

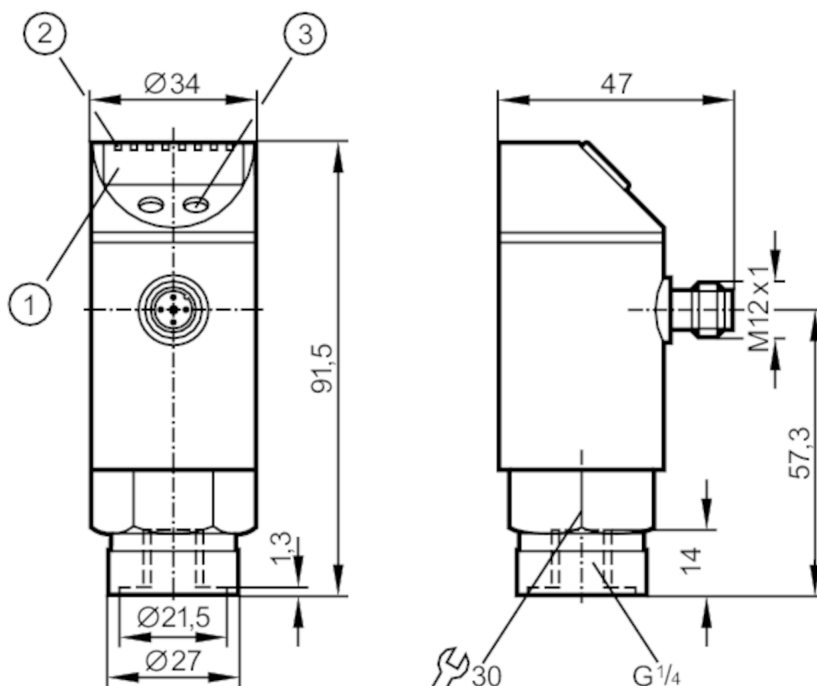


Pressure sensor with display

PN-100-SBR14-MFRKG/US/ /V

discontinued article

replaced by: PN2092 – Discontinuation date: 31.03.2016



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / switching status
- 3 programming button



Product characteristics

Output signal	switching signal; analogue signal; IO-Link; (configurable)		
Measuring range	0...100 bar	0...1450 psi	0...10 MPa
Process connection	threaded connection G 1/4 internal thread		

Application

Special feature	Gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Pressure rating	300 bar	4350 psi	30 MPa
Min. bursting pressure	650 bar	9400 psi	65 MPa
Type of pressure	relative pressure		



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Electrical data			
Operating voltage	[V]	18...32 DC; (according to EN 50178 SELV/PELV)	
Current consumption	[mA]	< 35	
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Power-on delay time	[s]	0.3	
Integrated watchdog		yes	
Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; IO-Link; (configurable)	
Electrical design		PNP/NPN	
Number of digital outputs		2	
Output function		normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Switching frequency DC	[Hz]	< 500	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20; (scalable 1:4)	
Max. load	[Ω]	(U _b - 10 V) / 20 mA	
Analogue voltage output	[V]	0...10; (scalable 1:4)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range		0...100 bar	0...1450 psi 0...10 MPa
Set point SP		0.8...100 bar	12...1450 psi 0.08...10 MPa
Reset point rP		0.4...99.6 bar	6...1444 psi 0.04...9.96 MPa
Analogue start point		0...75 bar	0...1088 psi 0...7.5 MPa
Analogue end point		25...100 bar	364...1450 psi 2.5...10 MPa
In steps of		0.2 bar	2 psi 0.02 MPa
Factory setting			SP1 = 25.0 bar rP1 = 23.0 bar
			SP2 = 75.0 bar rP2 = 73.0 bar
			ASP = 0.0 bar AEP = 100.0 bar
Accuracy / deviations			
Switch point accuracy	[% of the span]	< ± 0,4; (Turn down 1:1)	
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation		< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)	



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	[% of the span]	
Hysteresis deviation		$< \pm 0,1$; (Turn down 1:1)
	[% of the span]	
Long-term stability		$< \pm 0,1$; (Turn down 1:1; per year)
	[% of the span]	
Temperature coefficient zero point		$< \pm 0,2$; (0...80 °C)
	[% of the span / 10 K]	
Temperature coefficient span		$< \pm 0,2$; (0...80 °C)
	[% of the span / 10 K]	

Response times

Response time	[ms]	< 1.5
Damping for the switching output dAP	[s]	0.01...4
Damping for the analogue output dAA	[s]	0.01...4
Max. response time analogue output	[ms]	3

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span
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Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.0
IO-Link device ID	58 d / 00 00 3A h
Profiles	no profile
SIO mode	yes
Required master port type	A
Process data analogue	1
Process data binary	2
Min. process cycle time	[ms] 2.3

Operating conditions

Ambient temperature	[°C] -25...80
Storage temperature	[°C] -40...100
Protection	IP 67

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)
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)
MTTF	[years]	131
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	



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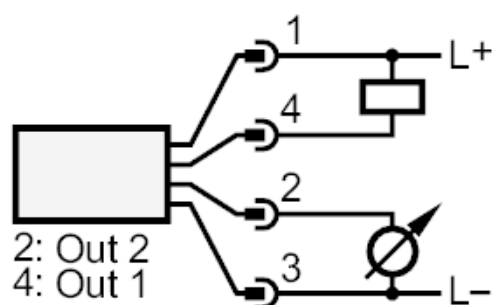
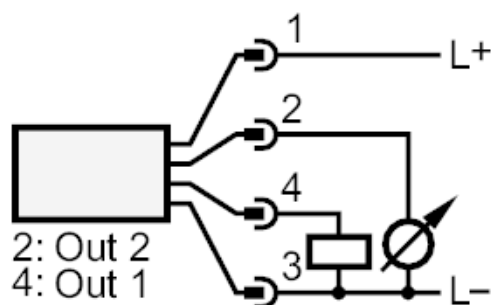
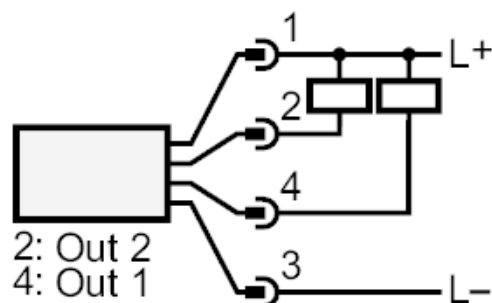
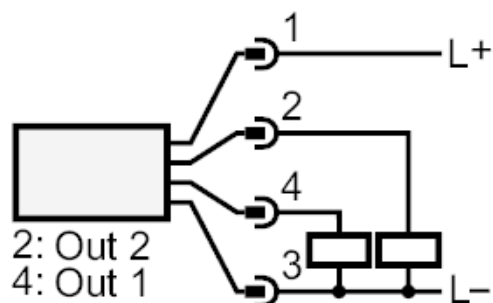
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Mechanical data		
Weight	[g]	262.5
Materials	stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM	
Materials (wetted parts)	stainless steel (1.4305 / 303); ceramics; FKM	
Min. pressure cycles	100 million	
Process connection	threaded connection G 1/4 internal thread	
Restrictor element integrated	no (can be retrofitted)	
Displays / operating elements		
Display	Display unit	3 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Remarks		
Notes	discontinued article	
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		

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PN-100-SBR14-MFRKG/US/ IV

Connection



OUT1	switching output
OUT2	switching output
	analogue output

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