

Pressure and differential pressure measuring transducers, adjustable, calibrateable, with multi-range switching and active output series Thor II, incl. connection set

Quality product for HVAC sector, accuracy ± 1.5% or ± 3%

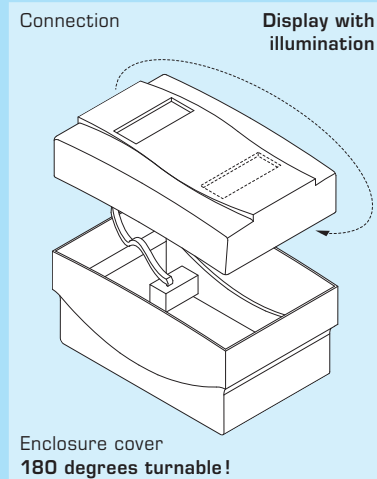
The calibrateable compact pressure sensors PREMASGARD® 1140 series are equipped with four switchable measuring ranges and with display (4 devices in one) and are used for measuring above-atmospheric, below-atmospheric, or differential pressures in air. The piezo-resistive measuring element is temperature and pressure 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 4 selectable measuring ranges and therefore, minimizes the diversity of types and stockkeeping 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).

PREMASGARD® 1140



TECHNICAL DATA:

- Power supply: 24V AC (±20%) and 15...36V DC (± 10%) for U variant
15...36V DC (± 10%) for I variant (depending on working resistance)
- Power consumption: < 1VA / 24V DC, < 2.2 VA / 24V AC
- Measuring ranges: **multi-range switching with 4 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 Ø = 4 / 6 mm),
metal pressure connection nozzles
- Type of pressure: differential pressure
- Medium: clean air and other non-aggressive, non-combustible gases
- Accuracy: **± 1.5% of final value** (at 20°C) **with display** (not ± 100/50 Pa)
± 3.0% of final value (at 20°C) **without display**
(optional ± 1.5% of final value)
- Sum of
Linearity+hysteresis: < ± 1% of final value with display
< ± 2% of final value without display, standard
(optional ± 1% of final value)
- Temperature drift values: ± 0.1% / °C with display
± 0.3% / °C without display
- Zero point offset: < ± 0.7% of final value with display
< ± 1.5% of final value without display
- Above- / below-
atmospheric pressure: max. ± 200 hPa
- Signal filtering: **switchable 1 s / 10 s**
- Enclosure: impact-resistant plastic, material polyamide, 30 % glass-globe-reinforced,
with quick-locking screws, colour pure white (similar RAL9010)
- Dimensions: 108 x 72,5 x 70 mm (Thor II)
- Electrical connection: 0.14 - 1.5 mm², via **removable plug-in screw terminals**
- Cable gland: M 16, including strain relief
- Humidity: < 95% r.H., non-precipitating air
- Protection class: III (according to EN 60 730)
- Protection type: IP65 (according to EN 60529)
- Standards: CE conformity, according to EMC directive 2004 / 108 / EC,
according to EN 61326-1:2006, according to EN 61326-2-3:2006
- Features: **two-line display with illumination**, 37 x 16 mm (W x H),
for displaying ACTUAL pressure and/or
SETPOINT pressure respectively 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)

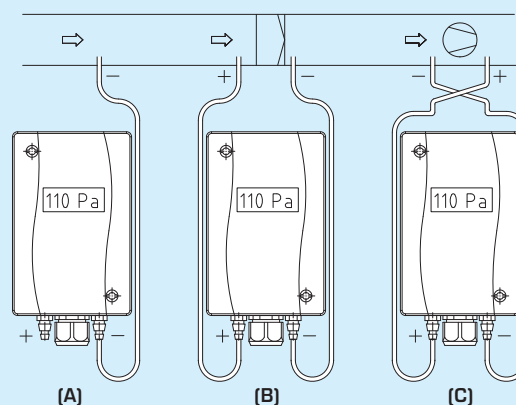


TYPES OF MONITORING:

- (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

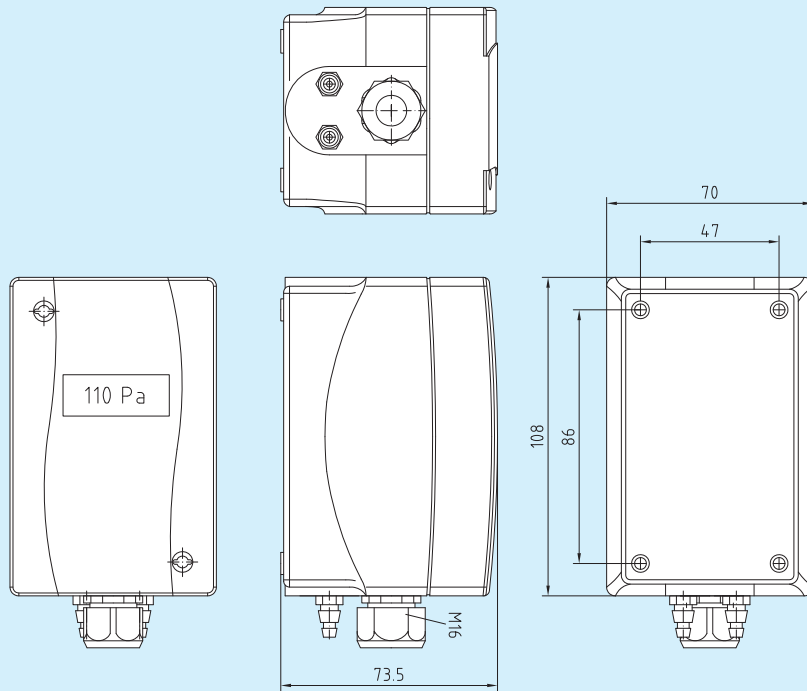
Pressure connections at the pressure switch are marked with P1 (+) for higher pressure and P2 (-) for lower pressure.

Mounting diagram PREMASGARD® 1140



Dimensional drawing

PREMASGARD® 1140

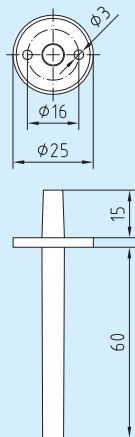


PREMASGARD® 1140
with display



Dimensional drawing

ASD-06
Connection set

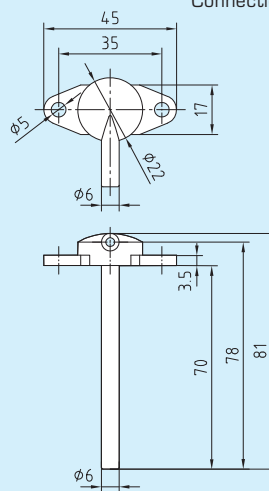


ASD-06
Connection set



Dimensional drawing

ASD-07
Connection nipple

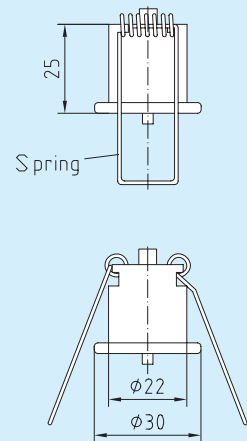


ASD-07
Connection nipple



Dimensional drawing

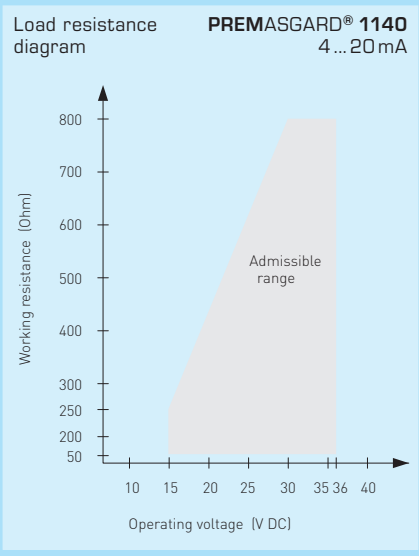
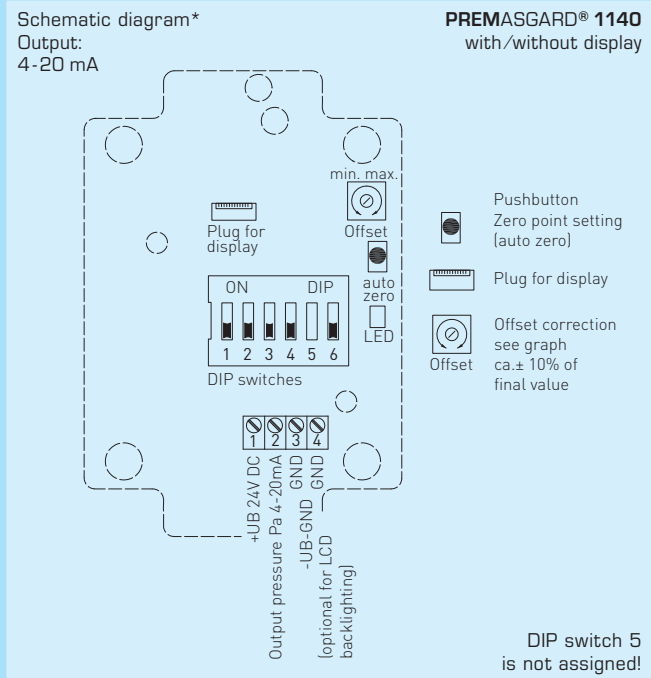
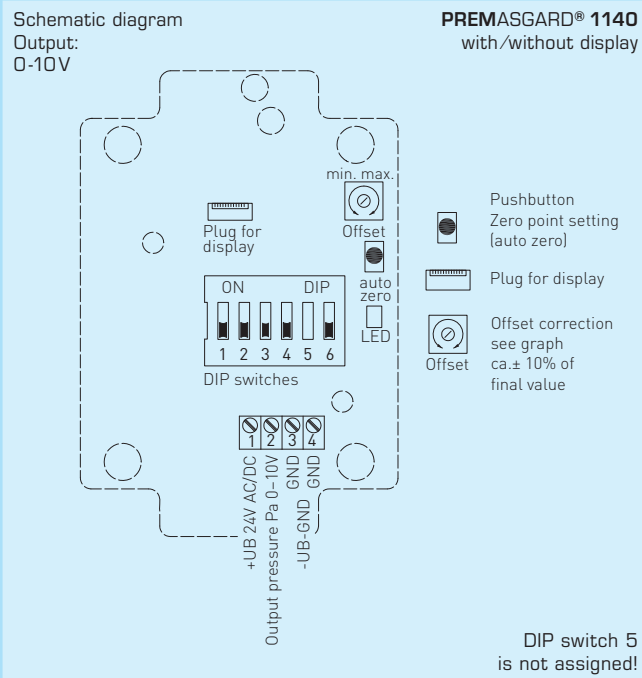
DAL-1
Pressure outlet



DAL-1
Pressure outlet



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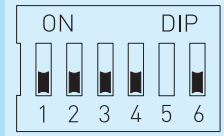
Connection*:
2-wire connection for devices with/without display (not illuminated)
3-wire connection for devices with illuminated display

Conversion table for pressure values:

Unit =	bar	mbar	Pa	kPa	mH ₂ O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH ₂ O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH ₂ O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH ₂ O
1 mbar	0.001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH ₂ O
1 mH ₂ O	0.0980665 bar	98.0665 mbar	9806.65 Pa	9.80665 kPa	1 mH ₂ O

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

PREMASGARD® 1140
DIP switch 5
is not assigned!



Measuring range mode (mode selectable)	DIP 3	Output attenuation (magnitude respectively interval adjustable)	DIP 4	Zero point calibration (function adjustable)	DIP 6
Unidirectional [0...+MR]	OFF	Great (10 s)	OFF	Pushbutton (auto zero)	OFF
Bidirectional [-MR...+MR]	ON	Small (1 s)	ON	Potentiometer (Offset)	ON

PREMASGARD® 1140, including connection set

Max. Measuring Range	Pressure Range (8 ranges selectable)	Type / WG1 Item No.	Features	Output
- 1000 ... + 1000 Pa	0 ... 100 Pa / - 100 ... + 100 Pa	PREMASGARD-1141-0010-200		0-10V
	0 ... 300 Pa / - 300 ... + 300 Pa	PREMASGARD-1141-2010-200	with display	0-10V
	0 ... 500 Pa / - 500 ... + 500 Pa	PREMASGARD-1142-0010-200		4...20 mA
	0 ... 1000 Pa / - 1000 ... + 1000 Pa	PREMASGARD-1142-2010-200	with display	4...20 mA
- 5000 ... + 5000 Pa	0 ... 1000 Pa / - 1000 ... + 1000 Pa	PREMASGARD-1141-0050-200		0-10V
	0 ... 2000 Pa / - 2000 ... + 2000 Pa	PREMASGARD-1141-2050-200	with display	0-10V
	0 ... 3000 Pa / - 3000 ... + 3000 Pa	PREMASGARD-1142-0050-200		4...20 mA
	0 ... 5000 Pa / - 5000 ... + 5000 Pa	PREMASGARD-1142-2050-200	with display	4...20 mA
-100 ... +100 Pa	-50 ... +50 Pa	PREMASGARD-1141-0110-200		0-10V
	-100 ... +100 Pa	PREMASGARD-1141-2110-200	with display	0-10V
	0 ... +50 Pa	PREMASGARD-1142-0110-200		4...20 mA
	0 ... +100 Pa	PREMASGARD-1142-2110-200	with display	4...20 mA

Multi-range switching: Four pressure ranges depending on the type of device can be preset via two DIP switches (DIP1 and DIP2). (Factory setting is maximum measuring range).

Optional: Other special measuring ranges up to max. 500 Pa (please specify in your order)

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
DAL pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)