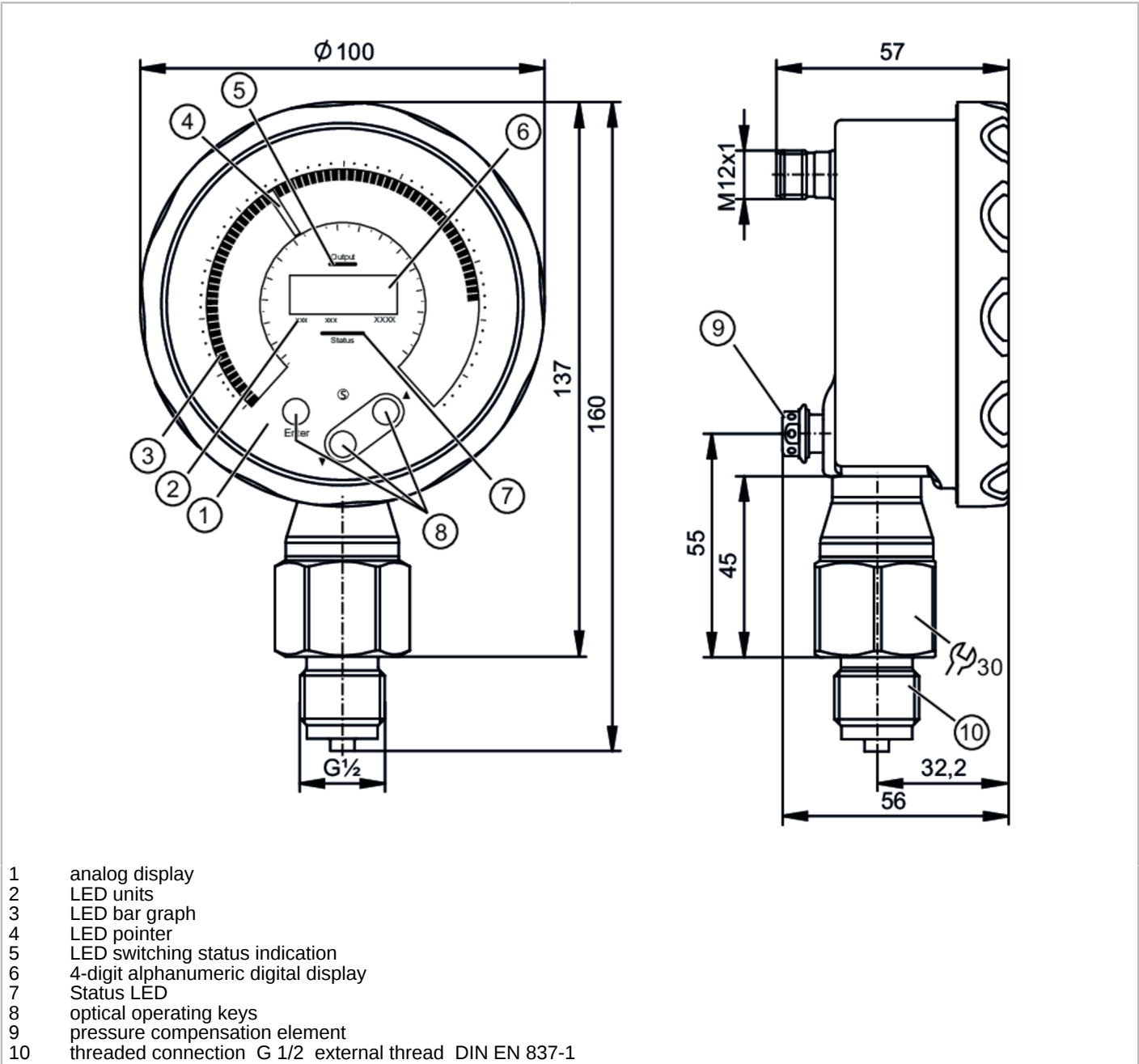


PG1409



Pressure sensor with analog display

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



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog 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

System	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 analog outputs: 1

Outputs		
Total number of outputs		2
Output signal		switching signal; analog signal; IO-Link
Electrical design		PNP/NPN
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]	100
Switching frequency DC	[Hz]	125
Number of analog outputs		1
Analog current output	[mA]	4...20, invertible; (scalable)
Max. load	[Ω]	500
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
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
Analog start point	-1000...600 mbar	-14.5...8.7 psi
Analog 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 stabilization [% of the span]	IO-Link, analog output	0,1; (see operating instructions zero-point behavior)	
	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)		
Reaction times			
Min. response time of switching output (dAP) [ms]	3		
Damping process value dAP [s]	0...99.99		
Damping for the analog output dAA [s]	0...99.99		
Step response time analog 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 class	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 number	J060
	File number UL	E174189

Mechanical data		
Weight	[g]	702.1
Housing		manometer housing
Dimensions	[mm]	160 x 100 x 57
Material	Housing: stainless steel (1.4404 / 316L); M12 connector: PPSU; sealing: FKM; pressure compensation element: PTFE; viewing glass: laminated safety glass 4 mm	
Materials (wetted parts)	measuring cell: Al ₂ O ₃ (ceramics); Process connection: stainless steel (1.4404 / 316L); 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-color ; 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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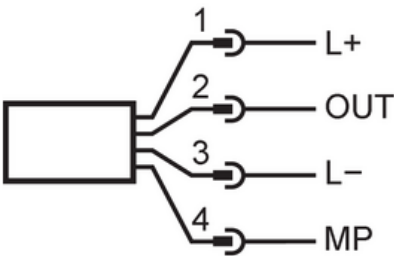
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Electrical connection

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



Connection



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