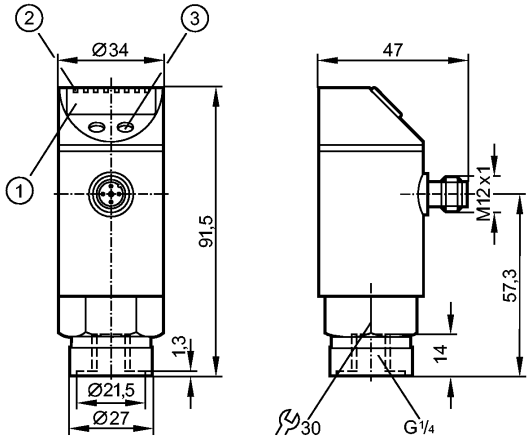
New generation available: PN2097

efectorsoo

PN2027

PN-001BRBR14-MFRKG/US/ /V

Pressure sensors



1: 4-digit alphanumeric display
2: LEDs (display unit / switching status)
3: Programming button

Product characteristics			
Combined pressure sensor			
Quick disconnect			
Zero and span adjustable			
Function programmable			
Process connection: G ¼ I			
2 outputs OUT1 = switching output OUT2 = switching output or analog output			
4-digit alphanumeric display			
Measuring range: -50...1000 mbar / -0.74...14.5 psi			
Application			
Application		Type of pressure: relative pressure Liquids and gases	
Pressure rating		10000 mbar	145 psi
Bursting pressure min.		30000 mbar	450 psi
Medium temperature	[°C]	-25...80	
Electrical data			
Electrical design		DC PNP/NPN	
Operating voltage	[V]	18...32 DC [1])	
Current consumption	[mA]	< 35	
Insulation resistance	[MΩ]	> 100 (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Outputs			
Output		2 outputs OUT1 = switching output OUT2 = switching output or analog output	
Output function		2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analog (4...20 mA / 0...10 V; programmable 1:4)	
Current rating	[mA]	2 x 250	
Voltage drop	[V]	< 2	
Short-circuit protection		yes (non-latching)	
Overload protection		yes	

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Switching frequency	[Hz]	≤ 500	
Analog output		4...20 mA / 0...10 V	
Max. load	[Ω]	4...20 mA: max. (Ub - 10 V) x 50 / 0...10 V: min. 2000	
Measuring / setting range			
Display unit		mbar, kPa, psi, inH2O	
Measuring range		-50...1000 mbar	-0.74...14.5 psi
Setting range			
Set point, SP		-46...1000 mbar	-0.68...14.50 psi
Reset point, rP		-50...996 mbar	-0.74...14.44 psi
Analog start point, ASP		-50...750 mbar	-0.74...10.88 psi
Analog end point, AEP		250...1000 mbar	3.64...14.50 psi
in steps of		2 mbar	0.02 psi
Factory setting		SP1 = 250 mbar; rP1 = 230 mbar SP2 = 750 mbar; rP2 = 730 mbar ASP = 0 mbar; AEP = 1000 mbar	
Accuracy / deviations			
Accuracy / deviations (in % of the span) Turn down 1:1			
Switch point accuracy		< ± 0.4	
Characteristics deviation *)		< ± 0.25 (BFSL) / < ± 0.5 (LS)	
Hysteresis		< ± 0.1	
Repeatability **)		< ± 0.1	
Long-term stability ***)		< ± 0.1	
Temperature coefficients (TEMPCO) in the temperature range 0...80° C (in % of the span per 10 K)			
Greatest TEMPCO of the zero point		< ± 0.2	
Greatest TEMPCO of the span		< ± 0.2	
Reaction times			
Power-on delay time	[s]	0.3	
Min. response time switching output	[ms]	1.5	
Damping for the switching output (dAP)	[s]	0; 0.01...4.00	
Damping for the analog output (dAA)	[s]	0; 0.01...4.00	
Response time analog output	[ms]	3	
Integrated watchdog		yes	
Software / programming			
Programming options		hysteresis / window function; N.O. / N.C; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit	
Interfaces			
IO-Link Device			
Transfer type		COM2 (38.4 kBaud)	
IO-Link revision		1.0	
IO-Link Device ID		62 d / 00 00 3E h	
Profiles		no profile	
SIO mode		yes	
Required master port class		A	
Process data analogue		1	
Process data binary		2	
Min. process cycle time	[ms]	2.3	
Environment			
Ambient temperature	[°C]	-25...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

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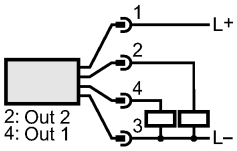
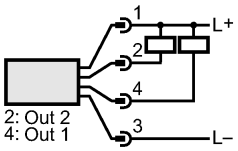
		EN 61000-4-4 Burst:	2 kV
		EN 61000-4-5 Surge:	0.5/1 kV
		EN 61000-4-6 HF conducted:	10 V
Shock resistance		DIN IEC 68-2-27:	50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6:	20 g (10...2000 Hz)
MTTF	[Years]	131	
Mechanical data			
Process connection		G ¼ I	
Materials (wetted parts)		stainless steel (303S22); ceramics; FPM (Viton)	
Housing materials		stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE	
Switching cycles min.		100 million	
Weight	[kg]	0.289	
Displays / operating elements			
Display		Display unit	4 x LED green
		Switching status	2 x LED yellow
		Function display	4-digit alphanumeric display
		Measured values	4-digit alphanumeric display
Electrical connection			
Connection		M12 connector; gold-plated contacts	

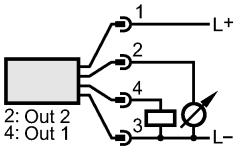
Wiring

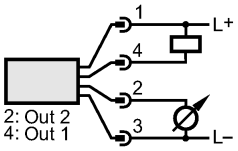
Programming of the output function
(OUT1 / OUT2):
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed
Complementary outputs:
output 1: = Hno, output 2: = Hnc
(with the same SP / rP)





Programming of the analog output (OUT2):
I = current output (4...20 mA)
U = voltage output (0...10 V)





Remarks			
Remarks		[1]) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in % of the span per year	
Pack quantity	[piece]	1	

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