

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).

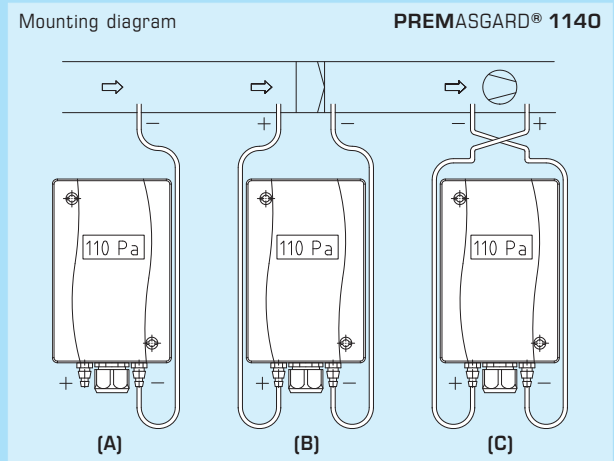
**TECHNICAL DATA:**

- Power supply: ..... 24V AC ( $\pm 20\%$ ) and 15 ... 36V DC ( $\pm 10\%$ ) for U variant  
15 ... 36V DC ( $\pm 10\%$ ) stabilised, max. ripple 0.5V<sub>ss</sub> for I variant (depending on working resistance)
- Power consumption: ..... < 1VA / 24V DC, < 2.2VA / 24V AC
- Measuring ranges: ..... **multi-range switching with 8 switchable measuring ranges** (see table)
- Output signal: ..... 0 -10V or 4 ... 20mA
- 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: .....  **$\pm 1.5\%$  of final value** (at +20°C) **with display** (not  $\pm 100 / 50$  Pa)  
 **$\pm 3.0\%$  of final value** (at +20°C) **without display**  
(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: .....  $\pm 0.1\%$  / °C with display  
 $\pm 0.3\%$  / °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.  $\pm 200$  hPa
- Signal filtering: ..... **switchable 1 s / 10 s**
- Enclosure: ..... plastic, material polyamide, 30% glass-globe reinforced, colour traffic white (similar to RAL 9016)
- Dimensions: ..... 108 x 72.5 x 70 mm (Thor II)
- Electrical connection: ..... 0.14 - 1.5 mm<sup>2</sup>, via **removable plug-in screw terminals**
- Cable gland: ..... M16 x 1.5; including strain relief
- Humidity: ..... < 95% r.H., non-precipitating air
- Protection class: ..... III (according to EN 60730)
- Protection type: ..... IP65 (according to EN 60529)
- Standards: ..... CE conformity, according to EMC directive 2004 / 108 / EC, according to EN 61326-1, according to EN 61326-2-3
- Features: ..... two-line **display with illumination**, 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: ..... including connection set **ASD-06** (nipple straight) (included in the scope of delivery)  
connection nipple **ASD-07** (at 90 degree angle)  
pressure outlet **DAL-1** for ceiling or in-wall installation (e.g. in clean rooms)

**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.





S+S REGELTECHNIK

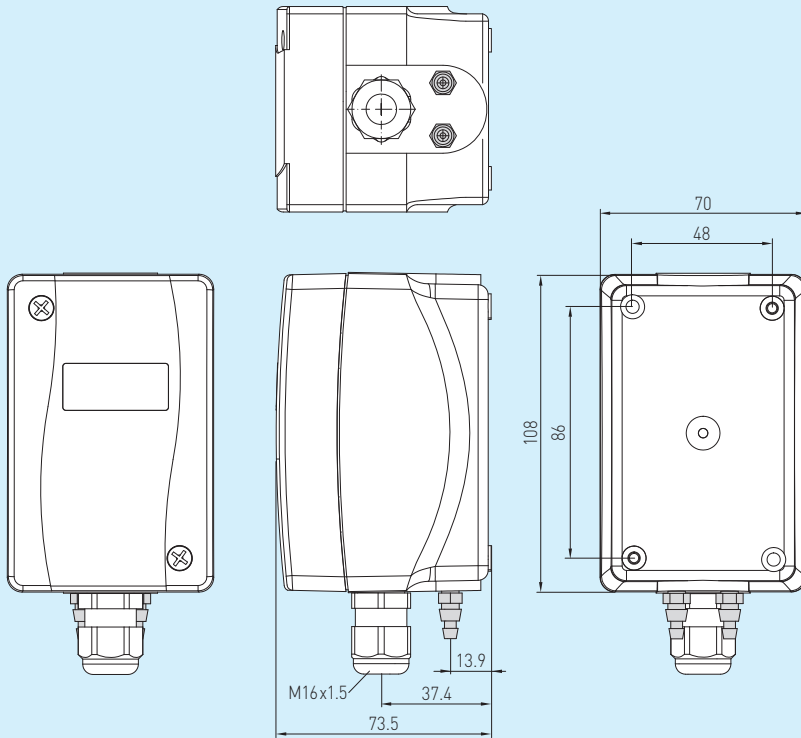
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Dimensional drawing

PREMASGARD® 1140

PREMASGARD® 1140 with display



Dimensional drawing

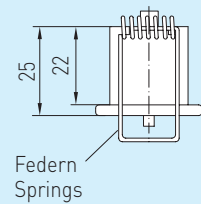
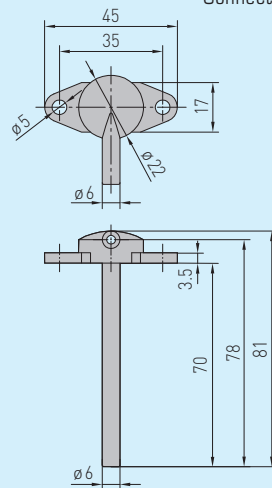
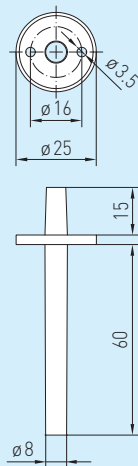
ASD-06 Connection set

Dimensional drawing

ASD-07 Connection nipple

Dimensional drawing

DAL-1 Pressure outlet



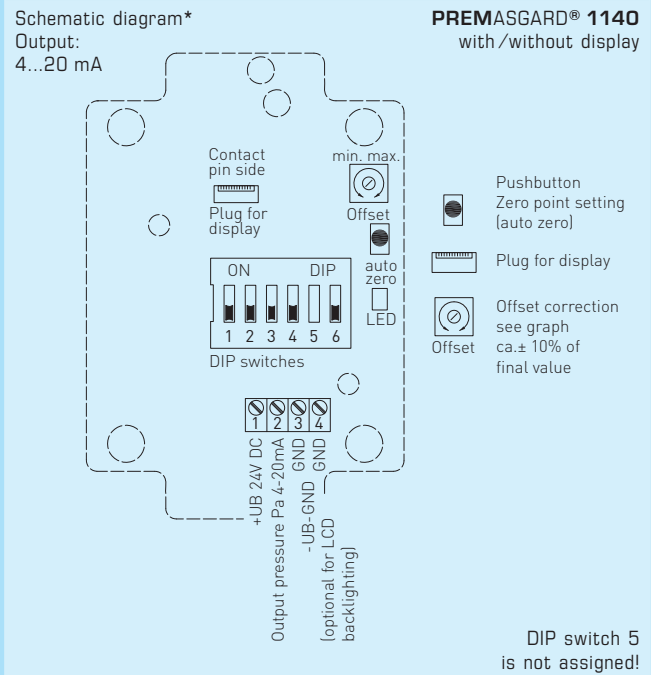
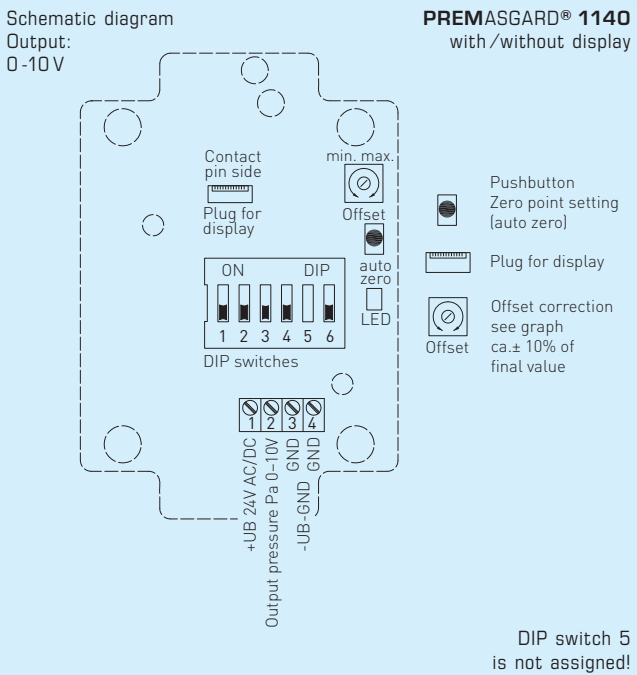
ASD-06 Connection set

ASD-07 Connection nipple

DAL-1 Pressure outlet



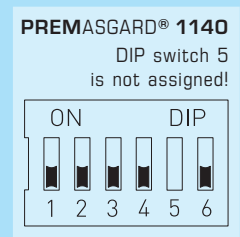
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Connection\*:  
 2-wire connection for devices with / without display (not illuminated)  
 3-wire connection for devices with illuminated display

**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    |



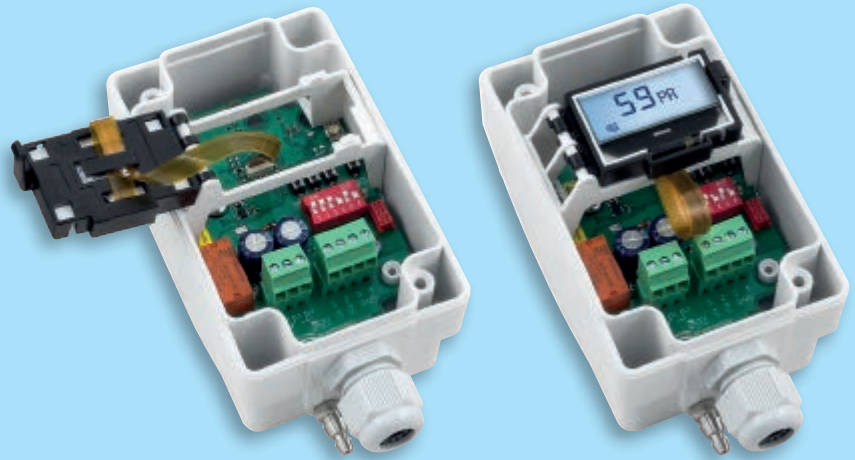
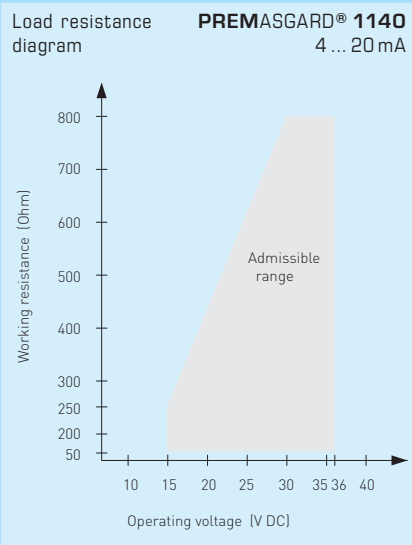
| Measuring range mode<br>(Mode selectable) | DIP 3 | Output damping<br>(Strength and length-adjustable) | DIP 4 | Zero point calibration<br>(Function adjustable) | DIP 6 |
|---|-------|--|-------|---|-------|
| Unidirectional (0...+MR)                  | OFF   | Long (10 s)  | OFF   | Pushbutton (auto zero)                          | OFF   |
| Bidirectional (-MR...+MR)                 | ON    | Small (1 s)  | ON    | Potentiometer (offset)                          | ON    |

**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           |



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**PREMASGARD® 1140**  
incl. connection set

| Pressure range<br>(Ranges adjustable)                  | Type / WG1 / 01  | 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>126,32 €</b> |
| 0... 300 Pa / - 300... + 300 Pa                        | PREMASGARD 1141 DISPLAY  | 0-10 V      | ■       | 1301-1141-2010-200 | <b>173,69 €</b> |
| 0... 500 Pa / - 500... + 500 Pa                        | PREMASGARD 1142  | 4 ... 20 mA |         | 1301-1142-0010-200 | <b>132,64 €</b> |
| 0... 1000 Pa / - 1000... + 1000 Pa                     | PREMASGARD 1142 DISPLAY  | 4 ... 20 mA | ■       | 1301-1142-2010-200 | <b>173,69 €</b> |
| <b>max. - 5000...+ 5000 Pa</b>                         |  |             |         |                    |                 |
| 0...1000 Pa / - 1000 ... + 1000 Pa                     | PREMASGARD 1141  | 0-10 V      |         | 1301-1141-0050-200 | <b>126,32 €</b> |
| 0...2000 Pa / - 2000 ... + 2000 Pa                     | PREMASGARD 1141 DISPLAY  | 0-10 V      | ■       | 1301-1141-2050-200 | <b>173,69 €</b> |
| 0...3000 Pa / - 3000 ... + 3000 Pa                     | PREMASGARD 1142  | 4 ... 20 mA |         | 1301-1142-0050-200 | <b>132,64 €</b> |
| 0...5000 Pa / - 5000 ... + 5000 Pa                     | PREMASGARD 1142 DISPLAY  | 4 ... 20 mA | ■       | 1301-1142-2050-200 | <b>173,69 €</b> |
| <b>max. -100...+100 Pa</b>                             |  |             |         |                    |                 |
| -50... +50 Pa  | PREMASGARD 1141  | 0-10 V      |         | 1301-1141-0110-200 | <b>164,00 €</b> |
| -100...+100 Pa   | PREMASGARD 1141 DISPLAY  | 0-10 V      | ■       | 1301-1141-2110-200 | <b>205,20 €</b> |
| 0... +50 Pa  | PREMASGARD 1142  | 4 ... 20 mA |         | 1301-1142-0110-200 | <b>164,00 €</b> |
| 0...+100 Pa  | PREMASGARD 1142 DISPLAY  | 4 ... 20 mA | ■       | 1301-1142-2110-200 | <b>205,20 €</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>41,20 €</b>  |
| <b>Accessories</b>                                     | <b>Description</b>   |             |         | <b>Item No.</b>    | <b>Price</b>    |
| <b>ASD-06</b>  | Connection set ( <b>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>6,32 €</b>   |
| <b>ASD-07</b>  | 2 connection nipples (at 90 degree angle) made of plastic, ABS   |             |         | 7100-0060-7000-000 | <b>6,32 €</b>   |
| <b>DAL-01</b>  | Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)  |             |         | 7300-0060-3000-000 | <b>29,58 €</b>  |
| For further information, see last chapter Accessories! |  |             |         |                    |                 |