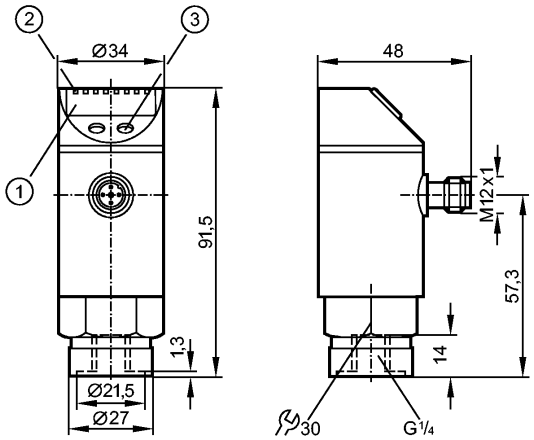
PY2068

PN-+,2BRBR14-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 Output OUT1 = Switching output OUT2 = Analog output				
4-digit alphanumeric display				
Measuring range: -250...250 mbar / -3.63...3.63 psi / -25.0...25.0 kPa				
Application				
Application		Type of pressure: relative pressure Liquids and gases		
Pressure rating		10000 mbar	145 psi	1000 kPa
Bursting pressure min.		30000 mbar	435 psi	3000 kPa
Medium temperature	[°C]	-25...80		
Electrical data				
Electrical design		DC PNP/NPN		
Operating voltage	[V]	18...32 DC [1])		
Current consumption	[mA]	< 50		
Insulation resistance	[MΩ]	> 100 (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Outputs				
Output		2 Output OUT1 = Switching output OUT2 = Analog output		
Output function		1 x normally open / closed programmable + 1 x analog (I / U, scaleable 1:4)		
Current rating	[mA]	250		
Voltage drop	[V]	< 2		

Short-circuit protection	yes (non-latching)		
Overload protection	yes		
Switching frequency [Hz]	6		
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, % der Spanne		
Measuring range	-250...250 mbar	-3.63...3.63 psi	-25.0...25.0 kPa
Setting range			
Set point, SP	-248...250 mbar	-3.61...3.63 psi	-24.8...25.0 kPa
Reset point, rP	-250...248 mbar	-3.63...3.60 psi	-25.0...24.8 kPa
Analog start point, ASP	-250...125 mbar	-3.63...1.82 psi	-25.0...12.5 kPa
Analog end point, AEP	-125...250 mbar	-1.82...3.63 psi	-12.5...25.0 kPa
in steps of	1 mbar	0.01 psi	0.1 kPa
Accuracy / deviations			
Accuracy / deviations (in % of the span) Turn down 1:1			
Switch point accuracy	< ± 0.2		
Characteristics deviation *)	< ± 0.2		
Linearity	< ± 0.1		
Hysteresis	< ± 0.1		
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	< ± 0.2		
Greatest TEMPCO of the span	< ± 0.2		
Reaction times			
Power-on delay time [s]	0.5		
Min. response time switching output [ms]	100		
Damping for the switching output (dAP) [s]	0.1...100.0		
Damping for the analog output (dAA) [s]	0.1...100.0		
Response time analog output [ms]	100		
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		
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		

	EN 61000-4-4 Burst: EN 61000-4-5 Surge: EN 61000-4-6 HF conducted:	2 kV 0.5/1 kV 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]	181.26	

Mechanical data

Process connection	G ¼ I
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Housing materials	stainless steel (304S15); PC (Makrolon); PBT (Pocan); PA; FPM (Viton)
Switching cycles min.	100 million
Weight [kg]	0.288

Displays / operating elements

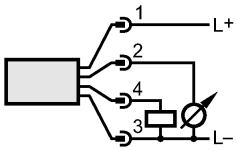
Display	Display unit	4 x LED green
	Switching status	LED yellow
	Function display	4-digit alphanumeric display
	Measured values	4-digit alphanumeric display

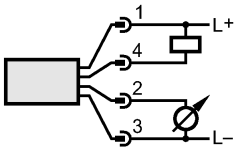
Electrical connection

Connection	M12 connector; gold-plated contacts

Wiring

Programming of switching output (OUT1):
Hno = hysteresis / N.O.
Hnc = hysteresis / N.C.
Fno = window function / N.O.
Fnc = window function / N.C.





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

Remarks

Remarks	*) 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