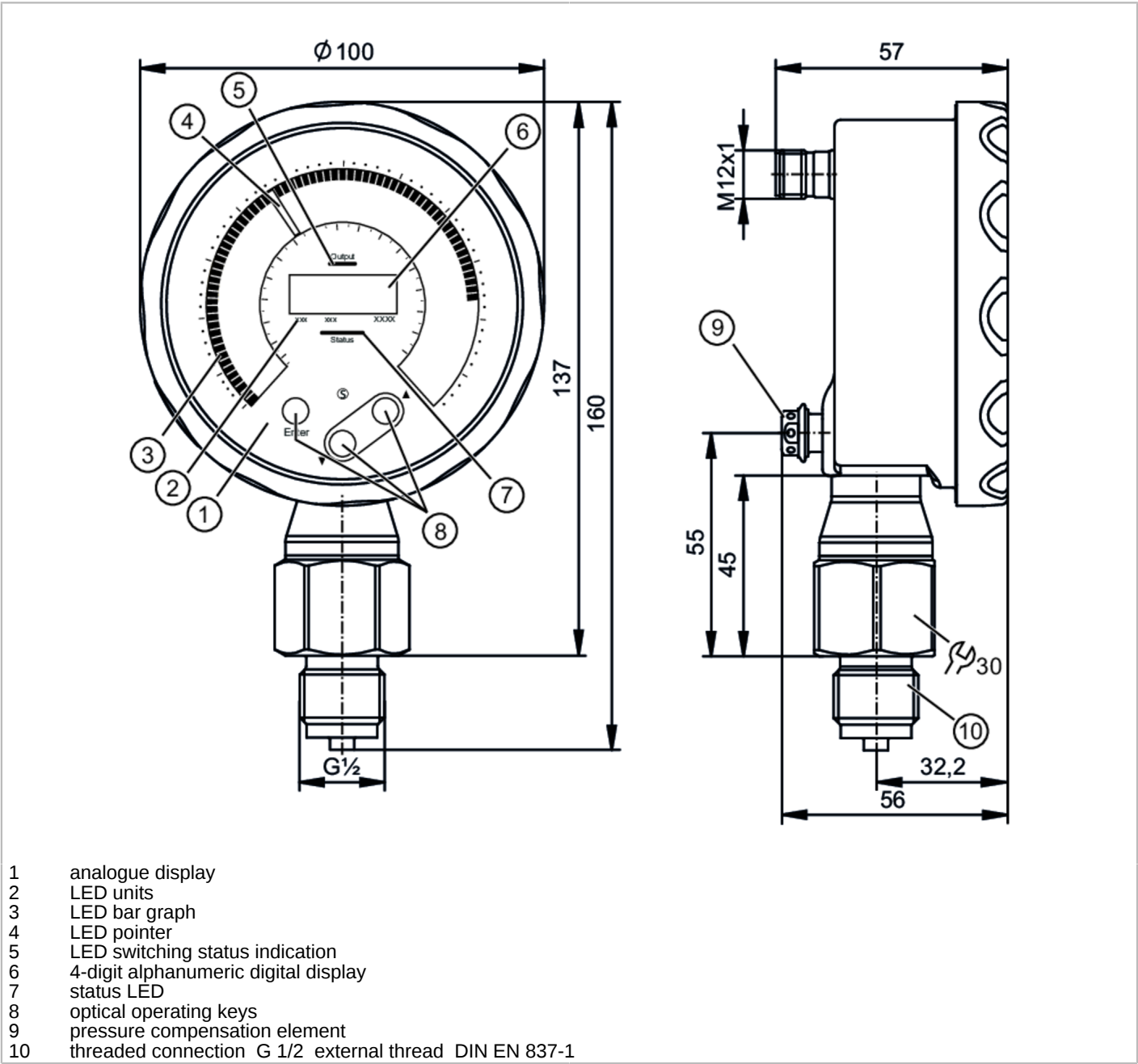


PG1414



Pressure sensor with analogue display

PG-016-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	-1...16 bar	-14.5...232.1 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	250 bar	3625 psi



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Pressure rating	75 bar	1087 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	-1...16 bar	-14.5...232.1 psi
Set point SP	-1...16 bar	-14.5...232.1 psi
Analogue start point	-1...12.8 bar	-14.5...185.6 psi
Analogue end point	2.2...16 bar	31.9...232.1 psi
In steps of	0.01 bar	0.2 psi

Measuring range (bar)			
Factory setting	SP1 = 4 bar		
	SP2 = 3.68 bar		
	ASP = 0.00 bar		AEP = 16 bar
	dAP = 0.06 s		dAA = 0.06 s



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Measuring range (psi)			
Factory setting	SP1 = 58 psi		
	SP2 = 53.4 psi		
	ASP = 0.00 psi		AEP = 232.1 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	0,2; (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 [bar]	0.0005	
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	1873

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]	702.2	
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: 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.	

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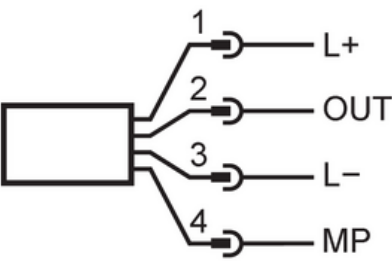
PG-016-REB12-MFRKG/US/ /P

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