

Pressure and differential pressure measuring transducers ( $\pm 1.5\%$  or  $\pm 3\%$ ),  
incl. connection set, adjustable, calibratable,  
with multi-range switching and active output

PREMASGARD® 1140

Quality product for HVAC sector, accuracy  $\pm 1.5\%$  or  $\pm 3\%$

The calibratable compact pressure sensors **PREMASGARD® 1140** of the 1140 series are equipped with eight switchable measuring ranges and with or without optional display (eight devices in one) and are used for measuring above-atmospheric, below-atmospheric, or differential pressures in air. The piezoresistive measuring element is temperature-compensated and guarantees a high degree of reliability and accuracy. These pressure transmitters have a pushbutton for manual zero point calibration and an adjustable offset. 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. A PREMASGARD® 1140 series pressure sensor has eight selectable measuring ranges and therefore, minimizes the diversity of types and inventory levels while covering a greater range of applications. The differential pressure sensor is supplied including connection set **ASD-06** (2m connection hose, two pressure connection nipples, screws).



**TECHNICAL DATA**

Power supply:	24 V AC ( $\pm 20\%$ ); 15...36 V DC for U variant 15...36 V DC for I variant, depending on working resistance, residual ripple stabilised $\pm 0.3$ V
Working resistance:	$R_a(\text{ohm}) = (U_b - 14 \text{ V}) / 0.02 \text{ A}$ for I variant
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	$< 1 \text{ VA} / 24 \text{ V DC}$ , $< 2.2 \text{ VA} / 24 \text{ V AC}$
Measuring ranges:	<b>multi-range switching</b> <b>with 8 switchable measuring ranges</b> (see table)
Output signal:	0 -10V or 4...20 mA
Electrical connection:	2- or 3-wire connection
Media temperature:	0...+50 °C
Pressure connection:	4 / 6 x 11 mm (hoses $\varnothing = 4 / 6$ 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) <b>with display</b> (not $\pm 100 / 50 \text{ Pa}$ ) <b><math>\pm 3.0\%</math> of final value</b> (at +20°C) <b>without display</b> (optional $\pm 1.5\%$ of final value)
Sum of Linearity+hysteresis:	$< \pm 1\%$ of final value with display $< \pm 2\%$ of final value without display, standard (optional $\pm 1\%$ of final value)
Temperature drift values:	$\pm 0.1\% / ^\circ\text{C}$ with display $\pm 0.3\% / ^\circ\text{C}$ without display
Zero point offset:	$< \pm 0.7\%$ of final value with display $< \pm 1.5\%$ of final value without display
Above- / below-atmospheric pressure:	max. $\pm 200 \text{ hPa}$
Signal filtering:	<b>switchable 1 s / 10 s</b>
Enclosure:	plastic, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Dimensions:	108 x 72.5 x 70 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 or 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)



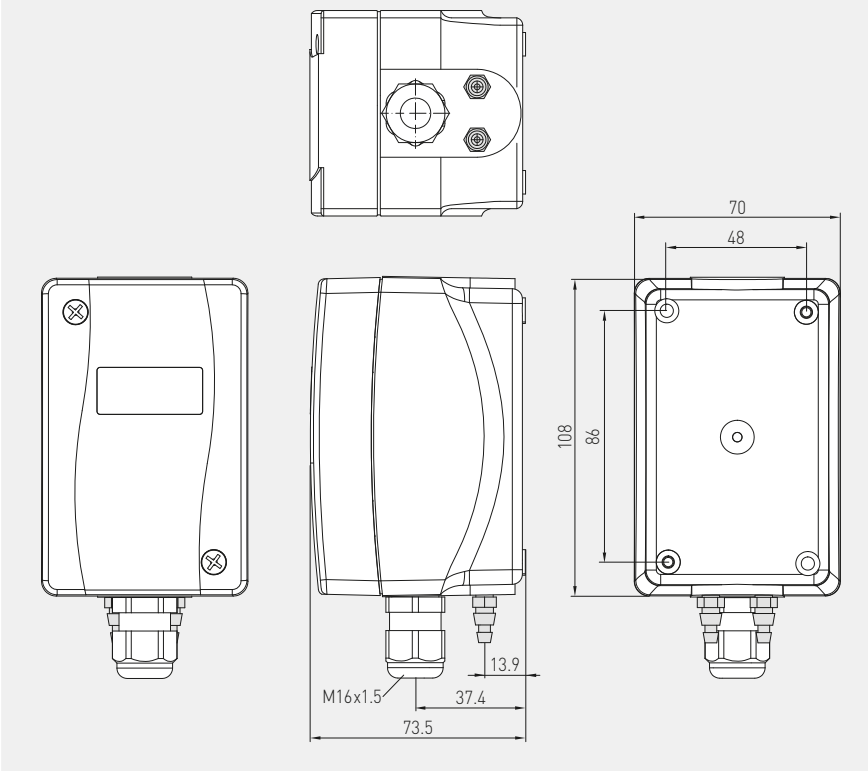


Pressure and differential pressure measuring transducers ( $\pm 1.5\%$  or  $\pm 3\%$ ),  
incl. connection set, adjustable, calibratable,  
with multi-range switching and active output

Dimensional drawing

PREMASGARD® 1140  
Compact form

PREMASGARD® 1140  
with display



Dimensional drawing

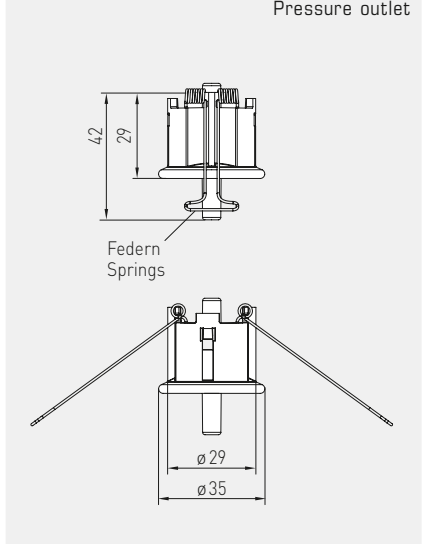
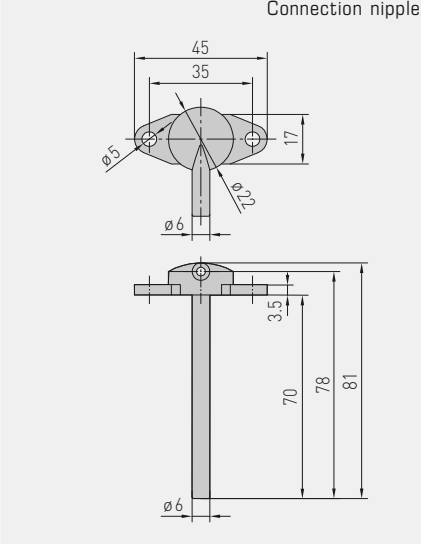
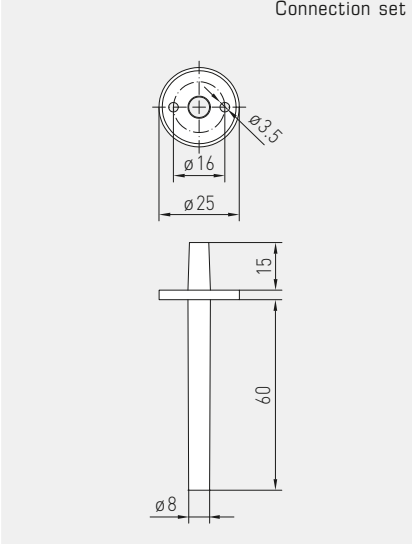
ASD-06  
Connection set

Dimensional drawing

ASD-07  
Connection nipple

Dimensional drawing

DAL-02  
Pressure outlet



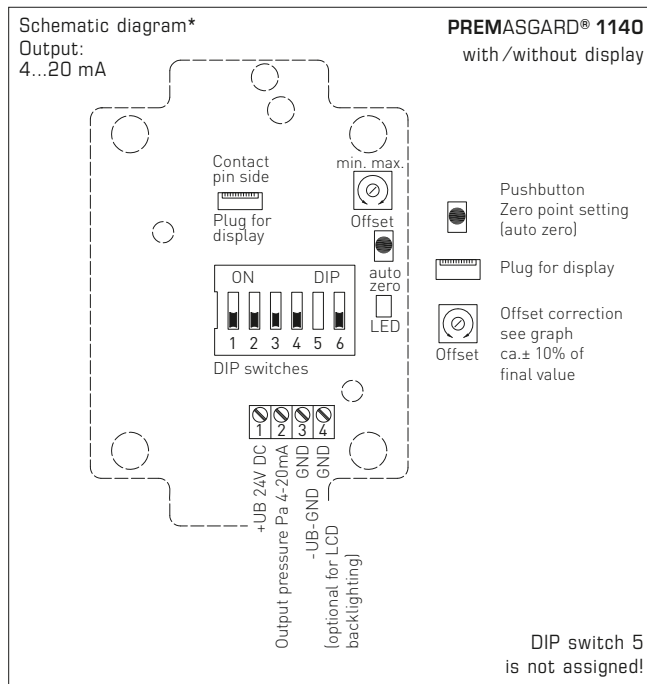
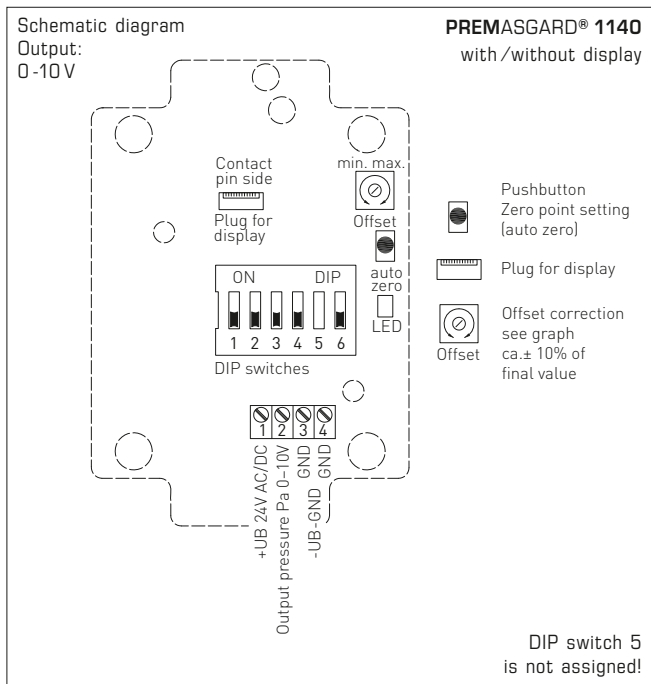
ASD-06  
Connection set

ASD-07  
Connection nipple

DAL-02  
Pressure outlet

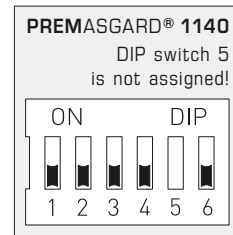


Pressure and differential pressure measuring transducers ( $\pm 1.5\%$  or  $\pm 3\%$ ),  
incl. connection set, adjustable, calibratable,  
with multi-range switching and active output



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

0...1000 Pa	0...5000 Pa	-100...+100 Pa	-1000...+1000 Pa	-5000...+5000 Pa	DIP 1	DIP 2
0...100 Pa	0...1000 Pa	-50...+50 Pa	-100...+100 Pa	-1000...+1000 Pa	OFF	OFF
0...300 Pa	0...2000 Pa	-100...+100 Pa	-300...+300 Pa	-2000...+2000 Pa	ON	OFF
0...500 Pa	0...3000 Pa	0 ... +50 Pa	-500...+500 Pa	-3000...+3000 Pa	OFF	ON
0...1000 Pa	0...5000 Pa	0 ...+100 Pa	-1000...+1000 Pa	-5000...+5000 Pa	ON	ON



**Measuring range mode**  
(Mode selectable)

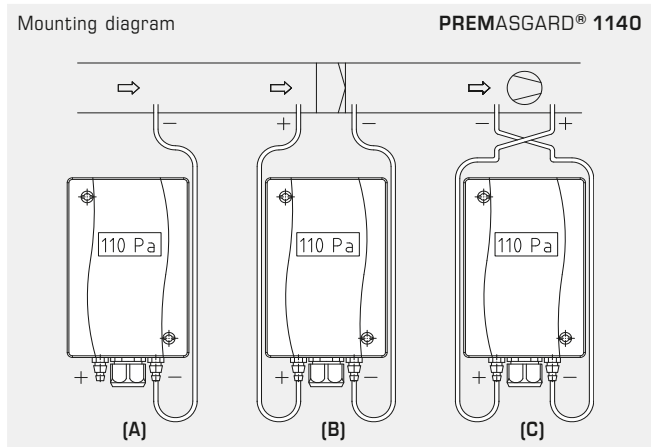
	DIP 3
Unidirectional (0...+MR)	OFF
Bidirectional (-MR...+MR)	ON

**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

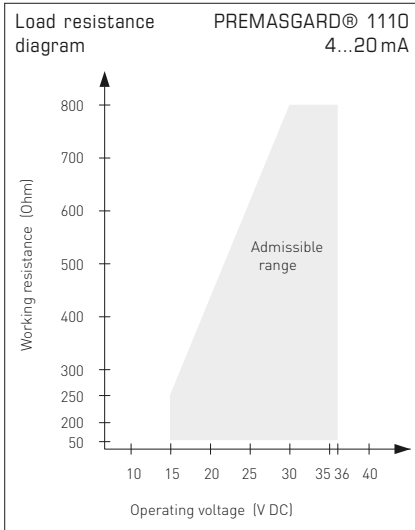
Pressure connections at the pressure switch are marked with P1 (+) for higher pressure and P2 (-) for lower pressure.

**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



Pressure and differential pressure measuring transducers ( $\pm 1.5\%$  or  $\pm 3\%$ ),  
incl. connection set, adjustable, calibratable,  
with multi-range switching and active output



PREMASGARD® 1140  
with display

Connection\*:

- 2-wire connection for devices with / without display (not illuminated)
- 3-wire connection for devices with illuminated display

PREMASGARD® 1140 – Pressure and differential pressure measuring transducers, *Premium*

Pressure range (Ranges adjustable)	Type / WG01	Output	Display	Item No.	Price
<b>max. - 1000...+ 1000 Pa</b>					
0... 100 Pa / - 100...+ 100 Pa	PREMASGARD 1141	0-10 V		1301-1141-0010-200	<b>128,85 €</b>
0... 300 Pa / - 300...+ 300 Pa	PREMASGARD 1141 DISPLAY	0-10 V	■	1301-1141-2010-200	<b>177,17 €</b>
0... 500 Pa / - 500...+ 500 Pa	PREMASGARD 1142	4...20 mA		1301-1142-0010-200	<b>135,30 €</b>
0... 1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1142 DISPLAY	4...20 mA	■	1301-1142-2010-200	<b>177,17 €</b>
<b>max. - 5000...+ 5000 Pa</b>					
0...1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1141	0-10 V		1301-1141-0050-200	<b>128,85 €</b>
0...2000 Pa / - 2000...+ 2000 Pa	PREMASGARD 1141 DISPLAY	0-10 V	■	1301-1141-2050-200	<b>177,17 €</b>
0...3000 Pa / - 3000...+ 3000 Pa	PREMASGARD 1142	4...20 mA		1301-1142-0050-200	<b>135,30 €</b>
0...5000 Pa / - 5000...+ 5000 Pa	PREMASGARD 1142 DISPLAY	4...20 mA	■	1301-1142-2050-200	<b>177,17 €</b>
<b>max. -100...+100 Pa</b>					
- 50...+ 50 Pa	PREMASGARD 1141	0-10 V		1301-1141-0110-200	<b>167,28 €</b>
-100...+ 100 Pa	PREMASGARD 1141 DISPLAY	0-10 V	■	1301-1141-2110-200	<b>209,31 €</b>
0...+ 50 Pa	PREMASGARD 1142	4...20 mA		1301-1142-0110-200	<b>167,28 €</b>
0...+ 100 Pa	PREMASGARD 1142 DISPLAY	4...20 mA	■	1301-1142-2110-200	<b>209,31 €</b>
Multi-range switching:	Depending on the type of device, a total of <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>

Accessories			
<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!