



Flush pressure sensor with display

PI-1-1BREA01-E-ZVG/US/ /P

phase-out article

Alternative articles: PI2899 or PI2799
When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button



Product characteristics		
Number of inputs and outputs	Number of analogue outputs: 1	
Measuring range	-1...1 bar	-1000...1000 mbar
Process connection	threaded connection G 1 external thread sealing cone	
Application		
Special feature	Gold-plated contacts	
Application	flush mountable for the food and beverage industry	
Installation	freely rotatable housing 350°	
Media	viscous media and liquids with suspended particles; liquids and gases	
Medium temperature [°C]	-25...125; (145 max. 1h)	
Min. bursting pressure [mbar]	30000	
Pressure rating [mbar]	10000	
Type of pressure	relative pressure	



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No dead space	yes
Electrical data	
Operating voltage [V]	20...32 DC
Min. insulation resistance [MΩ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	0.5
Switch-on peak current [mA]	6
Switch-on peak current duration [ms]	30
Integrated watchdog	yes
Inputs / outputs	
Number of inputs and outputs	Number of analogue outputs: 1
Outputs	
Total number of outputs	1
Output signal	analogue signal
Number of analogue outputs	1
Analogue current output [mA]	4...20, invertible; (scalable 1:4)
Max. load [Ω]	300
Overload protection	yes
Measuring/setting range	
Measuring range	-1...1 bar -1000...1000 mbar
Analogue start point [mbar]	-1000...500
Analogue end point [mbar]	-500...1000
In steps of [mbar]	1
Factory setting	ASP = -1000 mbar AEP = 1000 mbar
Accuracy / deviations	
Repeatability [X21]	$< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [X21]	$< \pm 0,2$; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation [X21]	$< \pm 0,15$; (Turn down 1:1)
Hysteresis deviation [X21]	$< \pm 0,15$; (Turn down 1:1)
Long-term stability [X21]	$< \pm 0,1$; (Turn down 1:1; per year)
Temperature coefficient zero point [X22]	$< \pm 0,05$; (0...70 °C)
Temperature coefficient span [X22]	$< \pm 0,15$; (0...70 °C)
Response times	
Damping for the analogue output dAA [s]	0.1...100
Max. response time analogue output [ms]	40
Software / programming	
Parameter setting options	zero point; span
Operating conditions	
Ambient temperature [°C]	-25...80



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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	[ANN]	238

Mechanical data

Weight	[g]	444
Materials		stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE
Materials (wetted parts)		ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles		100 million
Process connection		threaded connection G 1 external thread sealing cone

Displays / operating elements

Display	Display unit	6 x LED, green
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit		mbar; kPa; psi; inH ₂ O; mWS; % of the span

Remarks

Remarks	The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.
Pack quantity	1 pcs.

Electrical connection

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



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Connection



- 1: normal operation
 2: programming operation (P = communication via EPS / FDT interface)