

DIFFERENTIAL PRESSURE SENSOR with selectable measurement range DS200

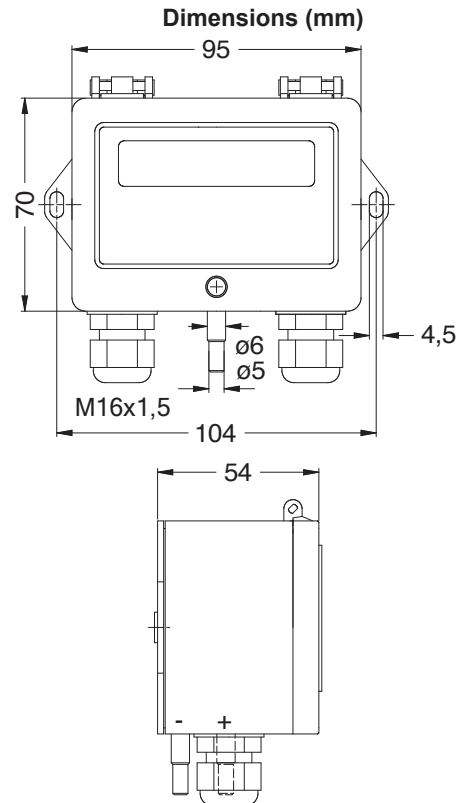
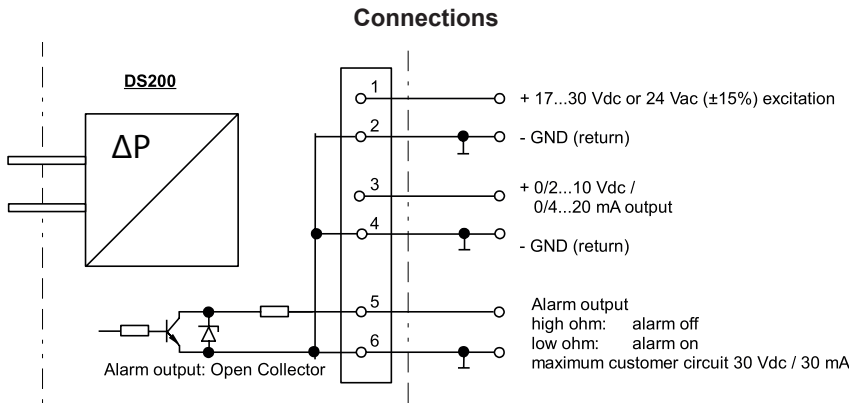


- MENSIO measuring system
- Sensor for differential pressure or volume flow
- Measuring range from 0...50 Pa (0.5 mbar) up to 0...6000 Pa (60 mbar)
- Software menu for parameterization
 - Switchable measuring variables (differential pressure or volume flow)
 - Selectable units (metric or imperial)
 - k-factor (input range k-factor up to 10,000) Setting for volumetric flow
 - 4 calibrated measuring ranges selectable via DIP-switch
 - Characteristic adjustment: Linear / radiated
 - Analog output signal 0/2...10 V or 0/4...20 mA
 - Measuring mode with adjustable limit value
 - Alarm delay time (switching delay) 1 sec. to 15 minutes adjustable
 - Switching and contact logic for 4 different states
- Open collector alarm output (max. 30 V / 30 mA)
- Damping of the output signal adjustable via DIP switch
- Supply voltage 17...30 Vdc; 24 Vac (+/-15%)
- Compact plastic housing IP 65

The DS200 differential pressure sensor is used to measure small differential pressures in ventilation and air conditioning systems. In combination with an effective pressure transducer (for example, a venturi nozzle, a venturi tube, a measuring diaphragm), suitable for the calculation of the volumetric flow.

Known fields of application are: Ventilation systems, room pressure monitoring, filter monitoring process, environmental, clean room technology, fan technology, pump technology, suction technology, pressure switch.

All our differential pressure transducers of the DS series have our optimized mechanical measuring system MENSIO. The MENSIO has been steadily developed over many years and has always proved itself against all adversities. It is particularly characterized by its precision, longevity and insensitivity to external influences.



Error limits (related to the actual range)					
	Zero deviation	Final value deviation	Linearity	Resolution	Hysteresis
DS200-2					
0...200 Pa	± 0.5 %	± 0.5 %	± 0.25 %	0.1 %	1 %
0...150 Pa	± 0.75 %	± 0.6 %	± 0.4 %	0.2 %	0.7 %
0...100 Pa	± 1 %	± 0.7 %	± 0.5 %	0.2 %	0.5 %
0...50 Pa	± 2 %	± 1 %	± 1 %	0.3 %	0.5 %
DS200-10					
0...1000 Pa	± 0.5 %	± 0.5 %	± 0.25 %	0.1 %	0.2 %
0...500 Pa	± 0.7 %	± 0.7 %	± 0.5 %	0.2 %	0.2 %
0...300 Pa	± 0.9 %	± 0.9 %	± 0.9 %	0.3 %	0.2 %
0...200 Pa	± 1 %	± 1 %	± 1.25 %	0.3 %	0.2 %
DS200-60					
0...6000 Pa	± 0.5 %	± 0.5 %	± 0.25 %	0.1 %	0.2 %
0...4000 Pa	± 0.7 %	± 0.7 %	± 0.4 %	0.15 %	0.2 %
0...3000 Pa	± 0.9 %	± 0.9 %	± 0.6 %	0.2 %	0.2 %
0...2000 Pa	± 1 %	± 1 %	± 0.75 %	0.25 %	0.2 %

Unit type	DS200-2	DS200-10	DS200-60
Measuring range			
MB 1:	0...200 Pa	0...1000 Pa	0...6000 Pa
MB 2:	0...150 Pa	0...500 Pa	0...4000 Pa
MB 3:	0...100 Pa	0...300 Pa	0...3000 Pa
MB 4:	0...50 Pa	0...200 Pa	0...2000 Pa

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	PERFORMANCE:
Overpressure protection:	0.2 bar
Static pressure:	max. 0.2 bar
Zero point calibration:	adjustable by REEDcontact, no cyclic zero-point calibration required
Response time:	direct

	ACCURACY / ERROR LIMIT:
Zero drift:	are specified below
Sum of linearity and hysteresis:	are specified below
Temperature drift measuring range:	4 measuring ranges in 3 measuring groups

	TECHNICAL SPECIFICATIONS:
Operating mode:	measuring mode
Measuring medium:	air or non-aggressive gases
Measuring principle:	electromechanical diaphragm measuring system
Measuring unit:	Pa / InH ₂ O or m ³ /h or cfm
Smallest measuring range:	0...50 Pa (0.5 mbar)
Largest measuring range:	0...6000 Pa (60 mbar)
Measuring range:	DS200-P2: 0...200 Pa (2 mbar), 0...150 Pa, 0...100 Pa, 0...50 Pa (0.5 mbar) DS200-P10: 0...1000 Pa (10mbar), 0...500 Pa, 0...300 Pa, 0...200 Pa (2 mbar) DS200-P60: 0...6000 Pa (60 mbar), 0...4000 Pa, 0...3000 Pa, 0...2000 Pa (20 mbar)
Measuring range selection:	by software menu
Characteristic:	linear or radiated selectable by software menu
Damping:	adjustable in 3 steps
Ambient temperature:	-20...+60 °C
Storage temperature:	-30...+70 °C
Setpoint settings:	1 limit can be set via software menu
Limit signal Output / alarm output:	open collector, max 30 V / 30 mA
Alarm delay time:	freely adjustable in the range of 0 ... 60 seconds - 2 ... 15 minutes
Switching logic:	MIN or MAX
Contact logic:	active high or active low

	PHYSICALLY:
Housing:	UL 94 HB; Ultramid with hinged lid of ABS
Dimensions:	95 x 70 x 54 mm (w x h x d)
Weight:	approx. 250 g
Protection class:	IP 65 according EN 60529
Display:	two-line alphanumeric LCD display, 2 x 16 characters
Electrical connections:	cable entry M16x1.5, screw terminals, electronics protected against incorrect polarity
Pressure connections:	hose connections 5 mm ø and 6 mm ø
Operational position:	vertical, position dependence when rotated through 90° approx. 25 Pa

	ELECTRONIC:
Power supply:	17...30 Vdc or 24 Vac ± 15 %
Power consumption:	approx. 6 mA @ 17 Vdc and 0...10 V output approx. 19 mA @ 30 Vdc and 0...10 V output
Output:	0/2...10 V (I _{max} = 10 mA @ 20 Vdc, I _{max} = 17 mA @ 30 Vdc) 0/4...20 mA, max load 200 Ω

	CONFORMITY:
EMC:	EN 61000-6-2, EN 61000-6-3, CE-mark
RoHS:	according RoHS-directive 2011/65/EU

	Item no.
Differential pressure sensor DS200-2	2560
Output: 0/2...10 V, 0/4...20 mA, 3-wire technology Supply voltage: 17...30 Vdc, 24 Vac Measurement range: 0...200, 0...150, 0...100 and 0...50 Pa	
Differential pressure sensor DS200-10	2561
Output: 0/2...10 V, 0/4...20 mA, 3-wire technology Supply voltage: 17...30 Vdc, 24 Vac Measurement range: 0...1000, 0...500, 0...300 and 0...200 Pa	
Differential pressure sensor DS200-60	2562
Output: 0/2...10 V, 0/4...20 mA, 3-wire technology Supply voltage: 17...30 Vdc, 24 Vac Measurement range: 0...6000, 0...4000, 0...3000 and 0...2000 Pa	

ACCESSORIES	
Mounting set M-DS with screws, bleeder Connections and 2 m plastic hose (4 x 1.5 mm)	25110