



## DYNAMIC DIFFERENTIAL PRESSURE TRANSDUCERS

### FOR THE DYNAMIC MEASUREMENT OF EFFECTIVE AND DIFFERENTIAL PRESSURES

Differential pressure transducers based on the dynamic measurement principle for volume flow rate measuring units Type VMR or VME

- Linear volume flow rate actual value 0 - 10 V DC or 2 - 10 V DC
- Recording of measured values for the display of volume flow rates or for the control of slave controllers
- Any installation orientation
- Parameters are factory set

## Application



### Application

- Electronic volume flow controller Universal with dynamic differential pressure transducer for use with volume flow rate measuring units
- Parameters are factory set
- On-site adjusting is not required

Standard filtration in comfort air conditioning systems allows for use of the transmitter in the supply air without additional dust protection. Since a partial volume flow is passed through the differential pressure transducer in order to measure the volume flow rate, please note:

- With heavy dust levels in the room, suitable extract air filters must be provided.
- If the air is polluted with fluff or sticky particles, or if it contains aggressive media, dynamic pressure transducers cannot be used

For this application the Universal controller is only used for measuring the differential pressure and for transforming the measured value into a linear voltage signal. Connections for setpoint value signal and actuator are not relevant, and neither are the corresponding technical data.

- Volume flow rate actual value is available as linear voltage signal

## ТЕХНИЧЕСКА ИНФОРМАЦИЯ

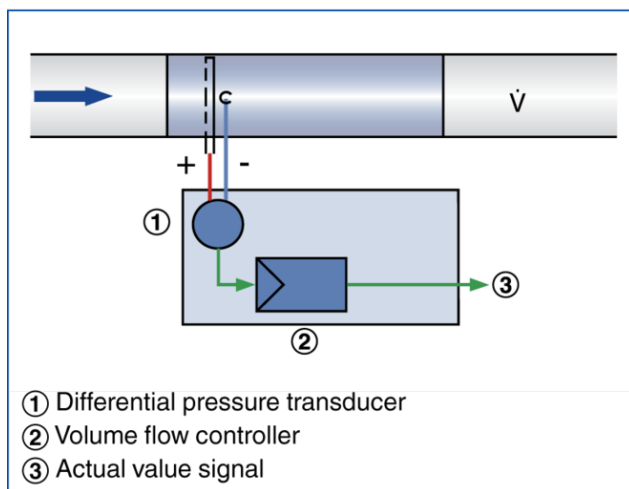
### Functional description

The volume flow rate is determined by measuring the effective pressure. For this reason the measuring unit is fitted with an effective pressure sensor.

The integral differential pressure transducer transforms the effective pressure into a voltage signal. The volume flow rate actual value is hence available as a voltage signal. The factory setting is such that 10 V DC always corresponds to the nominal volume flow rate ( $V_{nom}$ ).

Voltage ranges are factory stored in the controller. Changes on the customer's site can easily be carried out using an adjustment device or a notebook with service tool.

### Principle of operation – dynamic differential pressure transducer



Differential pressure sensor for the measurement of non-contaminated supply air.

Continuous airflow measurement.

A transducer converts the effective pressure measurement into a voltage signal such that it can be displayed or integrated into the central BMS.

Recording of measured values and use for slave controllers.

Measures the total airflow of a duct section, which may or may not be pressure-controlled, and enables slave control of, for example, the extract air with the same percentage.