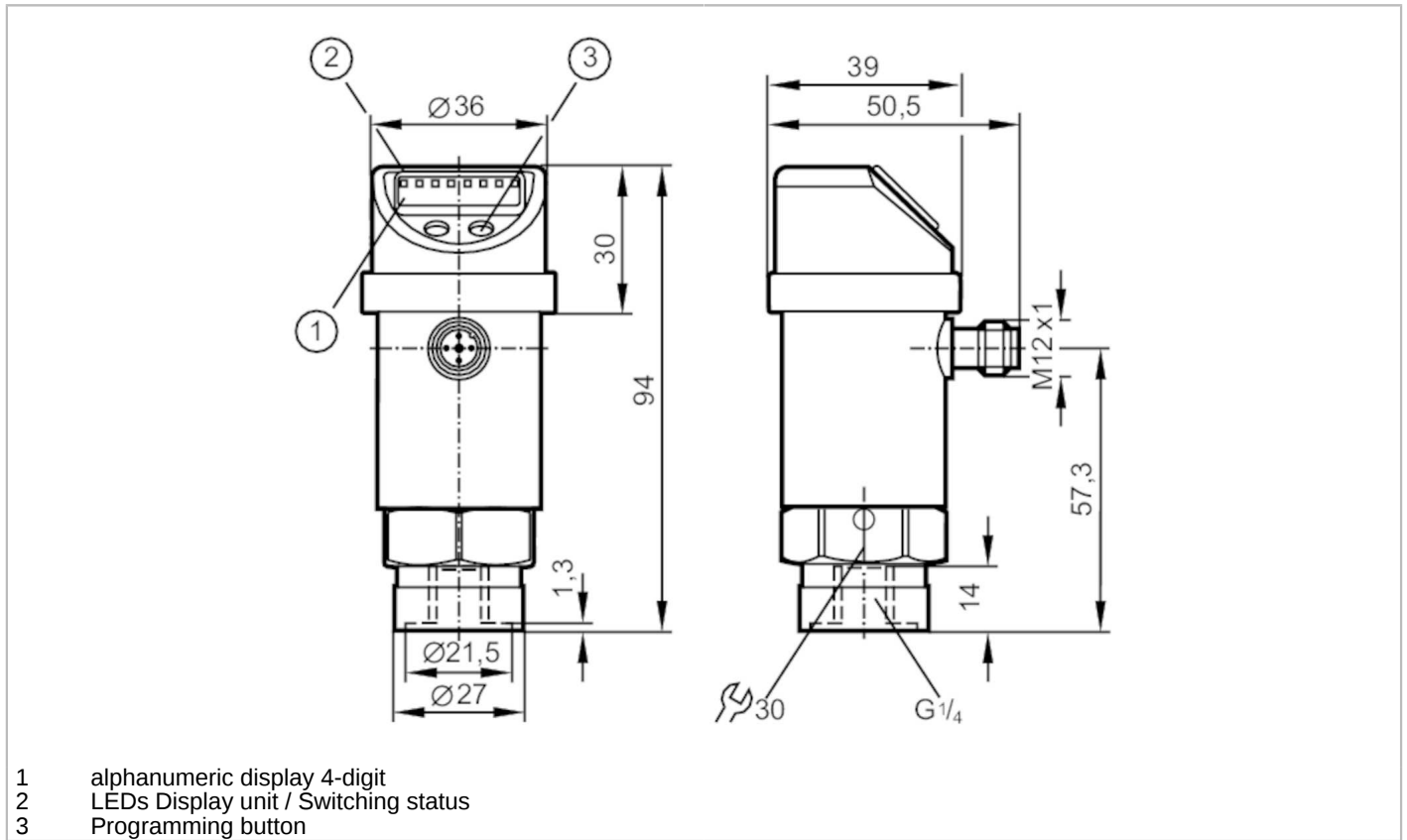


PN004A



Pressure sensor with display

PN-010-RBR14-KFPKG/US/3D IV



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / Switching status
- 3 Programming button



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1			
Measuring range	-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Process connection	threaded connection G 1/4 Internal thread			

Application

System	gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-20...60		
Min. bursting pressure	150 bar	2175 psi	15 MPa
Pressure rating	75 bar	1087 psi	7.5 MPa
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...36 DC; (to SELV/PELV)		
Current consumption [mA]	< 50		
Protection class	III		
Reverse polarity protection	yes		
Overtoltage protection	yes; (< 40 V)		
Power-on delay time [s]	0.3		
Integrated watchdog	yes		

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Pressure sensor with display

PN-010-RBR14-KFPKG/US/3D /V


Inputs / outputs					
Number of inputs and outputs		Number of digital outputs: 1; Number of analog outputs: 1			
Outputs					
Total number of outputs		2			
Output signal		switching signal; analog signal; (configurable)			
Electrical design		PNP			
Number of digital outputs		1			
Output function		normally open / closed; (configurable)			
Max. voltage drop switching output DC	[V]	2			
Permanent current rating of switching output DC	[mA]	250			
Switching frequency DC	[Hz]	< 170			
Number of analog outputs		1			
Analog current output	[mA]	4...20			
Max. load	[Ω]	500			
Analog voltage output	[V]	0...10			
Min. load resistance	[Ω]	2000			
Short-circuit protection		yes			
Type of short-circuit protection		yes (non-latching)			
Measuring/setting range					
Measuring range		-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Set point SP		-0.9...10 bar	-12...145 psi	-0.09...1 MPa	
Reset point rP		-0.95...9.95 bar	-13...144 psi	-0.095...0.995 MPa	
In steps of		0.05 bar	1 psi	0.005 MPa	
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar		
Accuracy / deviations					
Switch point accuracy [% of the span]		< ± 0,5			
Repeatability [% of the span]		< ± 0,1; (with temperature fluctuations < 10 K)			
Characteristics deviation [% of the span]		< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)			
Hysteresis deviation [% of the span]		< ± 0,25			
Long-term stability [% of the span]		< ± 0,05; (per 6 months)			
Temperature coefficient zero point [% of the span / 10 K]		0,2; (0...60 °C)			
Temperature coefficient span [% of the span / 10 K]		0,2; (0...60 °C)			
Reaction times					
Delay time programmable dS, dr [s]		0; 0,2...50			
Max. response time analog output [ms]		3			

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Pressure sensor with display

PN-010-RBR14-KFPKG/US/3D /V

Software / programming		
Parameter setting options	hysteresis / window; normally open / closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output	
Operating conditions		
Ambient temperature	[°C]	-20...60
Storage temperature	[°C]	-40...100
Protection		IP 65
Tests / approvals		
ATEX marking	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]	213
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	302.5
Material	stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE	
Materials (wetted parts)	stainless steel (1.4305 / 303); ceramics; FKM	
Min. pressure cycles	100 million	
Process connection	threaded connection G 1/4 Internal thread	
Restrictor element integrated	no (can be retrofitted)	
Displays / operating elements		
Display	Display unit	3 x LED, green
	Switching status	LED, yellow
	Function display	alphanumeric display, 4-digit
	Measured values	alphanumeric display, 4-digit
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; coding: A; Contacts: gold-plated		
		

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Connection

