efectorsoo

Pressure sensors

PN2024

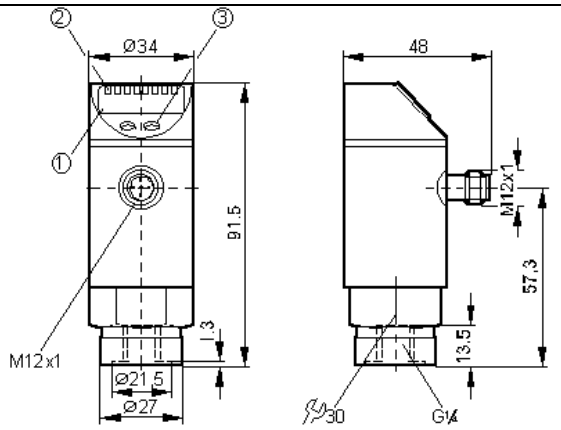
Combined pressure sensor PN2
G¼ I

Zero and span adjustable
Function programmable

2 outputs OUT1 = switching output OUT2 = switching output or analogue output

4-digit alphanumeric display

Measuring range
-0,5...+10 bar



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

Application	**Type of pressure: relative pressure Liquids and gases**
Electrical design	**DC PNP / DC NPN**
Output	**2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analogue (4...20 mA / 0...10 V, scaleable 1:4)**
Operating voltage [V]	20...30 DC
Current rating [mA]	2 x 250
Short-circuit protection	•
Reverse polarity protection / Overload protection	•
Integrated Watchdog	•
Voltage drop [V]	< 2
Current consumption [mA]	< 65
Analogue output	4...20mA / 0...10V
Load for analogue output [ohms]	4...20mA: max. (UB - 10) x 50; 700 at UB = 24V; 0...10V: min. 2000
Permissible overl. pressure [bar]	50
Bursting pressure [bar]	150
Setting range	
Switch-on point, SP [bar]	-0,46...+10,00
Switch-off point, rP [bar]	-0,50...+9,96
Analogue output/lower end, ASP [bar]	-0,50...+4,00
Analogue output/upper end, AEP [bar]	+2,50...+10,00
in steps of [bar]	0,02
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
Accuracy / deviations (in% of the span)	
Turn down 1:1	
Accuracy of switch point	
Characteristics deviation *)	
Linearity	< ± 0,5
Hysteresis	< ± 0,6
Repeatability **)	< ± 0,5
Long-time stability ***)	< ± 0,1
Temperature coefficients (TEMPCO) in the temperature	< ± 0,1

range -25...+80 °C (in% of the span per 10 K) - greatest TEMPCO of the zero point	< ± 0,1
- greatest TEMPCO of the span	< ± 0,2
Power-on delay time [s]	0,3
Min. response time switching outputs [ms]	3
Damping for the switching outputs (dAP) [ms]	0; 10; 20;...100; 200;...4000
Switching frequency [Hz]	160...0,125
Response time analogue output [ms]	3
Damping for the analogue output (dAA) [ms]	0; 100; 500; 2000

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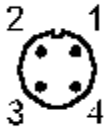
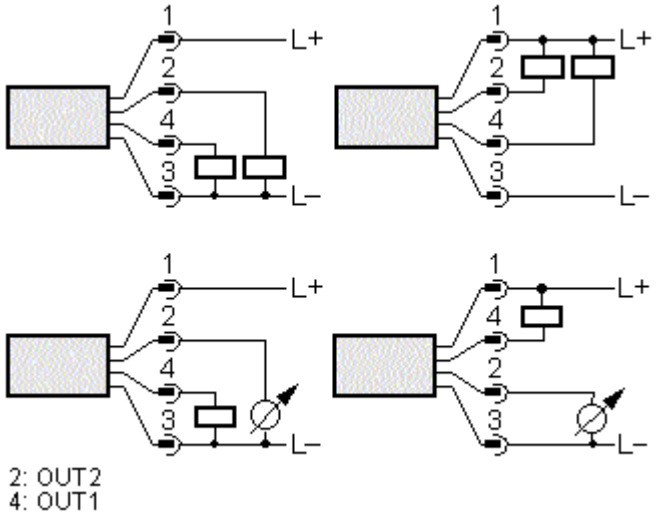
Display unit	bar, PSI, kPa
Operating temperature [°C]	-25...+80
Medium temperature [°C]	-25...+80
Storage temperature [°C]	-40...+100
Protection	IP 65, III
Insulation resistance [MΩ]	> 100 (500 V DC)
Shock resistance [g]	50 (DIN / IEC 68-2-27, 11ms)
Vibration resistance [g]	20 (DIN / IEC 68-2-6, 10 - 2000 Hz)
Switching cycles min.	100 million
EMC	IEC 1000/4/2 ESD: 4kV CD / 8kV AD IEC 1000/4/3 HF radiated: 10 V/m IEC 1000/4/4 Burst: 2 KV IEC 1000/4/5 Surge: 0.5 / 1 KV IEC 1000/4/6 HF conducted: 10 V
Housing material	stainless steel (304S15) PC (Macrolon) Pocan PA FPM (Viton) EPDM/X (Santoprene)
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Function display	
Switching status LED	2 x yellow
System pressure, function LED	4-digit alphanumeric display
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 analogue output (OUT2):

I = current output (4-20mA)
U = voltage output (0-10V)





Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10K ***) in% of the span per year