

# Pressure sensors – PS series



## The full range of performance

The sensors of this series cover all important pressure ranges from -1 ... +600 bar with an accuracy of 0.5% f.s.. Bar, psi and further 12 standard pressure units can be selected for measurement. The 4-digit 7-segment LED display indicates the pressure status and makes programming more comfortable. The devices are available with two transistor switching out-

puts or with one switching and one analog output. High EMC immunity and protection classes IP67/IP69K guarantee reliable operation, even under harsh conditions. All sensors are equipped with an IO-Link interface. Flexible integration and diagnostics is guaranteed, making the PS series a cost-effective solution.



## Clearly visible display

The 4-digit 7-segment display indicates the applied pressure during normal operation and is easily programmed. The sloped display allows the sensors to be mounted on top or in front according to

the position of the process connection. The read direction can be reversed by 180° degrees via software. Values are thus perfectly readable, even if the sensor is mounted horizontally.



## Flexible mounting

Inclined by 45° the display is well readable from any position and even from a great distance. Horizontal mounting is also possible. The read direction can be reversed by 180° degrees via software. After locking the pressure connection, the PS500 can be moved in any desired position because it is freely rotatable.

Once the final position is attained, the device is fixed in place with a second coupling nut. Special mounting aids are not required. With a diameter of only 34 mm, several sensors can be mounted side by side in confined spaces.

# PS series sensors



## Easy programming

Thanks to the user friendly menu guide, parameters such as switch and release points, output type, analog range and various special functions are easily taught. The PS sensors are programmed with the buttons MODE and SET. Tools are not needed to view the parameter

values. To avoid accidental changes of programmed data, the ENTER button for storing the values is recessed. The button can only be pressed with a pointed object, such as a ball pen for example.



## Rugged design

The sensor body, process and electrical connection of the PS series are made of stainless steel. Based on proven ceramic component technology, these shock and vibration proof sensors operate safely and reliably even in harsh environments. All sensors feature excellent EMC properties and are IP67 or IP69K protected.

Even in an undesired exceptional situation, safety comes first: Should the measuring cell burst, a patented medium-stop system prevents the discharge of liquids up to a pressure of 2400 bar, depending on the medium temperature.

Pressure  
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## High system availability

The PS series excels in excellent EMC properties and is IP67 rated. Sensor body, pressure and electrical connection are made of stainless steel and are therefore highly reliable and rugged. Should the measuring cell burst, a patented medium-stop system prevents the discharge of liquids up to a pressure of 2400 bar, depending on the medium temperature.

- Excellent EMC properties, highly interference immune
- Protection against mechanical impacts thanks to the rugged design
- Short down-times through high system availability and short replacement times

# Pressure sensors – PS series



## Extremely service-friendly

Due to the extremely flexible mounting options, user-friendly operation and high accuracy, the sensors offer you distinct and calculable advantages.

- Upper sensor part rotatable by 360° (PS500 series)

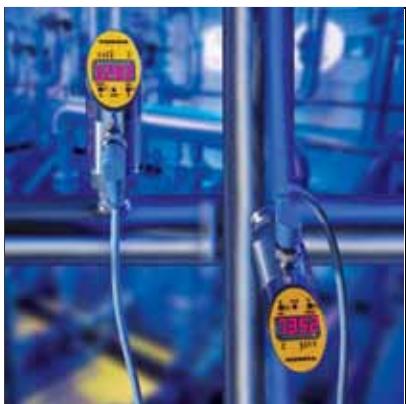
- Minimum maintenance effort through streamlined product range.
- Simple operation via two finger-operated pushbuttons
- Failsafe operation through a recessed ENTER button for the storage of values



## Efficient standardization

A single sensor replaces many conventional types. Even if a PS sensor is applied to measure only half of its nominal pressure, it will operate highly accurate, as required by the machine engineering industry. As a result, sensor inventories can be reduced significantly. A reduced inventory pays off for you:

- Only a few sensors are needed to cover a large range of applications
- Reduced training effort due to simple and failsafe operation
- High system safety achieved through a rugged design



## Maximum planning freedom

Due to many solutions achievable with only a few devices, the new sensors of the PS series offer maximum planning freedom, while minimizing the mounting efforts.

- Upper sensor part rotatable by 360°
- Display rotatable by 180°
- Sloped display by 45°

- Bright illuminated LED display legible from a greater distance
- Highest accuracy, 0.5 % f.s.
- Two switching outputs or a combination of switching and analog output
- Communication via IO-Link
- VDMA menu guide (optional)

# PS series sensors

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# Type code

**PS 010V - 5 01 - LI2U PN 8 X - H1 1 4 1**

<b>PS 010V</b>	Functional principle	<b>- 5 01</b>	Mechanical version	<b>- LI2U PN 8 X</b>	Electrical version	<b>-</b>
<ul style="list-style-type: none"> <li>— Measuring range           <ul style="list-style-type: none"> <li>01VR -1...0 bar g <sup>1)</sup></li> <li>001R 0...1 bar g <sup>1)</sup></li> <li>001V -1...1 bar g <sup>1)</sup></li> <li>003V -1...2,5 bar g <sup>1)</sup></li> <li>010V -1...10 bar g</li> <li>016V -1...16 bar g</li> <li>025V -1...25 bar g</li> <li>040V -1...40 bar g</li> <li>100R 0...100 bar g</li> <li>250R 0...250 bar g</li> <li>400R 0...400 bar g</li> <li>600R 0...600 bar g <sup>2)</sup></li> <li>001A 0...1 bar a <sup>1)3)</sup></li> <li>003A 0...2,5 bar a <sup>1)3)</sup></li> <li>010A 0...10 bar a <sup>1)3)</sup></li> <li>016A 0...16 bar a <sup>1)3)</sup></li> <li>025A 0...25 bar a <sup>1)3)</sup></li> </ul> </li>   <li>— Functional principle           <ul style="list-style-type: none"> <li>PS pressure sensor</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>— Process connection           <ul style="list-style-type: none"> <li>01 G1/4" female thread</li> <li>02 1/4"-18NPT female thread</li> <li>03 1/4"-18NPT male thread</li> <li>04 G1/4" male thread</li> <li>05 7/16" UNF male thread (only for design 6)</li> <li>06 G3/4" male thread front-flush (only for design 6)</li> <li>07 1 1/2" Tri-Clamp (only for design 6)</li> <li>08 G1/2" male thread manometer connection (only for design 5)</li> <li>09 G1/2" male thread front-flush (only for design 6)</li> <li>10 R 1/4" male thread</li> <li>11 R 1/4" female thread</li> </ul> </li>   <li>— Design           <ul style="list-style-type: none"> <li>3 adjustable, with display, non-rotatable sensor</li> <li>5 adjustable, with display, rotatable sensor</li> <li>6 adjustable, with display, non-rotatable sensor, dia-phragm seal with front-flush</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>— Indication           <ul style="list-style-type: none"> <li>X... LED display</li> </ul> </li>   <li>— Voltage range           <ul style="list-style-type: none"> <li>8 15(18)...30 VDC</li> </ul> </li>   <li>— Output mode           <ul style="list-style-type: none"> <li>PN PNP/NPN</li> </ul> </li>   <li>— Output function           <ul style="list-style-type: none"> <li>2U output 1: switching output</li> <li>          output 2: switching output</li> <li>LUU output 1: switching output</li> <li>          output 2: voltage output</li> <li>LI2U output 1: switching output</li> <li>          output 2: current/switching output, reprogrammable</li> </ul> </li> </ul>		

<sup>1)</sup> Not available for design/pressure connection 609

<sup>2)</sup> Not available for design 600

<sup>3)</sup> Not available for design 300

g = Relative pressure

a = Absolute pressure

H1	1	4	1	Electrical connection
				<ul style="list-style-type: none"><li>— Assignment 1 standard assignment</li></ul>
				<ul style="list-style-type: none"><li>— Number of contacts 4 4 contacts</li></ul>
				<ul style="list-style-type: none"><li>— Connector type 1 straight</li></ul>
				<ul style="list-style-type: none"><li>— Connector type H1 connector M12 x 1</li></ul>

# Designs and variants

Mechanical connection	Connection	Output 1	Output 2	Page
<b>G1/4" – Female thread – G 1/4" female thread 2 switching outputs</b>	male, M12 x 1	Switching output or IO-Link mode	switching output	399
				
<b>G1/4" – Female thread – G 1/4" female thread Switching and analog output</b>	male, M12 x 1	Switching output or IO-Link mode	Analog- or switching output analog output	399
				
<b>G1/4" – Male thread – G 1/4" male thread 2 switching outputs</b>	male, M12 x 1	Switching output or IO-Link mode	switching output	400
				
<b>G1/4" – Male thread – G 1/4" male thread Switching and analog output</b>	male, M12 x 1	Switching output or IO-Link mode	Analog- or switching output analog output	401
				
<b>G1/4" – Female thread – G 1/4" female thread 2 switching outputs</b>	male, M12 x 1	Switching output or IO-Link mode	switching output	403
				
<b>G1/4" – Female thread – G 1/4" female thread Switching and analog output</b>	male, M12 x 1	Switching output or IO-Link mode	Analog- or switching output analog output	403
				

# Pressure sensors and variants

	<b>Mechanical connection</b>	<b>Connection</b>	<b>Output 1</b>	<b>Output 2</b>	<b>Page</b>
<b>G1/4" – Male thread – 2 switching outputs</b>	G 1/4" male thread NPT 1/4" - 18 male thread 7/16-20 UNF	male, M12 x 1	Switching output or IO-Link mode	switching output	404
<b>G1/4" – Male thread – Switching and analog output</b>	G 1/4" male thread NPT 1/4" - 18 male thread 7/16-20 UNF	male, M12 x 1	Switching output or IO-Link mode	Analog- or switching output analog output	405
<b>G3/4" – Front-flush dia-phragm – 2 switching outputs</b>	G 3/4" front-flush	male, M12 x 1	Switching output or IO-Link mode	switching output	409
<b>G3/4" – Front-flush dia-phragm – Switching and analog output</b>	G 3/4" front-flush	male, M12 x 1	Switching output or IO-Link mode	Analog- or switching output analog output	409
<b>G3/4" – Front-flush dia-phragm – Switching and analog output</b>	G 3/4" front-flush	male, M12 x 1	Switching output or IO-Link mode	analog output	410
<b>G1/2" – Front-flush dia-phragm – 2 switching outputs</b>	G 1/2" front-flush	male, M12 x 1	Switching output or IO-Link mode	switching output	411

## PS300 series – For hydraulic applications

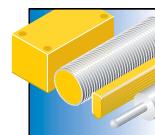


The PS300 series has been designed especially for hydraulic applications. The devices operate with a ceramic measuring cell. Available are versions with two switching outputs or one switching and one analog output. IO-Link communication is integrated as a standard. Highest process safety is achieved through a stainless steel housing, fully potted electronics and protection class IP69K.

### Features

- IO-Link capable
- Measuring range -1...600 bar
- Fully potted stainless steel housing
- Protection class IP69K
- VDMA menu guide (optional)
- Permanent display of pressure (bar, psi, kPa, MPa, misc)
- Highest pressure resistance

### Properties



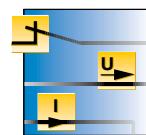
#### Designs

Cylindrical design, non-rotatable, with display



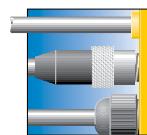
#### Measuring ranges

-1...600 bar rel.



#### Electrical versions

IO-Link capable, 2-channel, switching, current or voltage output



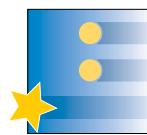
#### Electrical connections

Male M12 x 1, 4-pin



#### Connectivity

G1/4", 1/4" NPT, R1/4" male and female thread



#### Special features

Failsafe 3-key operation, VDMA menu guide (optional), IP69K, fully potted sensor



#### Internet link

Scan the QR code to access our products on the internet

## G1/4" – Female thread – 2 switching outputs



General data			
<b>Output 1</b>	Switching output or IO-Link mode	<b>Output 2</b>	switching output
<b>Protection class</b>	IP67 / IP69K	<b>Connection</b>	male, M12 x 1
<b>Mechanical connection</b>	G 1/4" female thread	<b>Medium temperature</b>	-40...85 °C
<b>Operating voltage</b>	18...30 VDC	<b>Response time</b>	3 ms
<b>Housing material</b>	1.4305 (AISI 303)/PC	<b>Switching frequency</b>	180 Hz
<b>Accuracy switching output</b>	0.5 % v. E. BSL		

### Types and data – selection table

Type	Relative pressure	Admissible overpressure	w	d
PS01VR-301-2UPN8X-H1141	-1...0 bar rel.	5,5 bar	w159	d627
PS001R-301-2UPN8X-H1141	0...1 bar rel.	5,5 bar	w159	d627
PS001V-301-2UPN8X-H1141	-1...1 bar rel.	5,5 bar	w159	d627
PS003V-301-2UPN8X-H1141	-1...2.5 bar rel.	12 bar	w159	d627
PS010V-301-2UPN8X-H1141	-1...10 bar rel.	50 bar	w159	d627
PS016V-301-2UPN8X-H1141	-1...16 bar rel.	80 bar	w159	d627
PS025V-301-2UPN8X-H1141	-1...25 bar rel.	120 bar	w159	d627
PS040V-301-2UPN8X-H1141	-1...40 bar rel.	200 bar	w159	d627
PS100R-301-2UPN8X-H1141	0...100 bar rel.	450 bar	w159	d627
PS250R-301-2UPN8X-H1141	0...250 bar rel.	600 bar	w159	d627
PS400R-301-2UPN8X-H1141	0...400 bar rel.	800 bar	w159	d627
PS600R-301-2UPN8X-H1141	0...600 bar rel.	900 bar	w159	d627

## G1/4" – Female thread – Switching and analog output



General data	
<b>Output 1</b>	Switching output or IO-Link mode
<b>Protection class</b>	IP67 / IP69K
<b>Connection</b>	male, M12 x 1
<b>Mechanical connection</b>	G 1/4" female thread
<b>Medium temperature</b>	-40...85 °C
<b>Operating voltage</b>	18...30 VDC
<b>Response time</b>	3 ms
<b>Housing material</b>	1.4305 (AISI 303)/PC
<b>Switching frequency</b>	180 Hz
<b>Accuracy LHR analog output</b>	0.5 % of final value BSL

### Types and data – selection table

Type	Relative pressure	Admissible overpressure	Output 2	Operating range	w	d
PS01VR-301-LI2UPN8X-H1141	-1...0 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS001R-301-LI2UPN8X-H1141	0...1 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS001V-301-LI2UPN8X-H1141	-1...1 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS003V-301-LI2UPN8X-H1141	-1...2.5 bar rel.	12 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS010V-301-LI2UPN8X-H1141	-1...10 bar rel.	50 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS016V-301-LI2UPN8X-H1141	-1...16 bar rel.	80 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS025V-301-LI2UPN8X-H1141	-1...25 bar rel.	120 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627

Table continues on the next page...

## Pressure sensors with display

PS300 series - Cylindrical design, non-rotatable

... Table starts on previous page

Type	Relative pressure	Admissible overpressure	Output 2	Operating range	w	d
PS040V-301-LI2UPN8X-H1141	-1...40 bar rel.	200 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS100R-301-LI2UPN8X-H1141	0...100 bar rel.	450 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS250R-301-LI2UPN8X-H1141	0...250 bar rel.	600 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS400R-301-LI2UPN8X-H1141	0...400 bar rel.	800 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS600R-301-LI2UPN8X-H1141	0...600 bar rel.	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d627
PS01VR-301-LUUPN8X-H1141	-1...0 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS001R-301-LUUPN8X-H1141	0...1 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS001V-301-LUUPN8X-H1141	-1...1 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS003V-301-LUUPN8X-H1141	-1...2.5 bar rel.	12 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS010V-301-LUUPN8X-H1141	-1...10 bar rel.	50 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS016V-301-LUUPN8X-H1141	-1...16 bar rel.	80 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS025V-301-LUUPN8X-H1141	-1...25 bar rel.	120 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS040V-301-LUUPN8X-H1141	-1...40 bar rel.	200 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS100R-301-LUUPN8X-H1141	0...100 bar rel.	450 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS250R-301-LUUPN8X-H1141	0...250 bar rel.	600 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS400R-301-LUUPN8X-H1141	0...400 bar rel.	800 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627
PS600R-301-LUUPN8X-H1141	0...600 bar rel.	900 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d627

## G1/4" – Male thread – 2 switching outputs



### General data

<b>Output 1</b>	Switching output or IO-Link mode	<b>Output 2</b>	switching output
<b>Protection class</b>	IP67 / IP69K	<b>Connection</b>	male, M12 x 1
<b>Mechanical connection</b>	G 1/4" male thread	<b>Medium temperature</b>	-40...85 °C
<b>Operating voltage</b>	18...30 VDC	<b>Response time</b>	3 ms
<b>Housing material</b>	1.4305 (AISI 303)/PC	<b>Switching frequency</b>	180 Hz
<b>Accuracy switching output</b>	0.5 % v. E. BSL		

## Types and data – selection table

Type	Relative pressure	Admissible overpressure	w	d
PS01VR-304-2UPN8X-H1141	-1...0 bar rel.	5,5 bar	w159	d628
PS001R-304-2UPN8X-H1141	0...1 bar rel.	5,5 bar	w159	d628
PS001V-304-2UPN8X-H1141	-1...1 bar rel.	5,5 bar	w159	d628
PS003V-304-2UPN8X-H1141	-1...2.5 bar rel.	12 bar	w159	d628
PS010V-304-2UPN8X-H1141	-1...10 bar rel.	50 bar	w159	d628
PS016V-304-2UPN8X-H1141	-1...16 bar rel.	80 bar	w159	d628
PS025V-304-2UPN8X-H1141	-1...25 bar rel.	120 bar	w159	d628
PS040V-304-2UPN8X-H1141	-1...40 bar rel.	200 bar	w159	d628
PS100R-304-2UPN8X-H1141	0...100 bar rel.	450 bar	w159	d628
PS250R-304-2UPN8X-H1141	0...250 bar rel.	600 bar	w159	d628
PS400R-304-2UPN8X-H1141	0...400 bar rel.	800 bar	w159	d628
PS600R-304-2UPN8X-H1141	0...600 bar rel.	900 bar	w159	d628

Many different types available, also with barrel, see type code

## G1/4" – Male thread – Switching and analog output



General data			
<b>Output 1</b>	Switching output or IO-Link mode	<b>Protection class</b>	IP67 / IP69K
<b>Connection</b>	male, M12 x 1	<b>Mechanical connection</b>	G 1/4" male thread
<b>Medium temperature</b>	-40...85 °C	<b>Operating voltage</b>	18...30 VDC
<b>Response time</b>	3 ms	<b>Housing material</b>	1.4305 (AISI 303)/PC
<b>Switching frequency</b>	180 Hz	<b>Accuracy switching output</b>	0.5 % v. E. BSL
<b>Accuracy LHR analog output</b>	0.5 % of final value BSL		

### Types and data – selection table

Type	Relative pressure	Admissible overpressure	Output 2	Operating range	w	d
PS01VR-304-LI2UPN8X-H1141	-1...0 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS001R-304-LI2UPN8X-H1141	0...1 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS001V-304-LI2UPN8X-H1141	-1...1 bar rel.	5,5 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS003V-304-LI2UPN8X-H1141	-1...2.5 bar rel.	12 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS010V-304-LI2UPN8X-H1141	-1...10 bar rel.	50 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS016V-304-LI2UPN8X-H1141	-1...16 bar rel.	80 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS025V-304-LI2UPN8X-H1141	-1...25 bar rel.	120 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS040V-304-LI2UPN8X-H1141	-1...40 bar rel.	200 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS100R-304-LI2UPN8X-H1141	0...100 bar rel.	450 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS250R-304-LI2UPN8X-H1141	0...250 bar rel.	600 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS400R-304-LI2UPN8X-H1141	0...400 bar rel.	800 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS600R-304-LI2UPN8X-H1141	0...600 bar rel.	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d628
PS01VR-304-LUUPN8X-H1141	-1...0 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS001R-304-LUUPN8X-H1141	0...1 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS001V-304-LUUPN8X-H1141	-1...1 bar rel.	5,5 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS003V-304-LUUPN8X-H1141	-1...2.5 bar rel.	12 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS010V-304-LUUPN8X-H1141	-1...10 bar rel.	50 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS016V-304-LUUPN8X-H1141	-1...16 bar rel.	80 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS025V-304-LUUPN8X-H1141	-1...25 bar rel.	120 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS040V-304-LUUPN8X-H1141	-1...40 bar rel.	200 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS100R-304-LUUPN8X-H1141	0...100 bar rel.	450 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS250R-304-LUUPN8X-H1141	0...250 bar rel.	600 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS400R-304-LUUPN8X-H1141	0...400 bar rel.	800 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628
PS600R-304-LUUPN8X-H1141	0...600 bar rel.	900 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d628

Many different types available, also with barrel, see type code

## PS500 series – For hydraulic and pneumatic applications

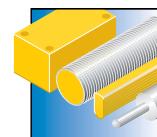


The PS500 sensors operate with ceramic measuring cells. Through pressure exerted on the ceramic substrate a pressure-proportional signal is created and then electronically processed. Depending on the sensor type used, the processed signal is either provided at a switching or an analog output. IO-Link communication is integrated as a standard. A rotatable sensor body, a large number of available thread types and an accuracy of 0.5% f.s. guarantee highest mounting flexibility and secure connection to the process.

### Features

- IO-Link capable
- Sensor rotatable by 360°
- 4-digit 7-segment display
- Measuring range -1...600 bar relative pressure
- Measuring range 0...25 bar absolute pressure
- Stainless steel housing
- Permanent display of pressure (bar, psi, kPa, MPa, misc)

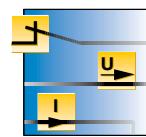
### Properties

**Designs**

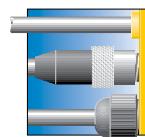
Cylindrical design, rotatable by 360°, with display

**Measuring ranges**

-1...600 bar relative and  
0...25 bar absolute

**Electrical versions**

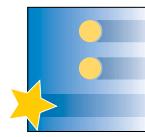
IO-Link capable, 2-channel, switching, current or voltage output

**Electrical connections**

Male M12 x 1, 4-pin

**Connectivity**

G1/4", 1/4" NPT, R1/4" male and female thread, 7/16" UNF and G1/2" male thread

**Special features**

Failsafe 3-key operation, VDMA menu guide (optional), IP67

**Internet link**

Scan the QR code to access our products on the internet

## G1/4" – Female thread – 2 switching outputs

	<b>General data</b>		
<b>Output 1</b>	Switching output or IO-Link mode	<b>Output 2</b>	switching output
<b>Protection class</b>	IP67	<b>Connection</b>	male, M12 x 1
<b>Mechanical connection</b>	G 1/4" female thread	<b>Medium temperature</b>	-40...85 °C
<b>Operating voltage</b>	18...30 VDC	<b>Response time</b>	3 ms
<b>Housing material</b>	1.4305 (AISI 303)/PC	<b>Switching frequency</b>	180 Hz
<b>Accuracy switching output</b>	0.5 % v. E. BSL		

### Types and data – selection table

Type	Relative pressure	Absolute pressure	Admissible overpressure	w	d
PS001R-501-2UPN8X-H1141	0...1 bar rel.	–	3 bar	w159	d629
PS001V-501-2UPN8X-H1141	-1...1 bar rel.	–	3 bar	w159	d629
PS003V-501-2UPN8X-H1141	-1...2.5 bar rel.	–	7 bar	w159	d629
PS010V-501-2UPN8X-H1141	-1...10 bar rel.	–	25 bar	w159	d629
PS016V-501-2UPN8X-H1141	-1...16 bar rel.	–	40 bar	w159	d629
PS01VR-501-2UPN8X-H1141	-1...0 bar rel.	–	3 bar	w159	d629
PS025V-501-2UPN8X-H1141	-1...25 bar rel.	–	65 bar	w159	d629
PS040V-501-2UPN8X-H1141	-1...40 bar rel.	–	100 bar	w159	d629
PS100R-501-2UPN8X-H1141	0...100 bar rel.	–	250 bar	w159	d629
PS250R-501-2UPN8X-H1141	0...250 bar rel.	–	625 bar	w159	d629
PS400R-501-2UPN8X-H1141	0...400 bar rel.	–	900 bar	w159	d629
PS600R-501-2UPN8X-H1141	0...600 bar rel.	–	900 bar	w159	d629
PS001A-501-2UPN8X-H1141	–	0...1 bar abs.	3 bar	w159	d629
PS003A-501-2UPN8X-H1141	–	0...2.5 bar abs.	7 bar	w159	d629
PS010A-501-2UPN8X-H1141	–	0...10 bar abs.	25 bar	w159	d629
PS016A-501-2UPN8X-H1141	–	0...16 bar abs.	40 bar	w159	d629
PS025A-501-2UPN8X-H1141	–	0...25 bar abs.	65 bar	w159	d629

Pressure  
sensors

## G1/4" – Female thread – Switching and analog output

	<b>General data</b>		
<b>Output 1</b>	Switching output or IO-Link mode	<b>Protection class</b>	IP67
<b>Connection</b>	male, M12 x 1	<b>Mechanical connection</b>	G 1/4" female thread
<b>Medium temperature</b>	-40...85 °C	<b>Operating voltage</b>	18...30 VDC
<b>Response time</b>	3 ms	<b>Housing material</b>	1.4305 (AISI 303)/PC
<b>Switching frequency</b>	180 Hz	<b>Accuracy switching output</b>	0.5 % v. E. BSL
<b>Accuracy LHR analog output</b>	0.5 % of final value BSL		

### Types and data – selection table

Type	Relative pressure	Absolute pres.	Admissible overpres.	Output 2	Operating range	w	d
PS01VR-501-LI2UPN8X-H1141	-1...0 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS001R-501-LI2UPN8X-H1141	0...1 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629

Table continues on the next page...

## Pressure sensors with display

PS 500 series - Rotatable version and flexible process connection

... Table starts on previous page

Type	Relative pressure	Absolute pres.	Admissible overpres.	Output 2	Operating range	w	d
PS001V-501-LI2UPN8X-H1141	-1...1 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS003V-501-LI2UPN8X-H1141	-1...2.5 bar rel.	–	7 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS010V-501-LI2UPN8X-H1141	-1...10 bar rel.	–	25 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS016V-501-LI2UPN8X-H1141	-1...16 bar rel.	–	40 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS025V-501-LI2UPN8X-H1141	-1...25 bar rel.	–	65 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS040V-501-LI2UPN8X-H1141	-1...40 bar rel.	–	100 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS100R-501-LI2UPN8X-H1141	0...100 bar rel.	–	250 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS250R-501-LI2UPN8X-H1141	0...250 bar rel.	–	625 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS400R-501-LI2UPN8X-H1141	0...400 bar rel.	–	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS600R-501-LI2UPN8X-H1141	0...600 bar rel.	–	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS001A-501-LI2UPN8X-H1141	–	0...1 bar abs.	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS003A-501-LI2UPN8X-H1141	–	0...2.5 bar abs.	7 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS010A-501-LI2UPN8X-H1141	–	0...10 bar abs.	25 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS016A-501-LI2UPN8X-H1141	–	0...16 bar abs.	40 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS025A-501-LI2UPN8X-H1141	–	0...25 bar abs.	65 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d629
PS01VR-501-LUUPN8X-H1141	-1...0 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS001R-501-LUUPN8X-H1141	0...1 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS001V-501-LUUPN8X-H1141	-1...1 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS003V-501-LUUPN8X-H1141	-1...2.5 bar rel.	–	7 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS010V-501-LUUPN8X-H1141	-1...10 bar rel.	–	25 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS016V-501-LUUPN8X-H1141	-1...16 bar rel.	–	40 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS025V-501-LUUPN8X-H1141	-1...25 bar rel.	–	65 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS040V-501-LUUPN8X-H1141	-1...40 bar rel.	–	100 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS100R-501-LUUPN8X-H1141	0...100 bar rel.	–	250 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS250R-501-LUUPN8X-H1141	0...250 bar rel.	–	625 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS400R-501-LUUPN8X-H1141	0...400 bar rel.	–	900 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS600R-501-LUUPN8X-H1141	0...600 bar rel.	–	900 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS001A-501-LUUPN8X-H1141	–	0...1 bar abs.	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS003A-501-LUUPN8X-H1141	–	0...2.5 bar abs.	7 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS010A-501-LUUPN8X-H1141	–	0...10 bar abs.	25 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS016A-501-LUUPN8X-H1141	–	0...16 bar abs.	40 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629
PS025A-501-LUUPN8X-H1141	–	0...25 bar abs.	65 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d629

## G1/4" – Male thread – 2 switching outputs



### General data

<b>Output 1</b>	Switching output or IO-Link mode	<b>Output 2</b>	switching output
<b>Protection class</b>	IP67	<b>Connection</b>	male, M12 x 1
<b>Mechanical connection</b>	G 1/4" male thread	<b>Medium temperature</b>	-40...85 °C
<b>Operating voltage</b>	18...30 VDC	<b>Response time</b>	3 ms
<b>Housing material</b>	1.4305 (AISI 303)/PC	<b>Switching frequency</b>	180 Hz
<b>Accuracy switching output</b>	0.5 % v. E. BSL		

### Types and data – selection table

Type	Relative pressure	Absolute pressure	Admissible overpressure	w	d
PS01VR-504-2UPN8X-H1141	-1...0 bar rel.	–	3 bar	w159	d630
PS001R-504-2UPN8X-H1141	0...1 bar rel.	–	3 bar	w159	d630

Table continues on the next page...

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Type	Relative pressure	Absolute pressure	Admissible overpressure	w	d
PS001V-504-2UPN8X-H1141	-1...1 bar rel.	–	3 bar	w159	d630
PS003V-504-2UPN8X-H1141	-1...2.5 bar rel.	–	7 bar	w159	d630
PS010V-504-2UPN8X-H1141	-1...10 bar rel.	–	25 bar	w159	d630
PS016V-504-2UPN8X-H1141	-1...16 bar rel.	–	40 bar	w159	d630
PS025V-504-2UPN8X-H1141	-1...25 bar rel.	–	65 bar	w159	d630
PS040V-504-2UPN8X-H1141	-1...40 bar rel.	–	100 bar	w159	d630
PS100R-504-2UPN8X-H1141	0...100 bar rel.	–	250 bar	w159	d630
PS250R-504-2UPN8X-H1141	0...250 bar rel.	–	625 bar	w159	d630
PS400R-504-2UPN8X-H1141	0...400 bar rel.	–	900 bar	w159	d630
PS600R-504-2UPN8X-H1141	0...600 bar rel.	–	900 bar	w159	d630
PS001A-504-2UPN8X-H1141	–	0...1 bar abs.	3 bar	w159	d630
PS003A-504-2UPN8X-H1141	–	0...2.5 bar abs.	7 bar	w159	d630
PS010A-504-2UPN8X-H1141	–	0...10 bar abs.	25 bar	w159	d630
PS016A-504-2UPN8X-H1141	–	0...16 bar abs.	40 bar	w159	d630
PS025A-504-2UPN8X-H1141	–	0...25 bar abs.	65 bar	w159	d630

Many different types available, also with barrel, see type code

## G1/4" – Male thread – Switching and analog output



General data	
<b>Output 1</b>	Switching output or IO-Link mode
<b>Connection</b>	male, M12 x 1
<b>Medium temperature</b>	-40...85 °C
<b>Response time</b>	3 ms
<b>Switching frequency</b>	180 Hz
<b>Accuracy LHR analog output</b>	0.5 % of final value BSL
<b>Protection class</b>	
	IP67
<b>Mechanical connection</b>	G 1/4" male thread
<b>Operating voltage</b>	18...30 VDC
<b>Housing material</b>	1.4305 (AISI 303)/PC
<b>Accuracy switching output</b>	0.5 % v. E. BSL

Pressure  
sensors

## Types and data – selection table

Type	Relative pres.	Absolute pres.	Admissible overpres.	Output 2	Operating range	w	d
PS01VR-504-LI2UPN8X-H1141	-1...0 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS001R-504-LI2UPN8X-H1141	0...1 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS001V-504-LI2UPN8X-H1141	-1...1 bar rel.	–	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS003V-504-LI2UPN8X-H1141	-1...2.5 bar rel.	–	7 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS010V-504-LI2UPN8X-H1141	-1...10 bar rel.	–	25 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS016V-504-LI2UPN8X-H1141	-1...16 bar rel.	–	40 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS025V-504-LI2UPN8X-H1141	-1...25 bar rel.	–	65 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS040V-504-LI2UPN8X-H1141	-1...40 bar rel.	–	100 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630

Table continues on the next page...

## Pressure sensors with display

PS 500 series - Rotatable version and flexible process connection

... Table starts on previous page

Type	Relative pres.	Absolute pres.	Admissible overpres.	Output 2	Operating range	w	d
PS100R-504-LI2UPN8X-H1141	0...100 bar rel.	–	250 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS250R-504-LI2UPN8X-H1141	0...250 bar rel.	–	625 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS400R-504-LI2UPN8X-H1141	0...400 bar rel.	–	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS600R-504-LI2UPN8X-H1141	0...600 bar rel.	–	900 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS001A-504-LI2UPN8X-H1141	–	0...1 bar abs.	3 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS003A-504-LI2UPN8X-H1141	–	0...2.5 bar abs.	7 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS010A-504-LI2UPN8X-H1141	–	0...10 bar abs.	25 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS016A-504-LI2UPN8X-H1141	–	0...16 bar abs.	40 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS025A-504-LI2UPN8X-H1141	–	0...25 bar abs.	65 bar	Analog or switching output	4...20/0...20 mA (3-wire)	w160	d630
PS01VR-504-LUUPN8X-H1141	-1...0 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d630
PS001R-504-LUUPN8X-H1141	0...1 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d630
PS001V-504-LUUPN8X-H1141	-1...1 bar rel.	–	3 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d630
PS003V-504-LUUPN8X-H1141	-1...2.5 bar rel.	–	7 bar	analog output	0...10 V, 0...5 V (3-wire)	w161	d630

Many different types available, also with barrel, see type code

