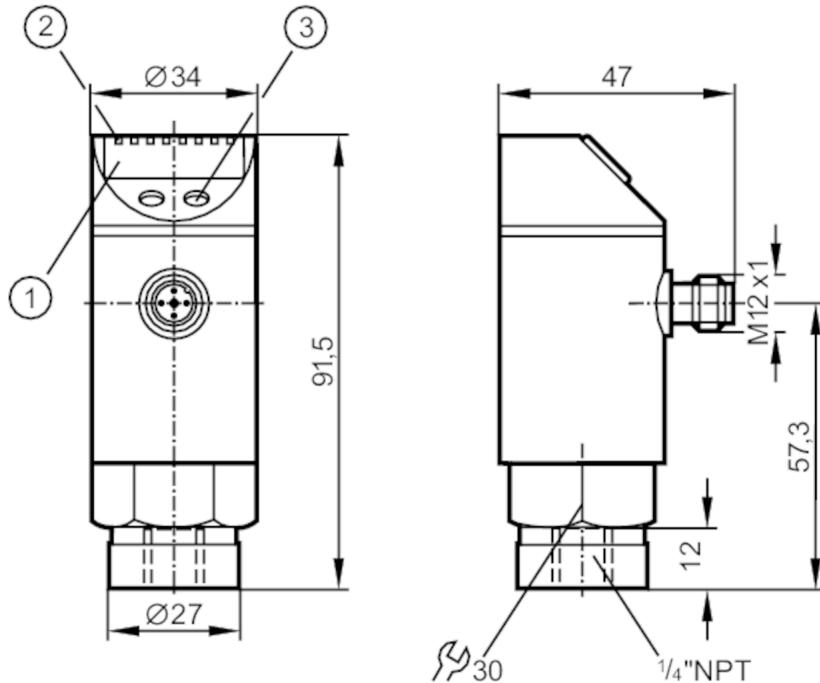


Pressure sensor with display

PN-250-SBN14-MFRKG/US / IV

Discontinued article

replaced by: PN2271 – Discontinuation date: 31.12.2016



- 1 alphanumeric display 4-digit
 2 LEDs Display unit / Switching status
 3 Programming button



Application

Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Pressure rating	400 bar	5800 psi	40 MPa
Min. bursting pressure	850 bar	12300 psi	85 MPa
Type of pressure	relative pressure		

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 analog outputs: 1		
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Pressure sensor with display

PN-250-SBN14-MFRKG/US /V

Outputs			
Total number of outputs		2	
Output signal	switching signal; analog signal; IO-Link; (configurable)		
Electrical design	PNP/NPN		
Number of digital outputs		2	
Output function	normally open / closed; (configurable)		
Max. voltage drop switching output DC [V]		2	
Permanent current rating of switching output DC [mA]		250	
Switching frequency DC [Hz]		< 500	
Number of analog outputs		1	
Analog current output [mA]	4...20; (scalable 1:4)		
Max. load [Ω]	(Ub - 10 V) / 20 mA		
Analog voltage output [V]		0...10; (scalable 1:4)	
Min. load resistance [Ω]		2000	
Short-circuit protection		yes	
Type of short-circuit protection		yes (non-latching)	
Overload protection		yes	
Measuring/setting range			
Measuring range	0...250 bar	0...3630 psi	0...25 MPa
Set point SP	2...250 bar	30...3625 psi	0.2...25 MPa
Reset point rP	1...249 bar	15...3610 psi	0.1...24.9 MPa
Analog start point	0...187.5 bar	0...2720 psi	0...18.75 MPa
Analog end point	62.5...250 bar	905...3625 psi	6.25...25 MPa
In steps of	0.5 bar	5 psi	0.05 MPa
		SP1 = 905 psi	rP1 = 835 psi
Factory setting		SP2 = 2720 psi	rP2 = 26450 psi
		ASP = 0 psi	AEP = 3525 psi
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 [% of the span]		< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)	
Hysteresis deviation [% of the span]		< ± 0,1; (Turn down 1:1)	
Long-term stability [% of the span]		< ± 0,1; (Turn down 1:1; per year)	
Temperature coefficient zero point [% of the span / 10 K]		< ± 0,2; (0...80 °C)	
Temperature coefficient span [% of the span / 10 K]		< ± 0,2; (0...80 °C)	

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Pressure sensor with display

PN-250-SBN14-MFRKG/US /V

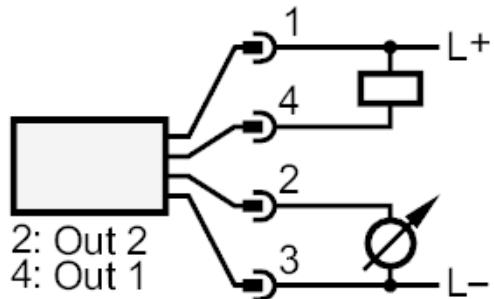
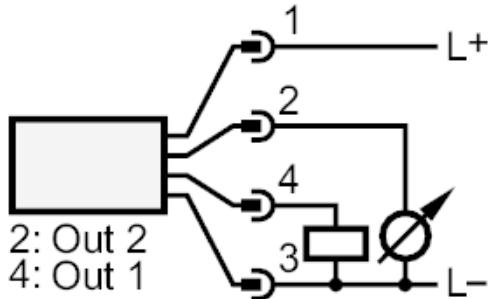
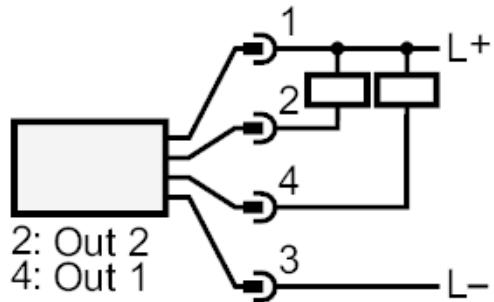
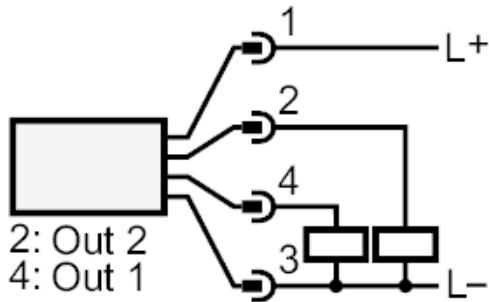
Reaction times		
Response time	[ms]	< 1.5
Damping for the switching output dAP	[s]	0.01...4
Damping for the analog output dAA	[s]	0.01...4
Max. response time analog output	[ms]	3
Software / programming		
Parameter setting options		hysteresis / window; normally open / closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; Zero point; span
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38.4 kBaud)
IO-Link revision		1.0
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
Mechanical data		
Weight	[g]	268
Material		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 1/4 NPT external thread
Restrictor element integrated		yes
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		

Pressure sensor with display

PN-250-SBN14-MFRKG/US/ I/V



Connection



OUT1	Switching output
OUT2	Switching output
	analog output

Discontinued article

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