

MODBUS/BACNET



TRYKFØLERE

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

PREMASGARD® 232x - Modbus - T3

Maintenance-free pressure measuring transducer **PREMASGARD® 232x - Modbus - T3** (Series), with Modbus connection, in an impact-resistant plastic housing with quick-locking screws, optionally with /without display, nozzles for pressure hose (Ø 6 mm), incl. connection set **ASD-06** (2m connecting hose, two pressure port nipples, screws).

The on-wall sensor is used to measure positive, negative or differential pressure in clean air (non-precipitating) or gaseous, non-aggressive, non-combustible 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. The piezoresistive measuring element is temperature-compensated and guarantees a high degree of reliability and accuracy.

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, 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

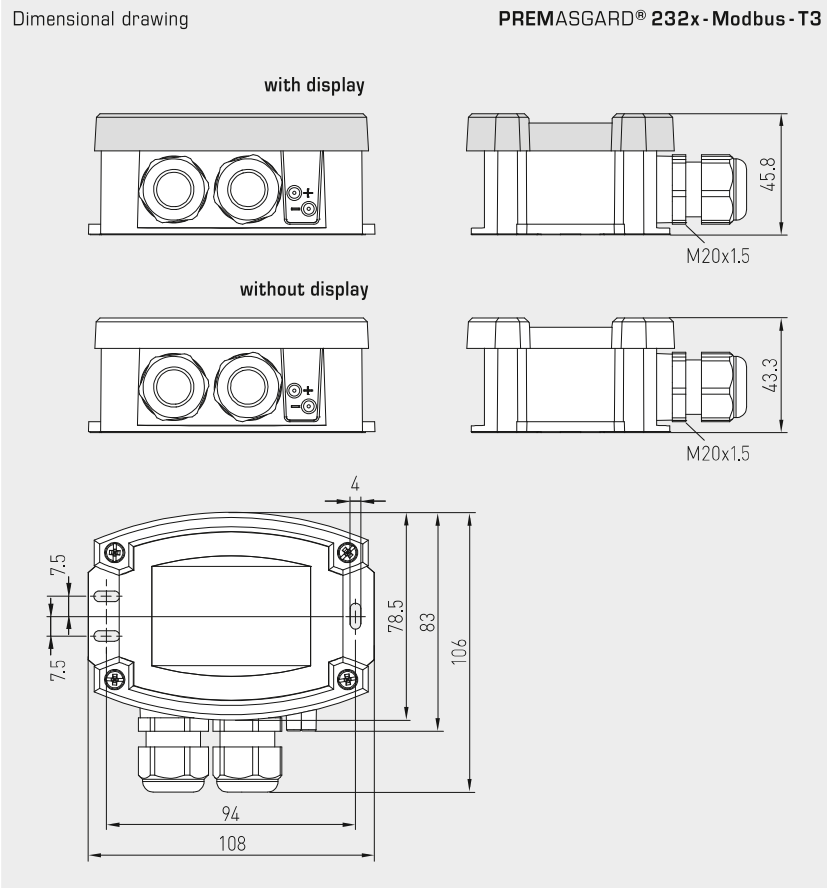
Power supply:	24 V AC (±20%) and 15...36 V DC
Power consumption:	< 1.2 W / 24 V DC; < 1.8 VA / 24 V AC
Type of pressure:	differential pressure
Pressure connection:	with connection nozzles for pressure hose Ø 6 mm
Measuring ranges:	-500... +500 Pa or -7000...+7000 Pa depending on the type of device, see table
Accuracy:	Type 2328 (500 Pa): typically ± 3 Pa at +25 °C Type 2327 (7000 Pa): typically ±35 Pa at +25 °C compared to the calibrated reference device
Above- / below-pressure:	max. ± 50 kPa
Zero point offset:	± 5 % measuring range
Medium:	clean air and other 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)
Hysteresis:	0.3% of final value
Linearity:	< ± 1 % of final value
Temperature drift values:	± 0.1 % / °C
Long-term stability:	± 1 % per year
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), 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 M 20 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, using push-in terminals
Permissible air humidity:	< 95 % r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP65 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC directive 2014 / 30 / EU
Optional:	Display with illumination , three-line, programmable, cut-out approx. 51 x 29 mm (W x H), for displaying the ACTUAL pressure or an individually programmable display value
ACCESSORIES	see table

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

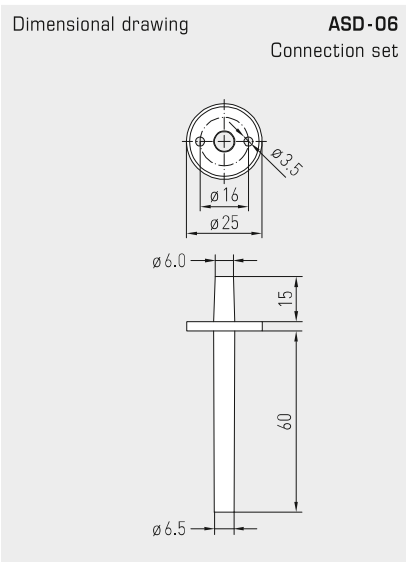


Programmable display screen **Modbus Tyr 3**

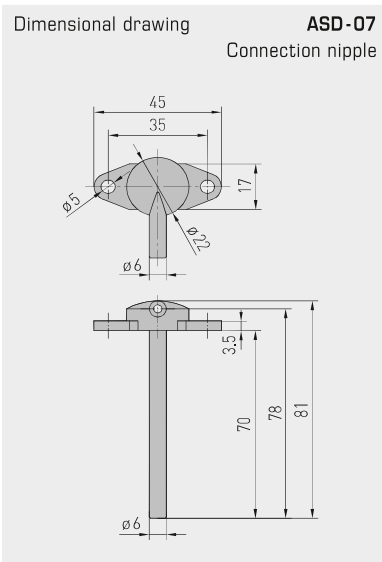




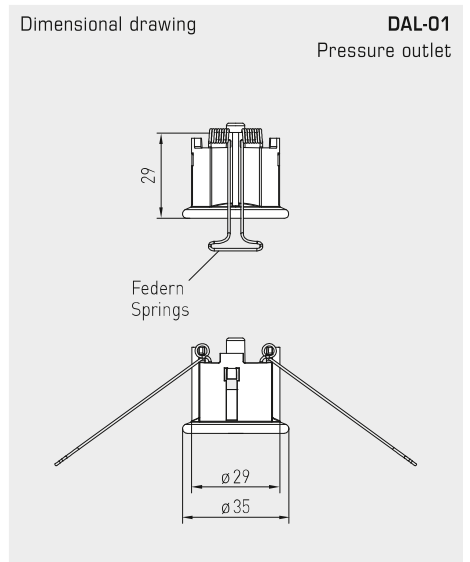
PREMASGARD® 232x - Modbus - T3 with display



ASD-06 Connection set



ASD-07 Connection nipple



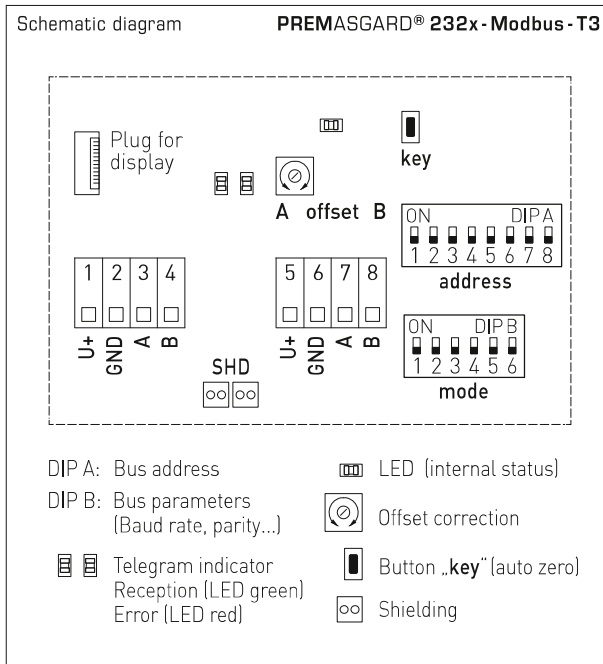
DAL-01 Pressure outlet



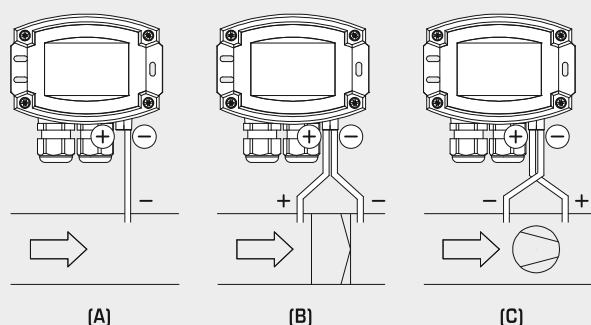
Pressure and differential pressure measuring transducers,
incl. connection set,
with Modbus connection

WS-04

Weather and sun protection hood
(optional)



Mounting diagram **PREMASGARD® 232x - Modbus - T3**



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

PREMASGARD® 232x - Modbus - T3
with display

PREMASGARD® 232x - Modbus - T3 Pressure and differential pressure measuring transducers

Type / WG01	Measuring Range Pressure range	Output	Display	Item No.	Price
PREMASGARD® 2328 - Modbus - T3	- 500...+ 500 Pa				
PREMASGARD 2328	-500...+500 Pa	Modbus		1301-12C4-0910-200	154,11 €
PREMASGARD 2328 LCD	-500...+500 Pa	Modbus	■	1301-12C4-4910-200	203,98 €
PREMASGARD® 2327 - Modbus - T3	- 7000...+ 7000 Pa				
PREMASGARD 2327	-7000...+7000 Pa	Modbus		1301-12C4-0950-200	154,11 €
PREMASGARD 2327 LCD	-7000...+7000 Pa	Modbus	■	1301-12C4-4950-200	203,98 €
Optional:	Cable connection with M12 connector according to DIN EN 61076-2-101			on request	

ACCESSORIES

KA2-Modbus	Communication adapter (USB/RS485) for system connection			1906-1200-0000-100	203,80 €
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination			1906-1300-0000-100	76,01 €
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	7,28 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS			7100-0060-7000-000	7,28 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)			7300-0060-3000-001	34,07 €
WS-04	Weather and sun protection hood , 130 x 180 x 135 mm, stainless steel V2A (1.4301)			7100-0040-7000-000	35,70 €

For further information, see last chapter Accessories!

Pressure sensor and measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection

Maintenance-free, microprocessor-controlled **PREMASGARD® 714x-Modbus** (series) with Modbus connection, impact-resistant plastic housing, optionally with/without display, with cable gland or M12 connector according to DIN EN 61076-2-101, for measuring the differential pressure (max. -7000...+7000 Pa) in air. Incl. connection kit **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 [Pa], volume flow [m³/h].

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, 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.

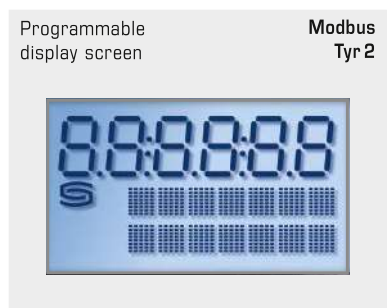
PREMASGARD® 714x-Modbus



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



TECHNICAL DATA	
Power supply:	24 V AC (±20%) and 15...36V DC
Power consumption:	< 4.8 W / 24 V DC typical; < 6.8 VA / 24 V AC typical
Pressure type:	Differential pressure
Data points:	Differential pressure [Pa], volume flow [m³/h]
Measuring range, pressure:	-500... +500 Pa or -7000...+7000 Pa depending on the device type, see table
Pressure accuracy:	Type 7148 (500 Pa): typical ± 13 Pa Type 7147 (7000 Pa): typical ± 105 Pa compared to a calibrated reference device
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 % / °C
Long-term stability:	± 1 % per year
Bus protocol:	Modbus (RTU mode), address range 0... 247 selectable
Signal filtering:	0 s / 1 s / 10 s
Pressure connection:	with metal nozzles for pressure hose Ø 6 mm
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 % r. H. (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 (Tyr2)
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:	Illuminated display , 3-line, 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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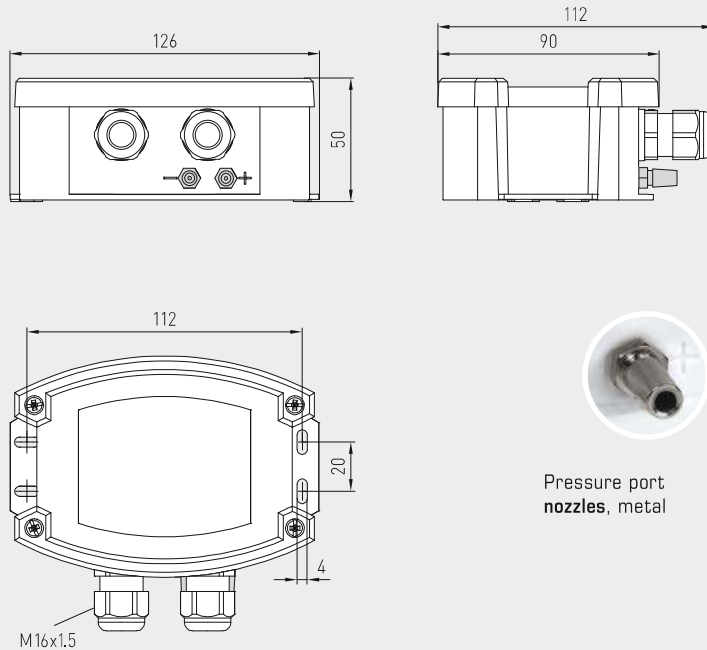
S+S REGELTECHNIK

PREMASGARD® 714x-Modbus

Pressure sensor and measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection

Dimensional drawing

PREMASGARD® 714x-Modbus



PREMASGARD® 714x-Modbus with display

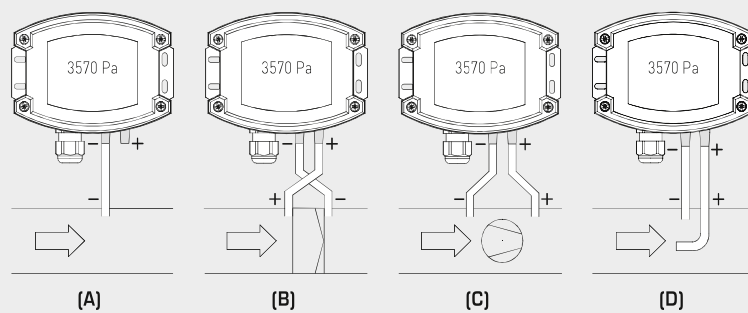


Device version with cable gland (as standard)



Mounting diagram

PREMASGARD® 714x-Modbus



TYPES OF MONITORING:

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

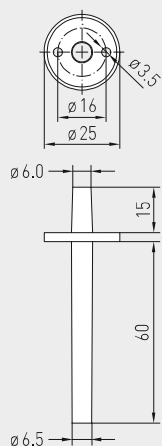
- (A) Below-atmospheric pressure**
P1 (+) is not connected, but open to the atmosphere
P2 (-) connected to inside of duct
- (B) Filter**
P1 (+) connected upstream of filter
P2 (-) connected downstream of filter
- (C) Ventilator**
P1 (+) connected downstream of ventilator
P2 (-) connected upstream of ventilator
- (D) Volume flow**
P1 (+) dynamic pressure, connected in flow direction
P2 (-) static pressure, connected free of dynamic pressure components

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

Pressure sensor and measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection

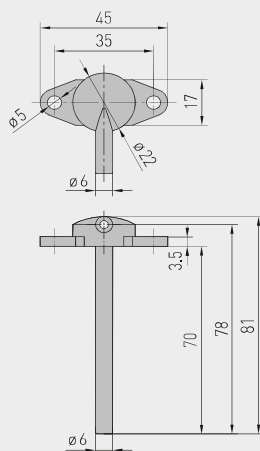
Dimensional drawing ASD-06 Connection set



ASD-06 Connection set



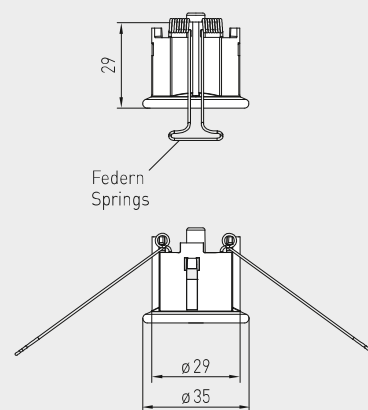
Dimensional drawing ASD-07 Connection nipple



ASD-07 Connection nipple



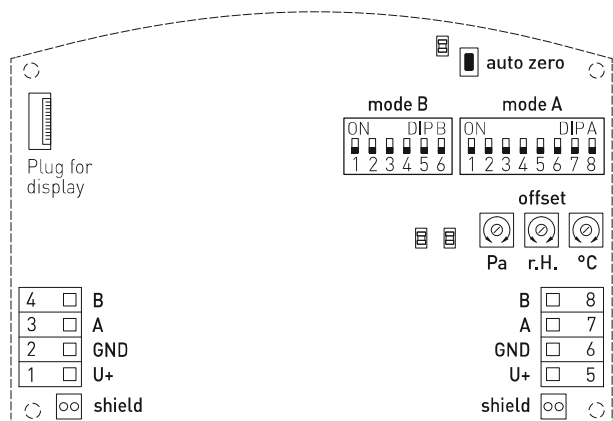
Dimensional drawing DAL-01 Pressure outlet



DAL-01 Pressure outlet



Schematic diagram PREMASGARD® 714x-Modbus



- DIP A: Bus address
- DIP B: Bus parameters (Baud rate, parity...)
- Telegram indicator Reception (LED green) Error (LED red)
- LED (internal status)
- Reset button
- Offset correction
- Shielding

WS-03 Weather and sun protection hood (optional)





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PREMASGARD® 714x-Modbus

Pressure sensor and measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection

PREMASGARD® 714x-Modbus
with display,
hinged



PREMASGARD® 714x-Modbus		Pressure sensor and measuring transducer for differential pressure and volume flow, <i>Deluxe</i>				
Measuring Range	Type/WG02	Output	Display	Item no.	Price	
Pressure / Volume Flow						
- 500...+ 500 Pa	7148					
k = 2000 44721 m³/h	PREMASGARD 7148-Modbus	Modbus		1301-7164-0910-20V	387,72 €	
	PREMASGARD 7148-Modbus LCD	Modbus	■	1301-7164-4910-20V	430,92 €	
	with automatic zero-point calibration as standard					
- 7000...+ 7000 Pa	7147					
k = 2000 167332 m³/h	PREMASGARD 7147-Modbus	Modbus		1301-7164-0950-200	333,72 €	
	PREMASGARD 7147-Modbus LCD	Modbus	■	1301-7164-4950-200	376,92 €	
	with optional automatic zero point calibration (Please specify in your order) on request					
Extra charge:	Cable connection with M12 connector according to DIN EN 61076-2-101				on request	
Measuring range:	The pressure ranges depend on the device type and can be set via Modbus.					

ACCESSORIES					
KA2-Modbus	Communication adapter (USB/RS485) for system connection			1906-1200-0000-100	203,80 €
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination			1906-1300-0000-100	76,01 €
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	7,28 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS			7100-0060-7000-000	7,28 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)			7300-0060-3000-001	34,07 €
WS-03	Weather and sun protection hood , 200x180x150 mm, stainless steel V2A (1.4301)			7100-0040-6000-000	42,61 €
	For further information, see chapter Accessories!				

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, impact-resistant plastic housing, optionally with /without display, with cable gland or M12 connector according to DIN EN 61076-2-101, for measuring the differential pressure (max. -7000...+7000 Pa) in air. Incl. connection set **ASD-06** (2m connecting hose, two pressure port nipples, screws). 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). 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 [Pa], volume flow [m³/h] and temperature [°C]. **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, 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...36V DC
Power consumption:	< 4.8 W / 24 V DC typical; < 6.8 VA / 24 V AC typical
Pressure type:	differential pressure (2 measuring channels)
Data points:	differential pressure [Pa], volume flow [m³/h], temperature [°C] – Type 724xT with connection facility for external Pt1000 sensor (sensor element not included in the scope of delivery)
Measuring range, pressure:	-500... +500 Pa or -7000...+7000 Pa depending on the device type, see table
Pressure accuracy:	Type 7249 (500 Pa): typical ± 13 Pa Type 724x (7000 Pa): typical ± 105 Pa compared to a calibrated reference device
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 % / °C
Long-term stability:	± 1 % per year
Bus protocol:	Modbus (RTU mode), address range 0... 247 selectable
Signal filtering:	0 s / 1 s / 10 s at pressure (4 s / 32 s at temperature)
Pressure connection:	with nozzles for pressure hose Ø 6 mm
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 % r. H. (non-precipitating air)
Electrical connection:	0.2- 1.5 mm², via push-in terminals
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 (Tyr2)
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
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:	display with illumination , 3-line, programmable, cut-out approx. 70 x 40 mm (W x H), to display the ACTUAL pressure of both channels or the ACTUAL temperature (cyclic) or an individually programmable display value
ACCESSORIES	see table
ASD-06	connection set (nipple straight) (included in the scope of delivery)



NEW

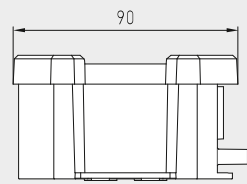
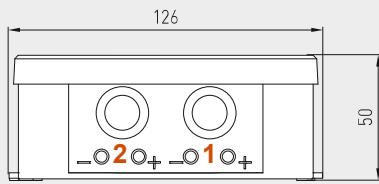
S+S REGELTECHNIK

PREMASGARD® 724x-Modbus

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

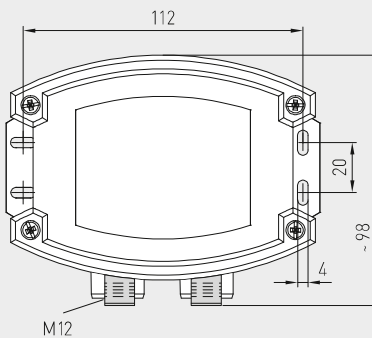
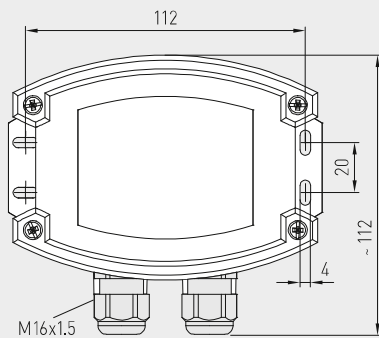
Dimensional drawing

PREMASGARD® 724x-Modbus



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

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



PREMASGARD® 724x-Modbus
with cable gland
and display

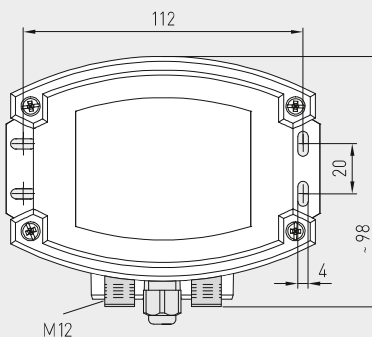
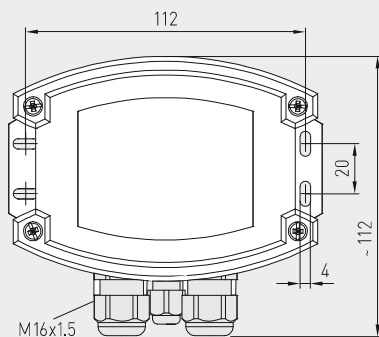


PREMASGARD® 724x-Modbus-Q
with M12 connector
and display



Dimensional drawing

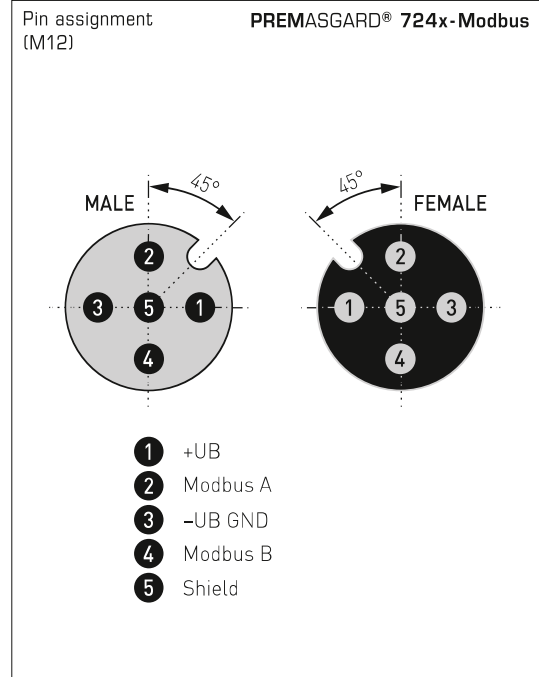
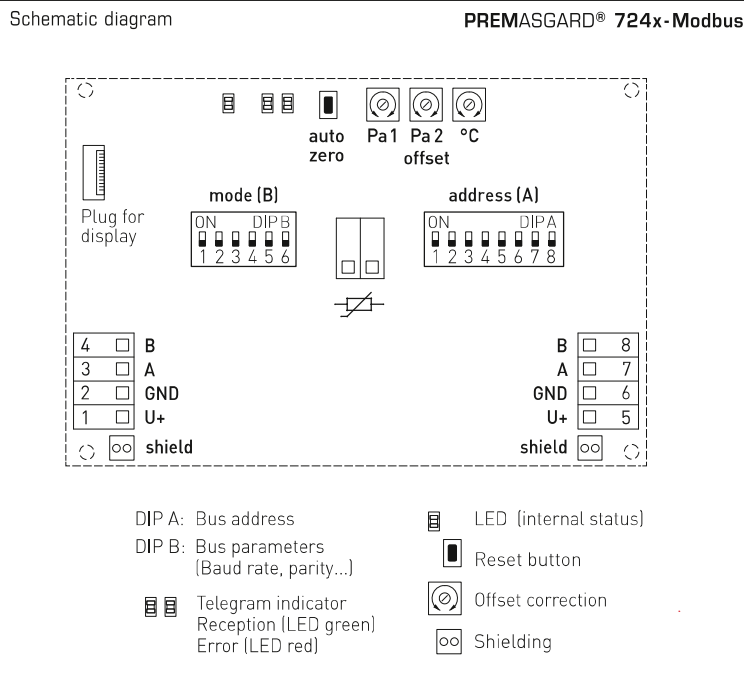
PREMASGARD® 724xT-Modbus
with connection facility
for external Pt1000 sensor



PREMASGARD® 724xT-Modbus
with cable gland
and display



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



Display screen (cyclic/static) **PREMASGARD® 724x-Modbus**

Pressure (channel 1) 382 Pa

Volume flow rate 3.174 m³/h

Pressure (channel 2) 6350 Pa

Temperature (only type "T") 27.8 °C

Standard displays (programmable via Modbus)

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

Alternatively, the calculated **volume flow** [m³/h] can also be issued for channel 1 (via the index).

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

Programmable display screen **Modbus Tyr 2**

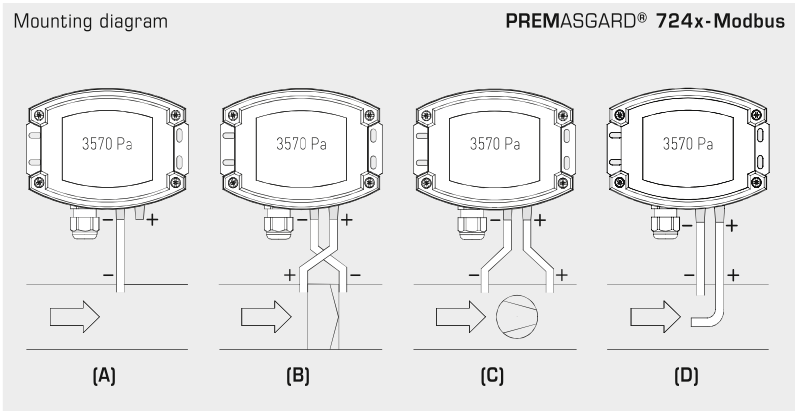


S+S REGELTECHNIK

NEW

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, hinged



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

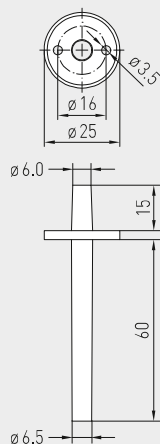
Conversion table for pressure values:

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), measuring transducer for differential pressure and volume flow, incl. connection set, calibratable, with Modbus connection

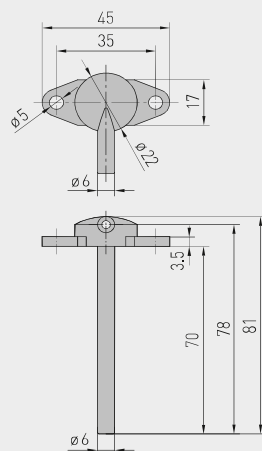
Dimensional drawing **ASD-06**
Connection set



ASD-06
Connection set



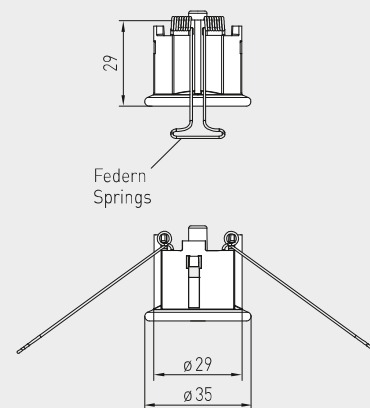
Dimensional drawing **ASD-07**
Connection nipple



ASD-07
Connection nipple



Dimensional drawing **DAL-01**
Pressure outlet



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	203,80 €
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination	1906-1300-0000-100	76,01 €
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	7,28 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS	7100-0060-7000-000	7,28 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001	34,07 €
WS-03	Weather and sun protection hood, 200 x 180 x 150 mm, stainless steel V2A (1.4301)	7100-0040-6000-000	42,61 €

For further information, see chapter Accessories!



NEW

S+S REGELTECHNIK

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® 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, *Deluxe*

Pressure range (adjustable per channel)	Type/WG02	Output	Display ● = Q	Item No.	Price
(1) max. - 7000...+ 7000 Pa (2) max. - 7000...+ 7000 Pa	Type 7247				
Channel (1) and (2):	PREMASGARD 7247-Modbus	Modbus		1301-7224-0950-200	243,00 €
0 ... 1000 Pa / - 1000 ... + 1000 Pa	PREMASGARD 7247-Modbus LCD	Modbus	■	1301-7224-4950-200	289,44 €
0 ... 3000 Pa / - 3000 ... + 3000 Pa	PREMASGARD 7247T-Modbus	Modbus		1301-7224-0950-2W0	275,40 €
0 ... 5000 Pa / - 5000 ... + 5000 Pa	PREMASGARD 7247T-Modbus LCD	Modbus	■	1301-7224-4950-2W0	321,84 €
0 ... 7000 Pa / - 7000 ... + 7000 Pa	PREMASGARD 7247-Modbus Q	Modbus	●	2004-6331-6100-011	316,44 €
	PREMASGARD 7247-Modbus Q LCD	Modbus	● ■	2004-6332-6100-011	362,88 €
	PREMASGARD 7247T-Modbus Q	Modbus	●	2005-6331-6100-011	348,84 €
	PREMASGARD 7247T-Modbus Q LCD	Modbus	● ■	2005-6332-6100-011	395,28 €
(1) max. - 500... + 500 Pa (2) max. - 7000...+ 7000 Pa	Type 7249				
Channel (1):	PREMASGARD 7249-Modbus	Modbus		1301-7224-0930-200	243,00 €
0 ... 100 Pa / - 100 ... + 100 Pa	PREMASGARD 7249-Modbus LCD	Modbus	■	1301-7224-4930-200	289,44 €
0 ... 200 Pa / - 200 ... + 200 Pa	PREMASGARD 7249T-Modbus	Modbus		1301-7224-0930-2W0	275,40 €
0 ... 300 Pa / - 300 ... + 300 Pa	PREMASGARD 7249T-Modbus LCD	Modbus	■	1301-7224-4930-2W0	321,84 €
0 ... 500 Pa / - 500 ... + 500 Pa	PREMASGARD 7249-Modbus Q	Modbus	●	2004-6331-6100-001	316,44 €
Channel (2): see Type 7247	PREMASGARD 7249-Modbus Q LCD	Modbus	● ■	2004-6332-6100-001	362,88 €
	PREMASGARD 7249T-Modbus Q	Modbus	●	2005-6331-6100-001	348,84 €
	PREMASGARD 7249T-Modbus Q LCD	Modbus	● ■	2005-6332-6100-001	395,28 €
Multi-range switching:	The pressure ranges depend on the device type and are separately adjustable for each measuring channel via Modbus .				
Housing variant "Q":	Cable connection with M12 connector (male, 5-pin, A-code)				
Housing variant "T":	Connection facility for external Pt1000 sensor (sensor element not included in the scope of delivery)				

Multifunctional duct sensors and measuring transducers for humidity, temperature, pressure, differential pressure and volume flow, incl. mounting flange and connection set, calibratable, with Modbus connection

Maintenance-free microprocessor-controlled **PREMASGARD® 814x-Modbus** (Series) with Modbus connection, in an impact-resistant plastic housing with quick-locking screws, optionally with/without display, with a plastic sinter filter (exchangeable), to exactly detect the relative humidity (0...100% r.H.) and the temperature (-35...+80 °C) in ducts and to measure the differential pressure (max. -7000...+7000 Pa) in air. Incl. mounting flange and connection set **ASD-06** (2m 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 long-term stable, **digital humidity and temperature sensor** and a **pressure sensor** with piezoresistive measuring element guarantee exact measurement results. These measurands are used to internally calculate the following parameters that can be retrieved via Modbus: temperature [°C], relative humidity [% r.H.], dew point [°C], absolute humidity [g/m³], mixture ratio [g/kg], enthalpy [kJ/kg] (ignoring atmospheric air pressure), differential pressure [Pa], volume flow [m³/h], air density [kg/m³].

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, 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® 814x-Modbus
with plastic sinter filter
(standard)



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
Data points:	differential pressure [Pa], temperature [°C], relative humidity [% r.H.], dew point [°C], absolute humidity [g/m³], mixture ratio [g/kg], enthalpy [kJ/kg], volume flow [m³/h], air density [kg/m³]

HUMIDITY

Sensors:	digital humidity sensor with integrated temperature sensor , low hysteresis, high long-term stability
Sensor protection:	plastic sinter filter , Ø 16 mm, L = 35 mm, exchangeable (optional metal sinter filter , Ø 16 mm, L = 32 mm)
Measuring range, humidity:	0...100% r. H.
Operating range, humidity:	0...95% r. H. (without dew formation)
Deviation in humidity:	typically ±2.0% (20...80% r.H.) at +25 °C, otherwise ±3.0%

TEMPERATURE

Measuring range, temperature:	-35...+80 °C
Deviation in temperature:	typically ±0.2 K at +25 °C

PRESSURE

Type of pressure:	differential pressure
Pressure connection:	with metal connection nozzles for pressure hose Ø 6 mm (optional on request with quick connect for PVC fabric pressure hose Ø 6 mm)
Measuring range, pressure:	-500... +500 Pa or -7000...+7000 Pa depending on the type of device, see table
Accuracy, pressure:	Type 8148 (500 Pa): typically ± 13 Pa at +25 °C Type 8147 (7000 Pa): typically ± 105 Pa at +25 °C compared to the calibrated reference device

Above-/ below-pressure:	max. ± 50 kPa
Zero point offset:	± 10 % of final value
Medium:	clean air and non-aggressive, non-combustible gases
Media contacting parts:	Brass, Ni, thermoset plastic, Si, epoxy, RTV, BSG, UV silicone gel
Media temperature:	-20...+50 °C (temperature-compensated 0...+50 °C)
Hysteresis:	0.3 % of final value
Linearity:	< ± 1 % of final value
Temp. drift values:	± 0.1 % / °C
Long-term stability:	± 1 % per year

Display screen (cyclic/static) **Modbus Tyr 2**



Pressure



Temperature



Humidity



Volume flow rate

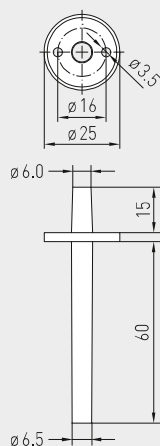
Programmable display screen **Modbus Tyr 2**



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Multifunctional duct sensors and measuring transducers
for humidity, temperature, pressure, differential pressure and volume flow,
incl. mounting flange and connection set,
calibratable, with Modbus connection

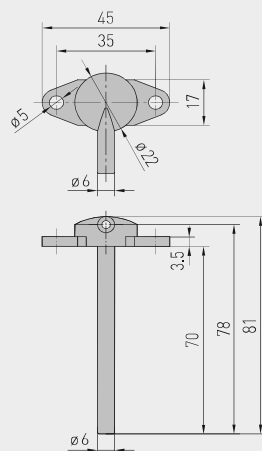
Dimensional drawing **ASD-06**
Connection set



ASD-06
Connection set



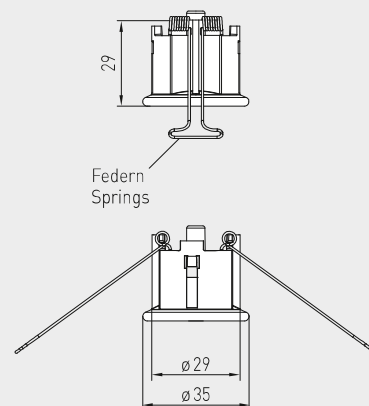
Dimensional drawing **ASD-07**
Connection nipple



ASD-07
Connection nipple



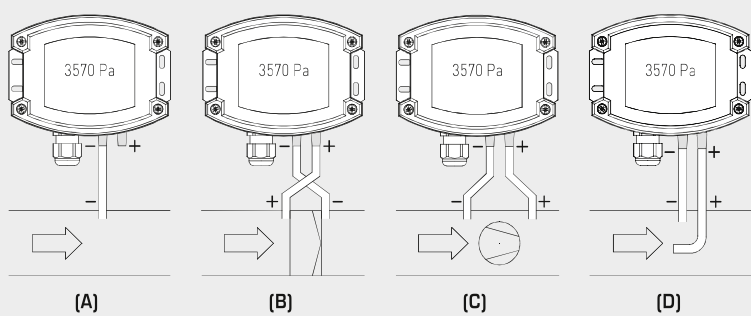
Dimensional drawing **DAL-01**
Pressure outlet



DAL-01
Pressure outlet



Mounting diagram **PREMASGARD® 814x-Modbus**



TYPES OF MONITORING:

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

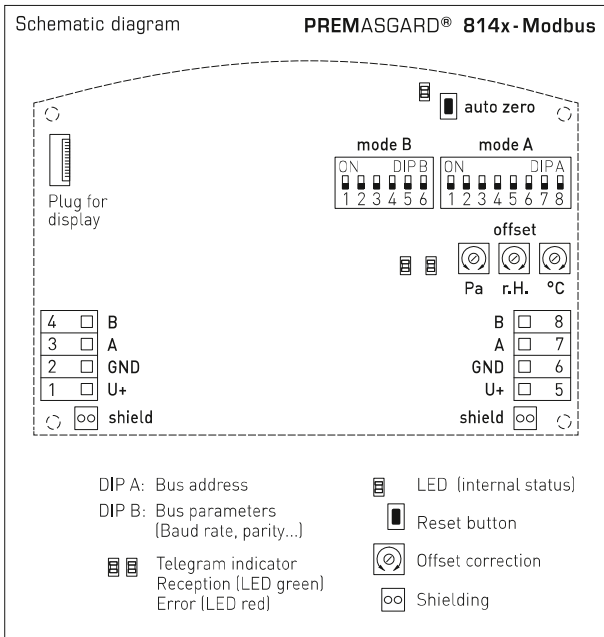
- (A) Below-atmospheric pressure**
P1 (+) is not connected, but open to the atmosphere
P2 (-) connected to inside of duct
- (B) Filter**
P1 (+) connected upstream of filter
P2 (-) connected downstream of filter
- (C) Ventilator**
P1 (+) connected downstream of ventilator
P2 (-) connected upstream of ventilator
- (D) Volume flow**
P1 (+) dynamic pressure, connected in flow direction
P2 (-) static pressure, connected free of dynamic pressure components

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



Multifunctional duct sensors and measuring transducers for humidity, temperature, pressure, differential pressure and volume flow, incl. mounting flange and connection set, calibratable, with Modbus connection



PREMASGARD® 814x-Modbus with display



SF-K
Plastic sinter filter (standard)



SF-M
Metal sinter filter (optional)
stainless steel protective tube (optional on request)

PREMASGARD® 814x-Modbus Multifunctional duct sensor for humidity, temperature, pressure, differential pressure and volume flow rate, *Deluxe*

Type / WG02	Measuring ranges	Humidity	Temperature	Output	Display	Item no.	Price
PREMASGARD® 8148-Modbus	- 500...+ 500 Pa						
PREMASGARD 8148-Modbus	-500...+ 500 Pa	0...100%r.H.	-35...+80°C	Modbus		1301-8144-0910-20V	491,72 €
PREMASGARD 8148-Modbus LCD	-500...+ 500 Pa	0...100%r.H.	-35...+80°C	Modbus	■	1301-8144-4910-20V	537,00 €
Equipped as standard with automatic zero point calibration							
PREMASGARD® 8147-Modbus	- 7000...+ 7000 Pa						
PREMASGARD 8147-Modbus	-7000...+ 7000 Pa	0...100%r.H.	-35...+80°C	Modbus		1301-8144-0950-200	434,72 €
PREMASGARD 8147-Modbus LCD	-7000...+ 7000 Pa	0...100%r.H.	-35...+80°C	Modbus	■	1301-8144-4950-200	480,56 €
Extra charge:	with optional automatic zero point calibration (please specify in your order)						69,10 €
Optional:	Cable connection with M12 connector according to DIN EN 61076-2-101						on request

ACCESSORIES			
KA2-Modbus	Communication adapter (USB/RS485) for system connection	1906-1200-0000-100	203,80 €
LA-Modbus	Line termination device (with terminating resistor) as an active bus termination	1906-1300-0000-100	76,01 €
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	7,28 €
ASD-07	2 connection nipples (at 90° angle) made of ABS	7100-0060-7000-000	7,28 €
DAL-01	Pressure outlet for ceiling or in-wall installation (e.g. in clean rooms)	7300-0060-3000-001	34,07 €
SF-M	Metal sinter filter , Ø 16 mm, L = 32 mm, exchangeable, stainless steel V4A (1.4404)	7000-0050-2200-100	40,31 €
MFT-20-K	Mounting flange , plastic (included in the scope of delivery)	7000-0031-0000-000	9,10 €

For further information see last chapter!



HVAC & BYGNINGS-
AUTOMATIK

VORES PRODUKTSORTIMENT INKLUDERER:



PRESSOSTATER



TRYK- & FLOWTRANSMITTERE



CO2- & VOCFØLERE



FLOWSWITCHE



MODBUS/BACNET



TEMPERATURCONTROLLERE

VI FØRER PRODUKTER INDENFOR KATEGORIERNE:



AUTOMATIK



ELVARME



KØLEPROFILER

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