

DPS 200



Differential Pressure Transmitter for Gas and Compressed Air

Applications:

- ▶ for HVAC-applications

Characteristics:

- ▶ piezoresistive silicon sensor
- ▶ differential pressure range 6 ... 1000 mbar

Technical Data



Input pressure range												
Nominal pressure P _N [mbar] (differential, gauge pressure)	6	10	16	25	40	60	100	160	250	400	600	1000
max. static pressure [mbar]	200	345	345	345	345	345	345	1000	1000	3000	3000	3000

Output signal / Supply		
Standard	3-wire: 0 ... 10 V	V _S = 19 ... 32 V _{DC}
Option	2-wire: 4 ... 20 mA	V _S = 11 ... 32 V _{DC}
	3-wire: 4 ... 20 mA	V _S = 19 ... 32 V _{DC}

Performance	
Accuracy	≤ ± 1% FSO BFSL
Permissible load	current 2-wire: R _{max} = [(V _S - V _{Smin}) / 0,02 A] Ω current 3-wire: 330 Ω voltage 3-wire: 10 kΩ
Influence effects	supply: ≤ ± 0.1 % FSO/10V load: ≤ ± 0.1 % FSO/kΩ
Response time (0 ... 100%)	2-wire: adjustable by potentiometer in the range of 500 msec up to 2.5 sec 3-wire: adjustable by potentiometer in the range of 50 msec up to 2.5 sec
Long term stability	≤ ± 0.5 % FSO / year at reference conditions
Measuring rate	2-wire: 8 Hz 3-wire: 1 kHz

Thermal effects (offset and span)	
Thermal error	≤ ± 0.3 % FSO / 10 K (typ.)
in compensated range	0 ... 50 °C

Permissible temperatures	
Medium	0 ... 50°C
Electronics / environment	0 ... 50°C
Storage	-10 ... 70°C

Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
Electromagnetic protection	emission and immunity according to EN 61326

Materials	
Pressure port	brass nickel plated
Housing	ABS
Sensor	ceramic, silicon, epoxy, RTV
Media wetted parts	pressure port, PVC / silicone tube, sensor

Miscellaneous		
LC-Display (optional)	visible range 32.5 x 22.5 mm; 5-digit 7-segment-main display, digit size 8 mm; 8-digit 14-segment-additional display, digit size 5 mm; 52-segment-bargraph	
Current consumption	2-wire: signal output current: max. 22 mA 3-wire: signal output current: max. 30 mA signal output voltage: 7.5 mA (20 mA short circuit) display: + 1 mA	
Units	following units can be set at factory: [bar], [mbar], [PSI], [Inch Hg], [cm Hg], [mm Hg], [hPa], [kPa], [MPa], [mH ₂ O], [Pa], [mmH ₂ O]	
Ingress protection	IP 54	
Weight	approx. 165 g	
Installation position	vertical ¹	
Operational life	100 million load cycles	
¹ The devices are calibrated in a vertical position with the pressure port down. If this position is changed on installation there can be slight deviations in the zero point.		
Mechanical connections (dimensions in mm)		
Standard	Ø 6.6 x 11 (for flex. tubes Ø 6)	
Option	Ø 4.4 x 10 (for flex. tubes Ø 4)	
Wiring diagrams		
2-wire-system (current)	3-wire-system (current / voltage)	
Pin configuration		
Electrical connections	terminals 2-wire-system	terminals 3-wire-system
supply + supply - signal + (only for 3-wire)	2 / + 3 / - 1 (not connected)	2 / V _S + 3 / V _S - 1 / SIG
Dimensions (mm / in)		
without display		
with display		

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Ordering code DPS 200

DPS 200



Pressure		8	1	0														
differential pressure																		
gauge pressure		8	1	1														consult
Input [mbar]		8	1	1														
6		0	0	6	0													
10		0	1	0	0													
16		0	1	6	0													
25		0	2	5	0													
40		0	4	0	0													
60		0	6	0	0													
100		1	0	0	0													
160		1	6	0	0													
250		2	5	0	0													
400		4	0	0	0													
600		6	0	0	0													
1000		1	0	0	1													
customer		9	9	9	9													consult
Output		3	1	7	9													
0 ... 10 V / 3-wire																		
4 ... 20 mA / 2-wire																		
4 ... 20 mA / 3-wire																		
customer																		consult
Accuracy		1																
1 % FSO BFSL																		G
Display		0	C	9														
without display																		
LC display																		
customer																		consult
Front foil		1	N	9														
BD SENSORS																		
neutral																		
customer																		consult
Mechanical connection		Y	0	0	9	9	9											
Ø6.6 x 11 (for flex. tubes Ø6)																		
Ø4.4 x 10 (for flex. tubes Ø4)																		
customer																		consult
Pressure port		M	9															
brass nickel plated																		
customer																		consult
Special version		0	0	0	9	9	9											
standard																		
customer																		consult

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01.04.2022