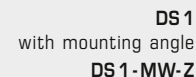


DS 1





S+S REGELTECHNIK

PREMASREG® DS 2

Differential pressure switches for air,  
with mounting ring, 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 a 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 monitoring fans and air dampers, or as a limit value controller. The switchpoint is adjusted using the internal precision scale.

These instruments are factory-calibrated. The differential pressure switch DS2 is supplied including connection set **ASD-06** (2 m connection hose, two pressure connection nipples, screws) and mounting ring **DS2 -MR**.

#### TECHNICAL DATA

Switching capacity:	5 (0.8) A, 250 V AC (Contact load)
Contact:	single-pole potential-free changeover contact, multi-layer contact, gold-plated (DDC compatible)
Pressure range:	see table, high adjustment accuracy due to individual laser-etched scale for each switch
Enclosure:	base: material PC (10% GF), colour light grey (similar to RAL 7035), snap-on lid: material PC, transparent, cable gland PG 11 with strain relief
Temperature of medium:	-30...+85 °C
Membrane:	silicone, LSR (Liquid Silicon Rubber, tempered at +200 °C, non-outgassing, LABS-free, no emission of varnish-adhesion inhibiting substances), long-term stability of switching points due to trapezoidal bead membranes
Humidity:	< 90 % r. H., non-precipitating air
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via terminal screws with torsion protection
Pressure connection:	P1 (+) for higher pressure P2 (-) for lower pressure Ø 6.2 mm (nipples)
Mounting:	<b>by 4-hole base ring, plastic</b> (included in the scope of delivery), recommended mounting position: vertical (pressure connections downward) – factory setting, horizontal (cap up / down)
Protection class:	II (according to EN 60730)
Protection type:	IP 54 with top cover (according to EN 60529)
Standards:	CE conformity, low-voltage directive 2014 / 35 / EU
Tests:	DVGW (according to DIN 1854), VDE 0630, EN 61058, directive on gas devices 2009 / 142 / EU, 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

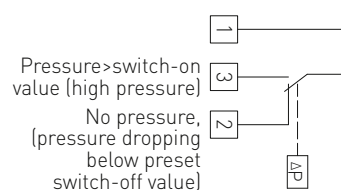
<b>ASD-06</b>	Connection set (nipple straight) – (included in the scope of delivery)
<b>DS2 -MR</b>	Mounting ring (included in the scope of delivery)
<b>WS-04</b>	Weather and sun protection hood, 130 x 180 x 135 mm, aus stainless steel <b>V2A</b> (1.4301)

**DS2**  
with mounting ring



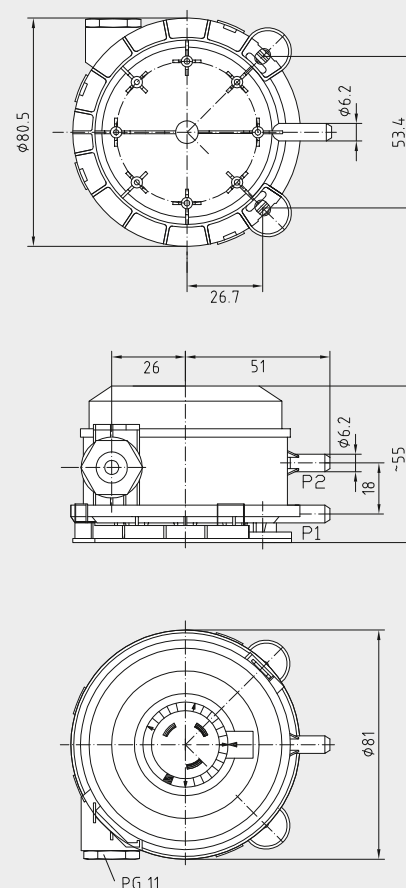
Schematic diagram

**DS2**

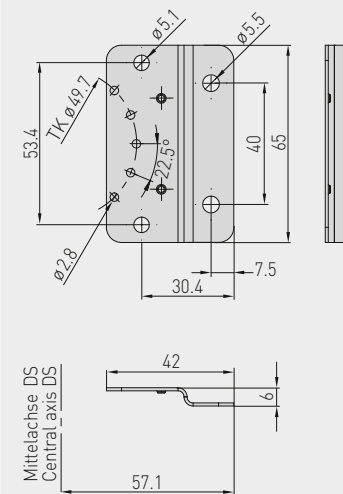


Dimensional drawing

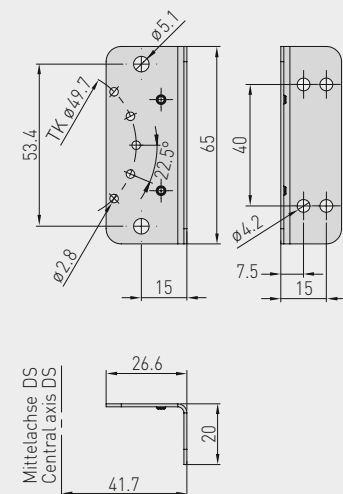
**DS2**  
with mounting ring  
**DS2 -MR**



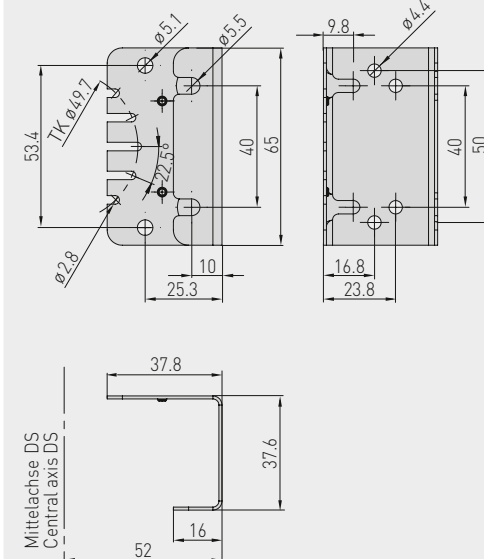
Dimensional drawing **DS 1-MW-Z**  
Mounting angle



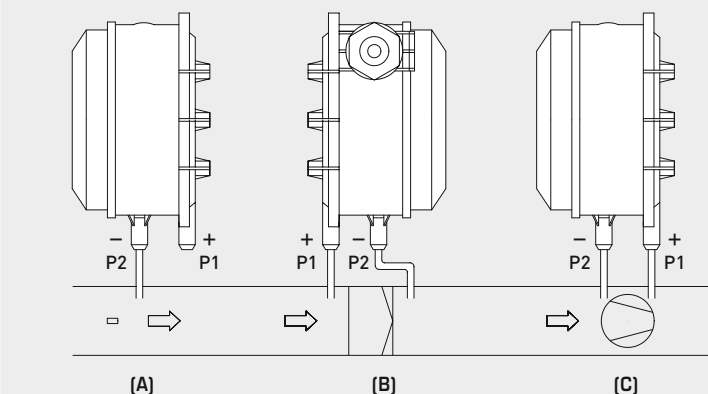
Dimensional drawing **DS 1-MW-L**  
Mounting angle



Dimensional drawing **DS 1-MW-U**  
Mounting angle



Mounting diagram **DS 1 / DS 2**



**DS 1 / DS 2**  
Connection



Setting potentiometer  
(internal setting)

Connecting terminals  
secured against turning

#### 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.

#### 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



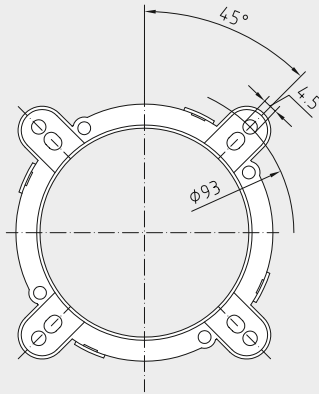
S+S REGELTECHNIK

PREMASREG® DS 1  
PREMASREG® DS 2

Differential pressure switches for air,  
including connection set

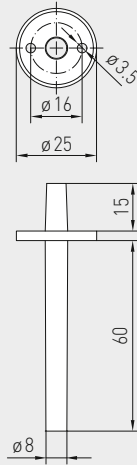
Dimensional drawing

**DS-2-MR**  
Mounting ring



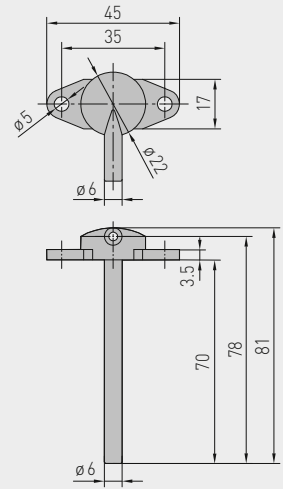
Dimensional drawing

**ASD-06**  
Connection set



Dimensional drawing

**ASD-07**  
Connection nipple



**WS-04**

Weather and sun  
protection hood  
(optional)



**ASD-06**

Connection set



**ASD-07**

Connection nipple



**PREMASREG® DS 1** Differential pressure switches with mounting angle, *Premium*  
**PREMASREG® DS 2** Differential pressure switches with mounting ring, *Standard*

Type	Pressure range (adjustable)		Operating Difference approx.	Max. Pressure	Item No.	Price
DS 1 / WG02	Premium				with mounting angle DS-MW-Z	
DS-106	20... 300 Pa	(0.2...3.0 mbar)	0.1 mbar ± 15 %	5000 Pa (50 mbar)	1302-4011-0000-000	44,88 €
DS-106 A	50... 500 Pa	(0.5...5.0 mbar)	0.2 mbar ± 15 %	5000 Pa (50 mbar)	1302-4012-0000-000	44,88 €
DS-106 B	100...1000 Pa	(1.0...10.0 mbar)	0.4 mbar ± 15 %	5000 Pa (50 mbar)	1302-4013-0000-000	44,88 €
DS-106 C	500...2000 Pa	(5.0...20.0 mbar)	1.0 mbar ± 15 %	5000 Pa (50 mbar)	1302-4014-0000-000	44,88 €
DS-106 D	1000...5000 Pa	(10.0...50.0 mbar)	2.5 mbar ± 15 %	7500 Pa (75 mbar)	1302-4015-0000-000	44,88 €
DS 2 / WG03B	Standard				with mounting ring	
DS-205 F	20... 300 Pa	(0.2...3.0 mbar)	0.1 mbar ± 15 %	5000 Pa (50 mbar)	1302-4026-0000-000	29,61 €
DS-205 B	50... 500 Pa	(0.5...5.0 mbar)	0.2 mbar ± 15 %	5000 Pa (50 mbar)	1302-4022-0000-000	29,61 €
DS-205 D	100...1000 Pa	(1.0...10.0 mbar)	0.4 mbar ± 15 %	5000 Pa (50 mbar)	1302-4027-0000-000	29,61 €
DS-205 E	500...2000 Pa	(5.0...20.0 mbar)	1.0 mbar ± 15 %	5000 Pa (50 mbar)	1302-4028-0000-000	29,61 €
Accessories						
DS-MW-Z	Sheet steel mounting angle in Z-form (DS 1: included in the scope of delivery)				7100-0063-0000-000	11,27 €
DS-MW-L	Sheet steel mounting angle in L-form				7100-0063-1000-000	11,53 €
DS-MW-U	Sheet steel mounting angle in U-form				7100-0060-9000-000	14,18 €
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				7100-0060-3000-000	6,45 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS				7100-0060-7000-000	6,45 €
WS-04	Weather and sun protection hood, 130 x 180 x 135 mm, stainless steel V2A (1.4301)				7100-0040-7000-000	31,62 €
For further information, see last chapter Accessories!						