

Pressure sensors

PN7024

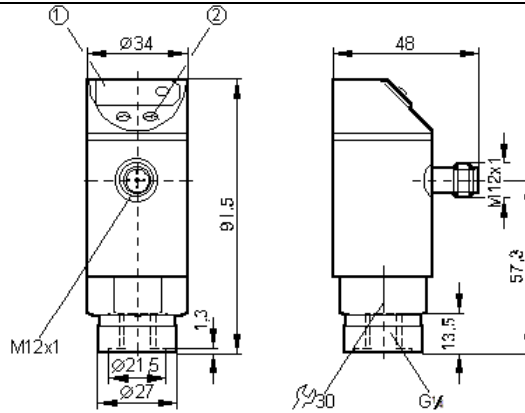
Electronic pressure monitor
PN70
G $\frac{1}{4}$ I

Function programmable

2 switching outputs

7-segment LED display

Measuring range
0...10 bar



1: 7-segment LED display, 2: Programming button

Application	Type of pressure: relative pressure																					
Electrical design	Liquids and gases																					
Output	DC PNP																					
	2 x normally open / closed programmable																					
Operating voltage [V]	18...30 DC																					
Current rating [mA]	250																					
Short-circuit protection	Yes (non-latching)																					
Reverse polarity protection	yes																					
overload protection	yes																					
Integrated Watchdog	•																					
Voltage drop [V]	< 2																					
Current consumption [mA]	< 60																					
Permissible overl. pressure [bar]	50																					
Bursting pressure [bar]	150																					
Setting range																						
Switch-on point, SP [bar]	0.10...10.0																					
Switch-off point, rP [bar]	0.05... 9.95																					
in steps of [bar]	0.05																					
Programming options	hysteresis / window function; N.O. / N.C.; on delay, off delay; damping																					
Adjustment of the switch point	Programming button																					
Deviations (% of value of measuring range)																						
Accuracy of switch point	< \pm 1.0																					
Repeatability	< \pm 0.25																					
Temperature drift (/ 10 K)	< \pm 0.3																					
in the temperature range	-25...80																					
Power-on delay time [s]	0.2																					
Switching frequency for a given set response time of one output *)	<table border="1"> <tr> <td>Response time (dAP) [ms]</td> <td>3</td> <td>6</td> <td>10</td> <td>17</td> <td>30</td> <td>60</td> <td>125</td> <td>250</td> <td>500</td> </tr> <tr> <td>Switching frequency [Hz]</td> <td>170</td> <td>80</td> <td>50</td> <td>30</td> <td>16</td> <td>8</td> <td>4</td> <td>2</td> <td>1</td> </tr> </table>		Response time (dAP) [ms]	3	6	10	17	30	60	125	250	500	Switching frequency [Hz]	170	80	50	30	16	8	4	2	1
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Delay time programmable dS, dr [s]	0, 0.2,...10, 11,...50																					

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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: 4 kV CD / 8 kV AD IEC 1000/4/3 HF radiated: 10 V/m IEC 1000/4/4 Burst: 2 kV IEC 1000/4/6 HF conducted: 10 V
Housing material	EPDM/X (Santoprene) FPM (Viton) PA Pocan PC (Macrolon) PTFE stainless steel (304S15)
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Function display	
Switching status LED	2 x red
System pressure, function LED	7-segment LED display
Connection	M12 connector, gold-plated contacts

Wiring

Programming of the output function:

Hno = hysteresis / normally open

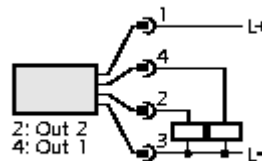
Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

Complementary outputs:

output 1: = Hno, output 2: = Hnc (with the same SP / rP)



Remarks

*) at rectangular pressure characteristic and setting:
switch-on point (SPx) = 70 %, switch-off point (rPx) = 30 %