

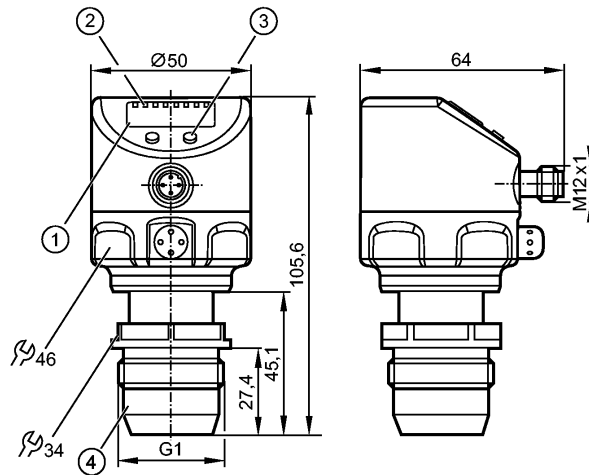


# PI2893

PI-025-REA01-MFRKG/US/ /P



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: status LEDs
- 3: Programming button
- 4: Sealing cone G 1 male

Attention: The unit must only be installed in a process connection for G1 sealing cone! The G1A sealing cone of the unit is only suited for adapters with metal end stop!

ACS CE US EC 1935/2004 EHEDG Certified

## IO-Link

### Product characteristics

Combined pressure sensor
Quick disconnect
Function programmable
Sealing cone G 1 male
Process connection: Sealing cone G 1 male
2-wire connection technology: analogue output
3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
4-digit alphanumeric display
Measuring range: -1.00...25.00 bar / -14.4...362.7 psi / -0.100...2.500 MPa

### Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	100 bar	1450 psi	10 MPa
Bursting pressure min.	350 bar	5070 psi	35 MPa
Medium temperature [°C]	-25...125 (145 max. 1h)		

### Electrical data

Electrical design	2 wires DC / 3 wires DC PNP/NPN		
Operating voltage [V]	20...32 DC (2L) / 18...32 DC (3L)		
Current consumption [mA]	3.6...21 (2L) / < 45 (3L)		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		



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Reverse polarity protection	yes
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## Outputs

Output	2-wire connection technology: analogue output 3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
Output function	1 x normally open / normally closed programmable + 1 x normally open / normally closed programmable or 1 x analog (4...20 / 20...4 mA, scalable)
Current rating [mA]	250; (3L)
Voltage drop [V]	2; (3L)
Short-circuit protection	yes (non-latching)
Overload protection	yes
Switching frequency [Hz]	--- (2L) / 125 (3L)
Analog output	I: 4...20 mA (Ineg: 20...4 mA)
Max. load [Ω]	300 (2L) / max. (U <sub>b</sub> - 10 V) x 50 (3L)

## Measuring / setting range

Display unit	bar, psi, MPa, % der Spanne		
Measuring range	-1.00...25.00 bar	-14.4...362.7 psi	-0.100...2.500 MPa
Setting range			
Set point, SP	-0.96...25.00 bar	-13.8...362.7 psi	-0.096...2.500 MPa
Reset point, rP	-1.00...24.96 bar	-14.4...362.1 psi	-0.100...2.496 MPa
Analog start point, ASP	-1.00...18.74 bar	-14.4...271.8 psi	-0.100...1.874 MPa
Analog end point, AEP	5.24...25.00 bar	76.2...362.7 psi	0.524...2.500 MPa
in steps of	0.02 bar	0.3 psi	0.002 MPa
Factory setting	SP1 = 6.24 bar; rP1 = 5.74 bar SP2 = 18.74 bar; rP2 = 18.24 bar ASP = 0.00 bar; AEP = 25.00 bar		

## Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.2
Characteristics deviation *)	< ± 0.2
Linearity	< ± 0.15
Hysteresis	< ± 0.15
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.05
Greatest TEMPCO of the span	< ± 0.15

## Reaction times

Power-on delay time [s]	1 (2L) / 0.5 (3L)
Min. response time switching output [ms]	--- (2L) / 3 (3L)
Damping for the switching output (dAP) [s]	0.00...30.00
Damping for the analog output (dAA) [s]	0.01...99.99



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Step response time analogue output [ms]	45 (2L) / 7 (3L)
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Integrated watchdog	yes
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## Interfaces

IO-Link Device	
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Transfer type	COM2 (38.4 kBaud)
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IO-Link revision	1.0
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IO-Link Device ID	156 d / 00 00 9C h
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Profiles	no profile
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SIO mode	yes
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Required master port class	A
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Process data analogue	1
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Process data binary	2
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Min. process cycle time [ms]	2.3
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## Environment

Ambient temperature [°C]	-25...80
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Storage temperature [°C]	-40...100
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Protection	IP 67 / IP 68 / IP 69K
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## Tests / approvals

EMC	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated:	10 V/m
	EN 61000-4-4 Burst:	2 kV
	EN 61000-4-5 Surge:	0.5/1 kV
	EN 61000-4-6 HF conducted:	10 V

Shock resistance	DIN IEC 68-2-27:	50 g (11 ms)
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Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
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MTTF [Years]	148.85
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## Mechanical data

Process connection	Sealing cone G 1 male
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Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
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Housing materials	stainless steel 316L / 1.4404; FPM (Viton); PTFE; PBT (Pocan); PEI; PFA
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Switching cycles min.	100 million
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Weight [kg]	0.344
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## Displays / operating elements

Display	Display unit	LED green
	Switching status	LED yellow
	Function display	4-digit alphanumeric display
	Measured values	4-digit alphanumeric display

## Electrical connection

Connection	M12 connector; gold-plated contacts
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## Wiring

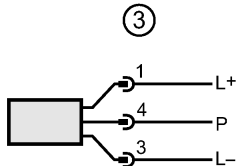
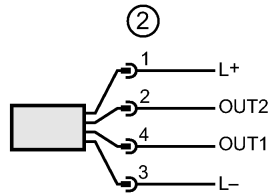
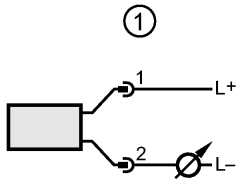


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- 1 connection for 2-wire operation
- 2 connection for 3-wire operation
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)

### Remarks

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Attention: The unit must only be installed in a process connection for G1 sealing cone! The G1A sealing cone of the unit is only suited for adapters with metal end stop!

(2L) = value for 2-wire operation  
 (3L) = value for 3-wire operation  
 \*) linearity, incl. hysteresis and repeatability;  
 (limit value setting to DIN 16086)  
 \*\*) with temperature fluctuations < 10 K  
 \*\*\*) in % of the span per year

Pack quantity

[piece]

1