

DIFFERENTIAL PRESSURE SENSOR with selectable measurement range DS85-P



- Diaphragm element
- Measuring range from 0...50 Pa to 0...6000 Pa
- Analog output 0...10 V or 4...20 mA
- Supply voltage 24 Vac or 24 Vdc
- 4 calibrated measuring ranges selectable via DIP-Switch
- Compact size of about ca. 70 mm
- Protection class IP 65

Sensor for measuring small differential pressure of non-aggressive gases, preferably of air. Ranges from 50 Pa up to 6000 Pa are covered by three units, up to four calibrated ranges are selectable by DIP-switch in each unit.

Overload protection: 0.2 bar
 Static pressure: max. 0.2 bar
 Zero point calibration: Adjustable by REEDcontact, no cyclic zero-point calibration required
 Reaction time: direct

PERFORMANCE:

Zero drift: See table: Error limits
 Sum of linearity and hysteresis: See table: Error limits
 Temperature drift measuring range: Because 4 measuring ranges in 3 measuring groups

ACCURACY / ERROR LIMIT:

Operating mode: Measuring mode
 Measuring medium: Air or non-aggressive gases
 Measuring principle: Electromechanical diaphragm measuring system
 Measuring unit: Pa
 Smallest measuring range: 0...50 Pa (0.5 mbar)
 Largest measuring range: 0...6000 Pa (60 mbar)
 Measuring range: 0...50 Pa (0.5 mbar), 0...200 Pa (2 mbar), 0...500 Pa (5 mbar), 0...1000 Pa (10 mbar), 0...2000 Pa (20 mbar), 0...4000 Pa (40 mbar), 0...6000 Pa (60 mbar)
 Measuring range selection: yes via 2-pole DIP switch
 Characteristic: linear
 Ambient temperature: -10...+50 °C
 Storage temperature: -25...+60 °C

TECHNICAL SPECIFICATIONS:

Housing: Ultramid
 Dimensions: diameter 70 mm, depth 50 mm
 Weight: approx. 90 g
 Protection class: IP65 according EN 60529
 Electrical connections: 3- or 4-wires cable, 50 cm length, colour coded, electronic protected against false polarity
 Pressure connections: Hose connections 5 mm ø
 Operational position: Vertical, position dependence when rotated through 90 ° approx. 25 Pa

PHYSICALLY:

Power supply: 15...30 Vdc or 24 Vac ± 15 %
 Power consumption: approx. 10 mA (@ 24 Vdc)
 Output: 0...10 V three-wire circuit

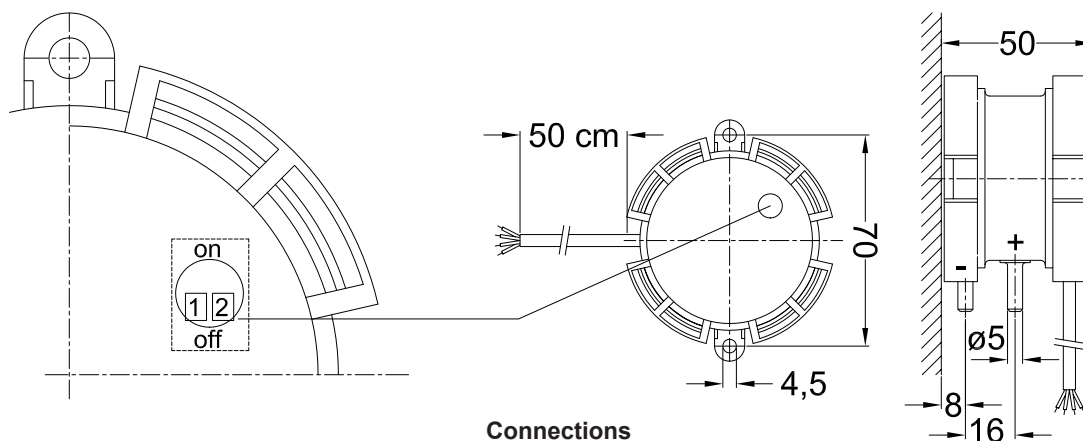
ELECTRONIC:

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

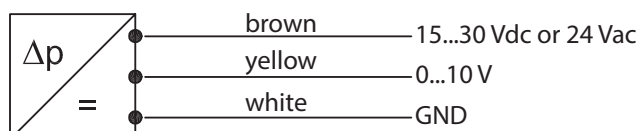
CONFORMITY:

Gerätetypen	DS85-P200	DS85-P1000	DS85-P6000
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

DIFFERENTIAL PRESSURE SENSOR with selectable measurement range DS85-P



Connections



Error limits (related to the actual range)

	Zero deviation	Final value deviation	Linearity	Resolution	Hysteresis
DS85-P200					
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 %
DS85-P1000					
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 %
DS85-P6000					
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 %

	Item no.
Differential pressure sensor DS85-P200 Output: 0...10 V, 3-wire technology Supply voltage: 15...30 Vdc, 24 Vac Range: 0...200, 0...150, 0...100 and 0...50 Pa	2550
Differential pressure sensor DS85-P1000 Output: 0...10 V, 3-wire technology Supply voltage: 15...30 Vdc, 24 Vac Range: 0...1000, 0...500, 0...300 and 0...200 Pa	2551
Differential pressure sensor DS85-P6000 Output: 0...10 V, 3-wire technology Supply voltage: 15...30 Vdc, 24 Vac Range: 0...6000, 0...4000, 0...3000 and 0...2000 Pa	2552
ACCESSORIES	
Mounting set M-DS with screws, hose liners and 2 m plastic hose (4 x 1.5 mm)	25110
SURCHARGE	
Test certificate	25108