

Pressure and differential pressure measuring transducers/switches, ( $\pm 1.5\%$ ), including connection set, with multi-range switching and adjustable switching and active output

#### Quality product for HVAC sector, accuracy $\pm 1.5\%$

Electronic pressure sensors and switches **PREMASREG® 1141** are equipped with eight switchable measuring ranges, one switching output and one continuous output, and a display for setting the switchpoint and to display the ACTUAL pressure (eight devices in one plus differential pressure switch / differential pressure monitor and continuous pressure sensor in a single device). The pressure sensor is used for above-atmospheric, below-atmospheric, or differential pressure measurement in clean air with limit value switching. The piezo-resistive measuring element guarantees a high degree of reliability and accuracy. Applications of these pressure sensors are in clean room, medical and filter technology, in ventilation and air conditioning ducts, in spray booths, in large-scale catering facilities, for monitoring filters, for level measurement, or for triggering frequency converters. Media measured with these pressure transducers are air (non-precipitating), or other gaseous non-aggressive, non-combustible media. The pressure sensor **PREMASREG® 1141** has a manual zero point pushbutton and an offset potentiometer for final value and switchpoint correction. Fine adjustment by the user is possible at any time. A connection set **ASD-06** (2 m connection hose, two pressure connection nipples, screws) is included in the scope of supply.

#### PREMASREG® 1141 Connections



#### TECHNICAL DATA

Power supply:	24 V AC / DC ( $\pm 20\%$ )
Load resistance:	$R_L > 5 \text{ k}\Omega$
Power consumption:	$< 1 \text{ VA} / 24 \text{ V DC}$ , $< 2.2 \text{ VA} / 24 \text{ V AC}$
Measuring ranges:	<b>multi-range switching with 8 switchable measuring ranges</b> (see table)
Output signal:	0 -10 V 1 changeover contact (24 V), 1 A ohmic load
Electrical connection:	3-wire connection (U)
Media temperature:	0...+50 °C
Pressure connection:	4 / 6 x 11 mm (hoses $\varnothing = 4 / 6 \text{ mm}$ ), metal pressure connection nozzles
Type of pressure:	differential pressure
Medium:	clean air and other non-aggressive, non-combustible gases
Accuracy:	<b><math>\pm 1.5\%</math> of final value</b> (at +20 °C)
Sum of Linearity + hysteresis:	$< \pm 1\%$ of final value
Temperature drift values:	$\pm 0.1\%$ per °C
Zero point offset:	$< \pm 0.7\%$ of final value
Above- / below-atmospheric pressure:	max. $\pm 200 \text{ hPa}$
Signal filtering:	<b>switchable 1 s / 10 s</b>
Setting increment $\Delta p$ :	1 % of pressure range (100 Pa => 1 Pa; 5000 Pa => 50 Pa)
Switching hysteresis:	$\pm 1\%$ of pressure range (100 Pa => $\pm 1 \text{ Pa}$ ; 5000 Pa => $\pm 50 \text{ Pa}$ )
Enclosure:	plastic, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Dimensions:	108 x 70 x 73.5 mm (Thor 2)
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via <b>removable plug-in screw terminals</b>
Cable gland:	M 16 x 1.5; including strain relief
Humidity:	$< 95\%$ r.H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP65 (according to EN 60 529)
Standards:	CE conformity, according to EMC directive 2014 / 30 / EU, according to EN 61326-1, according to EN 61326-2-3
Features:	two-line <b>display with illumination</b> , cutout approx. 36 x 15 mm (W x H), for displaying ACTUAL pressure and / or SETPOINT pressure and undercutting or exceeding the measuring range

#### ACCESSORIES

<b>ASD-06</b>	Connection set (nipple straight) – (included in the scope of delivery)
<b>ASD-07</b>	Connection nipple (at 90° angle)
<b>DAL-02</b>	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)
<b>WS-04</b>	Weather and sun protection, 130 x 180 x 135 mm, stainless steel

#### WS-04 Weather and sun protection (optional)





S+S REGELTECHNIK

PREMASREG® 1141

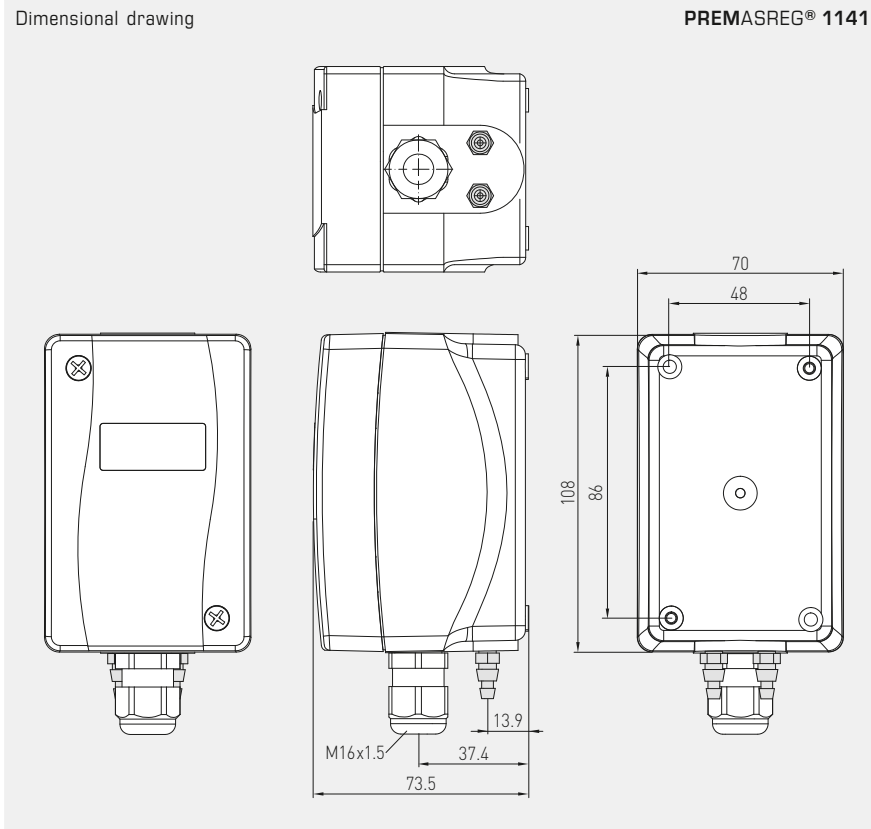
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Dimensional drawing

PREMASREG® 1141

PREMASREG® 1141 with display



Dimensional drawing

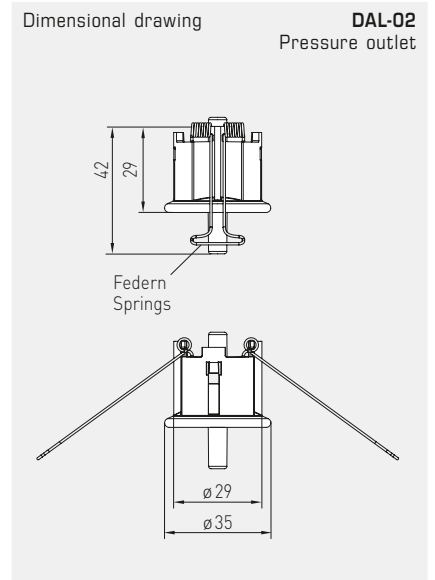
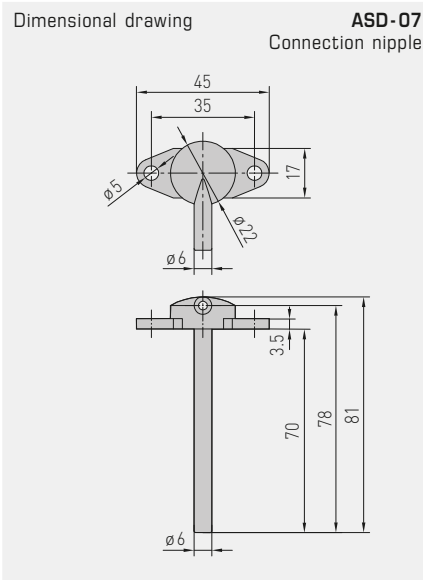
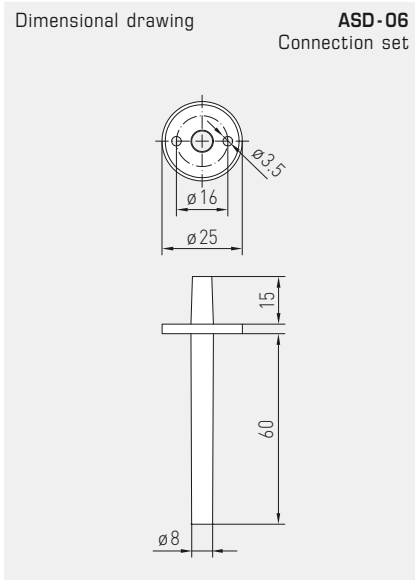
ASD-06 Connection set

Dimensional drawing

ASD-07 Connection nipple

Dimensional drawing

DAL-02 Pressure outlet



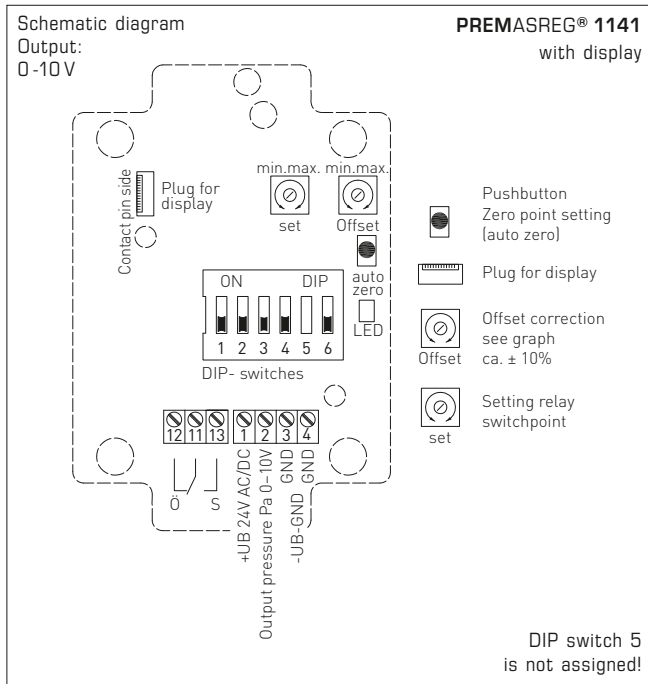
ASD-06 Connection set

ASD-07 Connection nipple

DAL-02 Pressure outlet

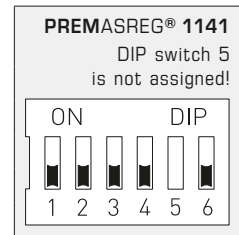


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**Pressure range**  
(adjustable, maximum measuring range depending on type of device)

0...1000 Pa	0...5000 Pa	-1000...+1000 Pa	-5000...+5000 Pa	DIP 1	DIP 2
0...100 Pa	0...1000 Pa	-100...+100 Pa	-1000...+1000 Pa	OFF	OFF
0...300 Pa	0...2000 Pa	-300...+300 Pa	-2000...+2000 Pa	ON	OFF
0...500 Pa	0...3000 Pa	-500...+500 Pa	-3000...+3000 Pa	OFF	ON
0...1000 Pa	0...5000 Pa	-1000...+1000 Pa	-5000...+5000 Pa	ON	ON



**Measuring range mode**  
(Mode selectable)

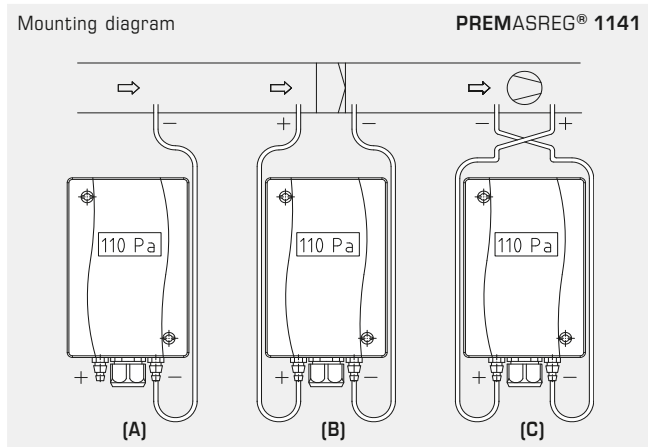
	DIP 3
Unidirectional (0...+MR)	OFF
Bidirectional (-MR...+MR)	ON

**Output damping**  
(Strength and length-adjustable)

	DIP 4
Long (10 s)	OFF
Small (1 s)	ON

**Zero point calibration**  
(Function adjustable)

	DIP 6
Pushbutton (auto zero)	OFF
Potentiometer (offset)	ON



**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

**PREMASREG® 1141** – Pressure and differential pressure measuring transducers / switches ( $\pm 1.5\%$ ), *Premium*

Pressure range (Ranges adjustable)	Type / WG01	Output	Display	Item No.	Price
<b>max. - 1000...+ 1000 Pa</b>					
0... 100 Pa / - 100... + 100 Pa	PREMASREG 1141 DISPLAY	0-10 V 1x Changeover contact	■	1302-1141-2011-200	<b>182,53 €</b>
0... 300 Pa / - 300... + 300 Pa					
0... 500 Pa / - 500... + 500 Pa					
0... 1000 Pa / -1000... + 1000 Pa					
<b>max. - 5000...+ 5000 Pa</b>					
0...1000 Pa / - 1000 ...+ 1000 Pa	PREMASREG 1141 DISPLAY	0-10 V 1x Changeover contact	■	1302-1141-2051-200	<b>182,53 €</b>
0...2000 Pa / -2000 ...+ 2000 Pa					
0...3000 Pa / -3000 ...+ 3000 Pa					
0...5000 Pa / -5000 ...+ 5000 Pa					
Multi-range switching:	Depending on the type of device, altogether <b>eight</b> pressure ranges can be preset via <b>DIP</b> switches. (Factory setting is maximum measuring range)				
Extra charge:	Other special measuring ranges up to max. 5000 Pa (please specify in your order)				<b>42,02 €</b>
<b>Accessories</b>					
<b>ASD-06</b>	<b>Connection set (included in the scope of delivery)</b> , consisting of 2 connection nipples (straight) made of ABS, 2 m PVC hose, soft, and 4 tapping screws			7100-0060-3000-000	<b>6,45 €</b>
<b>ASD-07</b>	<b>2 connection nipples</b> (at 90 degree angle) made of plastic, ABS			7100-0060-7000-000	<b>6,45 €</b>
<b>DAL-02</b>	<b>Pressure outlet</b> for ceiling or in-wall installation (e.g. in clean rooms)			7300-0060-3000-100	<b>30,18 €</b>
<b>WS-04</b>	<b>Weather and sun protection</b> , 130 x 180 x 135 mm, stainless steel			7100-0040-7000-000	<b>31,62 €</b>
For further information, see last chapter Accessories!					