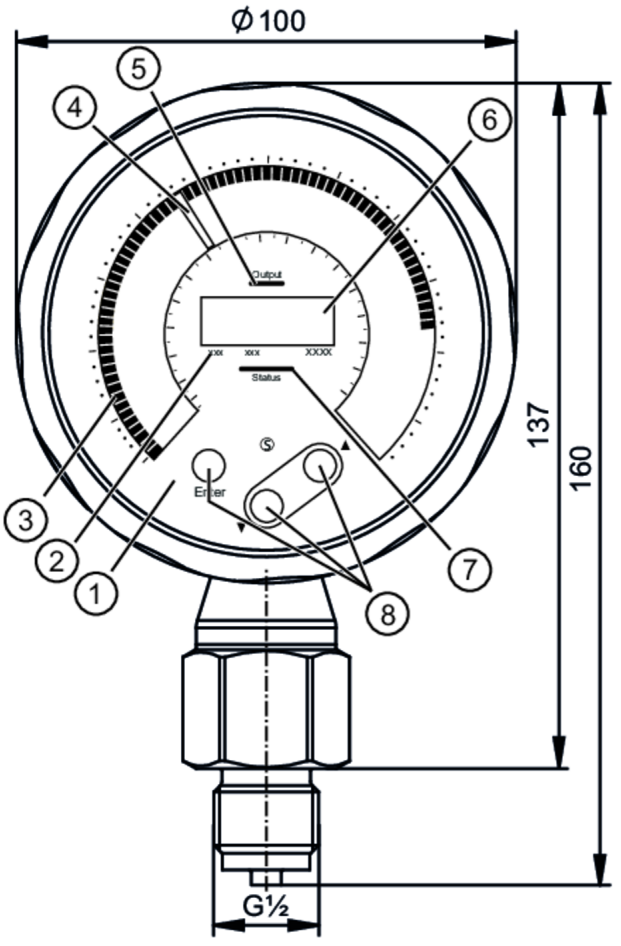
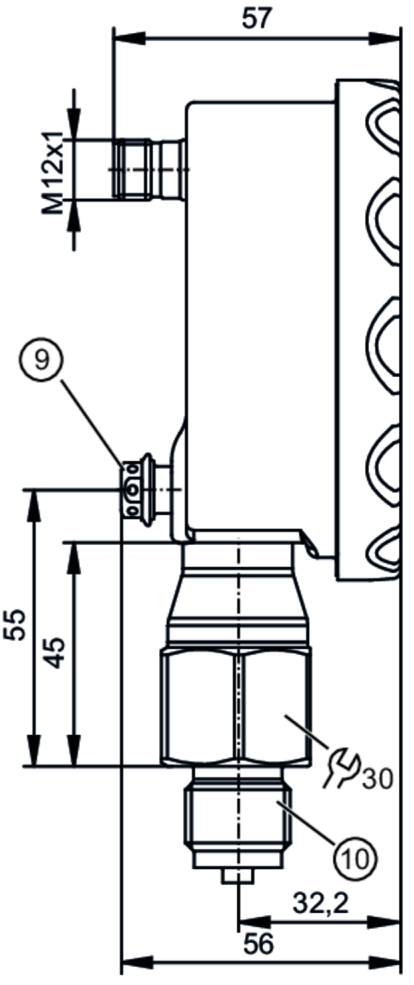
PG1409

Pressure sensor with analogue display

PG-1-1-REB12-MFRKG/US/ /P





1	analogue display
2	LED units
3	LED bar graph
4	LED pointer
5	LED switching status indication
6	4-digit alphanumeric digital display
7	status LED
8	optical operating keys
9	pressure compensation element
10	threaded connection G 1/2 external thread DIN EN 837-1

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range		-1000...1000 mbar	-14.5...14.5 psi
Process connection		threaded connection G 1/2 external thread DIN EN 837-1	

Application			
Special feature		Gold-plated contacts	
Application		for industrial applications	
Media		liquids and gases	
Medium temperature	[°C]	-25...80; (higher temperature upon request)	
Min. burst pressure		30000 mbar	435 psi

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Pressure rating		10000 mbar	145 psi
Vacuum resistance		-1000 mbar	14.5 psi
Type of pressure		relative pressure; vacuum	
Electrical data			
Operating voltage	[V]	18...30 DC	
Current consumption	[mA]	25...260	
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Power-on delay time	[s]	< 0.5	
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; IO-Link	
Electrical design		PNP/NPN	
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]	100	
Switching frequency DC	[Hz]	125	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20, invertible; (scalable)	
Max. load	[Ω]	500	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range		-1000...1000 mbar	-14.5...14.5 psi
Set point SP		-1000...1000 mbar	-14.5...14.5 psi
Analogue start point		-1000...600 mbar	-14.5...8.7 psi
Analogue end point		-600...1000 mbar	-8.7...14.5 psi
In steps of		2 mbar	0.05 psi
Measuring range (bar)			
Factory setting		SP1 = -500 mbar	
		SP2 = -540 mbar	
		ASP = -1000 mbar	AEP = 1000 mbar
		dAP = 0.06 s	dAA = 0.06 s

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Measuring range (psi)			
Factory setting	SP1 = -7.25 psi		
	SP2 = -7.83 psi		
	ASP = -14.5 psi		AEP = 14.5 psi
	dAP = 0.06 s		dAA = 0.06 s
Accuracy / deviations			
Switch point accuracy [% of the span]	< ± 0,5; (DIN EN IEC 62828-1; Turn down 1:1)		
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
Characteristics deviation [% of the span]	< ± 0,5; (DIN IEC EN 62828-1 incl. zero point and span error, non-linearity, hysteresis; Turn down 1:1)		
Zero-point stabilisation [% of the span]	IO-Link, analogue output	0,1; (see operating instructions zero-point behaviour)	
	display, switching output	0,1	
Hysteresis deviation [% of the span]	< ± 0,25; (Turn down 1:1 -25...80°C)		
Long-term stability [% of the span]	< ± 0,1; (Turn down 1:1; per year)		
Temperature coefficient zero point [% of the span / 10 K]	< ± 0,25; (0...70 °C)		
Temperature coefficient span [% of the span / 10 K]	< ± 0,25; (0...70 °C)		
Response times			
Min. response time of switching output (dAP) [ms]	3		
Damping process value dAP [s]	0...99.99		
Damping for the analogue output dAA [s]	0...99.99		
Step response time analogue output [ms]	7		
Interfaces			
Communication interface	IO-Link		
Transmission type	COM3 (230,4 kBaud)		
IO-Link revision	1.1		
SDCI standard	IEC 61131-9		
Profiles	Smart Sensor - SSP 4.2.1	Measuring and Switching Sensor, high resolution, 1 channel	
	BLOB	Binary Large Object transfer	
	Common - I&D	Identification and Diagnosis	
	Extension	Sensor Control Wide	
	Extension	Quantity detection, switches when value exceeds the setpoint	
	Function	Locator	
	Function	ProductURI	
SIO mode	yes		
Required master port type	A		
Min. process cycle time [ms]	1.3		

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IO-Link resolution pressure		0.0001 bar	0.1 mbar
IO-Link process data (cyclical)		**function**	**bit length**
		pressure	32
		device status	4
		binary switching information pressure	2
IO-Link functions (acyclical)		application specific tag; internal temperature; operating hours counter; switching cycles counter; Pressure peak counter	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	1879
Operating conditions			
Ambient temperature	[°C]	-25...70	
Storage temperature	[°C]	-40...100	
Protection		IP 67; IP 69; (to DIN EN 60529)	
Tests / approvals			
EMC		DIN EN 61326-1	
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance		DIN EN 60068-2-6	10 g (10...2000 Hz)
MTTF	[years]	115	
Embedded software included		yes	
UL approval		UL approval no.	J060
		File number UL	E174189
Mechanical data			
Weight	[g]	702.1	
Housing		manometer housing	
Dimensions	[mm]	160 x 100 x 57	
Materials		Housing: stainless steel (316L/1.4404); M12 connector: PPSU; Sealing: FKM; pressure compensation element: PTFE; viewing glass: laminated safety glass 4 mm	
Materials (wetted parts)		measuring cell: Al2O3 (ceramics); Process connection: stainless steel (316L/1.4404); Sealing: FKM	
Min. pressure cycles		100 million	
Process connection		threaded connection G 1/2 external thread DIN EN 837-1	
Restrictor element integrated		no (can be retrofitted)	
Displays / operating elements			
Display		Pointer	LED, white ; 72 steps
		LED bar graph	multi-colour ; 72 steps
		measured values	alphanumeric display, white 4-digit
		switching status	LED, yellow
		device status	LED, red/green
		Display unit	LED, white
		Display	display rotation: 320°
Display unit		bar; psi	
Operating elements		3	optical operating keys
Remarks			
Pack quantity		1 pcs.	

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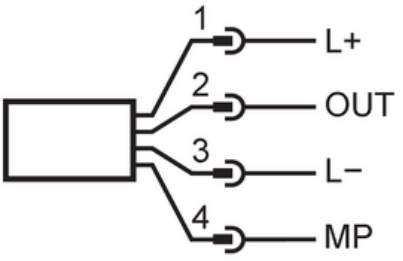
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



1	L+	
2	OUT	AO
3	L-	
4	MP	DO (NO/NC), IO-Link