

Dual pressure sensor (2 measuring channels),
measuring transducer for differential pressure and volume flow,
incl. connection set, calibratable, with Modbus connection

Maintenance-free, microprocessor-controlled **PREMASGARD® 724x-Modbus** (series) with Modbus connection, in an impact-resistant plastic housing with quick-locking screws, connection nozzles for pressure hose (Ø 6 mm), with cable gland or M12 connector according to DIN EN 61076-2-101, optionally with/without display, for measuring the differential pressure (2 measuring channels, max. ± 7000 Pa) in air. Type variant **724xT** with connection facility for external **Pt1000** sensor (sensor element not included in the scope of delivery) for detecting the temperature (-50...+150°C). International system of units **SI** (default) can be switched to **Imperial** (via Modbus). Incl. connection set **ASD-06** (2 m connecting hose, two pressure port nipples, screws).

The pressure sensor is applied to measure positive, negative or differential pressure in clean air and gaseous media. 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. A **pressure sensor** with piezoresistive measuring element guarantees exact measurement results. The following measured values can be accessed via the Modbus: Differential pressure, volume flow and temperature.

Innovative Modbus sensor with galvanically separated RS485 Modbus interface, selectable bus termination resistance, DIP switch for setting the bus parameters and bus address in current-free state, internal LEDs for telegram status display, two separate push-in terminals and large three-line display (illuminated; with customised programming in the 7-segment and dot-matrix range). The sensor is factory-calibrated; an environmental precision adjustment by an expert is possible.

PREMASGARD® 724x-Modbus
with cable gland



PREMASGARD® 724x-Modbus-Q
with M12 connector



PREMASGARD® 724xT-Modbus
with cable gland



TECHNICAL DATA

Power supply:	24 V AC (± 20%) and 15...36 V DC
Power consumption:	< 4.8 W / 24 V DC typical; < 6.8 VA / 24 V AC typical
System of units:	SI (default) or Imperial (switchable via Modbus)
Data points:	differential pressure [Pa] [inWC], volume flow [m³/h] [CFM], temperature [°C] [°F] – Type 724xT with connection facility for external Pt1000 sensor (-50...+150°C) (sensor element not included in the scope of delivery)
Pressure type:	differential pressure (2 measuring channels)
Pressure connection:	with connection nozzles for pressure hose Ø 6 mm
Measuring range, pressure:	-500... +500 Pa or -7000...+7000 Pa depending on the device type, see table
Pressure accuracy:	Type 7249 (500 Pa): typically ± 13 Pa at +25 °C Type 724x (7000 Pa): typically ± 105 Pa at +25 °C verglichen zu kalibriertem Referenzgerät
Above- / below-pressure:	max. ± 50 kPa
Zero point offset:	± 10 % measuring range
Hysteresis:	0.3 % of final value
Linearity:	< ± 1 % of final value
Temp. drift values:	± 0.1 % per °C
Long-term stability:	± 1 % per year
Bus protocol:	Modbus (RTU mode), address range 0... 247 adjustable
Baud rate:	9600, 19200, 38400 Baud
Signal filtering:	0 s / 1 s / 10 s
Medium:	clean air and non-aggressive, non-combustible gases
Media contacting parts:	Brass, Ni, Duroplast, Si, epoxy, RTV, BSG, UV silicone gel
Media temperature:	-20...+50 °C (temperature-compensated 0...+50 °C)
Ambient temperature:	-30...+70 °C
Permissible humidity:	0...95 % RH (non-precipitating air)
Housing:	plastic, UV-resistant, polyamide material, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips 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)
Cable connection:	cable gland plastic (M 16 x 1.5; with strain relief, exchangeable, inner diameter 10.4 mm) or M12 connector according to DIN EN 61076-2-101 (optional)
Electrical connection:	0.2 - 1.5 mm², via push-in terminals
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, electromagnetic compatibility according to EN 61 326, EMC directive 2014 / 30 / EU
Optional:	three-line display with illumination , programmable, cut-out approx. 70 x 40 mm (W x H), to display the actual pressure or volume flow or an individually programmable display value
ACCESSORIES	see table
ASD-06	Connection set (nipple straight) (included in the scope of delivery)



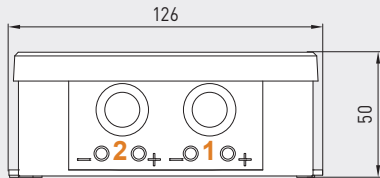
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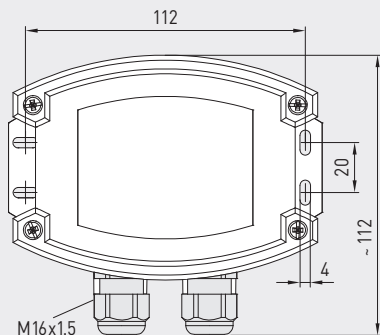
PREMASGARD® 724x-Modbus

Dual pressure sensor (2 measuring channels),
measuring transducer for differential pressure and volume flow,
incl. connection set, calibratable, with Modbus connection

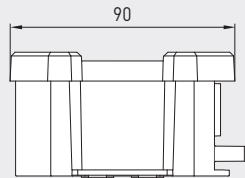
Dimensional drawing
(mm)



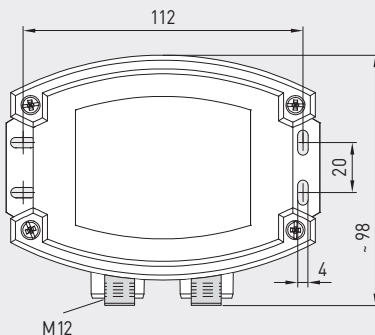
Housing with
dual pressure connection
(2 measuring channels)
and cable gland



PREMASGARD® 724x-Modbus



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



PREMASGARD® 724x-Modbus
with cable gland
and display



PREMASGARD® 724x-Modbus-Q
with M12 connector
and display

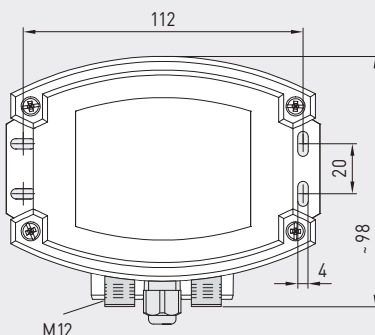
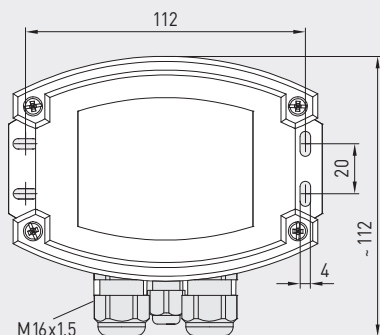


PREMASGARD® 724xT-Modbus
with cable gland
and display

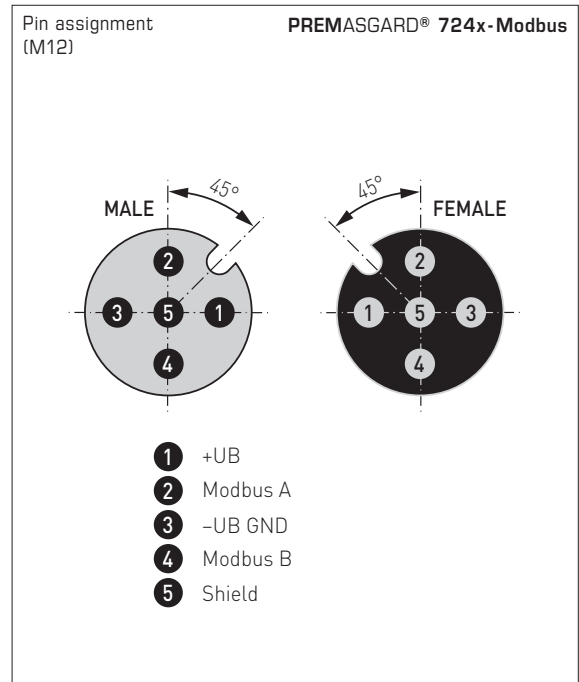
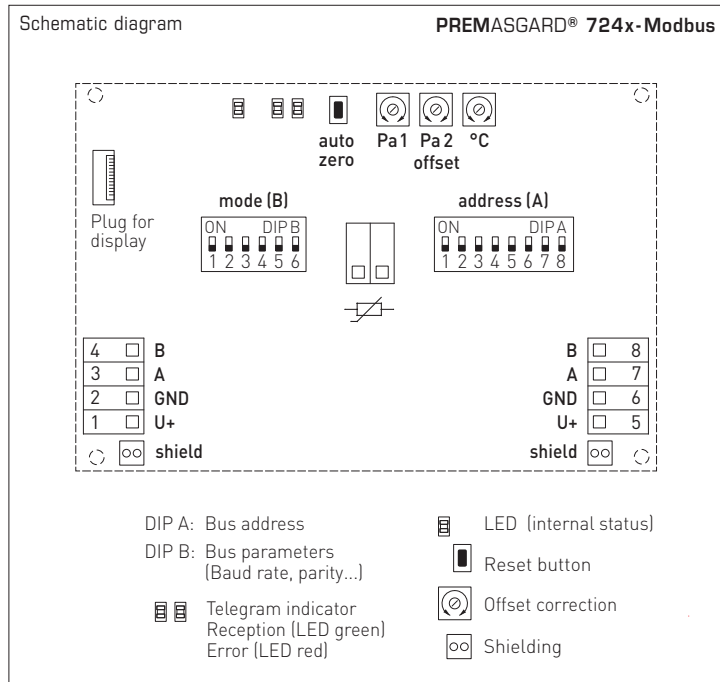


Dimensional drawing
(mm)

PREMASGARD® 724xT-Modbus
with connection facility
for external Pt1000 sensor



Dual pressure sensor (2 measuring channels),
measuring transducer for differential pressure and volume flow,
incl. connection set, calibratable, with Modbus connection



Display screen (SI or Imperial) **PREMASGARD® 724x-Modbus**

Pressure (channel 1) [Pa] [inWC] Volume flow rate [m³/h] [CFM]

Pressure (channel 2) [Pa] [inWC] Temperature (type "T") [°C] [°F]

The display value depends on the set **unit system SI** (default) or **imperial** (can be changed via Modbus).

Actual **pressure** of both channels is shown alternately. The associated measuring channel is visible at the bottom left.

Alternatively, the calculated **volume flow** can also be issued for channel 1 (via the index).

For the device type "T", the actual **temperature** of an external **Pt1000** temperature sensor can also be displayed as cyclic (standard) or static (via the index).

Programmable display screen **Modbus Tyr 2**



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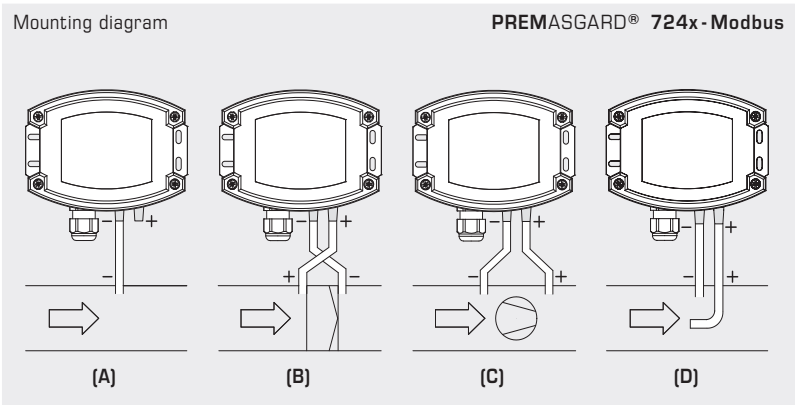
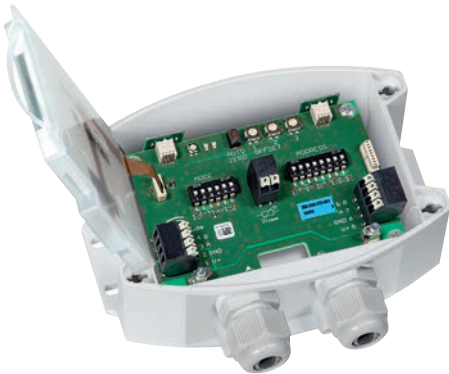
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PREMASGARD® 724x-Modbus

Dual pressure sensor (2 measuring channels), measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection



PREMASGARD® 724x-Modbus with display



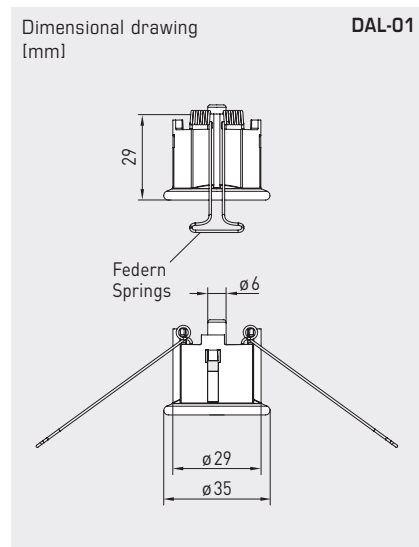
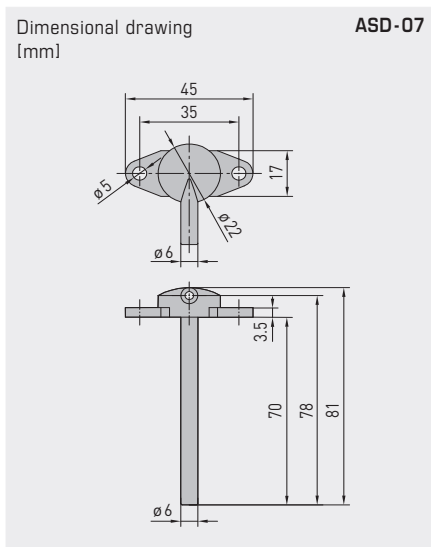
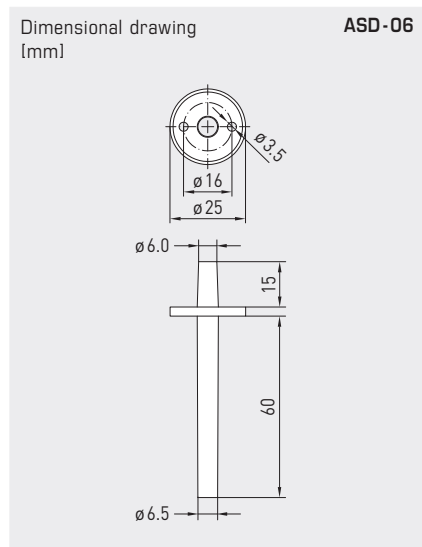
- TYPES OF MONITORING:**
 Pressure connections at the pressure switch are marked with P1 (+) for higher pressure and P2 (-) for lower pressure.
- (A) Below-atmospheric pressure**
 P1 (+) is not connected, but open to the atmosphere
 P2 (-) connected to inside of duct
 - (B) Filter**
 P1 (+) connected upstream of filter
 P2 (-) connected downstream of filter
 - (C) Ventilator**
 P1 (+) connected downstream of ventilator
 P2 (-) connected upstream of ventilator
 - (D) Volume flow**
 P1 (+) dynamic pressure, connected in flow direction
 P2 (-) static pressure, connected free of dynamic pressure components

Switchable system of units

Measurements / Data points	SI (default)	→	Imperial
Differential pressure	[Pa]	→	[inWC]
Volume flow	[m³/h]	→	[CFM]
Temperature	[°C]	→	[°F]

Measuring ranges	SI (default)	→	Imperial
Typ 7249	-500...+500 Pa	→	-2.0...+2.0 inWC
Typ 724x	-7000...+7000 Pa	→	-28...+28 inWC
Typ 724xT	-50...+150 °C	→	-58...+302 °F

Dual pressure sensor (2 measuring channels),
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ASD-06
Connection set



ASD-07
Connection nipple



DAL-01
Pressure outlet



WS-03
Weather and sun protection hood
(optional)

ACCESSORIES

KA2-Modbus	Communication adapter (USB/RS485) for system connection	1906-1200-0000-100	213,99 €
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination	1906-1300-0000-100	79,81 €
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	7,64 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS	7100-0060-7000-000	7,64 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001	35,77 €
WS-03	Weather and sun protection hood , 200 x 180 x 150 mm, stainless steel V2A (1.4301)	7100-0040-6000-000	44,74 €

For further information, see chapter Accessories!



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PREMASGARD® 724xT-Modbus

with cable gland
or M12 connector
and connection facility for Pt1000



PREMASGARD® 724x-Modbus

with cable gland
or M12 connector



PREMASGARD® 724x-Modbus		Dual pressure sensor (2 measuring channels), measuring transducer for differential pressure and volume flow, <i>Deluxe</i>			
Measuring Range	Type / WG02	Output	Display	Item No.	Price
Pressure / Volume Flow			● = Q		
(1) max. ± 7000 Pa (2) max. ± 7000 Pa		Type 7247			
Channel (1) and (2): -7000 ... +7000 Pa	167332 m³/h (k=2000)	PREMASGARD 7247-Modbus	Modbus	1301-7224-0950-200	255,15 €
		PREMASGARD 7247-Modbus LCD	Modbus	■ 1301-7224-4950-200	303,91 €
		PREMASGARD 7247T-Modbus	Modbus	1301-7224-0950-2W0	289,17 €
		PREMASGARD 7247T-Modbus LCD	Modbus	■ 1301-7224-4950-2W0	337,93 €
		PREMASGARD 7247-Modbus Q	Modbus	● 2004-6331-6100-011	332,26 €
		PREMASGARD 7247-Modbus Q LCD	Modbus	● ■ 2004-6332-6100-011	381,02 €
		PREMASGARD 7247T-Modbus Q	Modbus	● 2005-6331-6100-011	366,28 €
		PREMASGARD 7247T-Modbus Q LCD	Modbus	● ■ 2005-6332-6100-011	415,04 €
(1) max. ± 500 Pa (2) max. ± 7000 Pa		Type 7249			
Channel (1): -500 ... +500 Pa	44721 m³/h	PREMASGARD 7249-Modbus	Modbus	1301-7224-0930-200	255,15 €
		PREMASGARD 7249-Modbus LCD	Modbus	■ 1301-7224-4930-200	303,91 €
Channel (2): -7000 ... +7000 Pa	167332 m³/h (k=2000)	PREMASGARD 7249T-Modbus	Modbus	1301-7224-0930-2W0	289,17 €
		PREMASGARD 7249T-Modbus LCD	Modbus	■ 1301-7224-4930-2W0	337,93 €
		PREMASGARD 7249-Modbus Q	Modbus	● 2004-6331-6100-001	332,26 €
		PREMASGARD 7249-Modbus Q LCD	Modbus	● ■ 2004-6332-6100-001	381,02 €
		PREMASGARD 7249T-Modbus Q	Modbus	● 2005-6331-6100-001	366,28 €
		PREMASGARD 7249T-Modbus Q LCD	Modbus	● ■ 2005-6332-6100-001	415,04 €
Note:	System of units SI (default) or Imperial (switchable via Modbus).				
Housing variant "Q":	Cable connection with M12 connector (male, 5-pin, A-code)				
Housing variant "T":	Connection facility for external Pt1000 sensor (-50...+150°C) (sensor element not included in the scope of delivery)				