

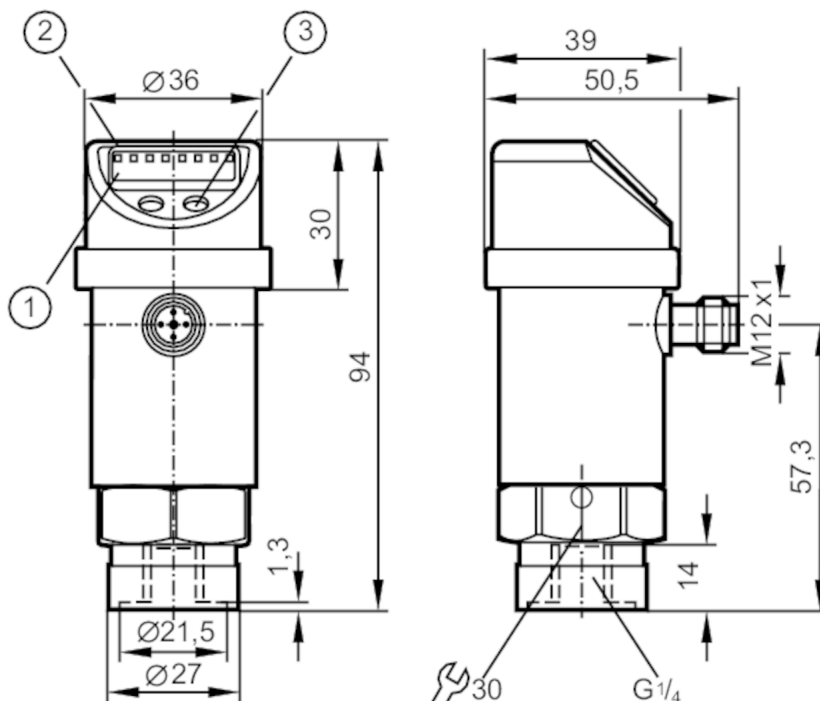
PN028A



Pressure sensor with display

PN-,25-RBR14-MFRKG/US/3D IV

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- 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: 2; Number of analogue outputs: 1		
Measuring range	-12.5...250 mbar	-5...100.4 inH2O	-1.25...25 kPa
Process connection	threaded connection G 1/4 internal thread		

Application

Special feature	Gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-20...60		
Min. bursting pressure	30000 mbar	12000 inH2O	3000 kPa
Pressure rating	10000 mbar	4000 inH2O	1000 kPa
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	20...32 DC; (to SELV/PELV)		
Current consumption [mA]	< 65		
Protection class	III		
Reverse polarity protection	yes		
Power-on delay time [s]	0.2		
Integrated watchdog	yes		



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Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; (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	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20; (scalable 1:4)	
Max. load	[Ω]	(Ub - 10 V) / 20 mA	
Analogue voltage output	[V]	0...10; (scalable 1:4)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range		-12.5...250 mbar	-5...100.4 inH2O -1.25...25 kPa
Set point SP		-10.5...250 mbar	-4.2...100.4 inH2O -1.05...25 kPa
Reset point rP		-11.5...249 mbar	-4.6...100 inH2O -1.15...24.9 kPa
Analogue start point		-12.5...100 mbar	-5...40.2 inH2O -1.25...10 kPa
Analogue end point		50...250 mbar	20...100.4 inH2O 5...25 kPa
In steps of		0.5 mbar	0.2 inH2O 0.05 kPa
Accuracy / deviations			
Switch point accuracy [% of the span]		< ± 0,4; (Turn down 1:1)	
Repeatability [% of the span]		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation [% of the span]		< ± 0,2 (BFSL) / < ± 0,4 (LS); (Turn down 1:1)	
Hysteresis deviation [% of the span]		< ± 0,1; (Turn down 1:1)	
Long-term stability [% of the span]		< ± 0,1; (Turn down 1:1; per year)	
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)	
Response times			
Response time [ms]		< 3	

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Damping process value dAP [s]	0...4
Damping for the analogue output dAA [s]	0...4
Max. response time analogue output [ms]	3

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span
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Operating conditions

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

Tests / approvals

ATEX marking	II 3D Ex tD A22 IP65 T80°C X Ta: -20°C...+60°C	
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)

Mechanical data

Materials	stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM; PTFE
Materials (wetted parts)	stainless steel (303/1.4305); ceramics; FKM
Min. pressure cycles	100 million
Process connection	threaded connection G 1/4 internal thread

Displays / operating elements

Display	Display unit	4 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit	mbar; kPa; inH2O; mmWS	

Remarks

Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



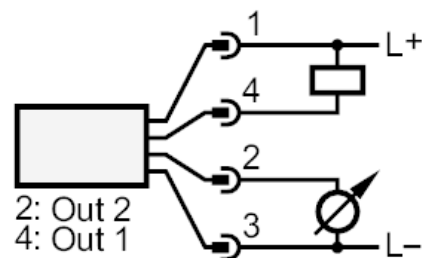
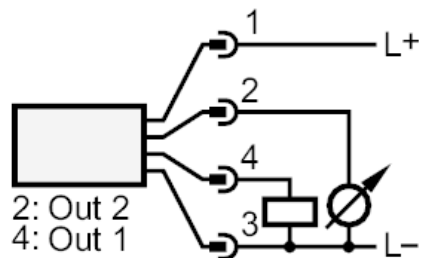
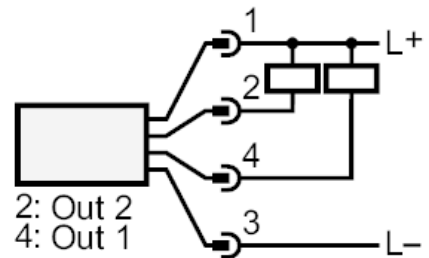
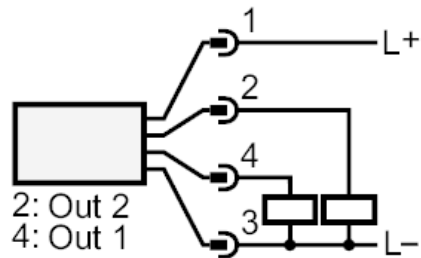
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Connection



OUT1
OUT2

switching output
switching output
analogue output