

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

The calibratable pressure sensors **PREMASGARD® 711x** (series) with eight switchable measuring ranges (eight devices in one), housing made from impact-resistant plastic, optionally with /without display, with cable gland or M12 connector according to DIN EN 61076-2-101 and pressure connection nozzles (quick connect optional) are used to measure positive, negative or differential pressures in air. The piezoresistive measuring element is temperature-compensated and guarantees a high degree of reliability and accuracy.

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 filter monitoring and 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 a button for manual zero point calibration (automatic zero point calibration optional/standard for 25 Pa) and an offset potentiometer for final value correction. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible. The delivery includes the connection set **ASD-06** (2 m connection hose, two pressure port nipples, screws).

PREMASGARD® 711x
with cable gland



PREMASGARD® 711x-Q
with M12 connector



Pressure port
for pressure hose
(as standard)



TECHNICAL DATA

Power supply:	24 V AC (± 20 %); 15...36 V DC for U variant 15...36 V DC for I variant, depending on working resistance, residual ripple stabilised ± 0.3 V
Working resistance:	$R_0 \text{ (Ohm)} = (U_0 - 14 \text{ V}) / 0.02 \text{ A}$ for I variant, see working resistance diagram
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	< 2 VA / 24 V DC, < 3.5 VA / 24 V AC
Measuring ranges:	multi-range switching with 8 switchable measuring ranges (see table)
Type of pressure:	differential pressure
Pressure connection:	with connection nozzle for pressure hose Ø 6 mm, optionally with quick connect made from stainless steel for PVC fabric pressure hose Ø 6 mm (external diameter)
Medium:	clean air and non-aggressive, non-combustible gases
Media temperature:	-20...+50 °C
Accuracy:	Type 7112 (25 Pa): typically ± 1 Pa Type 7110 (100 Pa): typically ± 2 Pa Type 7111 (1000 Pa): typically ± 5 Pa Type 7115 (5000 Pa): typically ± 25 Pa compared to the calibrated reference device
Sum of linearity+hysteresis:	< ± 1 % of final value ± 2 % of final value for pressure ranges < ± 250 Pa
Temp. drift values:	± 0.1 % / °C ± 0.3 % / °C for pressure ranges < 250 Pa
Zero point offset:	< ± 0.7 % of final value ± 1.4 % of final value for pressure ranges < 250 Pa
Positive /negative pressure:	max. ± 100 hPa
Signal filtering:	switchable 1 s / 10 s (via DIP switches)
Output:	0 -10 V or 4...20 mA
Connection type:	2- or 3-wire connection
Electrical connection:	0.14 -1.5 mm², via plug-in screw terminal
Cable connection:	cable gland , plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm) or M12 connector (male, 5-pin, A-code) according to DIN EN 61076-2-101
Housing:	plastic , UV-resistant, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), cover for display is transparent!
Housing dimensions:	126 x 90 x 50 mm (Tyr 2)
Air humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529) in the built-in state
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU, according to EN 61326-1, according to EN 61326-2-3
Equipment:	display with illumination , three-line, cutout approx. 70 x 40 mm (W x H), to display the ACTUAL pressure as well as the automatic zero point calibration
ACCESSORIES	see table



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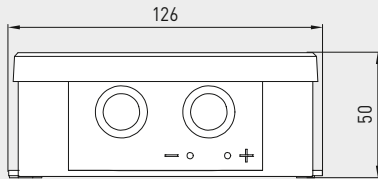
PREMASGARD® 711x

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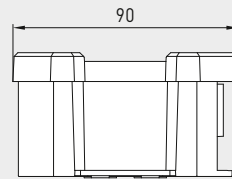


Dimensional drawing
[mm]

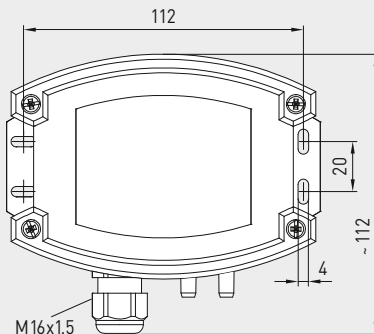
PREMASGARD® 711x



Housing with
cable gland
equipped as standard with
pressure port **nozzles**



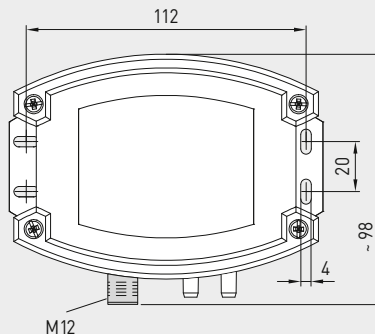
Housing with
M12 connector
equipped as standard with
pressure port **nozzles**



M16x1.5



Pressure port
for pressure hose
(as standard)



M12



M12 connector
(male)

PREMASGARD® 711x
with cable gland
and display



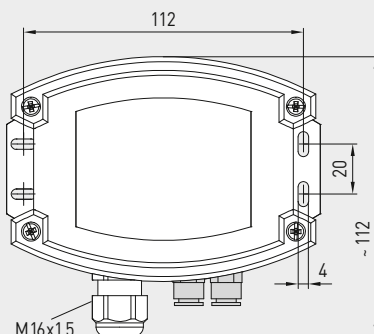
PREMASGARD® 711x-Q
with M12 connector
and display



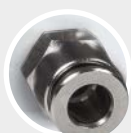
Dimensional drawing
[mm]

PREMASGARD® 711x

Housing with
cable gland
optional on request with
quick connect

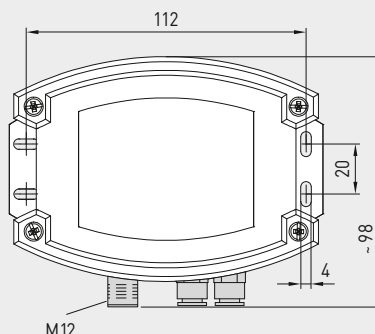


M16x1.5



Pressure port for
PVC/fabric pressure hose
(optional)

Housing with
M12 connector
optional on request with
quick connect



M12

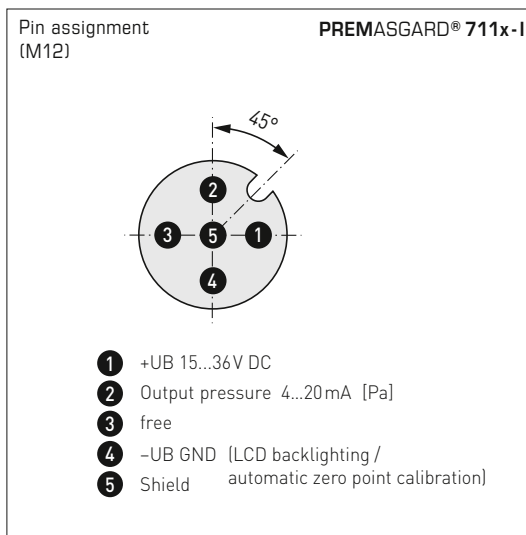
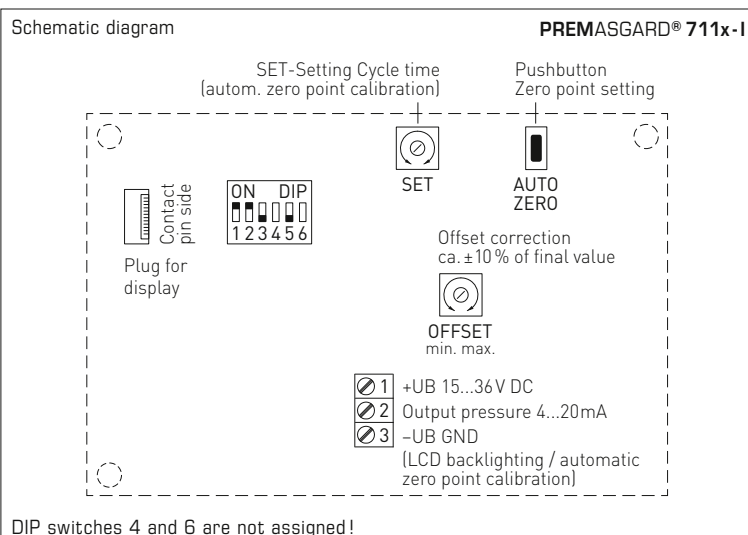
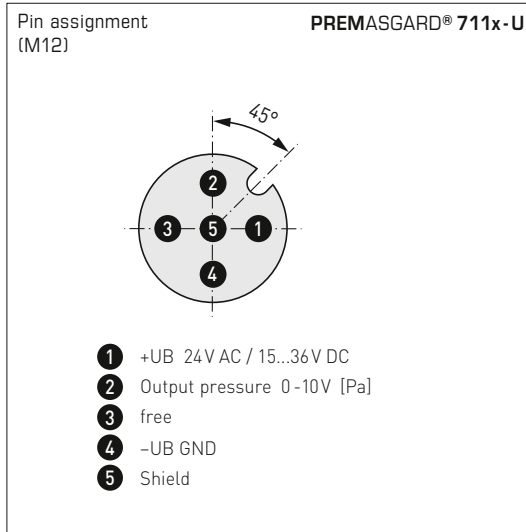
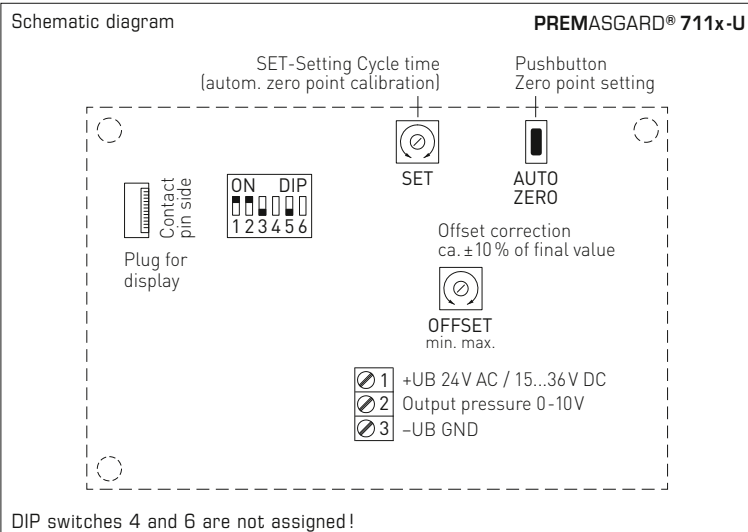


M12 connector
(male)

Pressure port for
PVC/fabric pressure hose
(optional)



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Display with option
automatic zero point calibration



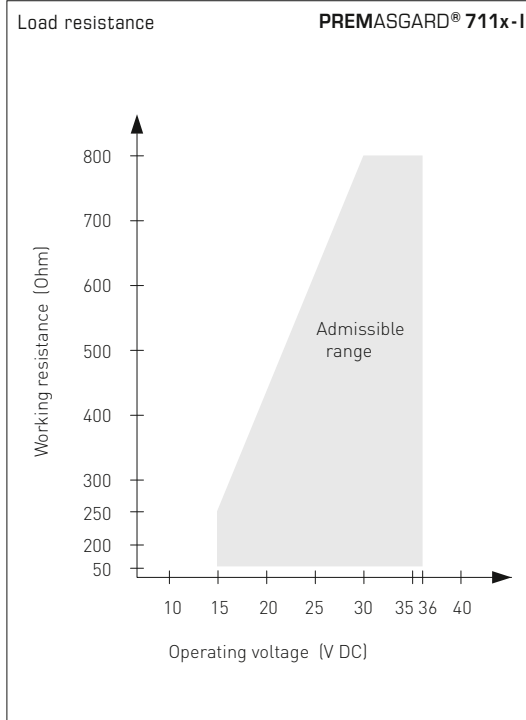
Standard
Actual pressure (in Pa)
Calibration interval (arrows)



Zero point calibration active
Remaining calibration time (in seconds)



Adjustment of zero point calibration
Cycle time (15 min to 24 hours) adjustable by potentiometer.



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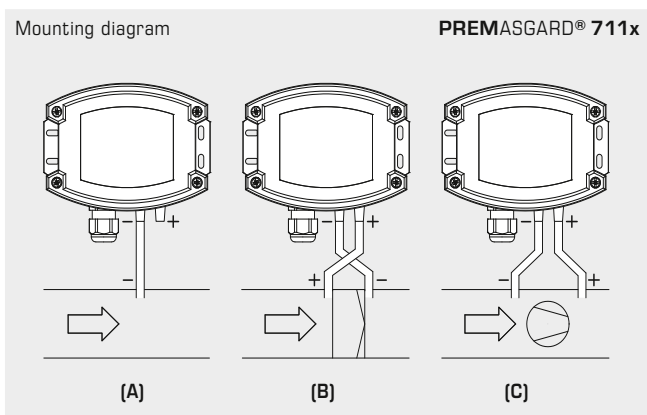
PREMASGARD® 711x-Q
with display,
hinged



Pressure range (selectable) – max. measuring range (default) is depending to the type of device								DIP 1	DIP 2
0...25 Pa	0...50 Pa	0...100 Pa	0...1000 Pa	-25...+25 Pa	-50...+50 Pa	-100...+100 Pa	-1000...+1000 Pa	OFF	OFF
–	–	0...300 Pa	0...2000 Pa	–	–	-300...+300 Pa	-2000...+2000 Pa	ON	OFF
–	–	0...500 Pa	0...3000 Pa	–	–	-500...+500 Pa	-3000...+3000 Pa	OFF	ON
0...25 Pa	0...100 Pa	0...1000 Pa	0...5000 Pa	-25...+25 Pa	-100...+100 Pa	-1000...+1000 Pa	-5000...+5000 Pa	ON	ON

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

Measurement signal filtering (Time interval selectable)	DIP 5
10 s (default)	OFF
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:

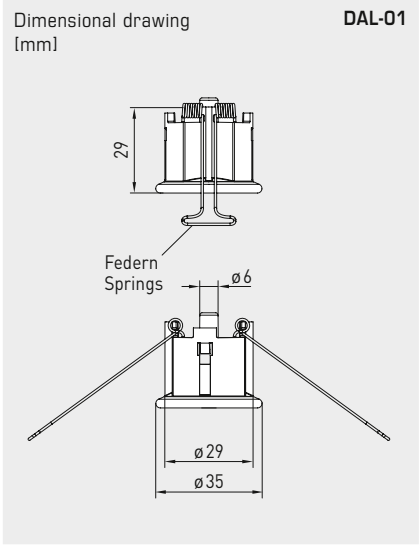
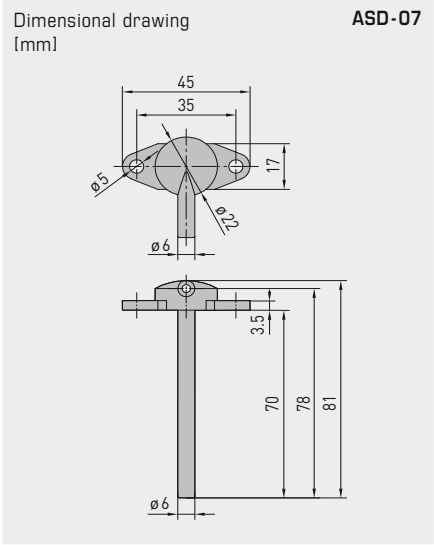
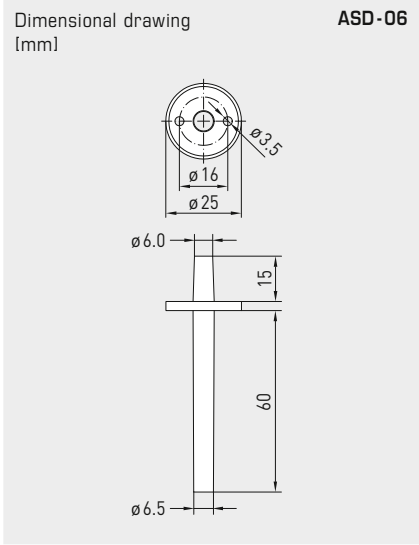
P1 (+) connected downstream of ventilator
P2 (-) connected upstream of ventilator

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

Conversion table for pressure values:

Unit =	bar	mbar	Pa	kPa	mWS
1 Pa	0,00001 bar	0,01 mbar	1 Pa	0,001 kPa	0,000101971 mWS
1 kPa	0,01 bar	10 mbar	1000 Pa	1 kPa	0,101971 mWS
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10,1971 mWS
1 mbar	0,001 bar	1 mbar	100 Pa	0,1 kPa	0,0101971 mWS
1 mWS	0,0980665 bar	98,0665 mbar	9806,65 Pa	9,80665 kPa	1 mWS

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ASD-06
Connection set



ASD-07
Connection nipple



DAL-01
Pressure outlet



WS-03
Weather and sun protection hood
(optional)

Pressure port
for pressure hose
(as standard)



Pressure port for
PVC/fabric pressure hose
(optional)



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, UV-resistant) and 4 screws	7100-0060-3000-000
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS	7100-0060-7000-000
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001
WS-03	Weather and sun protection hood, 200 x 180 x 150 mm, stainless steel V2A (1.4301)	7100-0040-6000-000
For further information, see chapter Accessories!		



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PREMASGARD® 711x-Q
with M12 connector



PREMASGARD® 711x
with cable gland



PREMASGARD® 711x		Pressure and differential pressure measuring transducers, <i>Deluxe</i>		
Pressure range (adjustable)	Type / WG02	Output	Display ● = Q	Item No.
max. - 1000...+ 1000 Pa	Type 7111			
0... 100 Pa / - 100... + 100 Pa	PREMASGARD 7111-U	0-10V		1301-7111-0010-200
0... 300 Pa / - 300... + 300 Pa	PREMASGARD 7111-U LCD	0-10V	■	1301-7111-4010-200
0... 500 Pa / - 500... + 500 Pa	PREMASGARD 7111-I	4...20mA		1301-7112-0010-100
0... 1000 Pa / -1000... + 1000 Pa	PREMASGARD 7111-I LCD	4...20mA	■	1301-7112-4010-100
	PREMASGARD 7111-U Q	0-10V	●	2004-6131-1100-001
	PREMASGARD 7111-U Q LCD	0-10V	● ■	2004-6132-1100-001
	PREMASGARD 7111-I Q	4...20mA	●	2004-6131-2100-001
	PREMASGARD 7111-I Q LCD	4...20mA	● ■	2004-6132-2100-001
max. - 5000...+ 5000 Pa	Type 7115			
0...1000 Pa / - 1000... + 1000 Pa	PREMASGARD 7115-U	0-10V		1301-7111-0050-200
0...2000 Pa / -2000... + 2000 Pa	PREMASGARD 7115-U LCD	0-10V	■	1301-7111-4050-200
0...3000 Pa / -3000... + 3000 Pa	PREMASGARD 7115-I	4...20mA		1301-7112-0050-100
0...5000 Pa / -5000... + 5000 Pa	PREMASGARD 7115-I LCD	4...20mA	■	1301-7112-4050-100
	PREMASGARD 7115-U Q	0-10V	●	2004-6131-1100-011
	PREMASGARD 7115-U Q LCD	0-10V	● ■	2004-6132-1100-021
	PREMASGARD 7115-I Q	4...20mA	●	2004-6131-2100-011
	PREMASGARD 7115-I Q LCD	4...20mA	● ■	2004-6132-2100-011
max. - 100...+ 100 Pa	Type 7110			
0... +50 Pa / -50... +50 Pa	PREMASGARD 7110-U	0-10V		1301-7111-0110-200
0...+100 Pa / -100...+100 Pa	PREMASGARD 7110-U LCD	0-10V	■	1301-7111-4110-200
	PREMASGARD 7110-I	4...20mA		1301-7112-0110-100
	PREMASGARD 7110-I LCD	4...20mA	■	1301-7112-4110-100
	PREMASGARD 7110-U Q	0-10V	●	2004-6131-1100-021
	PREMASGARD 7110-U Q LCD	0-10V	● ■	2004-6132-1100-031
	PREMASGARD 7110-I Q	4...20mA	●	2004-6131-2100-021
	PREMASGARD 7110-I Q LCD	4...20mA	● ■	2004-6132-2100-021
max. - 25...+ 25 Pa	Type 7112			
0... +25 Pa / -25... +25 Pa	PREMASGARD 7112-U	0-10V		1301-7111-0370-200
	PREMASGARD 7112-U LCD	0-10V	■	1301-7111-4370-200
	PREMASGARD 7112-I	4...20mA		1301-7112-0370-200
	PREMASGARD 7112-I LCD	4...20mA	■	1301-7112-4370-200
	PREMASGARD 7112-U Q	0-10V	●	2004-6131-1100-031
	PREMASGARD 7112-U Q LCD	0-10V	● ■	2004-6132-1100-011
	PREMASGARD 7112-I Q	4...20mA	●	2004-6131-3100-001
	PREMASGARD 7112-I Q LCD	4...20mA	● ■	2004-6132-3100-011
Housing variant "Q":	Cable connection with M12 connector (male, 5-pin , A-code)			
Multi-range switching:	The pressure ranges depend on the device type and can be set via DIP switches.			
Extra charge:	Other special measuring ranges up to max. 5000 Pa with optional automatic zero point calibration with optional quick connect for PVC fabric pressure hose Ø 6 mm			