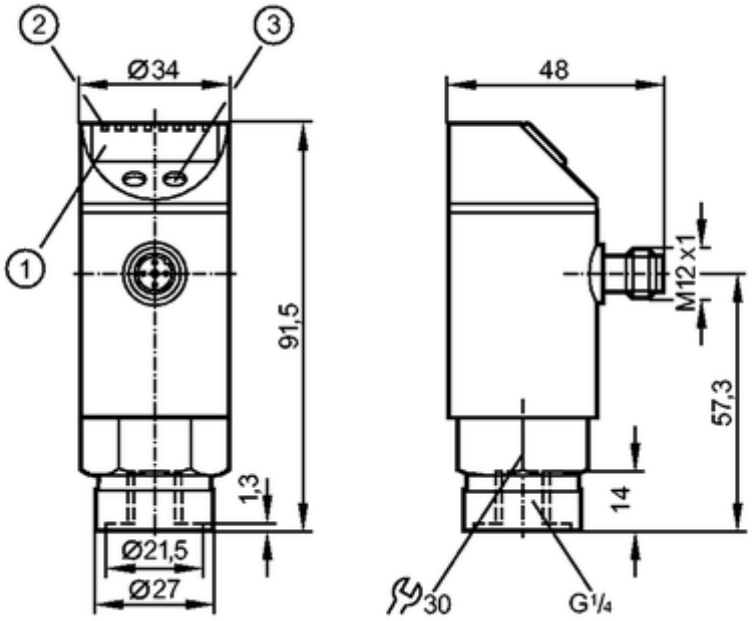
New generation available: PN7092 - Product comparison: PN7002/PN7092

efector500

PN7002

PN-100-SBR14-QFRKG/US/ /V

Pressure sensors



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

CE cULus LISTED IO-Link

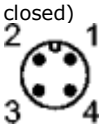
Product characteristics			
Electronic pressure monitor			
M12 connector			
Function programmable			
Process connection: G ¼ I			
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output			
4-digit alphanumeric display			
Measuring range: 0...100 bar / 0...1450 psi / 0...10 MPa			
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	300 bar	4350 psi	30 MPa
Bursting pressure min.	650 bar	9400 psi	65 MPa
Medium temperature [°C]	-25...80		
Electrical data			
Electrical design	DC PNP/NPN		
Operating voltage [V]	18...36 DC [1])		
Current consumption [mA]	< 35		

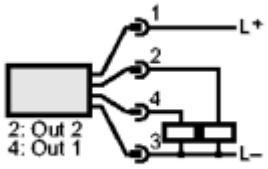
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Overvoltage protection [V]	up to 40		
Outputs			
Output	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output		
Output function	2 x normally open / closed programmable or 1 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...100 bar	0...1450 psi	0...10 MPa
Setting range			
Set point, SP	1.0...100.0 bar	20...1450 psi	0.10...10.00 MPa
Reset point, rP	0.5...99.5 bar	10...1440 psi	0.05...9.95 MPa
in steps of	0.5 bar	10 psi	0.05 MPa
Factory setting	SP1 = 25.0 bar; rP1 = 23.0 bar SP2 = 75.0 bar; rP2 = 73.0 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 -20...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	309 d / 00 01 35 h		
Profiles	no profile		
SIO mode	yes		
Required master port class	A		

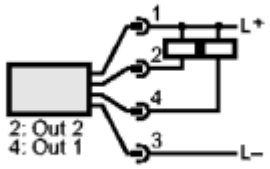
Process data analogue	1	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Environment		
Ambient temperature [°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)	
Storage temperature [°C]	-40...100	
Protection	IP 67	
Tests / approvals		
EMC	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated:	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]	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]	0.26	
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