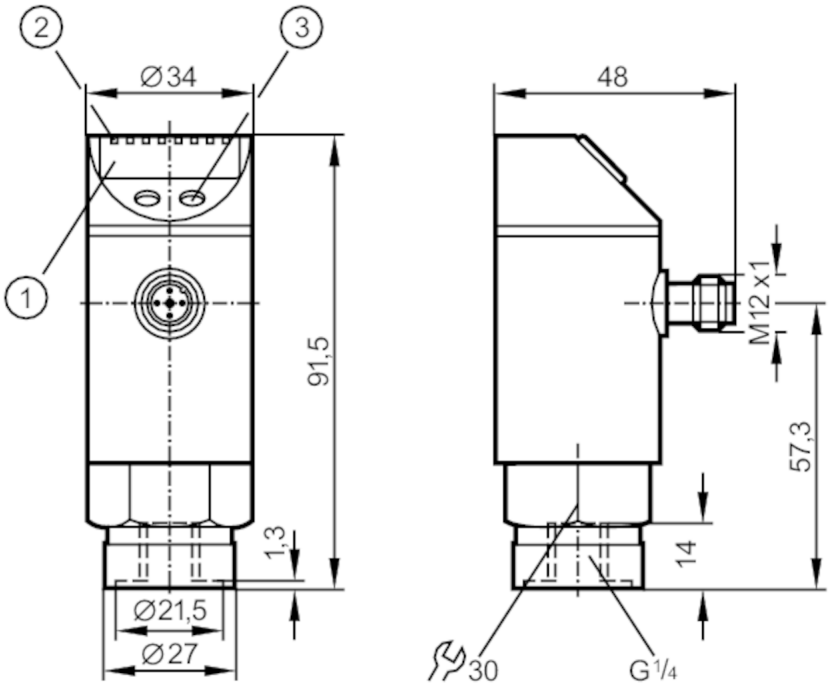
PE3029

Pressure sensor with display

PE-0-1BRDR14-MFPKG/US/ /E

phase-out article

Alternative articles: Pe2099 or PE2599
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

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range		-1...0 bar	-1000...0 mbar
Process connection		threaded connection G 1/4 internal thread	
Application			
Special feature		Gold-plated contacts	
Application		for industrial applications	
Media		liquids and gases	
Cannot be used for		oils	
Medium temperature	[°C]	-25...80	
Min. bursting pressure	[mbar]	30000	
Pressure rating	[mbar]	10000	
Type of pressure		relative pressure; vacuum	
Electrical data			
Operating voltage	[V]	18...36 DC; (to SELV/PELV)	
Current consumption	[mA]	< 50	
Min. insulation resistance	[MΩ]	100; (500 V DC)	

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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: 1; Number of analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; (configurable)	
Electrical design		PNP	
Number of digital outputs		1	
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	
Max. load	[Ω]	500	
Analogue voltage output	[V]	0...10	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Measuring/setting range			
Measuring range		-1...0 bar	-1000...0 mbar
Set point SP	[mbar]	-990...0	
Reset point rP	[mbar]	-995...-5	
In steps of	[mbar]	5	
Factory setting		SP1 = -750 mbar	rP1 = -770 mbar
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; (-20...80 °C)	
Temperature coefficient span		0,2; (-20...80 °C)	

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[% of the span / 10 K]			
Response times			
Delay time programmable dS, dr [s]		0; 0,2...50	
Max. response time analogue output [ms]		3	
Software / programming			
Adjustment of the switch point		programming button	
Parameter setting options		hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output	
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	
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]		261.5	
Materials		stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM; EPDM/X; PTFE	
Materials (wetted parts)		stainless steel (316L/1.4404); ceramics (99.9 % Al2O3); sealing of the measuring cell: EPDM	
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	LED, yellow	
	function display	alphanumeric display, 4-digit	
	measured values	alphanumeric display, 4-digit	
Display unit		mbar; kPa; psi; inHg	
Remarks			
Pack quantity		1 pcs.	

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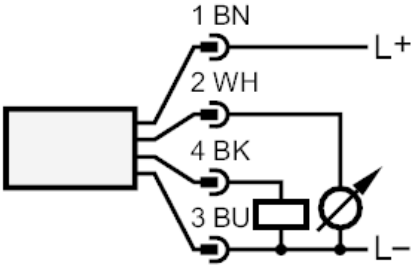
Electrical connection

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

Connection