

Pressure and differential pressure measuring transducers ($\pm 3\%$), including connection set, compact form, adjustable, calibratable, with multi-range switching and active output

PREMASGARD® 1110
Compact form

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

PREMASGARD® 1110 series calibratable compact pressure sensors 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 piezo-resistive 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® 1110 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 (2 m connection hose, two pressure connection nipples, screws).

TECHNICAL DATA:

Power supply: for U-variant: 24 V AC ($\pm 20\%$); 15...36 V DC ($\pm 10\%$)
 for I-variant: 15...36 V DC ($\pm 10\%$) depending on working resistance, stabilised, max. ripple 0.5 V_{ss}

Power consumption: < 1 W at 24 V DC; < 2 VA at 24 V AC

Measuring ranges: **multi-range switching with 8 switchable measuring ranges** (see table)

Output signal: 0 -10 V 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: **$\pm 3\%$ of final value** (at +20°C)

Zero point offset: $\pm 10\%$ of final value

Above- / below-atmospheric pressure: max. 5 x measuring range

Long-term stability: $\pm 1\%$ per year

Signal filtering: **switchable 1 s / 10 s**

Hysteresis: 0.3% of final value

Media contacting parts: ms, Ni, Nylon, PU, Si, PVC with plasticisers

Temperature drift values: $\pm 0.1\%$ of final value / °C

Current consumption: < 20 mA

Linearity: < $\pm 1\%$ of final value

Enclosure: plastic, material polyamide, 30% glass-globe-reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!

Enclosure dimensions: 72 x 64 x 37.8 mm (Tyr 1 without display)
 72 x 64 x 43.3 mm (Tyr 1 with display)

Cable gland: M16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm

Electrical connection: 0.14 - 1.5 mm², via terminal screws

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, electromagnetic compatibility according to EN 61 326, EMC directive 2004 / 108 / EC

Features: two-line **display with illumination**, cutout approx. 36 x 15 mm (W x H), to display ACTUAL pressure

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:

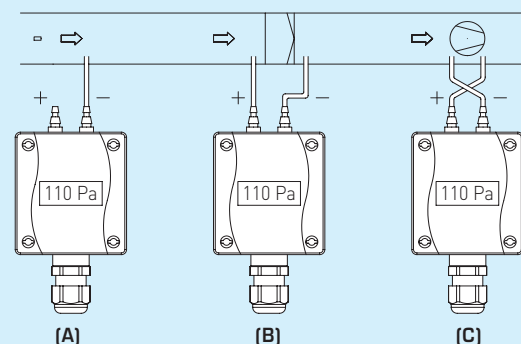
- (A) Below-atmospheric pressure: P1 (+) is not connected but open against atmosphere
 P2 (-) connected to inside of duct
- (B) Filter: P1 (+) connected upstream of filter
 P2 (-) connected downstream of filter
- (C) Ventilator: P1 (+) connected downstream of ventilator
 P2 (-) connected upstream of ventilator

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



Mounting diagram

PREMASGARD® 1110
Compact form



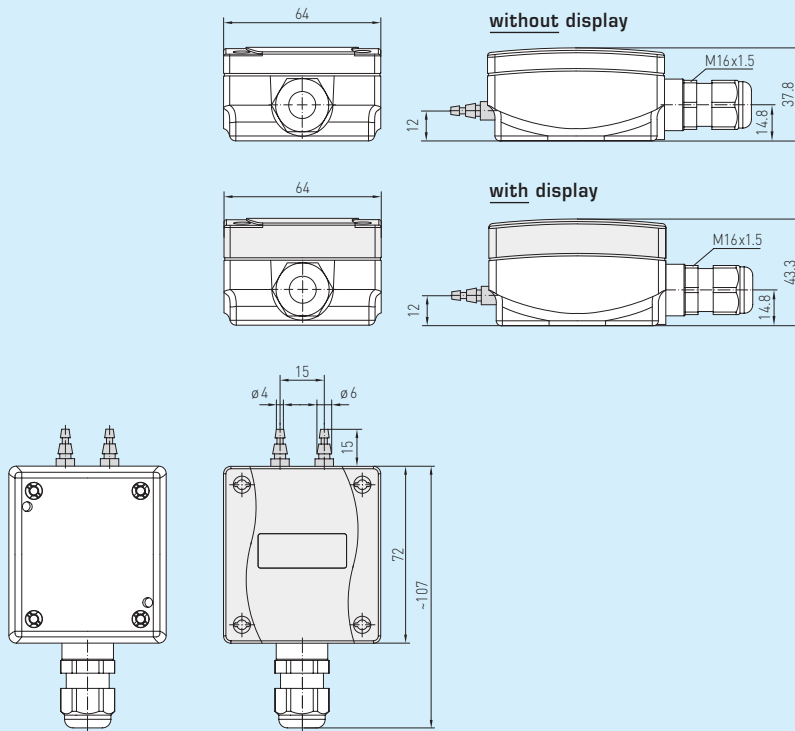


Pressure and differential pressure measuring transducers (± 3%), including connection set, compact form, adjustable, calibratable, with multi-range switching and active output



Dimensional drawing

PREMASGARD® 1110
Compact form

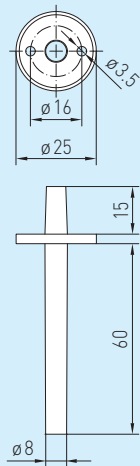


PREMASGARD® 1110
Compact form
with display



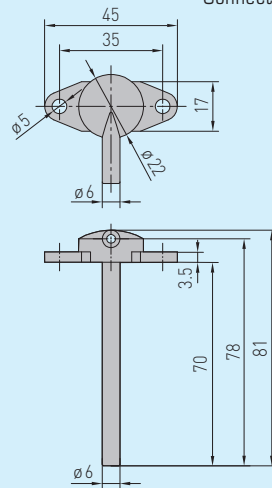
Dimensional drawing

ASD-06
Connection set



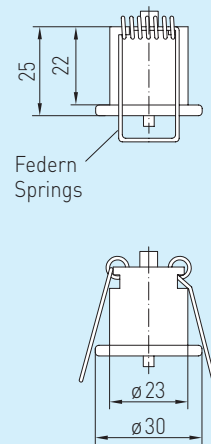
Dimensional drawing

ASD-07
Connection nipple



Dimensional drawing

DAL-1
Pressure outlet



ASD-06
Connection set



ASD-07
Connection nipple



DAL-1
Pressure outlet

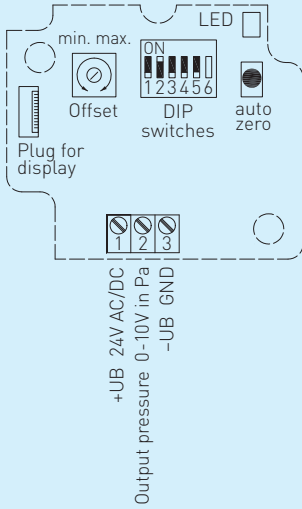


Pressure and differential pressure measuring transducers ($\pm 3\%$), including connection set, compact form, adjustable, calibratable, with multi-range switching and active output

Schematic diagram

Output:
0-10V

PREMASGARD® 1110
with /without display



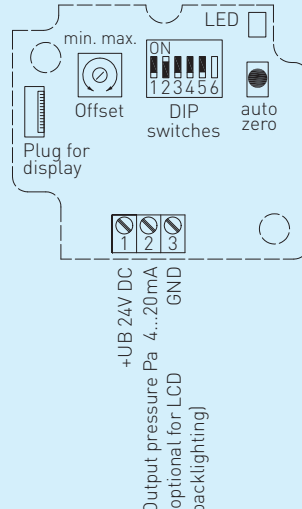
- Pushbutton
Zero point setting
(auto zero)
- Offset correction
see graph
ca. $\pm 10\%$ of
final value
- Plug for display
contact is
on the right side

DIP switch 6
is not assigned!

Schematic diagram*

Output:
4...20 mA

PREMASGARD® 1110
with /without display



- Pushbutton
Zero point setting
(auto zero)
- Offset correction
see graph
ca. $\pm 10\%$ of
final value
- Plug for display
contact is
on the right side

DIP switch 6
is not assigned!

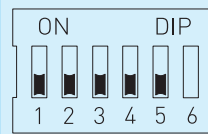
Connection*:

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

Pressure range (selectable, max. measuring range is depending to the type of device)

0...1000 Pa	0...5000 Pa	0...10000 Pa	DIP 1	DIP 2
0...100 Pa	0...1000 Pa	0...4000 Pa	OFF	OFF
0...300 Pa	0...2000 Pa	0...6000 Pa	ON	OFF
0...500 Pa	0...3000 Pa	0...8000 Pa	OFF	ON
0...1000 Pa	0...5000 Pa	0...10000 Pa	ON	ON

PREMASGARD® 1110
DIP switch 6
is not assigned!



Measuring range mode (Mode selectable)	DIP 3	Output characteristic line (Mode selectable)	DIP 4	Measurement signal filtering (Time interval selectable)	DIP 5
Unidirectional (0...+MR)	OFF	Linear	OFF	Long (10s)	OFF
Bidirectional (-MR...+MR)	ON	Square root extracting	ON	Short (1s)	ON

Conversion table for pressure values:

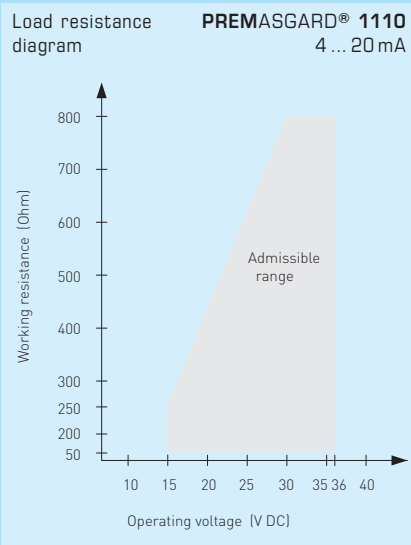
Unit =	bar	mbar	Pa	kPa	mH ₂ O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH ₂ O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH ₂ O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH ₂ O
1 mbar	0,001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH ₂ O
1 mH ₂ O	0.0980665 bar	98.0665 mbar	9806.65 Pa	9.80665 kPa	1 mH ₂ O



S+S REGELTECHNIK

PREMASGARD® 1110

Pressure and differential pressure measuring transducers ($\pm 3\%$), including connection set, compact form, adjustable, calibratable, with multi-range switching and active output



PREMASGARD® 1110
with display



PREMASGARD® 1110
incl. connection set

Pressure range (Ranges adjustable)	Type / WG1* / 01	Output	Display	Item No.	Price
max. - 1000...+ 1000 Pa					
0... 100 Pa / - 100... + 100 Pa	PREMASGARD 1111	0-10 V		1301-1111-0010-000	129,79 €
0... 300 Pa / - 300... + 300 Pa	PREMASGARD-1111 DISPLAY	0-10 V	■	1301-1111-2010-000	171,00 €
0... 500 Pa / - 500... + 500 Pa	PREMASGARD 1112	4 ... 20 mA		1301-1112-0010-000	129,79 €
0... 1000 Pa / - 1000... + 1000 Pa	PREMASGARD 1112 DISPLAY	4 ... 20 mA	■	1301-1112-2010-000	171,00 €
max. - 5000...+ 5000 Pa					
0... 1000 Pa / - 1000 ... + 1000 Pa	PREMASGARD 1111	0-10 V		1301-1111-0050-000	129,79 €
0... 2000 Pa / - 2000 ... + 2000 Pa	PREMASGARD 1111 DISPLAY	0-10 V	■	1301-1111-2050-000	171,00 €
0... 3000 Pa / - 3000 ... + 3000 Pa	PREMASGARD 1112	4 ... 20 mA		1301-1112-0050-000	129,79 €
0... 5000 Pa / - 5000 ... + 5000 Pa	PREMASGARD 1112 DISPLAY	4 ... 20 mA	■	1301-1112-2050-000	171,00 €
max. - 10000...+ 10000 Pa					
0... 4000 Pa / - 4000 ... + 4000 Pa	PREMASGARD 1111	0-10 V		1301-1111-0060-000	146,00 €
0... 6000 Pa / - 6000 ... + 6000 Pa	PREMASGARD 1111 DISPLAY	0-10 V	■	1301-1111-2060-000	186,40 €
0... 8000 Pa / - 8000 ... + 8000 Pa	PREMASGARD 1112	4 ... 20 mA		1301-1112-0060-000	146,00 €
0... 10000 Pa / - 10000 ... + 10000 Pa	PREMASGARD 1112 DISPLAY	4 ... 20 mA	■	1301-1112-2060-000	186,40 €
Multi-range switching:	Depending on the type of device, altogether eight pressure ranges can be preset via DIP switches. (Factory setting: 0 ... 1000 Pa).				
Accessories	Description			Item No.	Price
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	6,32 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS			7100-0060-7000-000	6,32 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)			7300-0060-3000-000	29,58 €
For further information, see last chapter Accessories!					