



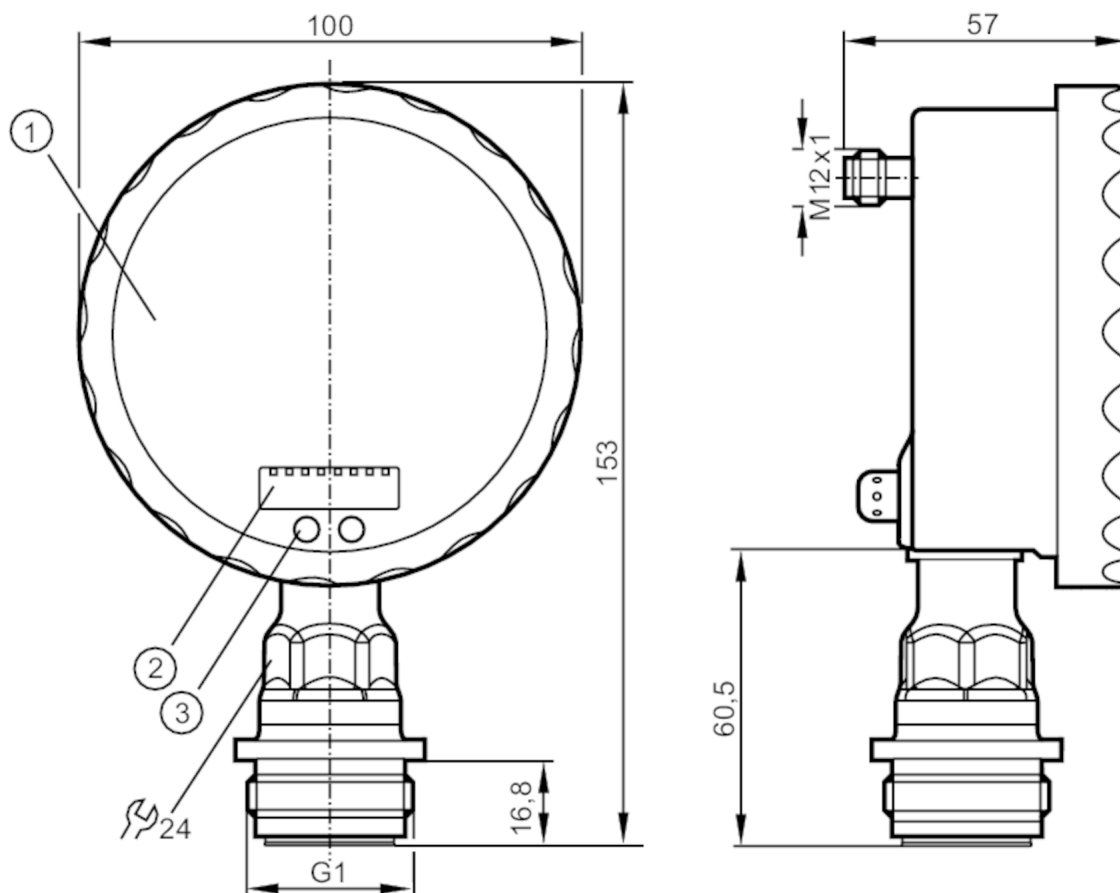
Flush pressure sensor with analog display

PG-1-1BREA01-MFRKG/US/ /P

Article to be discontinued

Alternative articles: PG1709

When selecting an alternative article and accessories please note that technical data may differ!



- 1 analog display
- 2 alphanumeric display 4-digit
- 3 Touch pad (programming button)



ACS



CRN



EC 1935/2004

EHEDG

Certified

FCM CN

FCM JP

FDA

NSF

Reg31



UK
CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi
Process connection	threaded connection G 1 external thread with Aseptoflex Vario sealing contour		
Note	G1 Gewinde nach ISO 228. Alternativ dichtend über rückwärtige Dichtkontur mit Dichtung in Anlehnung an DIN EN ISO 1179-2.		

Application

Special feature	gold-plated contacts
Application	flush mountable for the food and beverage industry
Media	viscous media and liquids with suspended particles; liquids and gases



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Medium temperature	[°C]	-25...125; (145 max. 1h)		
Min. burst pressure		30 bar	435 psi	3 MPa
Pressure rating		10 bar	145 psi	1 MPa
Type of pressure		relative pressure; vacuum		
No dead space		yes		
MAWP (for applications according to CRN)	[bar]	10		

Electrical data

Operating voltage	[V]	18...32 DC		
Current consumption	[mA]	< 70; (24 V)		
Min. insulation resistance	[MΩ]	100; (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Power-on delay time	[s]	6		
Integrated watchdog		yes		

Inputs / outputs

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

Total number of outputs		2		
Output signal		switching signal; analog signal; (configurable)		
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]	250		
Switching frequency DC	[Hz]	50		
Number of analog outputs		1		
Analog current output	[mA]	4...20, invertible; (scalable)		
Max. load	[Ω]	(U _b - 10 V) / 20 mA		
Short-circuit protection		yes		
Type of short-circuit protection		yes (non-latching)		
Overload protection		yes		

Measuring/setting range

Measuring range	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi
Set point SP	-0.998...1.6 bar	-14.48...23.2 psi	
Reset point rP	-1...1.598 bar	-14.5...23.18 psi	
Analog start point	-1...1.1 bar	-14.5...15.96 psi	
Analog end point	-0.5...1.6 bar	-7.26...23.2 psi	
In steps of	0.001 bar	0.02 psi	

Accuracy / deviations

Switch point accuracy		< ± 0,5; (Turn down 1:1)		
	[% of the span]			
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		



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Characteristics deviation [% of the span]	< ± 0,5; (Turn down 1:1 , linearity, incl. hysteresis and repeatability , limit value setting to DIN EN IEC 62828-1)	
Linearity deviation [% of the span]	< ± 0,15; (Turn down 1:1)	
Hysteresis deviation [% of the span]	< ± 0,15; (Turn down 1:1)	
Long-term stability [% of the span]	< ± 0,1; (Turn down 1:1; per year)	
Temperature coefficient zero point [% of the span / 10 K]	< ± 0,05; (0...70 °C)	
Temperature coefficient span [% of the span / 10 K]	< ± 0,15; (0...70 °C)	
Reaction times		
Response time [ms]	< 10	
Damping process value dAP [s]	0.01...30	
Damping for the analog output dAA [s]	0.01...30	
Step response time analog output [ms]	25	
Operating conditions		
Ambient temperature [°C]	-25...80	
Storage temperature [°C]	-40...100	
Protection	IP 67; IP 69K	
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 EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	10 g (10...2000 Hz)
MTTF [years]	100	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
Mechanical data		
Weight [g]	518.75	
Dimensions [mm]	153 x 100 x 57	
Material	stainless steel (1.4404 / 316L); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm	
Materials (wetted parts)	stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; ceramics (99.9 % Al2O3); PTFE	
Min. pressure cycles	100 million	
Process connection	threaded connection G 1 external thread with Aseptoflex Vario sealing contour	

PG2799



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Displays / operating elements		
Display	Display unit	2 x LED, green
	Switching status	LED, yellow
	Switch points	LED ring, red
	Function display	alphanumeric display, red 4-digit
	Measured values	analog display, 0...350° rotatable, pointer not visible when unit disconnected
	Measured values	alphanumeric display, red 4-digit
With scale		yes
Extended display range (max.)	1.6 bar	23.2 psi

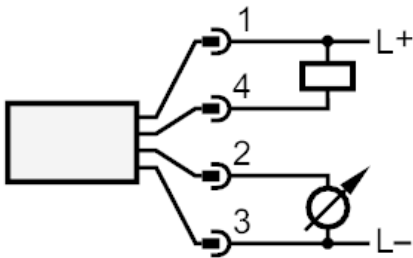
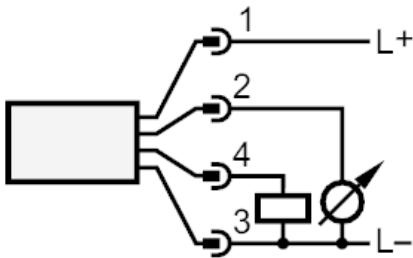
Remarks	
Remarks	characteristics deviation in the extended display range:1.5 % of the span switch point accuracy in the extended display range: 1.5 % of the span
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT1 Switching output
OUT2 analog output