

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



Product characteristics
Electronic pressure monitor

Quick disconnect

Function programmable

Analog input

Process connection: G ¼ I

2 switching outputs

4-digit alphanumeric display

Measuring range: 0...250 bar

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 [bar]

400

Bursting pressure min. [bar]

850

Medium temperature [°C]

-25...80

Electrical data

Electrical design

DC PNP/NPN

Operating voltage [V]

18...30 DC

Current consumption [mA]

< 90

Insulation resistance [MΩ]

> 100 (500 V DC)

Protection class

III

Reverse polarity protection

yes

Inputs

Analog input

0...20 mA / 0...10 V

Load / input resistance [kΩ]

0...20 mA: 0.3 / 0...10 V: 90

Outputs

Output

2 switching outputs

Output function

2 x normally open / closed programmable

Current rating [mA]

250

Voltage drop [V]

< 2

Short-circuit protection

yes (non-latching)

Overload protection

yes

Switching frequency [Hz]

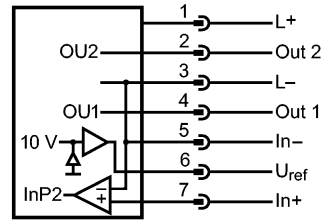
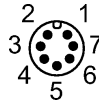
≤ 170

PNI021 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Measuring / setting range		
Display unit		bar, psi, MPa
Measuring range [bar]		0...250
Setting range		
Set point, SP [bar]		-62...250 *)
Reset point, rP [bar]		-63...249 *)
in steps of [bar]		1
Accuracy / deviations		
Deviations (% of value of measuring range)		
Characteristics deviation		< ± 0.6
Temperature drift (/ 10 K)		< ± 0.3
in the temperature range [°C]		0...80
Analog input		
Characteristics deviation		< ± 0.3
Temperature drift (/ 10 K)		< ± 0.1
in the temperature range [°C]		0...80
Reaction times		
Power-on delay time [s]		0.2
Min. response time switching output [ms]		3
Delay time programmable dS, dr [s]		0, 0.1...50
Damping for the switching output (dAP) [s]		0...4
Max. response time analog input [ms]		3
Integrated watchdog		yes
Software / programming		
Programming options	hysteresis / window function; N.O. / N.C; output polarity; current / voltage input; damping; calibration of displayed values; display can be rotated / deactivated; display unit	
Adjustment of the switch point	Programming button	
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 61000-4-6 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]		152
Mechanical data		
Process connection		G ¼ I
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)	
Housing materials	stainless steel (303S22); PBT (Pocan); PC (Makrolon); PA; FPM (Viton)	
Switching cycles min.		100 million
Weight [kg]		0.293
Displays / operating elements		
Display	Display unit	3 x LED green
	Display mode	3 x LED green
	Function display	4-digit alphanumeric display
	Measured values	4-digit alphanumeric display
Electrical connection		
Connection	M12 connector; gold-plated contacts	
Wiring		

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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

Remarks	*) differential pressure	
Pack quantity	[piece]	1