

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

The calibrateable compact pressure sensors of the **PREMASGARD® 111x / 112x / 112x-SD** 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 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. The 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).

PREMASGARD® 111x
Pressure connections **above**,
without display,
with quick-locking screws
(IP 65)



PREMASGARD® 112x-SD
Pressure connections **below**,
without display,
with snap-on lid
(IP 43)



TECHNICAL DATA

Power supply:	24 V AC (±20%); 15...36V DC for U variant 15...36V DC for I variant, depending on working resistance, residual ripple stabilised ±0.3V
Working resistance:	$R_a(\text{ohm}) = (U_b - 14V) / 0.02A$ for I variant
Load resistance:	$R_L > 5k\Omega$ for U variant
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 -10V or 4...20mA
Electrical connection:	2- or 3-wire connection
Media temperature:	-20...+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:	Type 1111 / 1121 / 1121-SD (1000 Pa): ± 10 Pa Type 1115 / 1125 / 1125-SD (5000 Pa): ± 50 Pa Type 1116 / 1126 / 1126-SD (10000 Pa): ± 50 Pa compared to the calibrated reference device
Zero point offset:	± 10 % of final value
Above- / below-atmospheric pressure:	max. 5x measuring range
Long-term stability:	± 1 % per year
Signal filtering:	switchable 1s / 10s
Hysteresis:	0.3% of final value
Media contacting parts:	ms, Ni, Nylon, PU, Si, PVC with plasticisers
Temperature drift values:	± 0.1 % of final value / °C
Current consumption:	< 20 mA
Linearity:	< ± 1 % of final value
Enclosure:	plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016) Type 111x / 112x: with quick-locking screws (slotted/Phillips head combination) enclosure cover for display is transparent! Type 112x-SD: with snap-on lid
Enclosure dimensions:	72 x 64 x 37.8 mm (Tyr 1 / Tyr 01 without display) 72 x 64 x 43.3 mm (Tyr 1 with display)
Cable gland:	M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
Electrical connection:	0.14 - 1.5 mm ² , via terminal screws
Humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	Type 111x / 112x: IP 65 (according to EN 60 529) Type 112x-SD: IP 43 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC directive 2014 / 30 / EU
Features:	two-line display with illumination , cutout approx. 36 x 15 mm (W x H), to display ACTUAL pressure

ACCESSORIES

ASD-06	Connection set (nipple straight) – (included in the scope of delivery)
ASD-07	Connection nipple (at 90° angle)
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)
WS-04	Weather and sun protection hood, 130 x 180 x 135 mm, stainless steel



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NEW

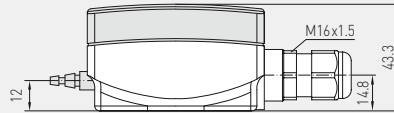
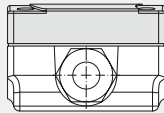
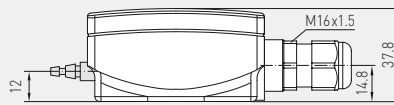
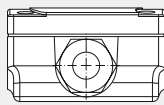
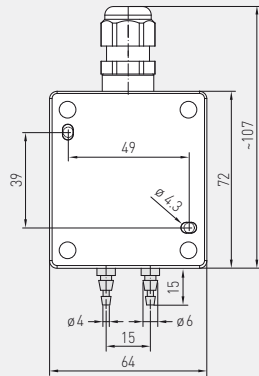
PREMASGARD® 111x/112x/112x-SD

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



Dimensional drawing

PREMASGARD® 111x



with display

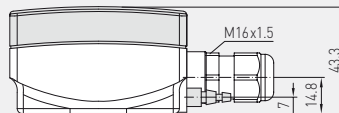
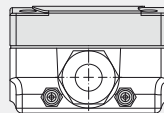
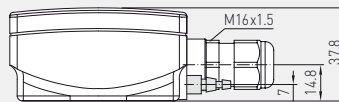
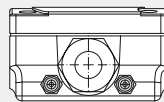
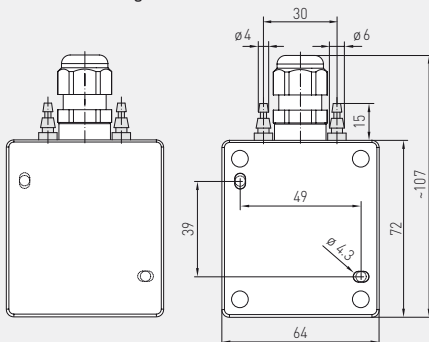
without display

PREMASGARD® 111x
Pressure connections **above**,
with display,
with quick-locking screws
(IP 65)



Dimensional drawing

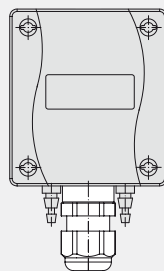
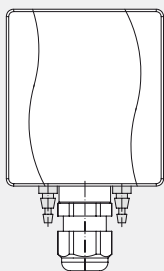
PREMASGARD® 112x
PREMASGARD® 112x-SD



with display

without display

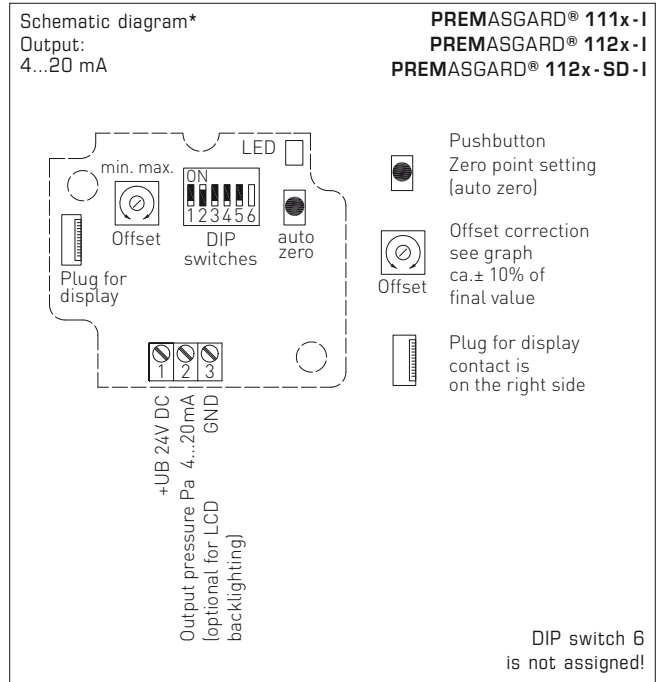
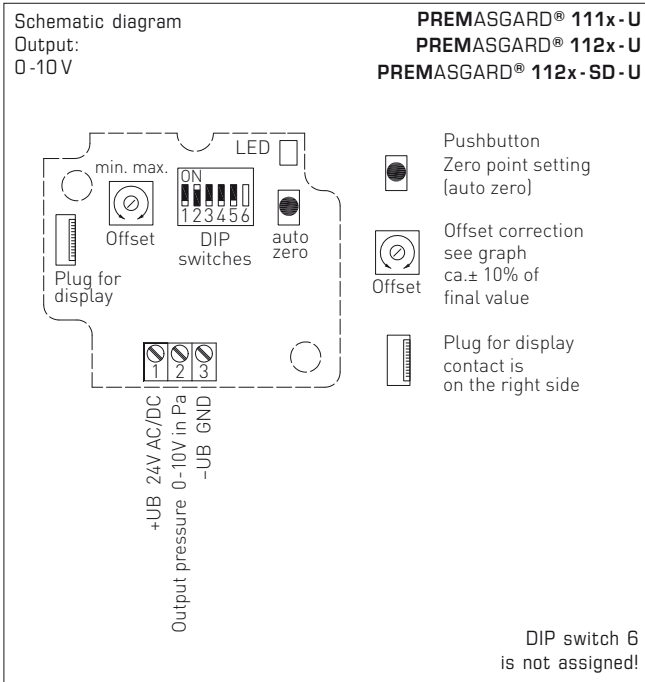
PREMASGARD® 112x
Pressure connections **below**,
with display,
with quick-locking screws
(IP 65)



with snap-on lid
(IP 43)

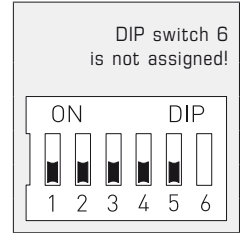
with quick-locking screws
(IP 65)

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



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

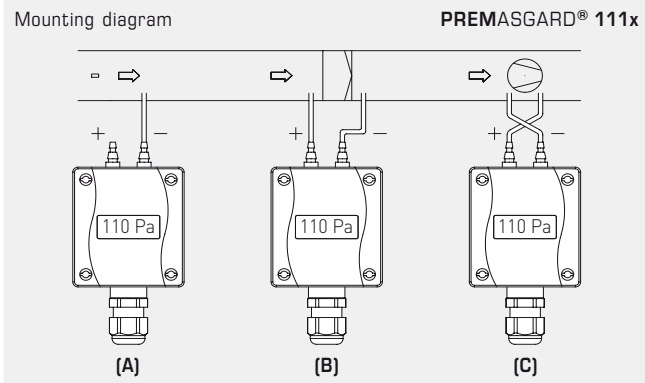
0...1000 Pa	0...5000 Pa	0...10000 Pa	-1000...+1000 Pa	-5000...+5000 Pa	-10000...+10000 Pa	DIP 1	DIP 2
0...100 Pa	0...1000 Pa	0...4000 Pa	-100...+100 Pa	-1000...+1000 Pa	-4000...+4000 Pa	OFF	OFF
0...300 Pa	0...2000 Pa	0...6000 Pa	-300...+300 Pa	-2000...+2000 Pa	-6000...+6000 Pa	ON	OFF
0...500 Pa	0...3000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



Measuring range mode (Mode selectable)	DIP 3
Unidirectional (0...+MR)	OFF
Bidirectional (-MR...+MR)	ON

Output characteristic line (Mode selectable)	DIP 4
Linear	OFF
Square root extracting	ON

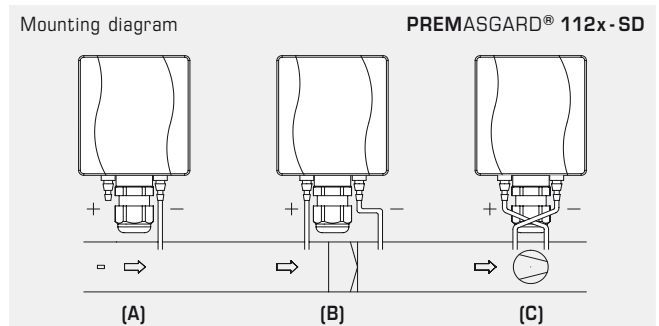
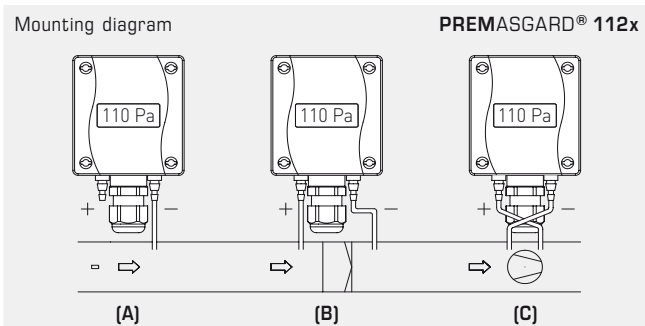
Measurement signal filtering (Time interval selectable)	DIP 5
Long (10 s)	OFF
Small (1 s)	ON



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.



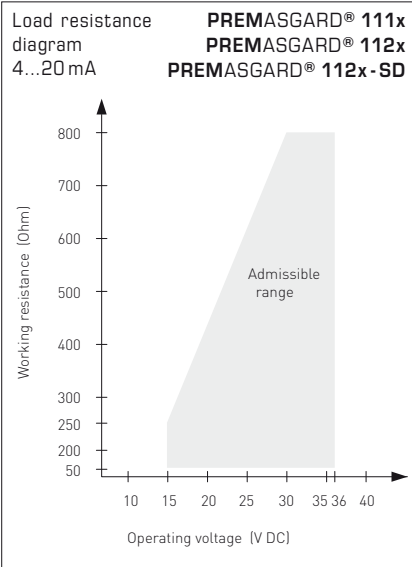


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PREMASGARD® 111x/112x/112x-SD

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



PREMASGARD® 111x
Pressure connections **above**, with display



PREMASGARD® 112x
Pressure connections **below**, with display



Connection*:

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

WS-04

Weather and sun protection hood (optional)

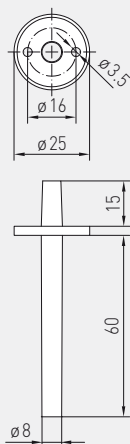


Conversion table for pressure values:

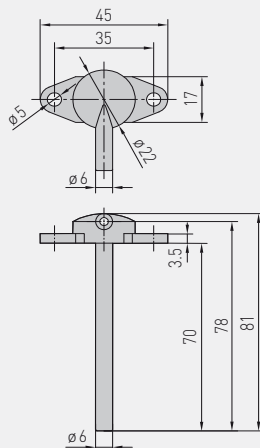
Unit =	bar	mbar	Pa	kPa	mH ₂ O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH ₂ O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH ₂ O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH ₂ O
1 mbar	0.001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH ₂ O
1 mH ₂ O	0.0980665 bar	98.0665 mbar	9806.65 Pa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

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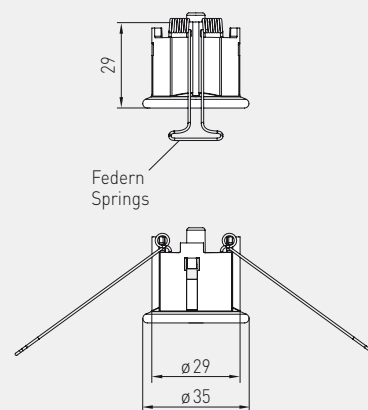
Dimensional drawing ASD-06 Connection set



Dimensional drawing ASD-07 Connection nipple



Dimensional drawing DAL-01 Pressure outlet



ASD-06 Connection set



ASD-07 Connection nipple



DAL-01 Pressure outlet



Accessories	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	6,45 €
ASD-07 2 connection nipples (at 90 degree angle) made of plastic, ABS	7100-0060-7000-000	6,45 €
DAL-01 Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001	30,18 €
WS-04 Weather and sun protection hood, 130 x 180 x 135 mm, stainless steel	7100-0040-7000-000	31,62 €

For further information, see last chapter Accessories!

PREMASGARD® 112x-SD – Pressure and differential pressure measuring transducers, *Standard*

Pressure range (Ranges adjustable)	Type / WG01	Output	Item No. (Pressure connections below)	Price
max. - 1000...+ 1000 Pa	PREMASGARD® 1121-SD		IP 43	
0... 100 Pa / - 100...+ 100 Pa	PREMASGARD 1121-SD-U	0-10V	1301-1181-0010-000	126,50 €
0... 300 Pa / - 300...+ 300 Pa	PREMASGARD 1121-SD-I	4...20mA	1301-1182-0010-000	126,50 €
0... 500 Pa / - 500...+ 500 Pa				
0... 1000 Pa / - 1000...+ 1000 Pa				
max. - 5000...+ 5000 Pa	PREMASGARD® 1125-SD		IP 43	
0...1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1125-SD-U	0-10V	1301-1181-0050-000	126,50 €
0...2000 Pa / - 2000...+ 2000 Pa	PREMASGARD 1125-SD-I	4...20mA	1301-1182-0050-000	126,50 €
0...3000 Pa / - 3000...+ 3000 Pa				
0...5000 Pa / - 5000...+ 5000 Pa				
max. - 10000...+ 10000 Pa	PREMASGARD® 1126-SD		IP 43	
0... 4000 Pa / - 4000...+ 4000 Pa	PREMASGARD 1126-SD-U	0-10V	1301-1181-0060-000	142,50 €
0... 6000 Pa / - 6000...+ 6000 Pa	PREMASGARD 1126-SD-I	4...20mA	1301-1182-0060-000	142,50 €
0... 8000 Pa / - 8000...+ 8000 Pa				
0...10000 Pa / - 10000...+ 10000 Pa				

Multi-range switching: Depending on the type of device, altogether **eight** pressure ranges can be preset via **DIP** switches. (Factory setting: 0 ...1000 Pa).



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

PREMASGARD® 111x
Pressure connections **above**, with/without display, with quick-locking screws (IP 65)

PREMASGARD® 112x
Pressure connections **below**, with/without display, with quick-locking screws (IP 65)

PREMASGARD® 112x-SD
Pressure connections **below**, without display, with snap-on lid (IP 43)



PREMASGARD® 111x – Pressure and differential pressure measuring transducers, Premium

Pressure range (Ranges adjustable)	Type / WG01	Output	Display	Item No. (Pressure connections above)	Price
max. - 1000...+ 1000 Pa	PREMASGARD® 1111			IP 65	
0... 100 Pa / - 100...+ 100 Pa	PREMASGARD 1111-U	0-10 V		1301-1111-0010-000	128,30 €
0... 300 Pa / - 300...+ 300 Pa	PREMASGARD 1111-U DISPLAY	0-10 V	■	1301-1111-2010-000	171,00 €
0... 500 Pa / - 500...+ 500 Pa	PREMASGARD 1111-I	4...20 mA		1301-1112-0010-000	128,30 €
0... 1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1111-I DISPLAY	4...20 mA	■	1301-1112-2010-000	171,00 €
max. - 5000...+ 5000 Pa	PREMASGARD® 1115			IP 65	
0...1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1115-U	0-10 V		1301-1111-0050-000	128,30 €
0...2000 Pa / - 2000...+ 2000 Pa	PREMASGARD 1115-U DISPLAY	0-10 V	■	1301-1111-2050-000	171,00 €
0...3000 Pa / - 3000...+ 3000 Pa	PREMASGARD 1115-I	4...20 mA		1301-1112-0050-000	128,30 €
0...5000 Pa / - 5000...+ 5000 Pa	PREMASGARD 1115-I DISPLAY	4...20 mA	■	1301-1112-2050-000	171,00 €
max. - 10000...+ 10000 Pa	PREMASGARD® 1116			IP 65	
0... 4000 Pa / - 4000...+ 4000 Pa	PREMASGARD 1116-U	0-10 V		1301-1111-0060-000	148,92 €
0... 6000 Pa / - 6000...+ 6000 Pa	PREMASGARD 1116-U DISPLAY	0-10 V	■	1301-1111-2060-000	187,91 €
0... 8000 Pa / - 8000...+ 8000 Pa	PREMASGARD 1116-I	4...20 mA		1301-1112-0060-000	148,92 €
0...10000 Pa / - 10000...+ 10000 Pa	PREMASGARD 1116-I DISPLAY	4...20 mA	■	1301-1112-2060-000	187,91 €
Multi-range switching:	Depending on the type of device, altogether eight pressure ranges can be preset via DIP switches. (Factory setting: 0 ...1000 Pa).				

PREMASGARD® 112x – Pressure and differential pressure measuring transducers, Premium

Pressure range (Ranges adjustable)	Type / WG01	Output	Display	Item No. (Pressure connections below)	Price
max. - 1000...+ 1000 Pa	PREMASGARD® 1121			IP 65	
0... 100 Pa / - 100...+ 100 Pa	PREMASGARD 1121-U	0-10 V		1301-1171-0010-000	128,30 €
0... 300 Pa / - 300...+ 300 Pa	PREMASGARD 1121-U DISPLAY	0-10 V	■	1301-1171-2010-000	171,00 €
0... 500 Pa / - 500...+ 500 Pa	PREMASGARD 1121-I	4...20 mA		1301-1172-0010-000	128,30 €
0... 1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1121-I DISPLAY	4...20 mA	■	1301-1172-2010-000	171,00 €
max. - 5000...+ 5000 Pa	PREMASGARD® 1125			IP 65	
0...1000 Pa / - 1000...+ 1000 Pa	PREMASGARD 1125-U	0-10 V		1301-1171-0050-000	128,30 €
0...2000 Pa / - 2000...+ 2000 Pa	PREMASGARD 1125-U DISPLAY	0-10 V	■	1301-1171-2050-000	171,00 €
0...3000 Pa / - 3000...+ 3000 Pa	PREMASGARD 1125-I	4...20 mA		1301-1172-0050-000	128,30 €
0...5000 Pa / - 5000...+ 5000 Pa	PREMASGARD 1125-I DISPLAY	4...20 mA	■	1301-1172-2050-000	171,00 €
max. - 10000...+ 10000 Pa	PREMASGARD® 1126			IP 65	
0... 4000 Pa / - 4000...+ 4000 Pa	PREMASGARD 1126-U	0-10 V		1301-1171-0060-000	148,92 €
0... 6000 Pa / - 6000...+ 6000 Pa	PREMASGARD 1126-U DISPLAY	0-10 V	■	1301-1171-2060-000	187,91 €
0... 8000 Pa / - 8000...+ 8000 Pa	PREMASGARD 1126-I	4...20 mA		1301-1172-0060-000	148,92 €
0...10000 Pa / - 10000...+ 10000 Pa	PREMASGARD 1126-I DISPLAY	4...20 mA	■	1301-1172-2060-000	187,91 €
Multi-range switching:	Depending on the type of device, altogether eight pressure ranges can be preset via DIP switches. (Factory setting: 0 ...1000 Pa).				