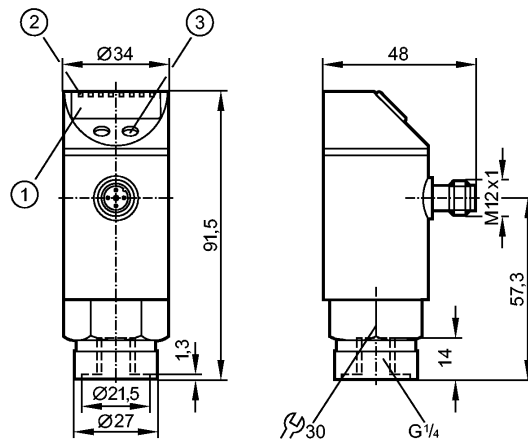


PNI021

PNI250-SBR14-QFRKG/US/ V

Pressure sensors



- 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 1/4 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

PNI021

PNI250-SBR14-QFRKG/US/ V

Pressure sensors

Voltage drop	[V]	< 2
Short-circuit protection		yes (non-latching)
Overload protection		yes
Switching frequency	[Hz]	≤ 170

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

PNI021

PNI250-SBR14-QFRKG/US/ V

Pressure sensors

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

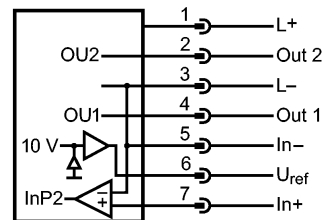
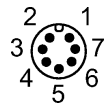
Display	Display unit 3 x LED green Display mode 3 x LED green Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
---------	---

Electrical connection

Connection	M12 connector; gold-plated contacts
------------	-------------------------------------

Wiring

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
-----------------------	---