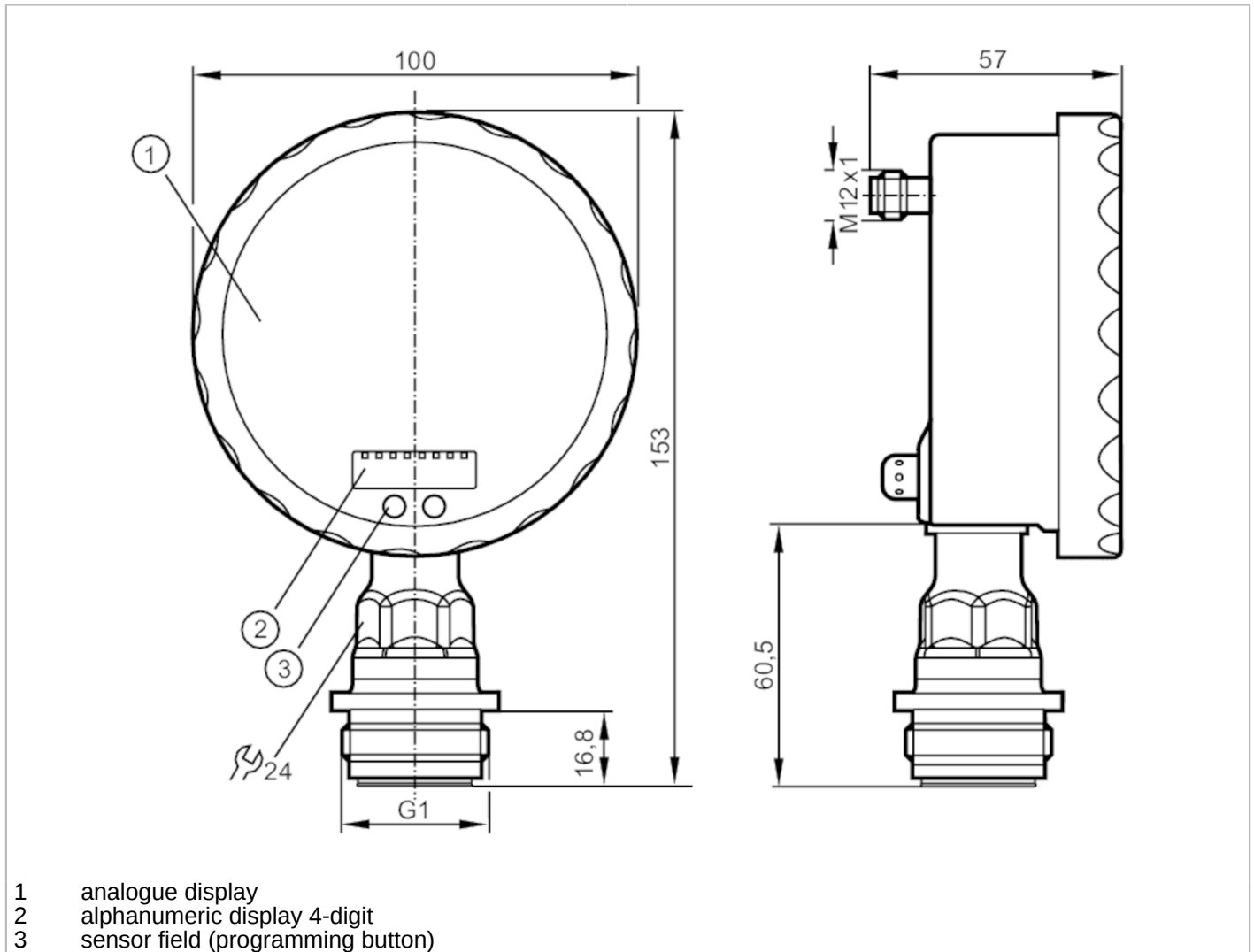


# PG2799



## Flush pressure sensor with analogue display

PG-1-1BREA01-MFRKG/US/ IP



- 1 analogue display
- 2 alphanumeric display 4-digit
- 3 sensor field (programming button)



### Product characteristics

Output signal	switching signal; analogue signal; (configurable)		
Measuring range	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi
Process connection	threaded connection G 1 external thread Aseptoflex Vario		

### Application

Special feature	Gold-plated contacts		
Application	food and beverage industry; Safety manometer (S) based on DIN EN 837-1		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...125; (145 max. 1h)		
Pressure rating	10 bar	145 psi	
Min. bursting pressure	30 bar	435 psi	
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	10		



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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 analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; (configurable)	
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]	250	
Switching frequency DC	[Hz]	50	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20, invertible; (scalable)	
Max. load	[Ω]	(U <sub>b</sub> - 10 V) / 20 mA	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
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
Analogue start point		-1...1.1 bar	-14.5...15.96 psi
Analogue 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		< ± 0,2; (Turn down 1:1)	
	[% of the span]		
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
	[% of the span]		
Characteristics deviation		< ± 0,2; (Turn down 1:1 linearity, incl. hysteresis and repeatability limit value setting to DIN 16086)	
	[% of the span]		
Linearity deviation		< ± 0,15; (Turn down 1:1)	
	[% of the span]		
Hysteresis deviation		< ± 0,15; (Turn down 1:1)	
	[% of the span]		
Long-term stability		< ± 0,1; (Turn down 1:1; per year)	

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## Flush pressure sensor with analogue display

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	[% of the span]	
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)

### Response times

Response time	[ms]	< 10
Damping for the switching output dAP	[s]	0.01...30
Damping for the analogue output dAA	[s]	0.01...30
Step response time analogue 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 IEC 68-2-27	50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)
MTTF	[years]	100
Note on approval		factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>

### Mechanical data

Weight	[g]	554
Materials		stainless steel (1.4404 / 316L); PA; FKM; PTFE; viewing glass: laminated safety glass 4 mm
Materials (wetted parts)		ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); PTFE; stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4
Min. pressure cycles		100 million
Process connection		threaded connection G 1 external thread Aseptoflex Vario

### 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	analogue 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

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## Flush pressure sensor with analogue display

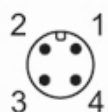
PG-1-1BREA01-MFRKG/US/ IP

### Remarks

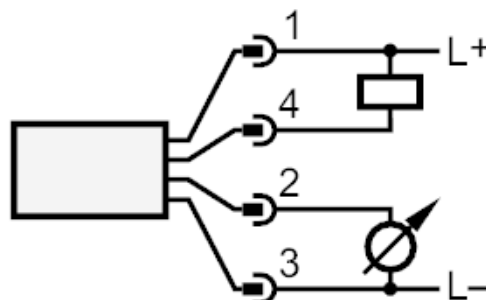
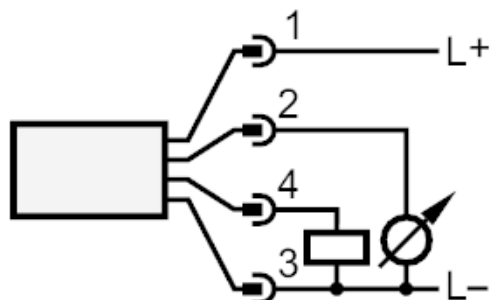
Remarks	characteristics deviation in the extended display range: 1.5 % of the span switch point accuracy in the extended display range: 1.5 % of the span
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M12; Contacts: gold-plated



### Connection



OUT1            switching output  
OUT2            analogue output