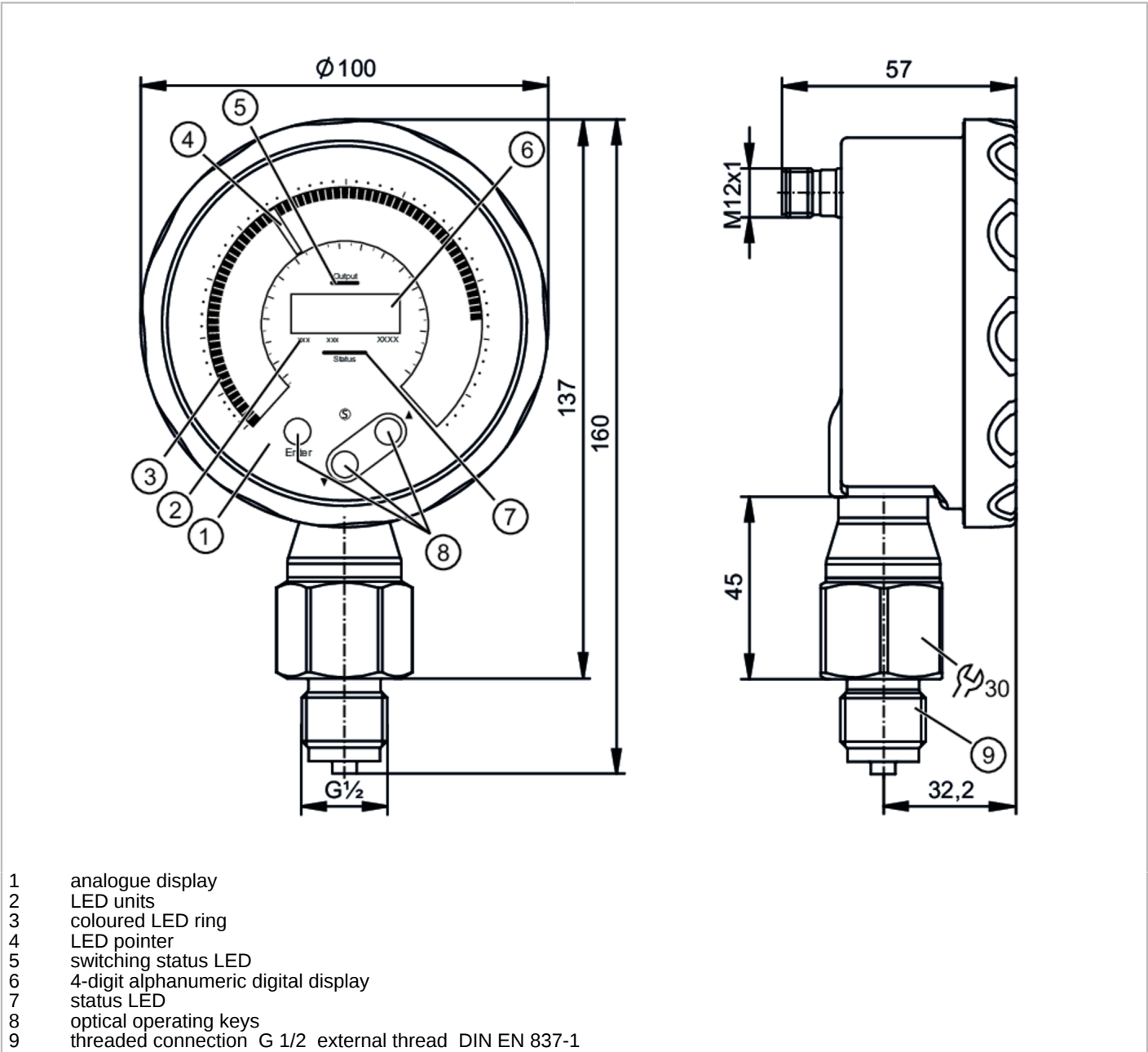


PG1412



Pressure sensor with analogue display

PG-160-REB12-MFRKG/US/ /P



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range	0...160 bar	0...2321 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	750 bar	10878 psi
Pressure rating	350 bar	5076 psi



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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
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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	0...160 bar	0...2321 psi
Set point SP	0...160 bar	0...2321 psi
Analogue start point	0...128 bar	0...1856 psi
Analogue end point	32...160 bar	464...2321 psi
In steps of	0.1 bar	2 psi

Measuring range (bar)

Factory setting	SP1 = 40 bar		
	SP2 = 36.8 bar		
	ASP = 0.00 bar		AEP = 160 bar
	dAP = 0.06 s		dAA = 0.06 s

Measuring range (psi)

Factory setting	SP1 = 580 psi		
	SP2 = 534 psi		
	ASP = 0.00 psi		AEP = 2321 psi
	dAP = 0.06 s		dAA = 0.06 s



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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	0,25; (see operating instructions zero-point behaviour)
	display, switching output	0,5
Hysteresis deviation [% of the span]	< ± 0,15; (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	
IO-Link resolution pressure [bar]	0.005	
IO-Link process data (cyclical)	function	bit length
	pressure	32
	device status	4
	binary switching information pressure	2



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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	1870

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.	J062
	File number UL	E174189

Mechanical data		
Weight	[g]	689.5
Housing		manometer housing
Dimensions	[mm]	160 x 100 x 57
Materials		Housing: stainless steel (316L/1.4404); M12 connector: PPSU; Sealing: FKM; viewing glass: laminated safety glass 4 mm
Materials (wetted parts)		measuring cell: Al ₂ O ₃ (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.

Electrical connection

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



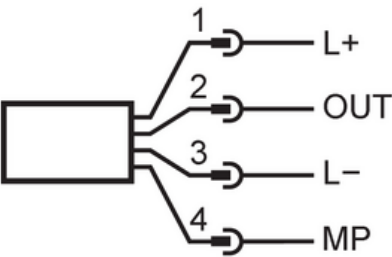
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Connection



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