

Volume flow measuring transducers/switches (monitors) (± 1,5%), including connection set

Calibratable pressure sensors **PREMASGARD® 1161** and **PREMASREG® 1160** are used for measuring above-atmospheric, below-atmospheric, or differential pressures in air for volume flow rate indication. The piezo-resistive measuring element 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 monitoring filters, for level measurement, or for triggering frequency converters. Media measured are air (non-precipitating), or other gaseous non-aggressive, non-combustible media.

PREMASGARD® 1161
PREMASREG® 1160
Connections



TECHNICAL DATA

Power supply:	PREMASGARD® 1161: 24 V AC (±20%) and 15...36 V DC PREMASREG® 1160: 24 V AC / DC (±20%)
Load resistance:	$R_L > 5 \text{ k}\Omega$
Power consumption:	< 1.1 VA / 24V DC, < 2.2 VA / 24V AC
Measuring ranges:	1000 Pa / 5000 Pa
Output signal:	0 -10 V
Electrical connection:	3-wire connection
Media temperature:	0...+50 °C
Pressure connection:	4 / 6 x 11 mm (hoses $\varnothing = 4 / 6 \text{ mm}$), metal pressure connection nozzles
Type of pressure:	differential pressure
Medium:	clean air and other non-aggressive, non-combustible gases
Accuracy:	± 1.5% of pressure range end value (at +20°C)
Sum linearity+hysteresis:	< ± 1% of pressure range end value
Temperature drift values:	± 0.1% of pressure range end value per °C
Zero point offset:	< ± 0.7% of pressure range end value
Above- / below-atmospheric pressure:	max. ± 200 hPa
Signal filtering:	switchable 1 s / 10 s
Enclosure:	plastic, material polyamide, 30% glass-globe reinforced, colour traffic white (similar to RAL 9016)
Dimensions:	108 x 70 x 73.5 mm (Thor 2)
Electrical connection:	0.14 - 1.5 mm ² , via removable plug-in screw terminals
Cable gland:	M16 x 1.5; including strain relief
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 according to EMC directive 2014 / 30 / EU, according to EN 61326-1, according to EN 61326-2-3
Features:	two-line display with illumination , cutout approx. 36 x 15 mm (W x H), displaying the volume flow rate
K factor:	1 to 3000
Measurement units:	adjustable m ³ /s, m ³ /min, m ³ /h, litres/s, lighters/min, lighters/h
Max. value displayed:	999999

ACCESSORIES

ASD-06	Connection set (nipple straight) – (included in the scope of delivery)
ASD-07	Connection nipple (at 90° angle)
WS-04	Weather and sun protection, 130 x 180 x 135 mm, stainless steel

WS-04
Weather and sun protection
(optional)





S+S REGELTECHNIK

PREMASGARD® 1161
PREMASREG® 1160

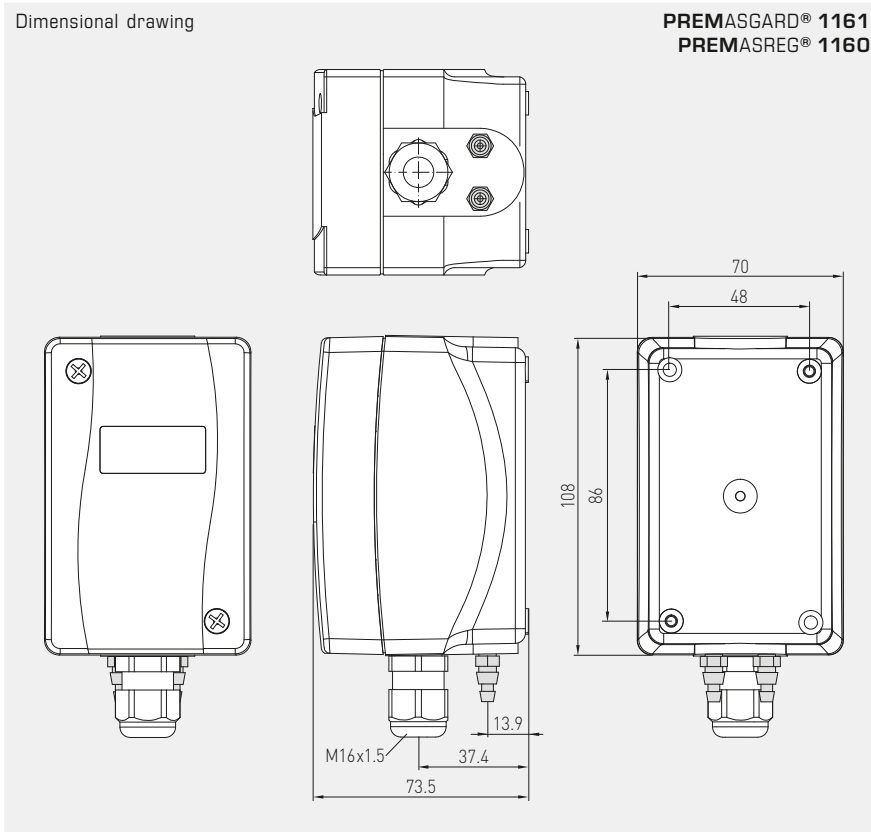
Volume flow measuring transducers/switches (monitors) ($\pm 1,5\%$),
including connection set



Dimensional drawing

PREMASGARD® 1161
PREMASREG® 1160

PREMASGARD® 1161
PREMASREG® 1160
with display

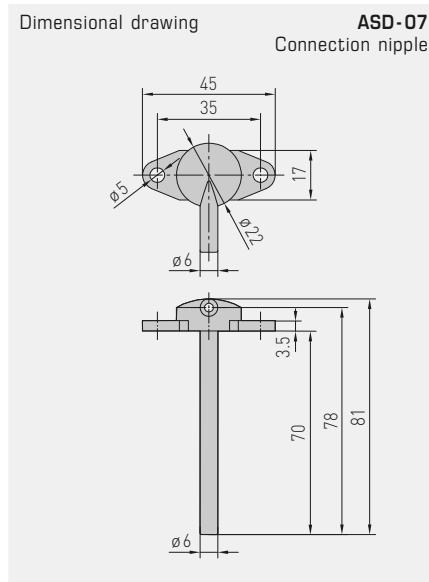
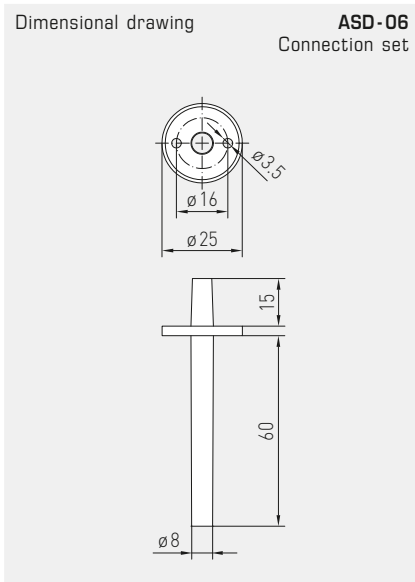


Dimensional drawing

ASD-06
Connection set

Dimensional drawing

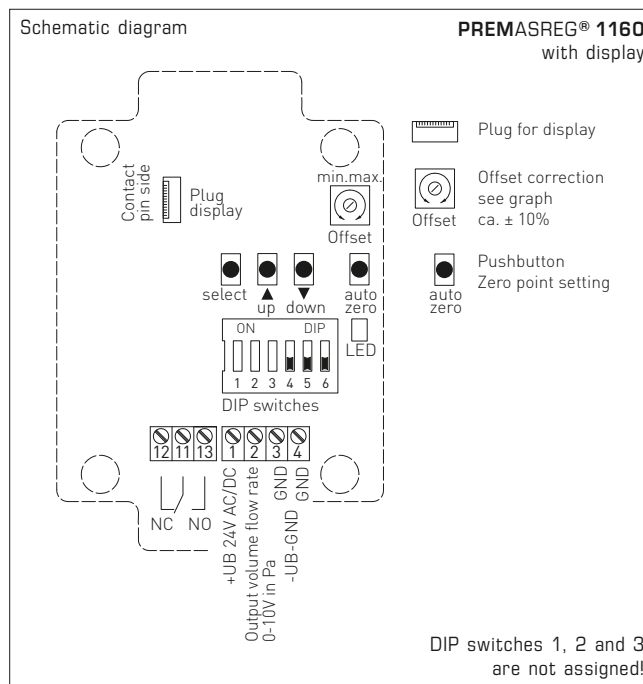
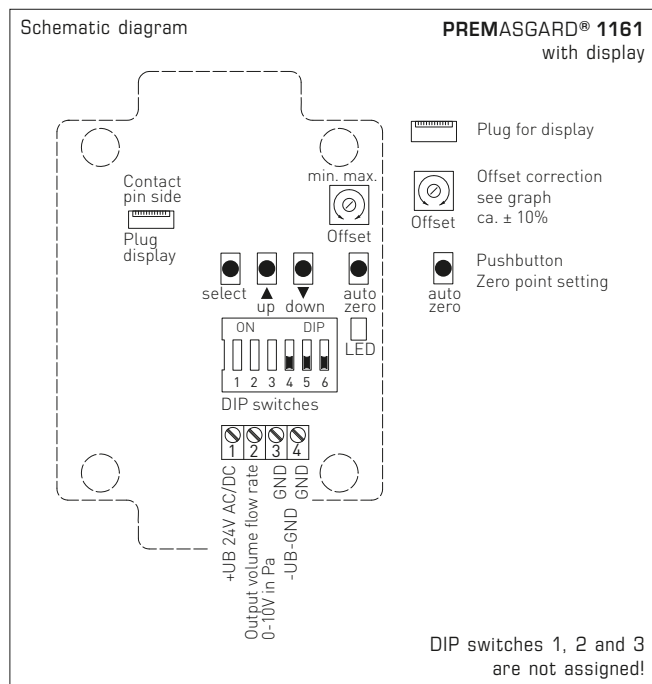
ASD-07
Connection nipple



ASD-06
Connection set

ASD-07
Connection nipple



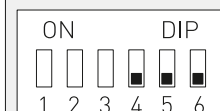


Output damping (Strength and length-adjustable)	DIP 4
Long (10 s)	OFF
Small (1 s)	ON

Volume flow rate / pressure (Display readout selectable)	DIP 5
Volume flow rate	OFF
Pressure (service)	ON

Zero point calibration (Function adjustable)	DIP 6
Pushbutton (auto zero)	OFF
Potentiometer (offset)	ON

PREMASGARD® 1161
PREMASREG® 1160
DIP switches 1, 2 and 3 are not assigned!

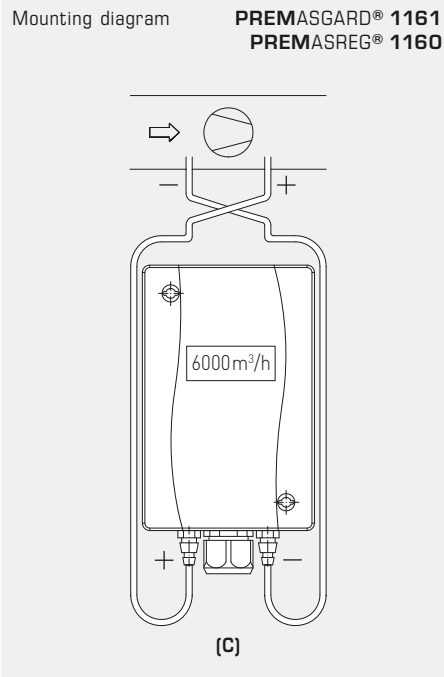


Conversion table for volume flow:

Unit =	m ³ /s	m ³ /min	m ³ /h	l/s	l/min	l/h
1 m ³ /s	1	60	3600	1000	60 x 10 ³	3.6 x 10 ⁶
1 m ³ /min	0.0166	1	60	16.66	1000	60 x 10 ³
1 m³/h	0.277 x 10⁻³	0.0166	1	0.277	16.66	1000
1 l/s	0.001	0.06	3.6	1	60	3600
1 l/min	16.66 x 10 ⁻⁶	0.001	0.06	0.0166	1	60
1 l/h	0.277 x 10 ⁻⁶	16.66 x 10 ⁻⁶	0.001	0.277 x 10 ⁻³	0.0166	1

Conversion table for pressure values:

Unit =	bar	mbar	Pa	kPa	mH ₂ O
1 Pa	0.00001 bar	0.01 mbar	1 Pa	0.001 kPa	0.000101971 mH ₂ O
1 kPa	0.01 bar	10 mbar	1000 Pa	1 kPa	0.101971 mH ₂ O
1 bar	1 bar	1000 mbar	100000 Pa	100 kPa	10.1971 mH ₂ O
1 mbar	0.001 bar	1 mbar	100 Pa	0.1 kPa	0.0101971 mH ₂ O
1 mH₂O	0.0980665 bar	98.0665 mbar	9806.65 Pa	9.80665 kPa	1 mH ₂ O



PREMASGARD® 1161
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with display



TYPES OF MONITORING:

(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.

PREMASGARD® 1161 – Volume flow measuring transducers/switches ($\pm 1,5\%$), Premium
PREMASREG® 1160 – Volume flow measuring transducers/monitors ($\pm 1,5\%$), Premium

Measuring Range Pressure / Volume Flow	Type / WG01	Output	Display	Item No.	Price
0...1000 Pa					
k = 3000 94800 m³/h	PREMASGARD 1161 DISPLAY	0-10V	■	1301-1161-2160-200	204,02 €
k = 3000 94800 m³/h	PREMASREG 1160 DISPLAY	0-10V 1x Changeover contact	■	1302-1161-2161-200	211,52 €
0...5000 Pa					
k = 3000 212100 m³/h	PREMASGARD 1161 DISPLAY	0-10V	■	1301-1161-2170-200	204,02 €
k = 3000 212100 m³/h	PREMASREG 1160 DISPLAY	0-10V 1x Changeover contact	■	1302-1161-2171-200	211,52 €

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, and 4 tapping screws			7100-0060-3000-000	6,45 €
ASD-07	2 connection nipples (at 90 degree angle) made of plastic, ABS			7100-0060-7000-000	6,45 €
WS-04	Weather and sun protection , 130 x 180 x 135 mm, stainless steel			7100-0040-7000-000	31,62 €

For further information, see last chapter Accessories!