa
Measurement accuracy	$\pm$ 1 % of full scale
Overload protection	up to 5-fold measuring range
Connections for tubes	$\varnothing$ 6.6 x 11 mm (for flexible tubes 6 mm)
Operating temperature	-10 to 50 °C
IEC protection class	III (Schutzkleinspannung)
Protection level	IP 54
EC conformity	EMC according to 2004/108/EG
Dimensions (B x H x T)	122 x 80 x 55 mm
Weight	0.3 kg

Differential pressure transducer for the LABCONTROL system, for the measurement of room or duct pressure.

When the transducer is connected to a room controller, the supply air or extract air flow is controlled based on the differential pressure.

### Differential pressure transducer



#### 1 Type

PT Differential pressure transducer

#### 2 Variants

DPS50 Measuring range  $\pm$ 50 Pa  
 DPS100 Measuring range  $\pm$ 100 Pa  
 699 Measuring range  $\pm$  50 or  $\pm$  100 Pa  
 699-LCD Measuring range  $\pm$  50 or  $\pm$  100 Pa, with differential pressure display  
 GB604 Measuring range  $\pm$ 100 Pa  
 GB604-CAL Measuring range  $\pm$ 100 Pa, with calibration certificate