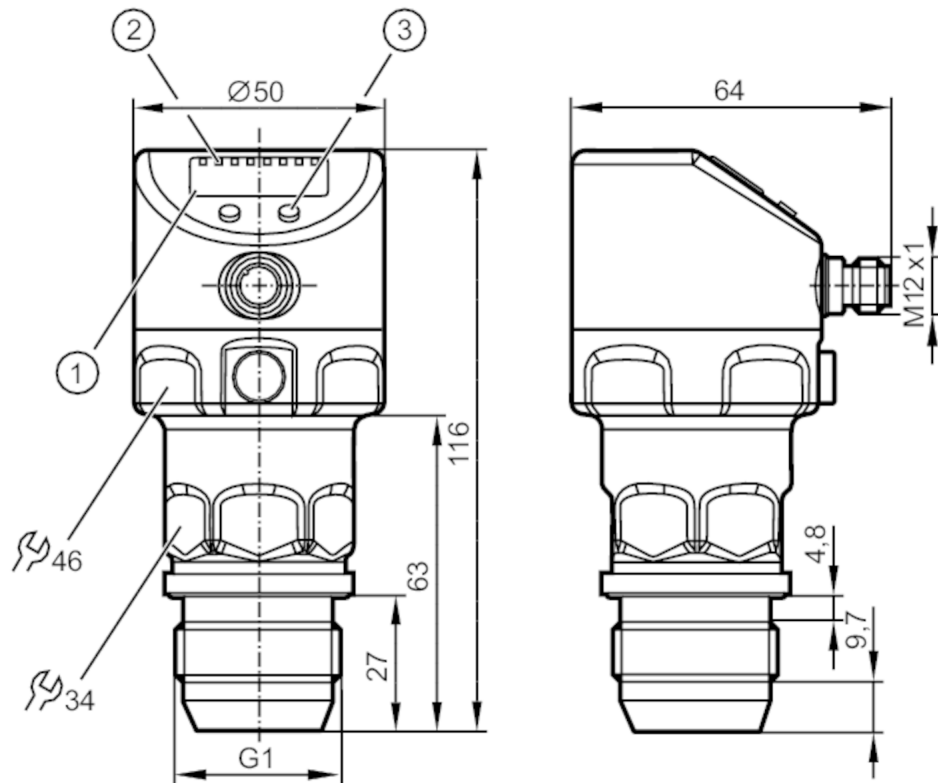


PI2602



Combined pressure sensor

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



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button
- 4 G 1 sealing cone external thread



EC 1935/2004



Reg31

Application

Application	hygienic systems		
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)		
Pressure rating	200 bar	20 MPa	2900 psi
Min. bursting pressure	650 bar	65 MPa	9425 psi
Type of pressure	relative pressure		
No dead space	yes		

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



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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 analogue outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analogue signal; IO-Link; (configurable)		
Electrical design	PNP/NPN		
Number of digital outputs	2		
Output function	normally open / normally closed; (parameterisable)		
Number of analogue outputs	1		
Analogue current output	[mA]	4...20, invertible; (scalable)	
Short-circuit protection	yes		
Type of short-circuit protection	pulsed		
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	-0.1...10 MPa	-15...1450 psi
Set point SP	-0.8...100 bar	-0.08...10 MPa	-12...1450 psi
Reset point rP	-1...99.8 bar	-0.1...9.98 MPa	-15...1448 psi
Analogue start point	-1...75 bar	-0.1...7.5 MPa	-15...1088 psi
Analogue end point	24...100 bar	2.4...10 MPa	348...1450 psi
In steps of	0.1 bar	0.01 MPa	1 psi
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	< ± 0,5; (Turn down 1:1)		
[% of the span]			
Repeatability	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
[% of the span]			
Characteristics deviation	< ± 0,5; (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)		



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	[% of the span]	
Long-term stability		$< \pm 0,1$; (Turn down 1:1; per year)
	[% of the span]	
Temperature coefficient zero point		$< \pm 0,2$; (0...70 °C)
	[% of the span / 10 K]	
Temperature coefficient span		$< \pm 0,2$; (0...70 °C)
	[% of the span / 10 K]	

Response times

Damping for the switching output dAP	[s]	0...30
Damping for the analogue output dAA	[s]	0.01...99.99

2-wire

Step response time analogue output	[ms]	45
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3-wire

Min. response time of switching output (dAP)	[ms]	3
Step response time analogue output	[ms]	7

Interfaces

Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.0
IO-Link device ID		731 d / 00 02 db h
Profiles		no profile
SIO mode		yes
Required master port type		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	2.3

Operating conditions

Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 67; IP 68; IP 69K

Tests / approvals

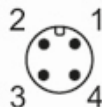
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5 Surge	0,5/1 kV
	EN 61000-4-6 HF conducted	10 V
Shock resistance	DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)
MTTF	[years]	154

PI2602



Combined pressure sensor

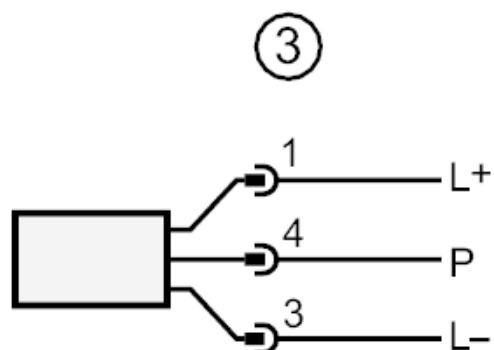
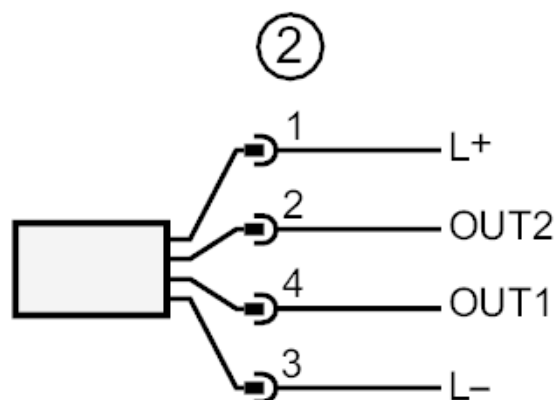
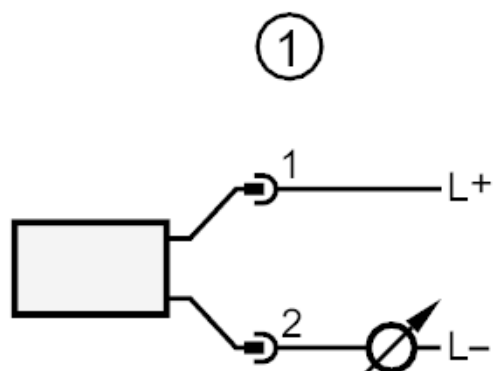
PI-100-REA01-MFRKG/US/ /P

Mechanical data		
Weight	[g]	374
Materials	stainless steel (1.4404 / 316L); FKM; PTFE; PBT; PEI; PFA	
Materials (wetted parts)	ceramics (99.9 % Al2O3); 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 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.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		

Combined pressure sensor

PI-100-REA01-MFRKG/US/ IP

Connection



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