PY7002

Pressure sensor with display

PN-100-SGR14-KG /US/ /V

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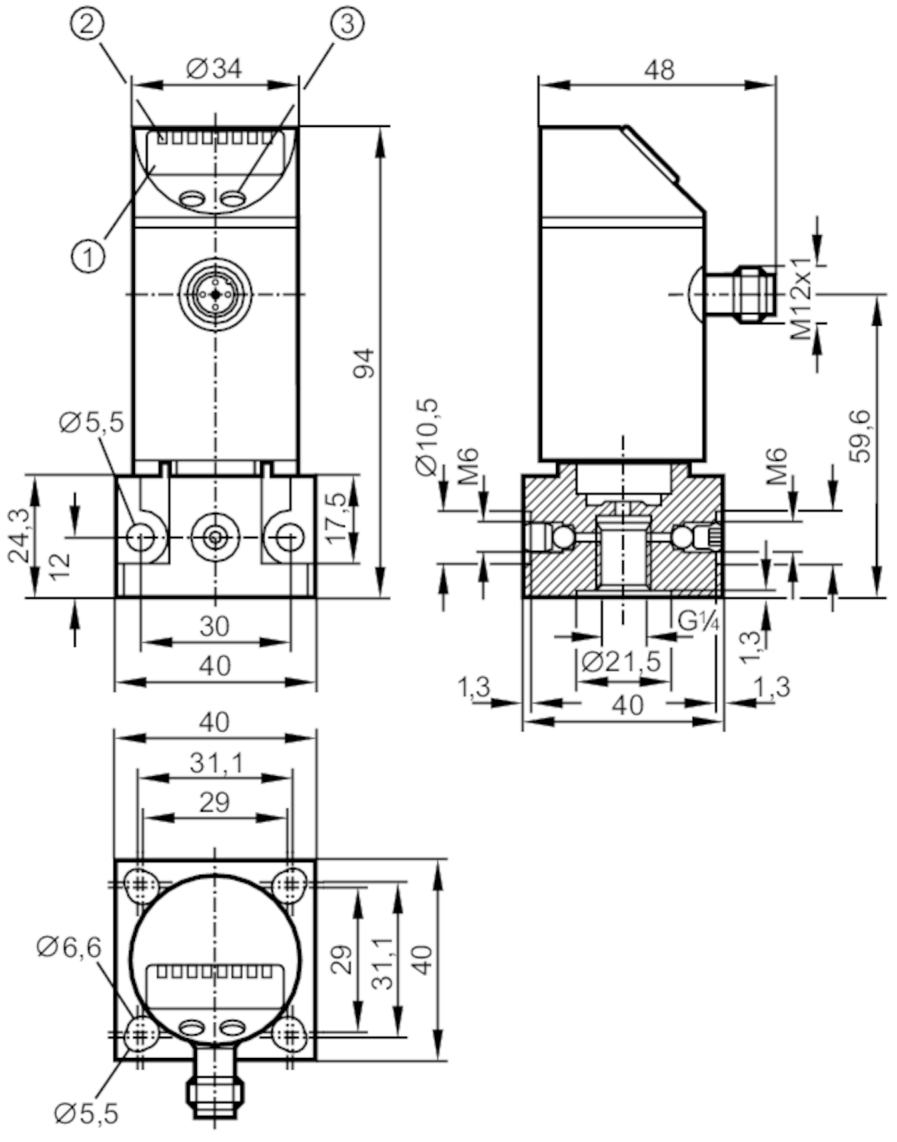
Alternative articles: PN7592 + E30063 or PN7092 + E30003
When selecting an alternative article and accessories please note that technical data may differ!



1 alphanumeric display 4-digit
2 LEDs Display unit / switching status
3 programming button

IO-Link

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2	
Measuring range		0...100 bar	0...1450 psi
Measuring range	[MPa]	0...10	
Process connection		flange internal thread:G 1/4; internal thread:M6	

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Application			
Special feature		Gold-plated contacts	
Design		with flange adapter	
Media		liquids and gases	
Conditionally suitable for		use in gases at pressures > 25 bar only on request	
Medium temperature	[°C]	-25...80	
Min. bursting pressure		650 bar	9400 psi
Min. bursting pressure	[MPa]	65	
Pressure rating		300 bar	4350 psi
Pressure rating	[MPa]	30	
Type of pressure		relative pressure	
Electrical data			
Operating voltage	[V]	18...36 DC; (to SELV/PELV)	
Current consumption	[mA]	< 50	
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Overvoltage protection		yes; (< 40 V)	
Power-on delay time	[s]	0.3	
Integrated watchdog		yes	
Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2	
Outputs			
Total number of outputs		2	
Output signal		switching signal; IO-Link; (configurable)	
Electrical design		PNP/NPN	
Number of digital outputs		2	
Output function		normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Switching frequency DC	[Hz]	< 170	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Measuring/setting range			
Measuring range		0...100 bar	0...1450 psi
Measuring range	[MPa]	0...10	
Set point SP		1...100 bar	20...1450 psi
Set point SP	[MPa]	0.1...10	
Reset point rP		0.5...99.5 bar	10...1440 psi
Reset point rP	[MPa]	0.05...9.95	
In steps of		0.5 bar	10 psi
In steps of	[MPa]	0.05	

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Factory setting		SP1 = 25.0 bar	rP1 = 23.0 bar
		SP2 = 75.0 bar	rP2 = 73.0 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]	< ± 0,5; (linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1)
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; (-20...80 °C)
Temperature coefficient span [% of the span / 10 K]	0,2; (-20...80 °C)

Response times

Delay time programmable dS, dr [s]	0; 0,2...50

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; diagnostic function; switching logic; switch-on/switch-off delay; Damping; Display unit

Interfaces

Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 CDV
Profiles	no profile
SIO mode	yes
Required master port type	A
Process data analogue	1
Process data binary	2
Min. process cycle time [ms]	2.3

Supported DeviceIDs	**Type of operation**	**DeviceID**
	default	309

Operating conditions

Ambient temperature [°C]	-20...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 61000-4-5 Surge	0,5/1 kV
	EN 61000-4-6 HF conducted	10 V

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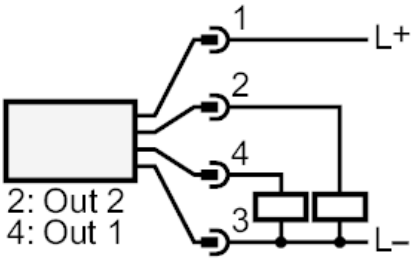
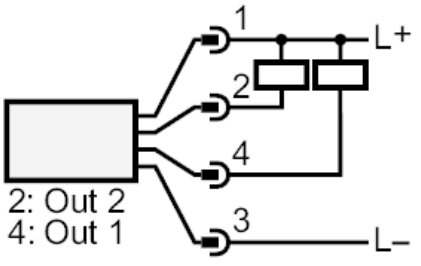
Shock resistance		DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6	20 g (10...2000 Hz)
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	381.5	
Materials		stainless steel (304/1.4301); PC; PBT; PEI; FKM	
Materials (wetted parts)		steel (1.4104 / 430F); ceramics; FKM	
Min. pressure cycles		100 million	
Process connection		flange internal thread:G 1/4; internal thread:M6	
Restrictor element integrated		no	
Displays / operating elements			
Display		Display unit	3 x LED, green
		switching status	2 x 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





OUT1	switching output
OUT2	switching output Diagnostic output