

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 $V_S = 19 \dots 32 V_{DC}$
Option	2-wire: 4 ... 20 mA $V_S = 11 \dots 32 V_{DC}$ 3-wire: 4 ... 20 mA $V_S = 19 \dots 32 V_{DC}$

Performance	
Accuracy	$\leq \pm 1\%$ FSO BFSL
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{Smin}) / 0,02 A] \Omega$ current 3-wire: 330 Ω voltage 3-wire: 10 kΩ
Influence effects	supply: $\leq \pm 0.1\%$ FSO/10V load: $\leq \pm 0.1\%$ 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	$\leq \pm 0,5\%$ FSO / year at reference conditions
Measuring rate	2-wire: 8 Hz 3-wire: 1 kHz

Thermal effects (Offset and Span) / Permissible temperatures	
Thermal error (offset and span)	$\leq \pm 0.3\%$ 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		
Display (optional)	LC-Display, 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	
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 diagram		
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 (in mm)		
standard: DPS 200 without display		
optional: DPS 200 with display		

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Ordering code DPS 200

DPS 200

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

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