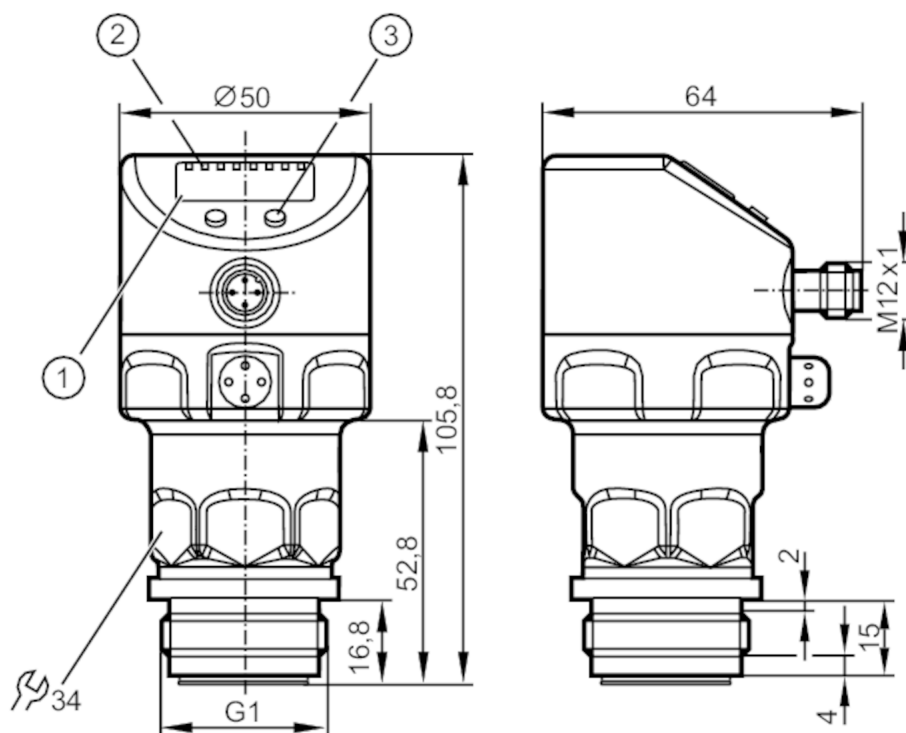


PI2714



Combined pressure sensor

PI-016-REA01-MFRKG/US/ I/P



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



ACS



US

EC 1935/2004

EHEDG Certified



Reg31

Application			
Application		hygienic systems	
Media		viscous media and liquids with suspended particles; liquids and gases	
Medium temperature [°C]		-25...125; (145 max. 1h)	
Pressure rating		75 bar	7.5 MPa 1085 psi
Min. bursting pressure		250 bar	25 MPa 3625 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...16 bar	-0.1...1.6 MPa	-14.6...232 psi
Set point SP	-0.98...16 bar	-0.098...1.6 MPa	-14.2...232 psi
Reset point rP	-1...15.98 bar	-0.1...1.598 MPa	-14.6...231.6 psi
Analogue start point	-1...12 bar	-0.1...1.2 MPa	-14.6...174 psi
Analogue end point	3...16 bar	0.3...1.6 MPa	43.6...232 psi
In steps of	0.02 bar	0.002 MPa	0.2 psi
Factory setting		SP1 = 4.0 bar	rP1 = 3.68 bar
		SP2 = 12.0 bar	rP2 = 11.68 bar
		ASP = 0.0 bar	AEP = 16.0 bar
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)		



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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		$< \pm 0,05$; (0...70 °C)
	[% of the span / 10 K]	
Temperature coefficient span		$< \pm 0,15$; (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
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		729 d / 00 02 d9 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



Combined pressure sensor

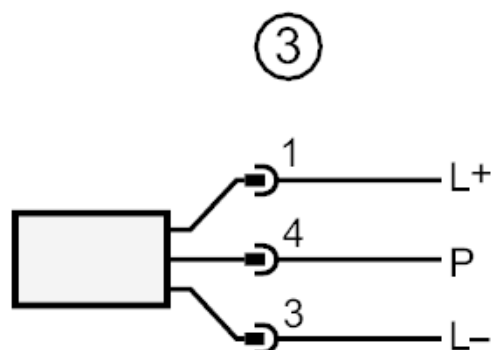
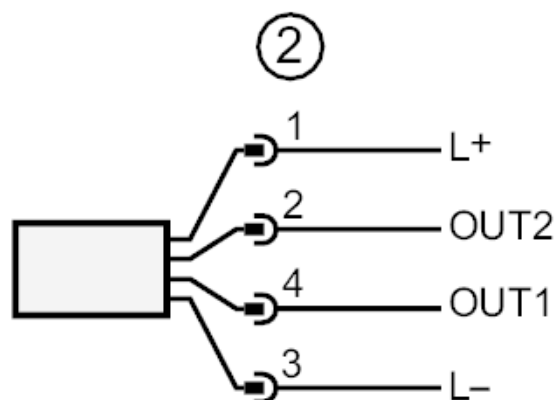
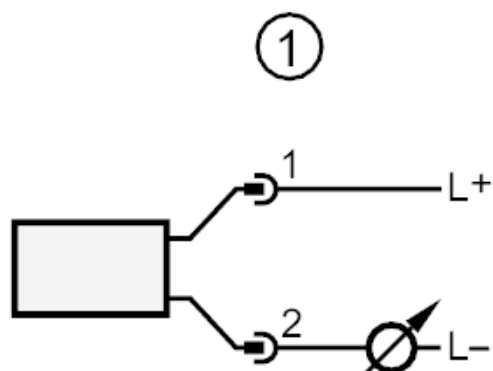
PI-016-REA01-MFRKG/US/ /P

Mechanical data		
Weight	[g]	359.5
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 Aseptoflex Vario	
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-016-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) |