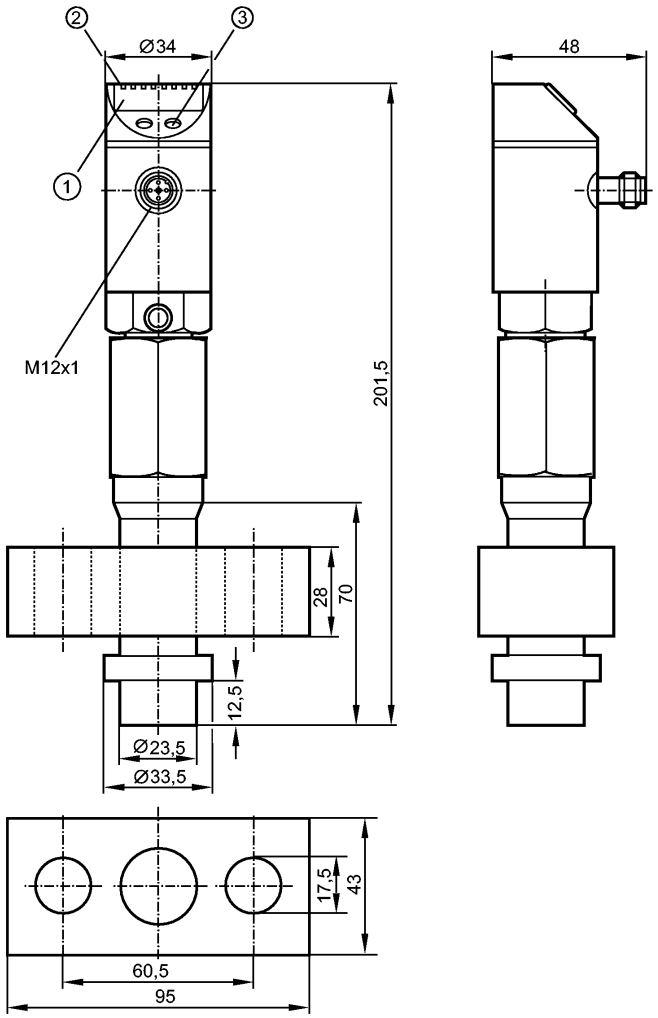
efectorsoo
PY9970

PY-400-SDD24-KFPKG/US/ /N

Pressure sensors



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

CE EC 1935/2004 FDA

Product characteristics

Combined pressure sensor
Zero and span adjustable
Function programmable
2 outputs OUT1 = switching output OUT2 = switching output or analog output
4-digit alphanumeric display
Measuring range: 0...400 bar / 0...5800 psi / 0...40 MPa

Application

Application		Type of pressure: relative pressure Hygienic systems For gaseous media the application is limited to max. 25 bar		
Pressure rating		600 bar	8700 psi	60 MPa
Bursting pressure min.		1000 bar	14500 psi	100 MPa
Medium temperature	[°C]	-10...140		

Electrical data

PY9970 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

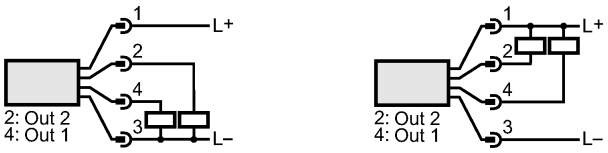
Electrical design		DC PNP/NPN		
Operating voltage	[V]	20...32 DC [1])		
Current consumption	[mA]	< 65		
Insulation resistance	[MΩ]	> 100 (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Outputs				
Output		2 outputs OUT1 = switching output OUT2 = switching output or analog output		
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		
Switching frequency	[Hz]	≤ 170		
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				
Measuring range		0...400 bar	0...5800 psi	0...40 MPa
Setting range				
Set point, SP		4...400 bar	60...5800 psi	0.4...40.0 MPa
Reset point, rP		2...398 bar	30...5770 psi	0.2...39.8 MPa
Analog start point, ASP		0...160 bar	0...2320 psi	0.0...16.0 MPa
Analog end point, AEP		100...400 bar	1450...5800 psi	10.0...40.0 MPa
in steps of		1 bar	10 psi	0.1 MPa
Factory setting		SP1 = 100 bar; rP1 = 92 bar SP2 = 300 bar; rP2 = 292 bar ASP = 0 bar; AEP = 400 bar		
Accuracy / deviations				
Accuracy / deviations (in % of the span)				
Switch point accuracy		< ± 1.0		
Characteristics deviation *)		< ± 1.0		
Repeatability **)		< ± 0.25		
Temperature coefficients (TEMPCO) in the temperature range 0...80° C (in % of the span per 10 K)				
Greatest TEMPCO of the zero point		< ± 0.3		
Greatest TEMPCO of the span		< ± 0.3		
Reaction times				
Power-on delay time	[s]	0.2		
Min. response time switching output	[ms]	3		
Damping for the switching output (dAP)	[s]	0...4		
Damping for the analog output (dAA)	[s]	0...4		
Response time analog output	[ms]	3		
Integrated watchdog		yes		
Environment				
Ambient temperature	[°C]	-25...80		
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		

PY9970 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

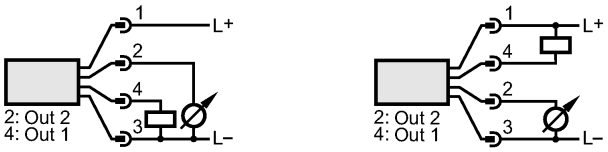
Shock resistance		DIN IEC 68-2-27:	50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6:	20 g (10...2000 Hz)
MTTF	[Years]	173.33	
Mechanical data			
Materials (wetted parts)		high-grade stainless steel	
Housing materials		stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton)	
Switching cycles min.		1 million	
Weight	[kg]	1.575	
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 / 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 **) with temperature fluctuations < 10 K	
Pack quantity	[piece]	1	