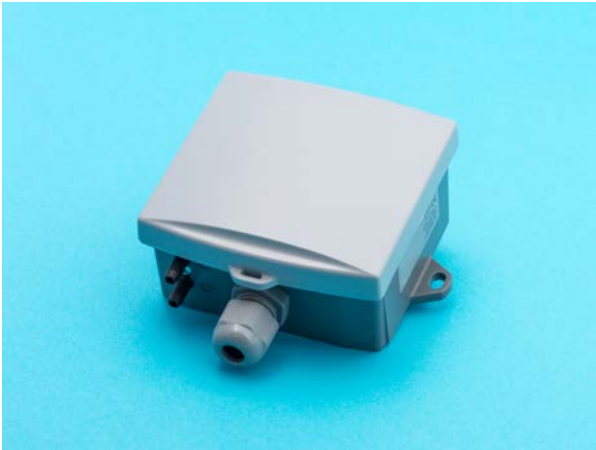


## > Air pressure sensors 0-10 Vdc auto calibration

### Sensors - air pressure



#### Characteristics

- active pressure difference sensor
- AC or DC power supply
- measurement of overpressure, vacuum or pressure differences
- adjustable measurement range
- maintenance-free thanks to automatic zero calibration
- two versions

#### Usage

The sensor is an active pressure difference sensor which measures overpressure, vacuum or pressure differences for air or other non-combustible and non-corrosive gases. This makes the sensor suitable for use in air treatment systems. For filter or fan monitoring, for instance.

#### Operation

The measuring cell in the sensor measures pressure or flow and generates an output signal that is dependent

on the measured value. The measurement range can be adjusted using jumpers.

Temperature has an influence on the sensor. The ambient temperature should therefore be as stable as possible in order to limit temperature drift. This applies in particular when measuring low pressures. Other environmental factors such as turbulence can be attenuated by selecting a time constant, also using jumpers.

#### Installation

If possible, mount the sensor vertically with the cable gland downwards. In addition, mount the sensor in such a way that it is free from vibration and other environmental influences, such as turbulence.

The weatherproof plastic housing and IP54 rating protect the electronics from other environmental influences.

Air is supplied to the measuring cell via flexible hoses which are connected to the measuring cell's hose nipples. The sensor can therefore be installed at some distance from the measuring location.

#### Automatic zero calibration

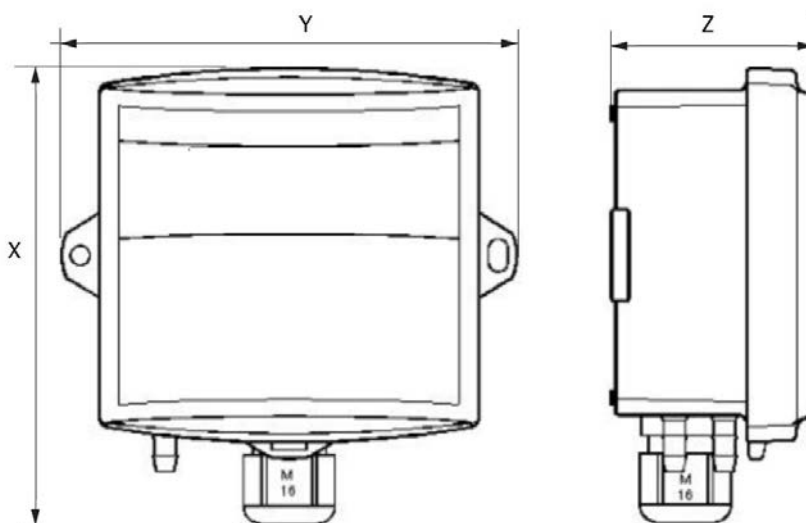
The sensor has automatic zero calibration. The calibration is performed every 5 minutes and compensates for the temperature drift. This means that accurate measurement is guaranteed at all times and manual or factory calibration is not necessary.

#### Two versions

Two versions are available. One version has an accuracy of 3 Pa. The other version has an accuracy of 0.5 Pa and is ideal for pharmaceutical and industrial applications.

## Specifications

| General                         |   |   |
|---------------------------------|---|---|
| Article description             | Air pressure sensor auto calibration 0-10 VDC   | Air pressure sensor high accuracy auto calibration 0-10 VDC   |
| Article number                  | 794400  | 794402  |
| Dimensions (XYZ)                | 115 x 115 x 45 mm   |   |
| Weight                          | 206 grams   | 75 grams  |
| Material                        | weatherproof plastic (< 120°C)  |   |
| IP code                         | IP54  |   |
| Supply voltage                  | 22 ... 28 VAC<br>22 ... 28 VDC  |   |
| Consumption                     | < 1.5 VA (24 VAC)<br>< 1.0 VA (24 VDC)  |   |
| Output signal                   | 0 ... 10 VDC (< 2 mA)   | 0 ... 10 VDC (< 2 mA)<br>24 VAC: 4 ... 20 mA (<1200 Ω)<br>24 VDC: 4 ... 20 mA (<900 Ω)  |
| Choice of output signal         | linear (pressure difference) or curve (flow)<br>adjustable with jumper  | linear (pressure difference)<br>adjustable with jumper  |
| Time constant                   | 2 s or 8 s<br>adjustable with jumper  |   |
| Accuracy                        | ± 3 Pa + 1% of the measured value (at 25°C)   | ± 0.5 Pa + 1% of the measured value (at 25°C)   |
| Temperature drift               | < 0.1%/K  | < 0.05 %/K  |
| Maximum static overpressure     | 25 kPa  |   |
| Connection                      | 3-wire  |   |
| Electrical connections          | terminal strip 3 x 0.75 mm <sup>2</sup>   | terminal strip 4 x 0.75 mm <sup>2</sup>   |
| Measurement range               | ± 100 Pa<br>0 - 100 Pa<br>0 - 200 Pa<br>0 - 500 Pa<br>0 - 1000 Pa<br>0 - 1500 Pa<br>0 - 2000 Pa<br>0 - 2500 Pa<br>adjustable with jumpers | -50 ... +50 Pa<br>-100 - +100 Pa<br>-250 - +250 Pa<br>-500... +500 Pa<br>0 - 100 Pa<br>0 - 200 Pa<br>0 - 500 Pa<br>0 - 1000 Pa<br>adjustable with jumpers |
| Permissible ambient temperature | -10 ... 45 °C   | 0 ... 45 °C   |



## Regulations and standards

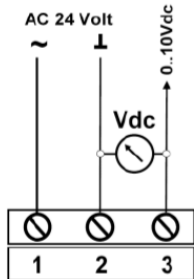
Europe



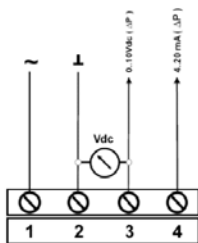
EMC Directive 89/336/EEC and its amendment by Directive 93/68/EEC.

- EN61000-6-2: 2001 (Generic Immunity Standard for industrial environments)
- EN61000-6-3: 2001 (Generic Emission Standard for residential, commercial and light industrial environments)

## Wiring diagram



794400: Air pressure sensor automatic calibration 0-10 V



794402: Air pressure sensor high accuracy automatic calibration

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