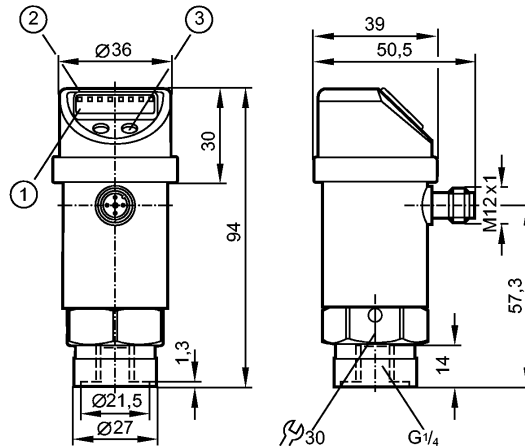


**PN016A**

PN-2.5-RBR14-QFPKG/US/3D IV

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
ATEX approval
Group II, category 3D
Process connection: G 1/4 I
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
4-digit alphanumeric display
Measuring range: 0...2.5 bar / 0...36.3 psi / 0...250 kPa

**Application**

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	20 bar	290 psi	2000 kPa
Bursting pressure min.	50 bar	725 psi	5000 kPa
Medium temperature [°C]	-20...60		

**Electrical data**

Electrical design	DC PNP/NPN
Operating voltage [V]	18...36 DC 1)
Current consumption [mA]	< 50
Protection class	III
Reverse polarity protection	yes
Overvoltage protection [V]	up to 40 V

**Outputs**

Output	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)
Current rating [mA]	250

**PN016A**

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**Pressure sensors**

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

Measuring / setting range			
Measuring range	0...2.5 bar	0...36.3 psi	0...250 kPa
Setting range			
Set point, SP	0.02...2.50 bar	0.4...36.2 psi	2...250 kPa
Reset point, rP	0.01...2.49 bar	0.2...36.0 psi	1...249 kPa
in steps of	0.01 bar	0.2 psi	1 kPa
Factory setting	SP1 = 0.63 bar; rP1 = 0.58 bar SP2 = 1.88 bar; rP2 = 1.83 bar		

Accuracy / deviations	
Accuracy / deviations (in % of the span)	
Switch point accuracy	< ± 0.5
Characteristics deviation *)	< ± 0.25 (BFSL) / < ± 0.5 (LS)
Hysteresis	< ± 0.25
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.05
Temperature coefficients (TEMPCO) in the temperature range 0...60° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	0.2
Greatest TEMPCO of the span	0.2

Reaction times	
Power-on delay time [s]	0.3
Delay time programmable dS, dr [s]	0; 0.2...50
Integrated watchdog	yes

Software / programming	
Programming options	hysteresis / window function; N.O. / N.C; diagnostic function; output polarity; on delay, off delay; damping; display unit

Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 CDV
IO-Link Device ID	312 d / 00 01 38 h
Profiles	no profile
SIO mode	yes
Required master port class	A
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3

Environment	
Ambient temperature [°C]	-20...60
Storage temperature [°C]	-40...100
Protection	IP 65

**Tests / approvals**

**PN016A**

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**Pressure sensors**

Marking of the unit	Ⓔ II 3D Ex tc IIIC T80°C Dc X	
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
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]	194	

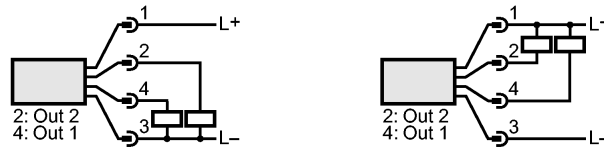

Mechanical data		
Process connection	G ¼ I	
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)	
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE	
Switching cycles min.	100 million	
Weight [kg]	0.301	

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-----  
 Hno = hysteresis / normally open  
 Hnc = hysteresis / normally closed  
 Fno = window function / normally open  
 Fnc = window function / normally closed  
 -----OUT2-----  
 Hno = hysteresis / normally open  
 Hnc = hysteresis / normally closed  
 Fno = window function / normally open  
 Fnc = window function / normally closed  
 dESI = diagnostic function (normally closed)

Remarks		
Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months	
Pack quantity [piece]	1	