

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	$\leq \pm 1\% \text{ FSO BFLS}$											
Permissible load	current 2-wire: $R_{max} = [(V_S - V_{Smin}) / 0,02 \text{ A}] \Omega$											
	current 3-wire: 330 Ω						voltage 3-wire: 10 k Ω					
Influence effects	supply: $\leq \pm 0,1\% \text{ FSO}/10V$						load: $\leq \pm 0,1\% \text{ FSO}/k\Omega$					
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	$\leq \pm 0,5\% \text{ FSO} / \text{year}$ 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)	$\leq \pm 0,3\% \text{ FSO} / 10 \text{ K (typ.)}$											
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											

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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
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 diagram

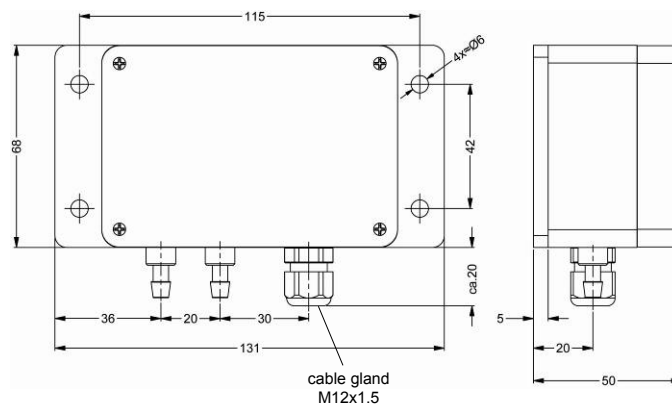


Pin configuration

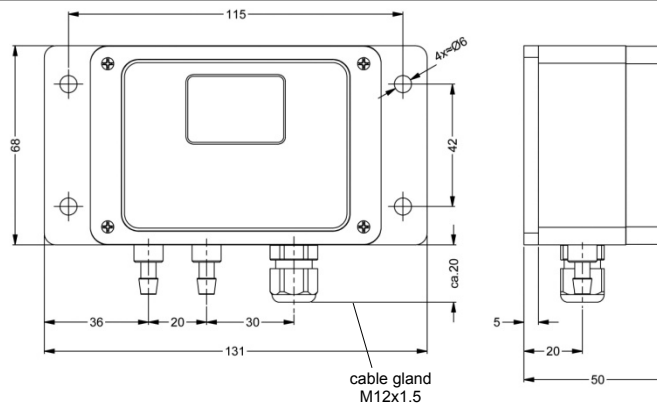
Electrical connections	Terminals 2-wire-system	Terminals 3-wire-system
supply +	2 / +	2 / V _{S+}
supply -	3 / -	3 / V _{S-}
signal + (only for 3-wire)	1 (not connected)	1 / SIG

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						
									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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