

PI2602

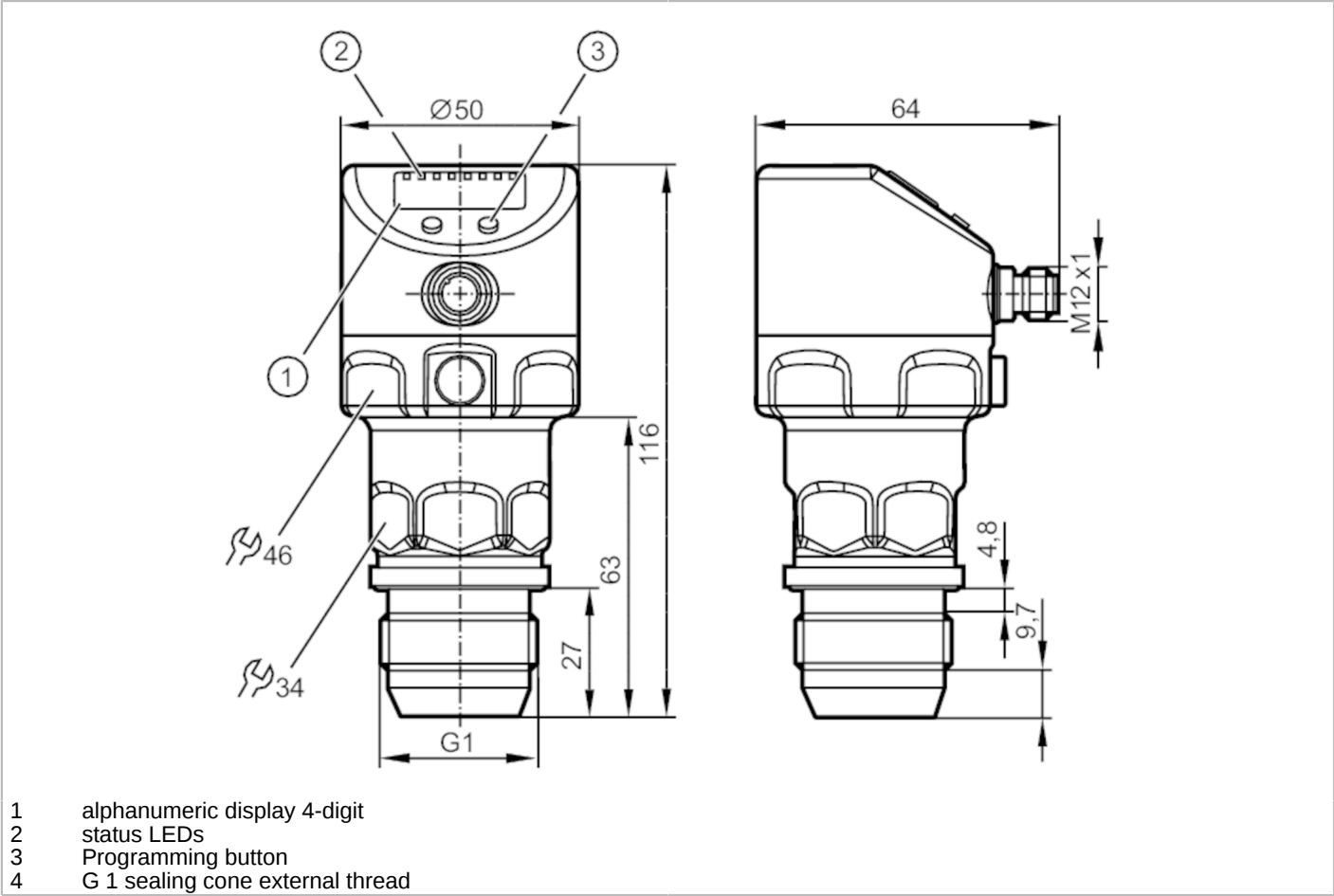


Flush pressure sensor with display

PI-100-REA01-MFRKG/US/ I/P

Alternative articles: PI1602

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
- 4 G 1 sealing cone external thread



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-1...100 bar	-15...1450 psi	-0.1...10 MPa
Process connection	threaded connection G 1 external thread sealing cone		
Application			
System	gold-plated contacts		
Application	flush mountable for the food and beverage industry		
Media	viscous media and liquids with suspended particles; liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...125; (145 max. 1h)		
Min. bursting pressure	650 bar	9425 psi	65 MPa
Pressure rating	200 bar	2900 psi	20 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		



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Electrical data			
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Integrated watchdog		yes	
2-wire			
Operating voltage	[V]	20...32 DC	
Current consumption	[mA]	3.6...21	
Power-on delay time	[s]	1	
3-wire			
Operating voltage	[V]	18...32 DC	
Current consumption	[mA]	< 45	
Power-on delay time	[s]	0.5	
Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2; Number of analog outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analog signal; IO-Link; (configurable)	
Electrical design		PNP/NPN	
Number of digital outputs		2	
Output function		normally open / closed; (configurable)	
Number of analog outputs		1	
Analog current output	[mA]	4...20, invertible; (scalable)	
Short-circuit protection		yes	
Type of short-circuit protection		yes (non-latching)	
Overload protection		yes	
2-wire			
Max. load	[Ω]	300	
3-wire			
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Switching frequency DC	[Hz]	125	
Max. load	[Ω]	(Ub - 10 V) / 20 mA	
Measuring/setting range			
Measuring range	-1...100 bar	-15...1450 psi	-0.1...10 MPa
Set point SP	-0.8...100 bar	-12...1450 psi	-0.08...10 MPa
Reset point rP	-1...99.8 bar	-15...1448 psi	-0.1...9.98 MPa
Analog start point	-1...75 bar	-15...1088 psi	-0.1...7.5 MPa
Analog end point	24...100 bar	348...1450 psi	2.4...10 MPa
In steps of	0.1 bar	1 psi	0.01 MPa



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Factory setting	SP1 = 25.0 bar	rP1 = 23 bar
	SP2 = 75.0 bar	rP2 = 73 bar
	ASP = 0.0 bar	AEP = 100.0 bar

Accuracy / deviations

Switch point accuracy [% of the span]	$< \pm 0,5$; (Turn down 1:1)
Repeatability [% of the span]	$< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [% of the span]	$< \pm 0,5$; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation [% of the span]	$< \pm 0,15$; (Turn down 1:1)
Hysteresis deviation [% of the span]	$< \pm 0,15$; (Turn down 1:1)
Long-term stability [% of the span]	$< \pm 0,1$; (Turn down 1:1; per year)
Temperature coefficient zero point [% of the span / 10 K]	$< \pm 0,2$; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]	$< \pm 0,2$; (0...70 °C)

Reaction times

Damping process value dAP [s]	0...30
Damping for the analog output dAA [s]	0.01...99.99
2-wire	
Step response time analog output [ms]	45
3-wire	
Min. response time of switching output (dAP) [ms]	3
Step response time analog output [ms]	7

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.0	
Profiles	no profile	
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID
	default	731

Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100



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Protection	IP 67; IP 68; IP 69K
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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]	154	
Note on approval	Factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval number	J017
	File number UL	E174189

Mechanical data

Weight [g]	374
Material	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA
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	LED, green
	Switching status	LED, yellow
	Function display	alphanumeric display, 4-digit
	Measured values	alphanumeric display, 4-digit
Display unit	bar; MPa; psi; % of the span	

Remarks

Pack quantity	1 pcs.
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Electrical connection

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





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Connection



- 1 connection for 2-wire operation
- 2 connection for 3-wire operation :
- OUT1 Switching output
- OUT2 Switching output
- analog output
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)