

Differential pressure switches for air, including connection set

The mechanical pressure difference switch / differential pressure monitor PREMASREG® DS-1 with metal angle is used for monitoring of above-atmospheric, differential and below-atmospheric pressures of air and gaseous, non-aggressive media in air ducts, ventilation intake or exhaust devices, as flow monitor, 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-1 is supplied including connection set ASD-06 (2 m 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 metal angle** (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 with top cover (according to EN 60529)
- 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) (included in the scope of delivery)  
 connection nipple (at 90 degree angle) **ASD-07** optional

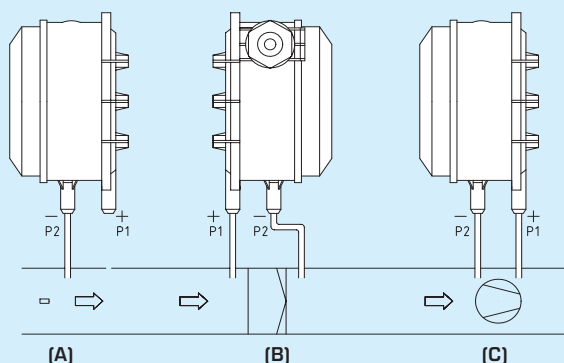
**TYPES OF MONITORING:**

- (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.

Mounting diagram

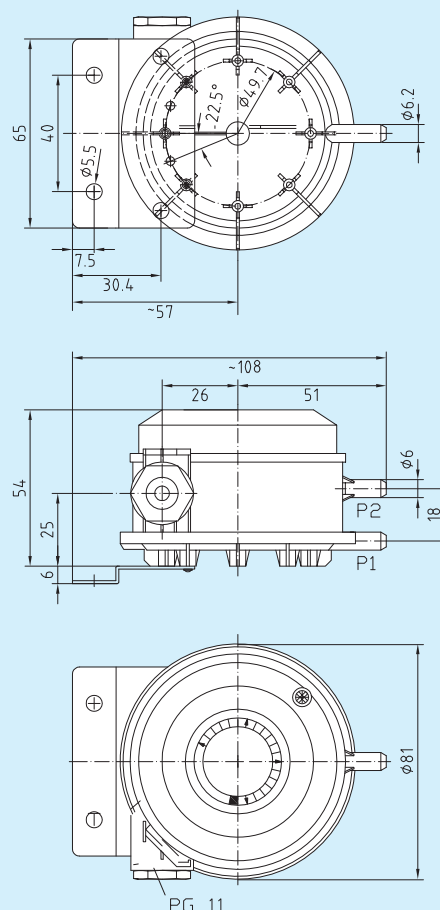
DS 1



DS 1

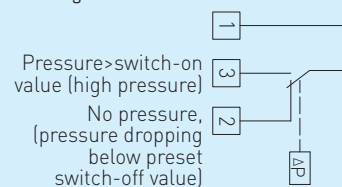
Dimensional drawing

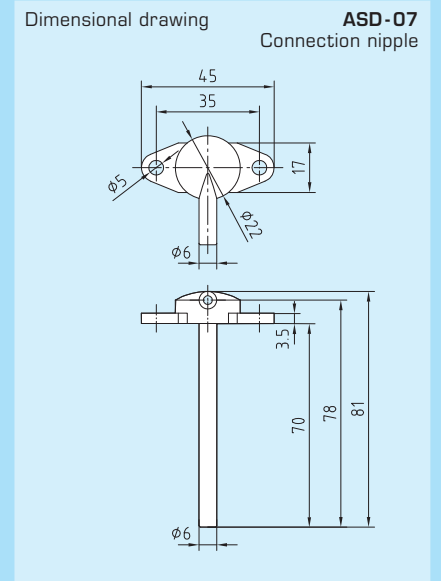
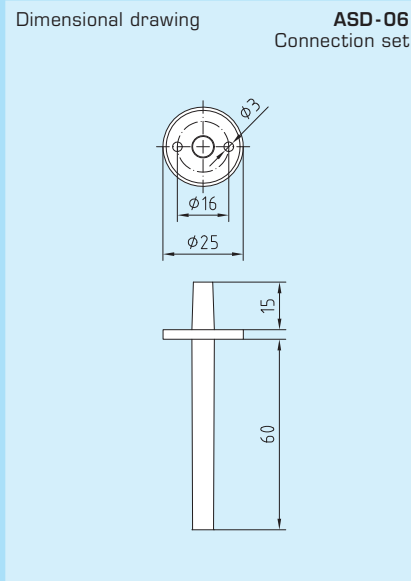
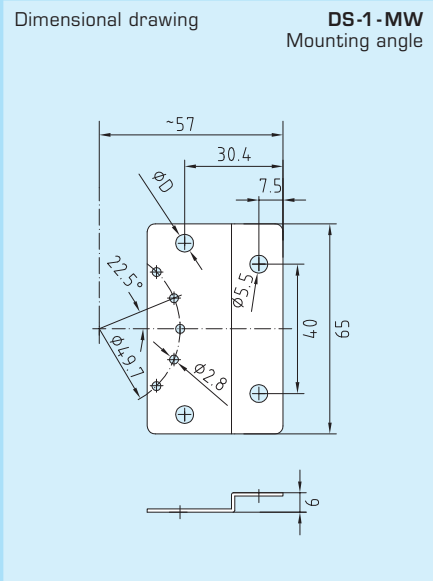
DS 1



Schematic diagram

DS 1





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 1, including connection set

Type/WG2	Pressure Range	(Adjustable)	Operating Difference ca.	Max. Pressure
DS-106	20...300 Pa	(0.2 mbar...3.0 mbar)	0.1 mbar +/- 15%	5000 Pa (50 mbar)
DS-106A	50...500 Pa	(0.5 mbar...5.0 mbar)	0.2 mbar +/- 15%	5000 Pa (50 mbar)
DS-106B	100...1000 Pa	(1.0 mbar...10.0 mbar)	0.4 mbar +/- 15%	5000 Pa (50 mbar)
DS-106C	500...2000 Pa	(5.0 mbar...20.0 mbar)	1.0 mbar +/- 15%	5000 Pa (50 mbar)
DS-106D	1000...5000 Pa	(10.0 mbar...50.0 mbar)	2.5 mbar +/- 15%	7500 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

Differential pressure switches for air , including connection set

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).

DS2



**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

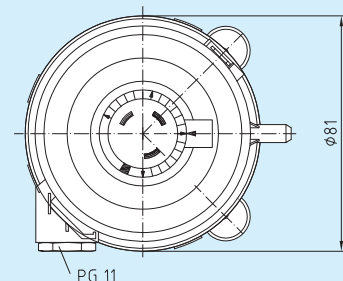
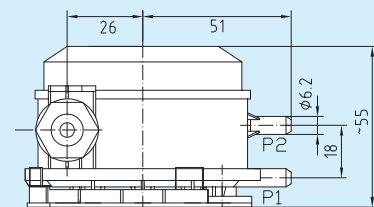
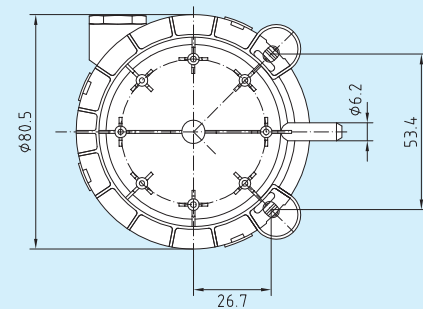
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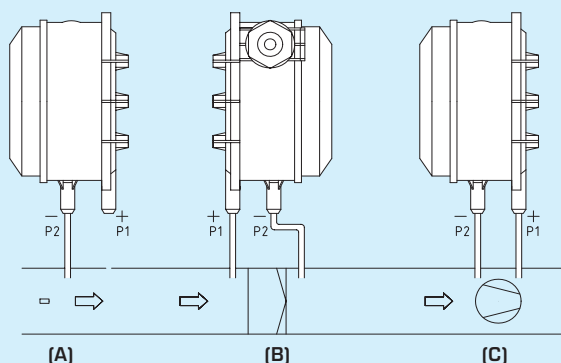
Dimensional drawing

DS2



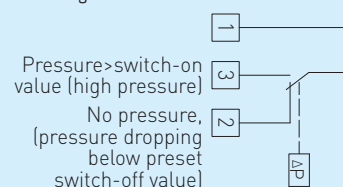
Mounting diagram

DS2



Schematic diagram

DS2





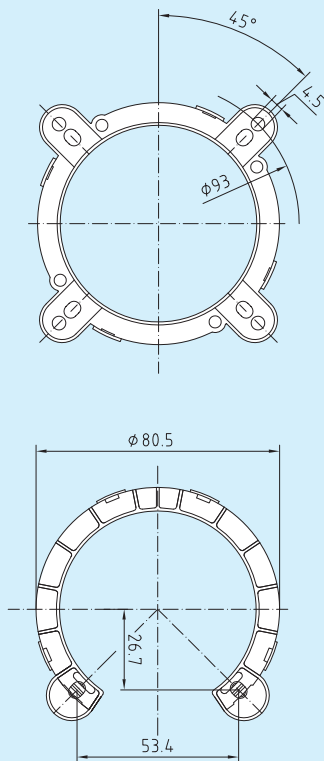
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 Tlfno.: (034) 91 764 21 00 Fax.: (034) 91 764 21 32  
 Email.: ventas@guemisa.com Web.: www.guemisa.com



**S+S REGELTECHNIK**

Dimensional drawing

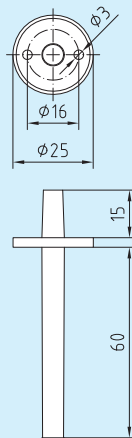
**DS-2-MR**  
Mounting ring



Consisting of  
fastening ring (above)  
and snap ring (below)

Dimensional drawing

**ASD-06**  
Connection set

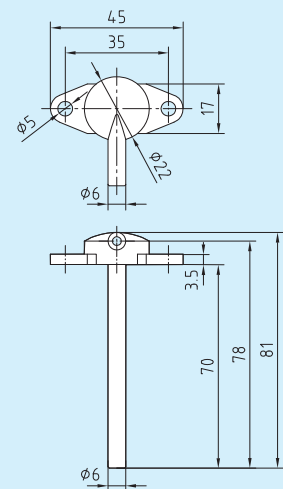


**ASD-06**  
Connection set



Dimensional drawing

**ASD-07**  
Connection nipple



**ASD-07**  
Connection nipple



**Conversion table for pressure values:**

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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® DS2**, including connection set

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

