

The pressure sensor **PREMASGARD® SHD-SD** is used for measuring relative pressures (max. 0...16 bar) in gaseous and liquid media.

**Not suitable for ammonia and freon!**

The pressure sensor **PREMASGARD® SHD** is used for measuring relative pressures (max. 0...40 bar) in gaseous and liquid media.

The pressure measuring cell is welded to the pressure sensors without a gasket.

The device variant **SHD-xx-LCD** is supplied with the display module **LCD-SHD**. The installation takes place below the angle plug.

The module can be mechanically rotated and tilted, and the display content can be rotated in 90° increments to achieve the ideal reading position.

The display types and pressure units are configured directly on the display (menu-controlled via buttons).

The pressure measuring transducer converts the measurand into a standard signal of 0-10V or 4...20 mA. Process connection is G½".

This pressure transmitter is used in hydraulics, pneumatics, process technology, in mechanical and plant engineering.

**TECHNICAL DATA**

Power supply:	24 V AC / DC for output 0-10V 7-33V DC for output 4...20 mA
Measuring ranges:	see table (other ranges upon request)
Output:	0-10 V, 3-wire, (working resistance > 10 kOhm) or 4...20 mA, 2-wire, (working resistance < (UB (V) -7 V) / 0.02 A; R <sub>L</sub> depending on working resistance
Electrical connection:	0.2 - 1.5 mm <sup>2</sup> / 24 - 16 AWG, via plug-in connector DIN EN 175301-803-A (included in the scope of delivery)
Pressure connection:	G½" sealing at the back
Type of pressure:	relative
Medium:	liquid and gaseous
Response time:	2 ms (1 ms typical)
Characteristic line:	± 0.3%
Mounting:	directly on pressure line
Housing:	stainless steel <b>V2A</b> (1.4305)
Connecting head:	plastic, approx. 98 x 50 x 34 mm / 3.86 x 1.97 x 1.34 in

**SHD-SD**

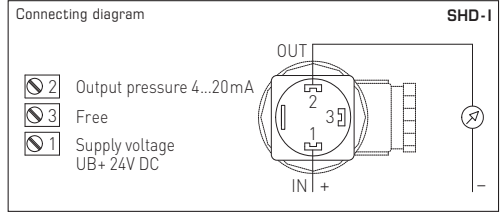
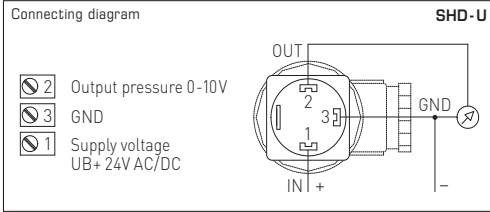
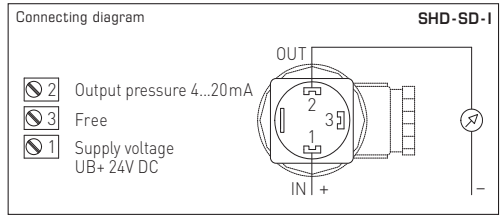
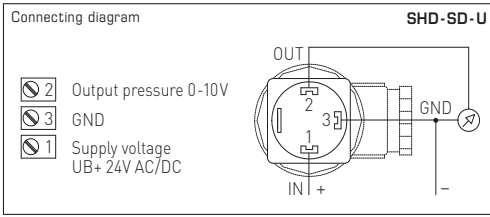
Measuring principle:	<b>ceramic measuring cell</b>
Temperature of medium:	-15...+125 °C / -5...+257 °F
Medium contacting parts:	stainless steel <b>V2A</b> (1.4305); measuring element ceramic Al <sub>2</sub> O <sub>3</sub> (96%); sealing material FPM (Viton)
Load changes:	< 100 Hz
Overload range /	< 4 bar: 3 x FS
Bursting pressure:	> 4 bar: 2.5 x FS

**SHD**

Measuring principle:	<b>steel measuring cell</b>
Temperature of medium:	-40...+135 °C / -40...+275 °F
Medium contacting parts:	stainless steel <b>V2A</b> (1.4305)
Overload range:	< 6 bar: 5 x of final valu > 6 bar: 3 x of final valu (max. 1500 bar)
Bursting pressure:	< 6 bar: 10 x of final valu > 6 bar: 6 x of final valu (max. 2500 bar)

**SHD-xx-LCD**

Display:	<b>display module LCD-SHD</b> , rotatable and tiltable, made of plastic, polyamide material, black colour, for displaying the ACTUAL pressure, min / max pressure or standard signal of the sensor
Display content:	pressure [bar] [kPa] [psi] [inWC] [mWC] [atm] power [V] or current [mA]
System of unitsv:	<b>SI and Imperial</b> (display configurable)
Protection class:	III (according to EN 60730)
Protection type:	<b>IP 65</b> (according to EN 60529)
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU
Tests:	Drinking water approval according to NSF/ANSI 61/372, UL-certified according to ANSI/UL 61010-1



Measuring Range	Type / WG01	Display	Item No.	Item No.
	SHD - SD - x = U / I		Output 0-10V	Output 4...20mA
		U - variant		I - variant
0... 6 bar	SHD - SD - x 6		1301-2121-0550-120	1301-2122-0550-000
	SHD - SD - x 6 LCD	■	1301-2121-5550-221	1301-2122-5550-101
0... 10 bar	SHD - SD - x 10		1301-2121-0560-120	1301-2122-0560-000
	SHD - SD - x 10 LCD	■	1301-2121-5560-221	1301-2122-5560-101
0... 16 bar	SHD - SD - x 16		1301-2121-0570-120	1301-2122-0570-000
	SHD - SD - x 16 LCD	■	1301-2121-5570-221	1301-2122-5570-101
<b>Note: Not suitable for ammonia and freon!</b>				

Measuring Range	Type / WG01	Display	Item No.	Item No.
	SHD - x = U / I		Output 0-10V	Output 4...20mA
		U - variant		I - variant
0... 1 bar	SHD - x 1		1301-2111-0520-220	1301-2112-0520-120
	SHD - x 1 LCD	■	1301-2111-5520-221	1301-2112-5520-121
0... 2.5 bar	SHD - x 2.5		1301-2111-0530-220	1301-2112-0530-120
	SHD - x 2.5 LCD	■	1301-2111-5530-221	1301-2112-5530-121
0... 6 bar	SHD - x 6		1301-2111-0550-220	1301-2112-0550-120
	SHD - x 6 LCD	■	1301-2111-5550-221	1301-2112-5550-121
0... 10 bar	SHD - x 10		1301-2111-0560-220	1301-2112-0560-120
	SHD - x 10 LCD	■	1301-2111-5560-221	1301-2112-5560-121
0... 16 bar	SHD - x 16		1301-2111-0570-220	1301-2112-0570-120
	SHD - x 16 LCD	■	1301-2111-5570-221	1301-2112-5570-121
0... 25 bar	SHD - x 25		1301-2111-0580-220	1301-2112-0580-120
	SHD - x 25 LCD	■	1301-2111-5580-221	1301-2112-5580-121
0... 40 bar	SHD - x 40		1301-2111-0590-220	1301-2112-0590-120
	SHD - x 40 LCD	■	1301-2111-5590-221	1301-2112-5590-121

**Our "General Terms and Conditions for Business" together with the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry" (ZVEI conditions) including supplementary clause "Extended Retention of Title" apply as the exclusive terms and conditions.**

In addition, the following points are to be observed:

- These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!
- Devices must only be connected to safety extra-low voltage and under dead-voltage condition. To avoid damages and errors at the device (e.g. by voltage induction) shielded cables are to be used, laying parallel with current-carrying lines is to be avoided, and EMC directives are to be observed.
- This device shall only be used for its intended purpose. Respective safety regulations issued by the VDE, the states, their control authorities, the TÜV and the local energy supply company must be observed. The purchaser has to adhere to the building and safety regulations and has to prevent perils of any kind.
- No warranties or liabilities will be assumed for defects and damages arising from improper use of this device.
- Consequential damages caused by a fault in this device are excluded from warranty or liability.
- These devices must be installed and commissioned by authorised specialists.
- The technical data and connecting conditions of the mounting and operating instructions delivered together with the device are exclusively valid. Deviations from the catalogue representation are not explicitly mentioned and are possible in terms of technical progress and continuous improvement of our products.
- In case of any modifications made by the user, all warranty claims are forfeited.
- This device must not be installed close to heat sources (e.g. radiators) or be exposed to their heat flow. Direct sun irradiation or heat irradiation by similar sources (powerful lamps, halogen spotlights) must absolutely be avoided.
- Operating this device close to other devices that do not comply with EMC directives may influence functionality.
- This device must not be used for monitoring applications, which serve the purpose of protecting persons against hazards or injury, or as an EMERGENCY STOP switch for systems or machinery, or for any other similar safety-relevant purposes.
- Dimensions of enclosures or enclosure accessories may show slight tolerances on the specifications provided in these instructions.
- Modifications of these records are not permitted.
- In case of a complaint, only complete devices returned in original packing will be accepted.

**Notes on commissioning:**

This device was calibrated, adjusted and tested under standardised conditions. When operating under deviating conditions, we recommend performing an initial manual adjustment on-site during commissioning and subsequently at regular intervals.

**Commissioning is mandatory and may only be performed by qualified personnel!**

**These instructions must be read before installation and commissioning and all notes provided therein are to be regarded!**

PREMASGARD® SHD  
PREMASGARD® SHD-SD



Dimensional drawing  
[inch]

SHD xx

