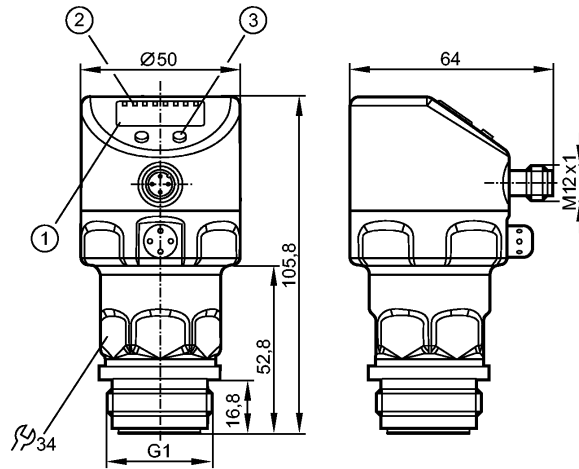


PI2794

PI-010-REA01-MFRKG/US/ /P

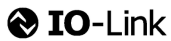
Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs
- 3: Programming button



Made in Germany



Product characteristics

Combined pressure sensor
Connector
Process connection: G 1 A / Aseptoflex Vario
Display units:
bar, psi, MPa, % of the span
Function programmable
2-wire connection technology:
analogue output
3-wire connection technology:
2 outputs
OUT1 = switching output
OUT2 = switching output or analogue output
4-digit alphanumeric display
Measuring range: -1.00...10.00 bar / -14.5...145.0 psi / -0.100...1.000 MPa

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	50 bar	725 psi	5 MPa
Bursting pressure min.	150 bar	2175 psi	15 MPa
MAWP (for applications according to CRN)	50 bar	725 psi	5 MPa
Medium temperature [°C]	-25...125 (145 max. 1h)		

Electrical data

Electrical design	2 wires DC / 3 wires DC PNP/NPN		
Operating voltage [V]	20...32 DC (2L) / 18...32 DC (3L)		
Current consumption [mA]	3.6...21 (2L) / < 45 (3L)		
Insulation resistance [MΩ]	> 100 (500 V DC)		

PI2794

PI-010-REA01-MFRKG/US/ /P

Pressure sensors

Protection class	III
Reverse polarity protection	yes

Outputs

Output	2-wire connection technology: analogue output 3-wire connection technology: 2 outputs OUT1 = switching output OUT2 = switching output or analogue output
Output function	1 x normally open / normally closed programmable + 1 x normally open / normally closed programmable or 1 x analogue (4...20 / 20...4 mA, scalable)
Current rating [mA]	--- (2L) / 250 (3L)
Voltage drop [V]	--- (2L) / < 2 (3L)
Short-circuit protection	pulsed
Overload protection	yes
Switching frequency [Hz]	--- (2L) / 125 (3L)
Analogue output	I: 4...20 mA (Ineg: 20...4 mA)
Max. load [Ω]	300 (2L) / max. (U _b - 10 V) x 50 (3L)

Measuring / setting range

Measuring range	-1.00...10.00 bar	-14.5...145.0 psi	-0.100...1.000 MPa
Setting range			
Set point, SP	-0.98...10.00 bar	-14.2...145.0 psi	-0.098...1.000 MPa
Reset point, rP	-1.00...9.98 bar	-14.5...144.7 psi	-0.100...0.998 MPa
Analogue start point, ASP	-1.00...7.50 bar	-14.5...108.7 psi	-0.100...0.750 MPa
Analogue end point, AEP	1.50...10.00 bar	21.8...145.0 psi	0.150...1.000 MPa
in steps of	0.01 bar	0.1 psi	0.001 MPa
Factory setting	SP1 = 2.50 bar; rP1 = 2.30 bar SP2 = 7.50 bar; rP2 = 7.30 bar ASP = 0.00 bar; AEP = 10.00 bar		

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.2
Characteristics deviation *)	< ± 0.2
Linearity	< ± 0.15
Hysteresis	< ± 0.15
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.05
Greatest TEMPCO of the span	< ± 0.15

Reaction times

Power-on delay time [s]	1 (2L) / 0.5 (3L)
Min. response time switching output [ms]	--- (2L) / 3 (3L)
Damping for the switching output (dAP) [s]	0.00...30.00
Damping for the analogue output (dAA) [s]	0.01...99.99



PI2794

PI-010-REA01-MFRKG/US/ /P

Pressure sensors

Step response time analogue output [ms]	45 (2L) / 7 (3L)
Integrated watchdog	yes

Interfaces

IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.0
IO-Link Device ID	157 d / 00 00 9D 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

Environment

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

Tests / approvals

EMC	DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance	DIN EN 60068-2-27: 50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6: 20 g (10...2000 Hz)
MTTF [Years]	160

Mechanical data

Process connection	G 1 A / Aseptoflex Vario
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; FPM; PTFE; PBT; PEI; PFA
Switching cycles min.	100 million
Weight [kg]	0.313

Displays / operating elements

Display	Display unit LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
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Electrical connection

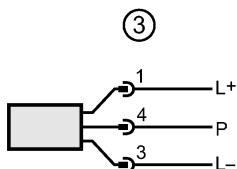
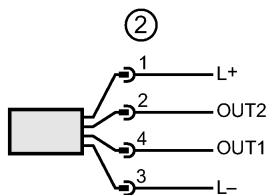
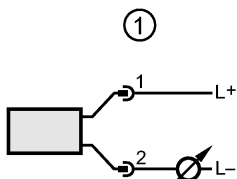
Connection	M12 connector; Gold-plated contacts
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Wiring

PI2794

PI-010-REA01-MFRKG/US/ /P

Pressure sensors



- 1 connection for 2-wire operation
- 2 connection for 3-wire operation
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)

Remarks

Remarks

(2L) = value for 2-wire operation
 (3L) = value for 3-wire operation
 *) linearity, incl. hysteresis and repeatability;
 (limit value setting to DIN 16086)
 **) with temperature fluctuations < 10 K
 ***) in % of the span per year

Pack quantity

[piece]

1