

Dual pressure sensor (2 measuring channels), pressure and differential pressure measuring transducer, incl. connection set, calibratable, with multi-range switching and active output (Automatic Output Switching)

Patented quality product (patent no. DE 10 2015 015 941 B4)

Calibratable dual pressure sensor **PREMASGARD® 722x** (series) with 2 x 8 switchable measuring ranges, 2 automated output signals (32 devices in one), housing with pressure connection nozzle from impact-resistant plastic, optionally with/without display, with cable gland or M12 connector acc. to DIN EN 61076-2-101 for measuring overpressure, underpressure or differential pressure of the air. The pressure measuring transducer automatically detects the required output type and converts the measurands into the required standard signal of 0-10V or 4...20mA (**Automatic Output Switching**).

It is used in the clean room, medical and filter technology, ventilation and air conditioning ducts, spray booths, large-scale catering facilities, for filter monitoring and level measurement or for triggering frequency converters. Media measured with this pressure measuring transducer are clean air (non-precipitating), or other gaseous, non-aggressive, non-combustible media.

Both pressure sensors with piezoresistive measuring element are temperature-compensated and guarantee a high level of reliability and accuracy. The device has a push-button for manual zero point matching as well as an offset potentiometer for correcting the final value. The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible. The delivery includes a connection set **ASD-06** (2 m connection hose, two pressure connection nipples, screws).

PREMASGARD® 722x
with cable gland



PREMASGARD® 722x-Q
with M12 connector



Dual pressure connection
Housing with cable gland



TECHNICAL DATA

Power supply:	24 V AC/DC (± 10%)
Working resistance:	R _Ω (ohms) = 25...450 Ohm (at I output)
Load resistance:	R _L > 15 kOhm (at U output)
Power consumption:	< 2W / 24 V DC; < 4.4 VA / 24 V AC
Pressure type:	differential pressure (2 measuring channels)
Measuring ranges:	Multi-range switching with 2 x 8 switchable measuring ranges (see table)
Accuracy:	Type 722x (500 Pa): typical ± 13 Pa Type 722x (7000 Pa): typical ± 105 Pa compared to a calibrated reference device
Pressure connection:	with connection nozzle for pressure hose Ø 6 mm
Medium:	clean air and non-aggressive, non-combustible gases
Media temperature:	-20...+50 °C (temperature-compensated 0...+50 °C)
Temp. drift values:	± 0.1 % / °C final value
Zero point offset:	± 10 % measuring range
Above- / below-pressure:	± 50 kPa
Signal filtering:	switchable 1 s / 10 s (via DIP switch)
Output:	automatically 0-10V / 4...20 mA (via Automatic Output Switching – the device detects the required output type and automatically switches to U or I output)
Switching type:	3-wire connection
electrical connection:	0.2–1.5 mm ² , via push-in clamp
Cable connection:	cable gland from 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, polyamide material, 30 % glass-globe reinforced, with quick-locking screws (slotted / Philips head combination), colour traffic white (similar to RAL 9016), housing cover for display is transparent!
Housing dimensions:	126 x 90 x 50 mm (Tyr 2)
Humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Safety class:	IP 65 (according to EN 60 529) in the built-in state
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU
Features:	Illuminated display , 3 lines, cut-out approx. 70 x 40 mm (W x H), to display the ACTUAL pressure of both channels (cyclical)
ACCESSORIES	see table



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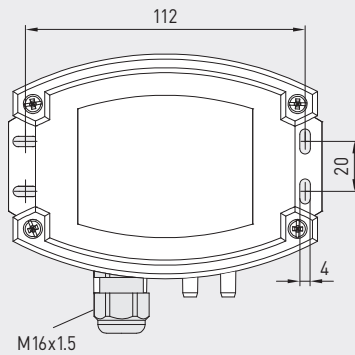
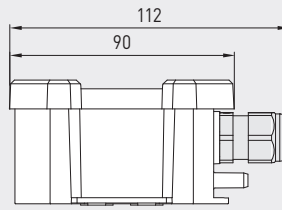
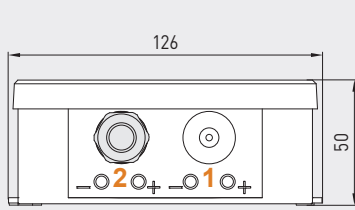
PREMASGARD® 722x

Dual pressure sensor (2 measuring channels), pressure and differential pressure measuring transducer, incl. connection set, calibratable, with multi-range switching and active output (Automatic Output Switching)



Dimensional drawing [mm]

PREMASGARD® 722x



Housing with dual pressure connection (2 measuring channels) and cable gland

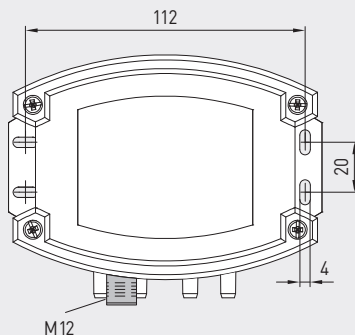
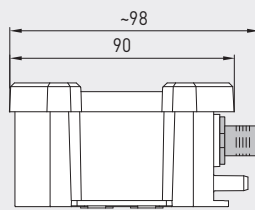
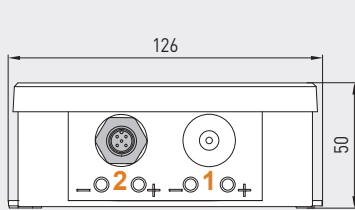
PREMASGARD® 722x with cable gland and display



PREMASGARD® 722x-Q with M12 connector and display

Dimensional drawing [mm]

PREMASGARD® 722x-Q



Housing with dual pressure connection (2 measuring channels) and M12 connector (male)



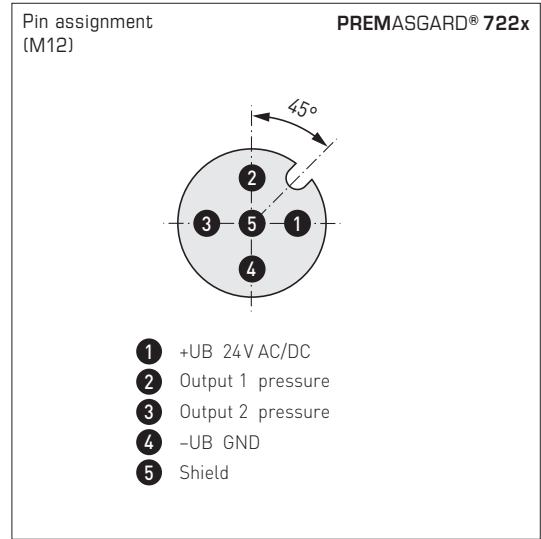
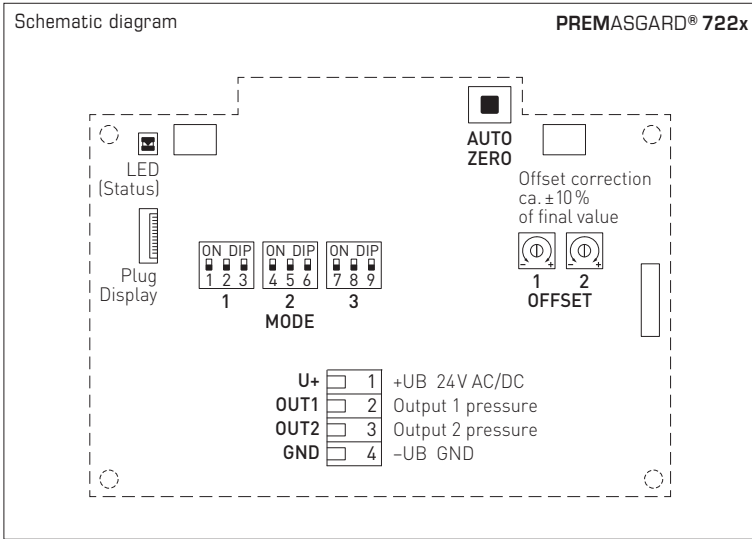
Dual pressure connection Housing with M12 connector



Automatic detection and switching to standard signal 0...10V or 4...20 mA

AOS-PATENTED
AUTOMATIC OUTPUT SWITCHING

Dual pressure sensor (2 measuring channels),
pressure and differential pressure measuring transducer,
incl. connection set, calibratable, with multi-range switching
and active output (Automatic Output Switching)



Pressure range adjustable depending on type

max. ±500 Pa	max. ±7000 Pa
0...+100 Pa	0...+1000 Pa
0...+200 Pa	0...+3000 Pa
0...+300 Pa	0...+5000 Pa
0...+500 Pa	0...+7000 Pa
-100...+100 Pa	-1000...+1000 Pa
-200...+200 Pa	-3000...+3000 Pa
-300...+300 Pa	-5000...+5000 Pa
-500...+500 Pa	-7000...+7000 Pa

Measuring channel 1			Measuring channel 2		
DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6
OFF	OFF	OFF	OFF	OFF	OFF
ON	OFF	OFF	ON	OFF	OFF
OFF	ON	OFF	OFF	ON	OFF
ON	ON	OFF	ON	ON	OFF
OFF	OFF	ON	OFF	OFF	ON
ON	OFF	ON	ON	OFF	ON
OFF	ON	ON	OFF	ON	ON
ON	ON	ON	ON	ON	ON

Mode Measurement signal filtering

Selectable time interval	DIP 7
1 s	ON
10 s (default)	OFF

Note:
DIP 8 and 9 are not defined!

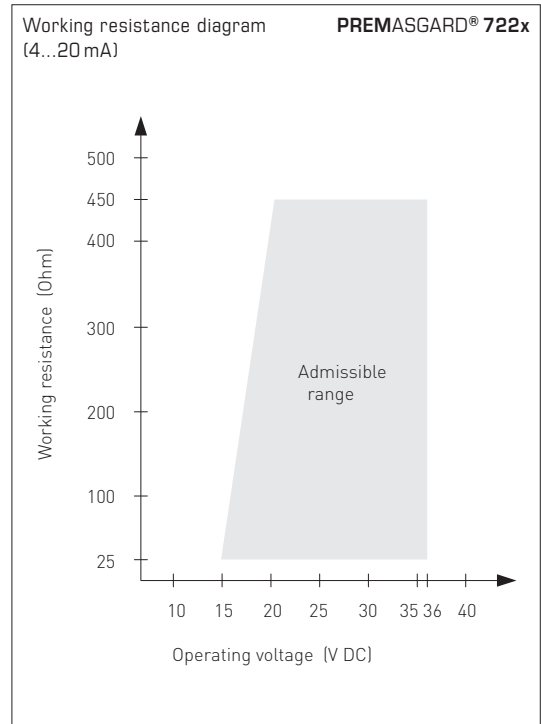
Displays **PREMASGARD® 722x**

Default display
Measured value

Actual pressure [Pa] of both channels is shown cyclically (Interval approx. 6 seconds).
The associated measuring channel is shown on the bottom left.

Status display
zero point calibration

Remaining calibration time is shown (in seconds).
Change from "AUTO 0" to "PROG 0" shows that matching was correct.





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PREMASGARD® 722x

Dual pressure sensor (2 measuring channels), pressure and differential pressure measuring transducer, incl. connection set, calibratable, with multi-range switching and active output (Automatic Output Switching)

PREMASGARD® 722x-Q with display, hinged



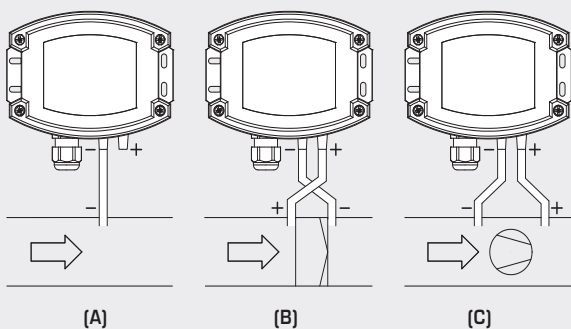
A

V



Mounting diagram

PREMASGARD® 722x



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:

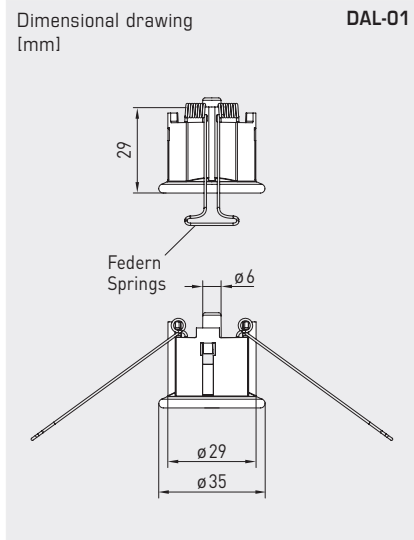
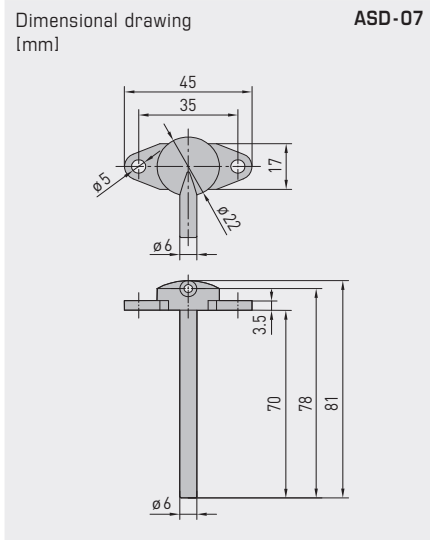
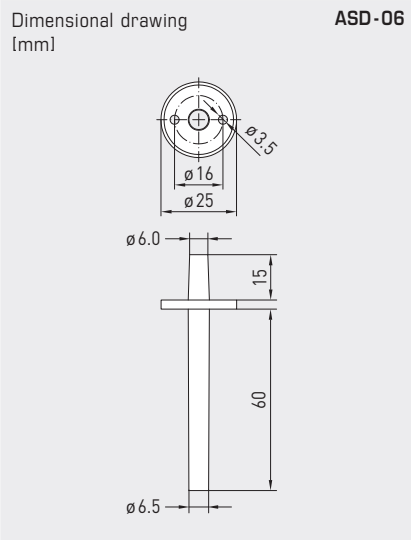
P1 (+) connected downstream of ventilator
P2 (-) connected upstream of ventilator

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

Dual pressure sensor (2 measuring channels), pressure and differential pressure measuring transducer, incl. connection set, calibratable, with multi-range switching and active output (Automatic Output Switching)



ASD-06
Connection set

ASD-07
Connection nipple

DAL-01
Pressure outlet



WS-03
Weather and sun protection hood (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	8,18 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS	7100-0060-7000-000	8,18 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001	38,31 €
WS-03	Weather and sun protection hood , 200 x 180 x 150 mm, stainless steel V2A (1.4301)	7100-0040-6000-000	47,92 €

For further information, see chapter Accessories!



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pressure and differential pressure measuring transducer,
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PREMASGARD® 722x-Q
with M12 connector



PREMASGARD® 722x
with cable gland



PREMASGARD® 722x		Dual pressure sensor (2 measuring channels), pressure and differential pressure measuring transducer, <i>Deluxe</i>			
Pressure range (adjustable per channel)	Type/WG02	Output (automatically)	Display ● = Q	Item No.	Price
(1) max. - 500...+ 500 Pa (2) max. - 500...+ 500 Pa	Type 7225				
Channel (1) and (2): 0 ... 100 Pa / - 100 ... + 100 Pa 0 ... 200 Pa / - 200 ... + 200 Pa 0 ... 300 Pa / - 300 ... + 300 Pa 0 ... 500 Pa / - 500 ... + 500 Pa	PREMASGARD 7225	0-10V / 4...20mA		1301-712A-0910-200	245,38 €
	PREMASGARD 7225 LCD	0-10V / 4...20mA	■	1301-712A-4910-200	297,61 €
	PREMASGARD 7225 Q	0-10V / 4...20mA	●	2004-6331-B100-021	295,28 €
	PREMASGARD 7225 Q LCD	0-10V / 4...20mA	● ■	2004-6332-B100-021	349,09 €
(1) max. - 7000...+ 7000 Pa (2) max. - 7000...+ 7000 Pa	Type 7227				
Channel (1) and (2): 0 ... 1000 Pa / - 1000 ... + 1000 Pa 0 ... 3000 Pa / - 3000 ... + 3000 Pa 0 ... 5000 Pa / - 5000 ... + 5000 Pa 0 ... 7000 Pa / - 7000 ... + 7000 Pa	PREMASGARD 7227	0-10V / 4...20mA		1301-712A-0950-200	245,38 €
	PREMASGARD 7227 LCD	0-10V / 4...20mA	■	1301-712A-4950-200	297,61 €
	PREMASGARD 7227 Q	0-10V / 4...20mA	●	2004-6331-B100-011	295,28 €
	PREMASGARD 7227 Q LCD	0-10V / 4...20mA	● ■	2004-6332-B100-011	349,09 €
(1) max. - 500... + 500 Pa (2) max. - 7000...+ 7000 Pa	Type 7229				
Channel (1): 0 ... 100 Pa / - 100 ... + 100 Pa 0 ... 200 Pa / - 200 ... + 200 Pa 0 ... 300 Pa / - 300 ... + 300 Pa 0 ... 500 Pa / - 500 ... + 500 Pa	PREMASGARD 7229	0-10V / 4...20mA		1301-712A-0930-200	245,38 €
	PREMASGARD 7229 LCD	0-10V / 4...20mA	■	1301-712A-4930-200	297,61 €
	PREMASGARD 7229 Q	0-10V / 4...20mA	●	2004-6331-B100-001	295,28 €
	PREMASGARD 7229 Q LCD	0-10V / 4...20mA	● ■	2004-6332-B100-001	349,09 €
Channel (2): 0 ... 1000 Pa / - 1000 ... + 1000 Pa 0 ... 3000 Pa / - 3000 ... + 3000 Pa 0 ... 5000 Pa / - 5000 ... + 5000 Pa 0 ... 7000 Pa / - 7000 ... + 7000 Pa					
Multi-range switching:	The pressure ranges depend on the device type and for each measuring channel, they are separately adjustable via DIP switch.				
Automatic Output Switching:	Patented analogue interface (patent no. DE 10 2015 015 941 B4) Device automatically detects the required output type 0-10 V or 4...20 mA.				
Housing variant Q:	Cable connection with M12 connector (male, 5 pin, A-code)				