

Differential pressure switches for air , including connection set

DS2

The mechanical differential pressure switch / differential pressure monitor PREMASREG® DS-2 with 4-hole plastic base ring is used for monitoring above-atmospheric, differential and below-atmospheric pressures of clean air and other gaseous, non-aggressive non-combustible media in air ducts, air intake or exhaust devices, as pressure difference detector or pressure monitor for flow detection at electric heating registers, for monitoring V-belts and filters, as air pressure deficiency protection, for observation of fans and air dampers, or as limit value controller. Switchpoint adjustment is done internally at an inside precision scale. These instruments are factory-calibrated. The differential pressure switch PREMASREG® DS-2 is supplied including connection set ASD-06 (2m connection hose, two pressure connection nipples, screws).



**TECHNICAL DATA:**

- Switching capacity:..... 5 [0.8] A, 250V AC  
[Contact load]                    4 [0.7] A, 30V DC
- Contact:..... single-pole potential-free changeover contact, multi-layer contact, gold-plated (DDC compatible)
- Pressure range:..... see table
- Enclosure:..... base: material PC (10% GF), colour light grey (similar RAL 7035), top cover: material PC, transparent, sheet steel mounting angle, cable gland PG 11
- Temperature of medium:..... - 30 °C...+ 85 °C
- Membrane: ..... silicone, LSR (Liquid Silicon Rubber, tempered at 200 °C, non-outgassing, LABS-free, no emission of varnish adhesion inhibiting substances)
- Humidity: ..... < 90% r.H., non-precipitating air
- Electrical connection:..... 0.14 - 1.5 mm<sup>2</sup>, via terminal screws on circuit board
- Pressure connection:..... P1 (+) for higher pressure  
P2 (-) for lower pressure  
Ø 6.2 mm (nipples)
- Mounting:..... **by 4-hole base ring, plastic** (included in the scope of delivery), recommended mounting position:  
vertical (pressure connections downward ) - factory setting,  
horizontal (cap up/down) - switchpoints located opposite to preset scale value ca. 11
- Protection class:..... II (according to EN 60730)
- Protection type:..... IP 54 (according to EN 60529) with top cover in place
- Standards: ..... CE conformity, low-voltage directive 73 / 23 / EEC
- Tests:..... DVGW (according to DIN 1854), VDE 0630, EN 61058, directive on gas devices 90 / 396 / EEC, CE 0085 A P 0918
- FUNCTION:..... Contact 1-2 breaks when pressure / differential pressure rises to the preset value.  
Contact 1-3 closes when pressure / differential pressure drops and can be used as signal contact.
- ACCESSORIES:..... including connection set **ASD-06** (nipple straight) and mounting ring **DS2-MR** (included in the scope of delivery) connection nipple **ASD-07** (at 90 degree angle) optional

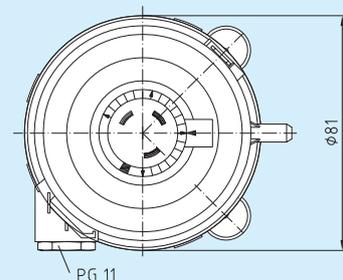
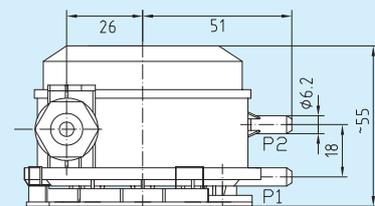
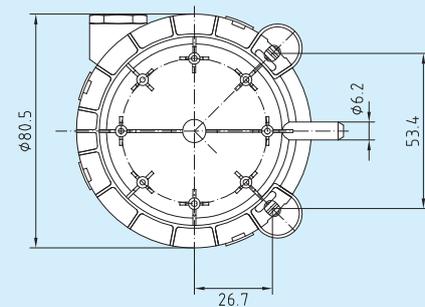
**TYPES OF MONITORING:**

- (A) Below-atmospheric pressure:**..... P1 (+) is not connected but open against atmosphere  
P2 (-) connected to inside of duct
- (B) Filter:**..... P1 (+) connected upstream of filter  
P2 (-) connected downstream of filter
- (C) Ventilator:**..... P1 (+) connected downstream of ventilator  
P2 (-) connected upstream of ventilator

Pressure connections at the pressure switch are marked with P1 (+) for higher pressure and P2 (-) for lower pressure.

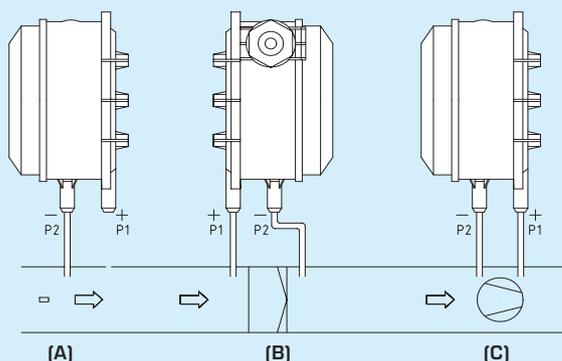
Dimensional drawing

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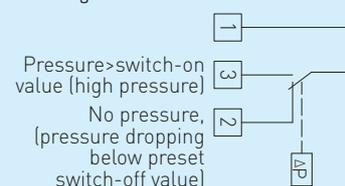
Mounting diagram

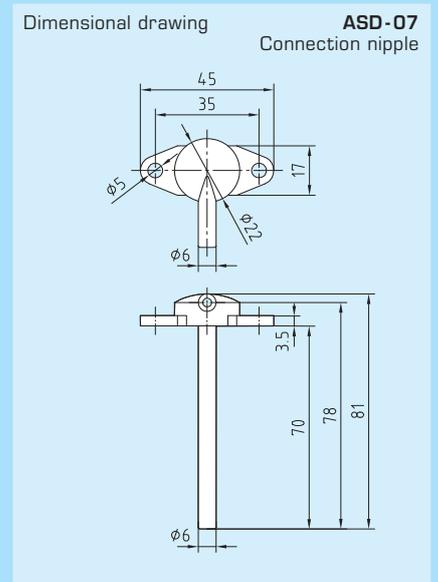
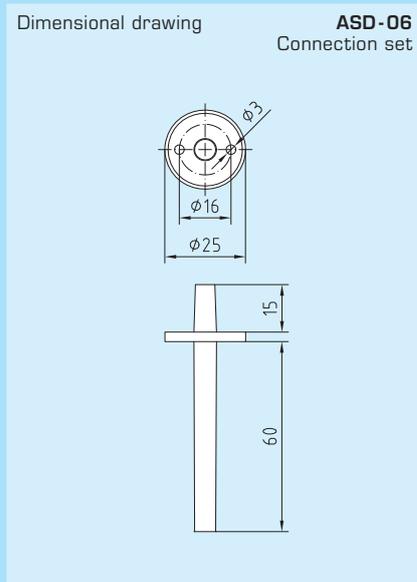
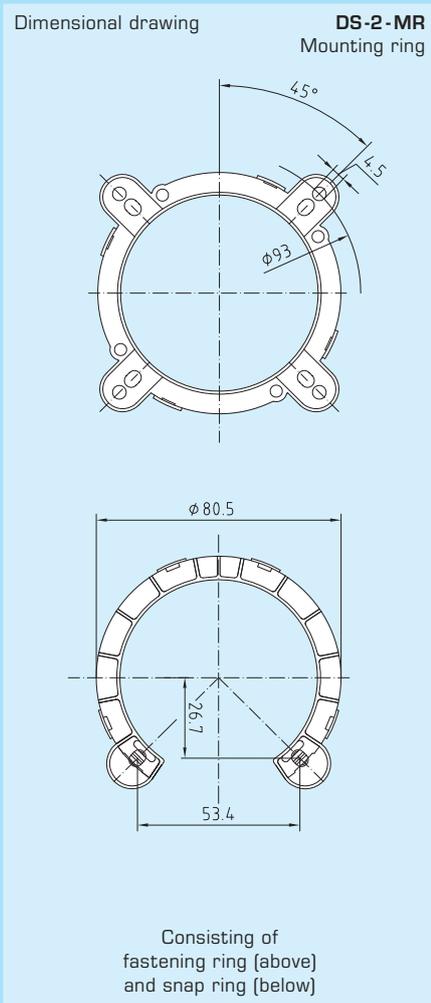
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Schematic diagram

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Conversion table for pressure values:

Unit =	bar	mbar	Pa	kPa	mH <sub>2</sub> O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH <sub>2</sub> O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH <sub>2</sub> O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH <sub>2</sub> O
1 mbar	0.001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH <sub>2</sub> O
1 mH <sub>2</sub> O	0.0980665 bar	98.0665 mbar	9806.65 Pa	9.80665 kPa	1 mH <sub>2</sub> O

PREMASREG® DS 2, including connection set

Type/WG2	Pressure Range	(Adjustable)	Operating Difference ca.	Max. Pressure
DS-205 F	20...300 Pa	(0.2 mbar...3.0 mbar)	0.1 mbar +/- 15%	5000 Pa (50 mbar)
DS-205 B	50...500 Pa	(0.5 mbar...5.0 mbar)	0.2 mbar +/- 15%	5000 Pa (50 mbar)
DS-205 D	100...1000 Pa	(1.0 mbar...10.0 mbar)	0.4 mbar +/- 15%	5000 Pa (50 mbar)

Accessories: **ASD-06** connection set (included in the scope of delivery), consisting of 2 connection nipples (straight) made of ABS, 2 m PVC hose, soft, and 4 tapping screws  
**ASD-07** connection nipples (at 90 degree angle) made of plastic, ABS