

**Pressure and differential pressure measuring transducers,
incl. connection set,
with Modbus connection**

Maintenance-free pressure sensor **PREMASGARD® 232x-Modbus-T3** (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 (optionally M12 connector according to DIN EN 61076-2-101), optionally with/without display, for measuring the differential pressure (max. 7000 Pa) in air. International system of units **SI** (default) can be switched to **Imperial** (via Modbus). Incl. mounting flange and connection set **ASD-06** (2 m connecting hose, two pressure port nipples, screws).

The 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.

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.

TECHNICAL DATA

Power supply:	24 V AC (±20%) and 15...36 V DC
Power consumption:	< 1.2 W / 24 V DC; < 1.8 VA / 24 V AC
System of units:	SI (default) or Imperial (switchable via Modbus)
Data points:	Differential pressure [Pa] [inWC]
Pressure type:	Differential pressure
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 2328 (500 Pa): typical ± 3 Pa at +25 °C Type 2327 (7000 Pa): typical ± 35 Pa at +25 °C compared to a calibrated reference device
Above- / below-pressure:	max. ± 50 kPa
Zero point offset:	± 5 % 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)
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:	108 x 78.5 x 43.3 mm (Tyr 3 without display) 108 x 78.5 x 45.8 mm (Tyr 3 with display)
Cable connection:	cable gland , plastic (2x M20 x 1.5; with strain relief, exchangeable, inner diameter 8 - 13 mm) or M12 connector according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.2 - 1.5 mm², via push-in terminals
Permissible humidity:	< 95 % RH, (non-precipitating air)
Protection class:	III (according to EN 60 730)
Safety class:	IP 65 (according to EN 60 529)
Standards:	CE-conformity, electromagnetic compatibility according to EN 61326, EMC directive 2014 / 30 / EU
Optional:	three-line display with illumination , programmable, cut-out approx. 51 x 29 mm (W x H), to display the actual pressure or an individually programmable display value
ACCESSORIES	see table

PREMASGARD® 232x - Modbus - T3



Device version
with **M12 connector**
(optional on request)



Programmable
display screen

**Modbus
Tyr 3**





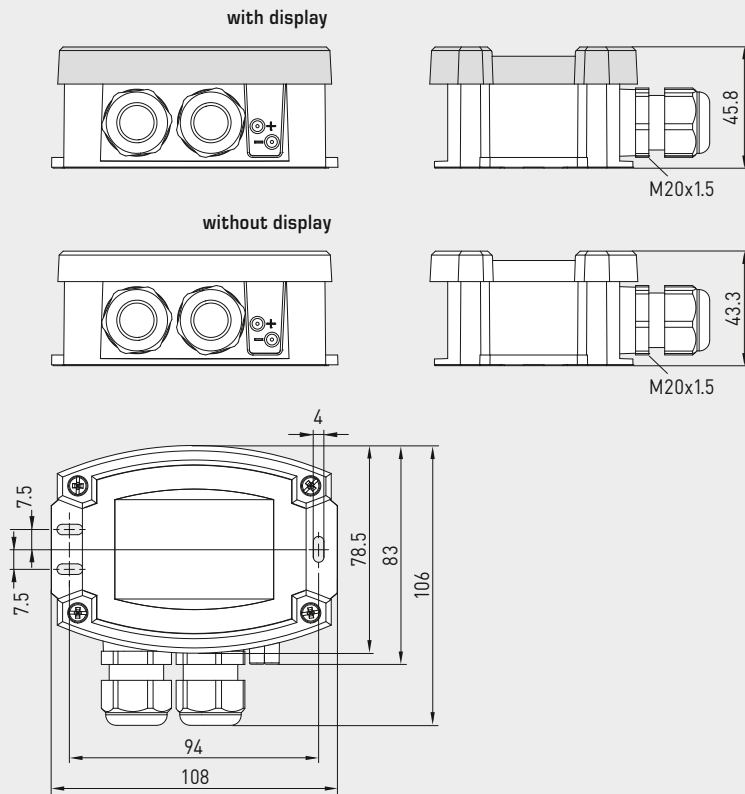
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Dimensional drawing
[mm]

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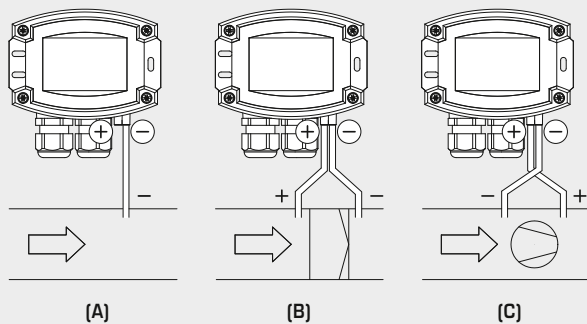


PREMASGARD® 232x - Modbus - T3
with display



Mounting diagram

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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

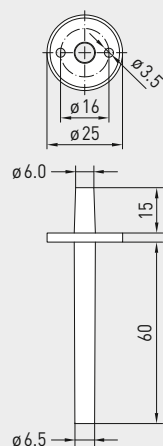
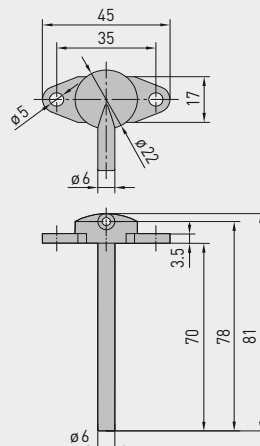
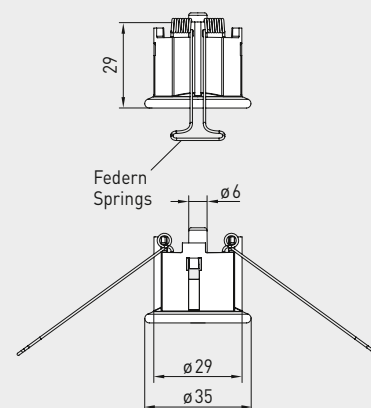
Switchable system of units

Measurements / Data points	SI (default)	→	Imperial
Differential pressure	[Pa]	→	[inWC]

Measuring ranges	SI (default)	→	Imperial
Type 2328	-500...+500 Pa	→	-2.0...+2.0 inWC
Type 2327	-7000...+7000 Pa	→	-28...+28 inWC

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Dimensional drawing
[mm]**ASD-06**Dimensional drawing
[mm]**ASD-07**Dimensional drawing
[mm]**DAL-01****ASD-06**
Connection set**ASD-07**
Connection nipple**DAL-01**
Pressure outlet**WS-04**

Weather and sun protection hood
(optional)

ACCESSORIES

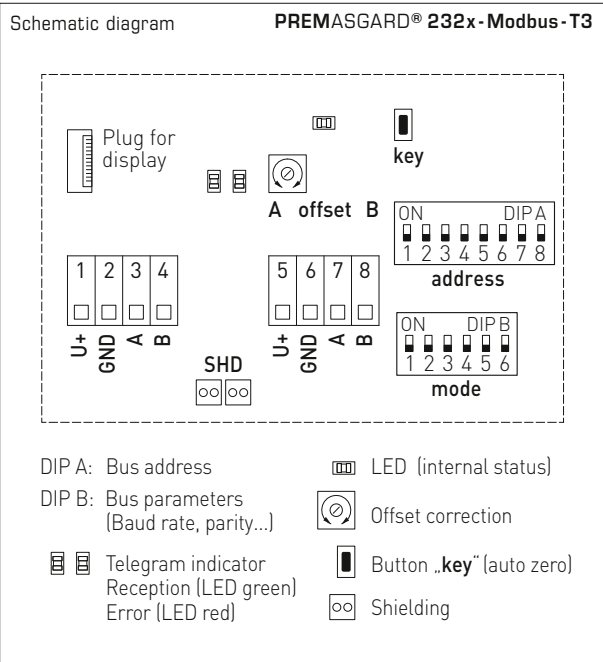
KA2-Modbus	Communication adapter (USB/RS485) for system connection	1906-1200-0000-100
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination	1906-1300-0000-100
ASD-06	Connection set (included in the scope of delivery) , consisting of 2 connection nipples (straight) 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-04	Weather and sun protection hood , 130 x 180 x 135 mm, stainless steel V2A (1.4301)	7100-0040-7000-000
For further information, see chapter Accessories!		



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Pressure sensor,
differential pressure measuring transducer

Measuring Range Pressure	Type / WG02	Output	Display	Item No.
± 500 Pa	Type 2328			
– 500 ... + 500 Pa	PREMASGARD 2328-Modbus	Modbus		1301-12C4-0910-200
	PREMASGARD 2328-Modbus LCD	Modbus	■	1301-12C4-4910-200
± 7000 Pa	Type 2327			
– 7000 ... + 7000 Pa	PREMASGARD 2327-Modbus	Modbus		1301-12C4-0950-200
	PREMASGARD 2327-Modbus LCD	Modbus	■	1301-12C4-4950-200
Optional:	Cable connection with M12 connector (male, 5-pin , A-code)			
Note:	System of units SI (default) or Imperial (switchable via Modbus).			