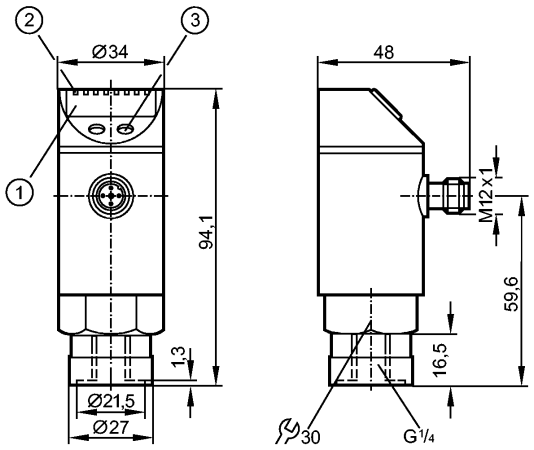
efectorsoo

PN7000

PN-400-SBR14-QFRKG/US/ /V

Pressure sensors



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

Made in Germany

CE cULus LISTED IO-Link

Product characteristics
Electronic pressure monitor
M12 connector
Process connection: G ¼ I
Communication interface: IO-Link 1.1 (COM2 slave, 38.4 kBaud)
Function programmable
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
4-digit alphanumeric display
Measuring range: 0...400 bar / 0...5800 psi / 0...40 MPa

Application				
Application		Type of pressure: relative pressure Liquids and gases Use in gases at pressures > 25 bar only after contacting the manufacturer ifm		
Pressure rating		600 bar	8700 psi	60 MPa
Bursting pressure min.		1000 bar	14500 psi	100 MPa
Medium temperature	[°C]	-25...80		

Electrical data		
Electrical design		DC PNP/NPN
Operating voltage	[V]	18...36 DC [1])
Current consumption	[mA]	< 35
Insulation resistance	[MΩ]	> 100 (500 V DC)
Protection class		III
Reverse polarity protection		yes
Overvoltage protection	[V]	up to 40

Outputs	
Output	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)

Current rating	[mA]	250		
Voltage drop	[V]	< 2		
Short-circuit protection		pulsed		
Switching frequency	[Hz]	≤ 170		
Measuring / setting range				
Measuring range		0...400 bar	0...5800 psi	0...40 MPa
Setting range				
Set point, SP		4...400 bar	60...5790 psi	0.4...40.0 MPa
Reset point, rP		2...398 bar	30...5760 psi	0.2...39.8 MPa
in steps of		2 bar	30 psi	0.2 MPa
Factory setting		SP1 = 100 bar; rP1 = 92 bar SP2 = 300 bar; rP2 = 292 bar		
Accuracy / deviations				
Accuracy / deviations (in % of the span)				
Switch point accuracy		< ± 0.5		
Characteristics deviation *)		< ± 0.25 (BFSL) / < ± 0.5 (LS)		
Hysteresis		< ± 0.25		
Repeatability **)		< ± 0.1		
Long-term stability ***)		< ± 0.05		
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		
Delay time programmable dS, dr	[s]	0; 0.2...50		
Integrated watchdog		yes		
Software / programming				
Programming options		hysteresis / window function; N.O. / N.C; diagnostic function; output polarity; on delay, off delay; damping; display unit		
Interfaces				
IO-Link Device				
Transfer type		COM2 (38.4 kBaud)		
IO-Link revision		1.1		
SDCI standard		IEC 61131-9 CDV		
IO-Link Device ID		307 d / 00 01 33 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		
Environment				
Ambient temperature	[°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)		
Storage temperature	[°C]	-40...100		
Protection		IP 67		

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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

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)
Switching cycles min.	100 million
Weight [kg]	0.276

Displays / operating elements

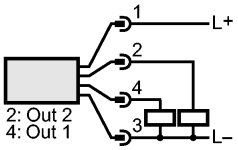
Display	Display unit	3 x LED green
	Switching status	2 x LED yellow
	Function display	4-digit alphanumeric display
	Measured values	4-digit alphanumeric display

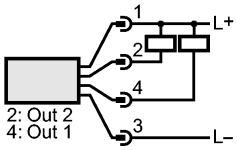
Electrical connection

Connection	M12 connector; Gold-plated contacts

Wiring

Programming of the output function
----------OUT1----------
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed
----------OUT2----------
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed
dESI = diagnostic function (normally closed)





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 / 6 months
Pack quantity [piece]	1