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# Multi-range pressure and differential pressure transmitter

## Type 402004

### General application

Type 402004 pressure and differential pressure transmitters are suitable for measuring overpressure, underpressure (partial vacuum) and differential pressure of non-corrosive gases.

Preferred areas of application are: HVAC, clean-room engineering and filter monitoring.



### Technical data

#### Reference conditions

as per DIN 16 086 and IEC 770/5.3

#### Measuring ranges

Can be set by DIP switches

0 – 250 Pa

0 – 500 Pa

0 – 1500 Pa

0 – 3000 Pa

#### Overload limit

For relative (gauge) pressure measurement:

10 x end of scale

For range 0 – 3000 Pa:

5 x end of scale, at the

#### maximum system pressure

200 hP

#### Bursting pressure

300 hP

#### Parts in contact with medium

Al, Au, Ni, Ni-Co steel, glass, PEI, PU, silicone

#### Output

see order details

#### Burden error

For voltage output:

$R_L \geq 2 \text{ k}\Omega$

For current output:

$R_L \leq 500 \Omega$

#### Ambient temperature error

within the range +10 to +50°C

(compensated temperature range)

Zero point:  $\leq 0.12\%/^{\circ}\text{C}$

Span:  $\leq 0.12\%/^{\circ}\text{C}$

#### Characteristic

As standard: linear

#### Deviation from characteristic

$\leq \pm 2\%$  of full scale

(limit point setting)

#### Hysteresis

$\leq \pm 0.2\%$  of full scale

#### Settling time / Filter time

adjustable 2 sec / 4 sec

#### Stability (per annum)

$\pm 2\%$

#### Output signal

switchable through coding:

0(2) – 10 V or 0(4) – 20 mA

#### Supply voltage

19 – 31 V DC or

19 – 25 V AC

#### Residual ripple

$\leq 60\text{mV}$

#### Max. current drawn

$\leq 20 \text{ mA}$  (without load)

#### Supply voltage error

Within the range 19 – 31 V DC:

$\leq 0.05\%$

#### Permissible ambient temperature

+10 to +50°C

#### Storage temperature

-10 to +70°C

#### Permissible temperature of medium

+10 to +50°C

#### Electromagnetic compatibility

EN 61 326-1

Interference emission: Class B

Interference immunity: to industrial requirements

#### Mechanical shock

10 g / 0.1 msec

#### Mechanical vibration

maximum 5 g at 15 – 2000 Hz

#### Enclosure protection

IP54 to EN 60 529

#### Housing

ABS

#### Process connection

6.6 mm dia. x 10 mm

(for 6 mm dia. flexible hoses)

#### Electrical connection

Internal screw terminals, for conductor cross-sections up to 1.5 mm<sup>2</sup>




#### Nominal position

vertical  $\perp$

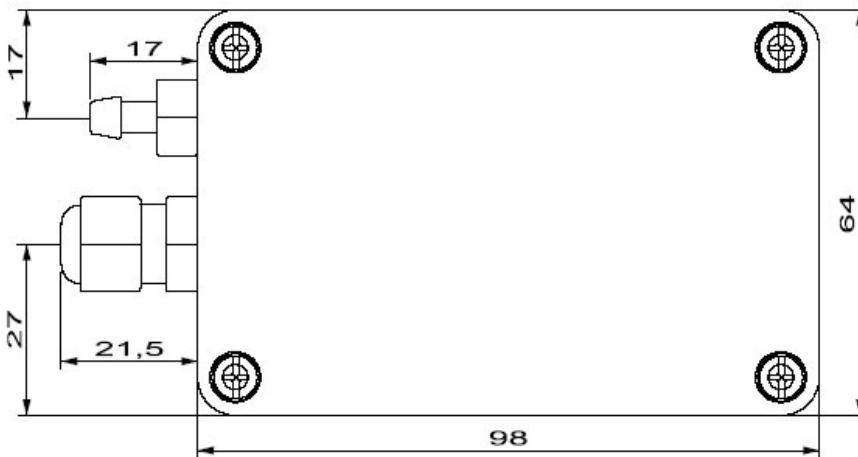
#### Weight

approx. 170 g

### Electrical connection

Connection		Connection assignment on terminal block	
Supply voltage 19 – 31 V DC		L - L +	1 2
Supply voltage 24 V AC		N L 1	1 2
Output 0(2) – 10 V or 0(4) – 20 mA, 3-wire		- +	3 4

### Dimensions



## Order details

- 402004    **(1) Basic type**  
Multi-range pressure and differential pressure transmitter  
Type 402004
- 000        **(2) Basic type extensions**  
none
- 440        **(3) Input for gauge pressure**  
switchable: 0 – 250 Pa, 0 – 500 Pa, 0 – 1500 Pa or 0 – 3000 Pa
- 409        **(4) Output**  
switchable: 0(2) – 10 V or 0(4) – 20 mA
- 298        **(5) Process connection**  
6.6 mm dia. x 10 mm, for 6 mm dia. flexible hoses
- 000        **(6) Extra codes**  
none

	<b>(1)</b>	/	<b>(2)</b>	-	<b>(3)</b>	-	<b>(4)</b>	-	<b>(5)</b>	/	<b>(6)</b>
<b>Order code</b>											
<b>Order example</b>	402004	/	000	-	440	-	409	-	298	/	000

## Stock versions (shipment: 3 working days after receipt of order)

**Type**  
402002/000-440-409-298/000

**Sales No.**  
40/00491350