halstrup-walcher GmbH
Kirchzarten

Intelligent Differential Pressure Transducer P 92

Measurement ranges 0...10 Pa to 0...100 kPa

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In addition to measuring differential pressure, positive and negative gauge pressure, the differential pressure transducer P 92 also gives the choice of measuring flow rates.

These process parameters are then converted into standardized signals.

Based on the proven technology of pressure measurement using a copper beryllium diaphragm whose pressure induced deflections are inductively registered, this transducer provides yet an even higher accuracy and greater flexibility due to its on-board microprocessor.

Features:

- Lowest measurement range from ±10 Pa
- High accuracy and long term stability
- No zero drift (on account of the automatic zero set function) low hysteresis and low temperature dependence.
- Very good linearity (option 0.2%)
- Output linear/root extracted and a choice of special functions in conjunction with the software
- High degree of EMC
- Variable time constants
- RS 232 C-interface (V24) (option)
- RS 485 interface (option)

Technical data:

(Subject to changes without notice)

Measurement ranges:

0... 10	Pa	(option)
0... 25	Pa	(option)
0... 50	Pa	(option)
0...100	Pa	(option)
0...250	Pa	
0...500	Pa	
0.. 1	kPa	
0... 2.5	kPa	
0... 5	kPa	
0... 10	kPa	
0... 20	kPa	
0... 50	kPa	
0...100	kPa	

Others available on request

Media:

Air, all non-aggressive gases
flammable gases (option)

Volume change:

0.1…0.3 ml

Excess pressure limit:

200 kPa for ranges ≧ 2.5 kPa
200 fold for ranges < 2.5 kPa
For flammable gases:
0...500 Pa to 0...5 kPa

Linearity:

± 4% for the range < 50 Pa
± 1% for ranges ≥ 50 Pa < 250 Pa
± 0.5% for the ranges ≧ 250 Pa
± 0.2% (option for ranges ≧ 250 Pa)

Hysteresis:

0.1%

Temperature effect on span:

0.03%/K (+10 °C to +50 °C)

Usable range:

inear: –5% to +110%; rooted: +3% to +110%,
Creeping suppression volume up to 3% of measurement range (others available on request)

Response time of sensor:

20 ms for measurement ranges ≧ 250 Pa
50 ms for measurement ranges < 250 Pa

Time constants:

1 s, 2.5 s, 5 s, 10 s, 20 s, 30 s, 40 s (variable)

Output signals:

0…10 V (R_L ≧ 2 kΩ)
4…20 mA (R_L ≦ 500 Ω)
0…20 mA (R_L ≦ 500 Ω) (option)

Supply voltages:

230 VAC + 6% –15% (50…60 Hz)	(Fig. 2)
115 VAC + 6% –15%	(option, Fig. 2)
24 VAC + 6% /–15%	(option, Fig. 2)
24 VDC +20%/–15%	(option, Fig. 1)

Operating temperature:

0…+60 °C

Storage temperature:

–10 °…+70 °C

Power consumption:

5 VA

Connections:

electrical: screw terminations
nominal cross sectional area 2.5 mm²
serial interface: 7 pin round plug
pneumatic: hose connections ∅ 6.5 mm
(others available on request e.g. pipe connectors)

Threaded cable glands:

2 x PG 9

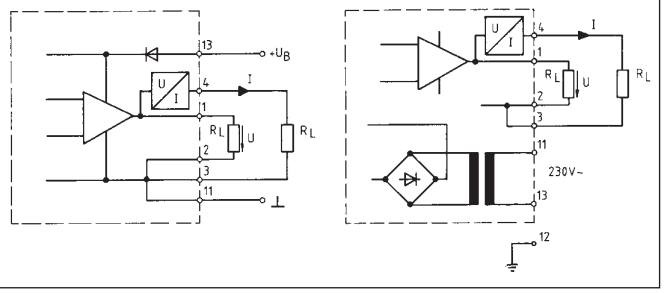
Weight:

1.5 kg

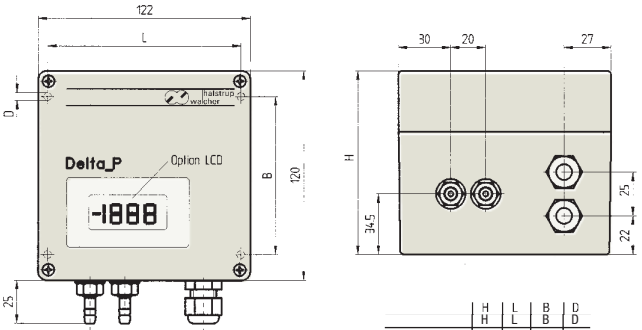
Enclosure protection:

IP 65

Fig. 1 Fig. 1



Dimensions:



	H H	L L	B B	D D
Housing P-LCD	105	111	90.5	4.5
Housing P	85			
Housing M-LCD	90	106	82	6.3
Housing M	80			

Ordering key:

P 92 - □ - □□□□ - □ - □□□ - □ - □ - □ - □ - □

Housing
M = metal
K = plastic

Pressure range in kPa

Output signal
S = Standard (0...10 V) or (0...20 mA)
4 = 4...20 mA

Power supply
230 = 230 VAC (standard)
115 = 115 VAC (option)
24 = 24 VAC (option)
24D = 24 VDC (option)

Linearity
S = standard
2 = ±0,2 % (option) only for ranges ≈ 250Pa

Interface
2 = serial interface RS 232 (V24)
4 = serial interface RS 485
0 = without

Option
B = flammable gases (only available in metal housing)
X = standard

Option
P = with calibration certificate
X = without calibration certificate

L = with LCD display

Example: *Sensor in a metal housing with measurement range 1.0 kPa; output signal 4...20 mA; power supply 230 VAC; linearity ±0,5%; without certificate of linearity; non-flammable gas; without serial interface: P 92 M - 1.0 - S - 230 - S - 0 - X - X*