

PN7009

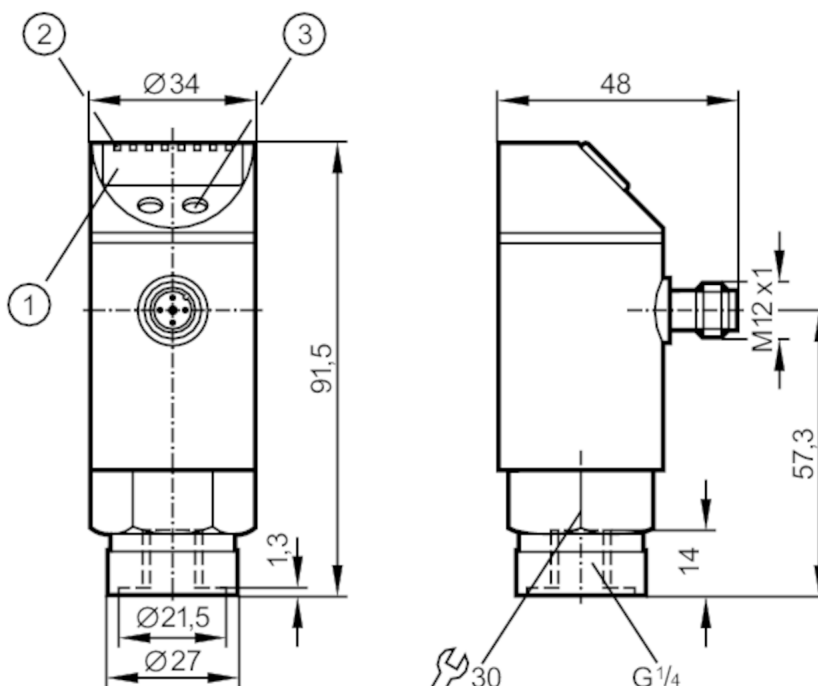


Pressure sensor with display

PN-1-1BRBR14-QFRKG/US/ /

discontinued article

replaced by: PN7099 – 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; IO-Link; (configurable)	
Measuring range	-1...1 bar	-1000...1000 mbar
Process connection	threaded connection G 1/4 internal thread	

Application

Special feature	Gold-plated contacts	
Application	for industrial applications	
Media	liquids and gases	
Medium temperature [°C]	-25...80	
Pressure rating [mbar]	20000	
Min. bursting pressure [mbar]	50000	
Type of pressure	relative pressure	



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Electrical data			
Operating voltage	[V]	18...36 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	
Overvoltage protection		yes; (< 40 V)	
Power-on delay time	[s]	0.3	
Integrated watchdog		yes	
Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2	
Outputs			
Total number of outputs		2	
Output signal		switching 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]	< 170	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Measuring/setting range			
Measuring range		-1...1 bar	-1000...1000 mbar
Set point SP	[mbar]	-970...1000	
Reset point rP	[mbar]	-980...990	
In steps of	[mbar]	10	
Factory setting		SP1 = -500 mbar	rP1 = -540 mbar
		SP2 = 500 mbar	rP2 = 460 mbar
Accuracy / deviations			
Switch point accuracy	[% of the span]	< ± 0,5	
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)	
Characteristics deviation	[% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)	
Hysteresis deviation	[% of the span]	< ± 0,25	
Long-term stability	[% of the span]	< ± 0,05; (per 6 months)	
Temperature coefficient zero point	[% of the span / 10 K]	0,2; (-20...80 °C)	
Temperature coefficient span		0,2; (-20...80 °C)	



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[% of the span / 10 K]

Response times

Delay time programmable dS, dr	[s]	0; 0,2...50
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Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; diagnostic function; switching logic; switch-on/switch-off delay; Damping; Display unit
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Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 CDV
IO-Link device ID	314 d / 00 01 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] -20...80
Storage temperature	[°C] -40...100
Protection	IP 65

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]	219
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	261
Materials	stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE	
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	4 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit

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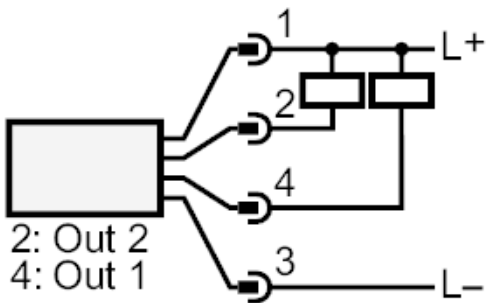
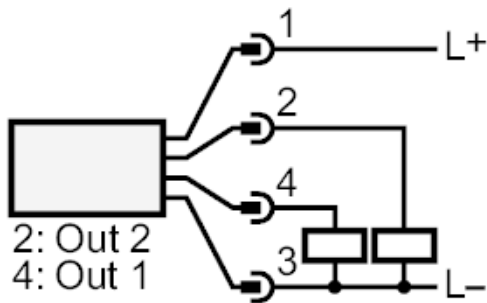
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Remarks	
Notes	discontinued article
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



OUT1	switching output
OUT2	switching output
	Diagnostic output

discontinued article

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