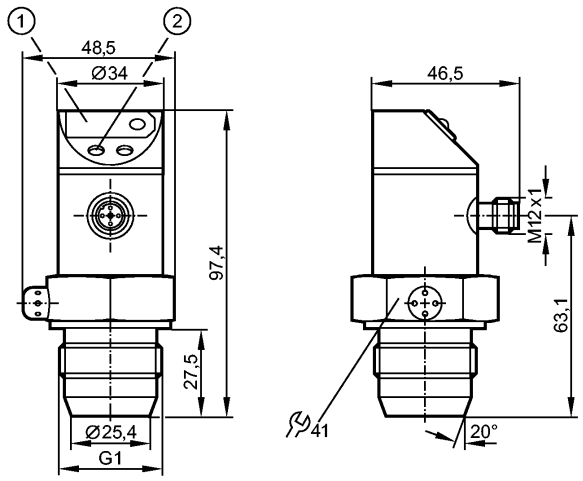
efectorsoo

PF2657

Pressure sensors



1: 7-segment LED display
2: Programming button

Made in Germany

EHEDG Certified

Product characteristics				
Combined pressure sensor				
Connector				
Process connection: G1 A				
no dead space				
Freely rotatable housing 350°				
Zero and span adjustable				
Function programmable				
2 outputs OUT1 = switching output OUT2 = switching output or analogue output				
7-segment LED display				
Measuring range: -50...1000 mbar / -0.7...14.5 psi / -5.0...100 kPa				
Application				
Application		Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating		10000 mbar	145 psi	1000 kPa
Bursting pressure min.		30000 mbar	450 psi	3000 kPa
Medium temperature	[°C]	-25...80		
Electrical data				
Electrical design		DC PNP/NPN		
Operating voltage	[V]	20...30 DC		
Current consumption	[mA]	< 60		
Insulation resistance	[MΩ]	> 100 (500 V DC)		
Protection class		III		
Reverse polarity protection		yes		
Outputs				
Output		2 outputs OUT1 = switching output OUT2 = switching output or analogue output		

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Output function		2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analogue (4...20 mA / 0...10 V; scaleable 1:4)		
Current rating	[mA]	2 x 250		
Voltage drop	[V]	< 2		
Short-circuit protection		pulsed		
Overload protection		yes		
Switching frequency	[Hz]	≤ 170		
Analogue output		4...20 mA / 0...10 V		
Max. load	[Ω]	4...20 mA: max. (Ub - 10 V) x 50 / 0...10 V: min. 2000		
Measuring / setting range				
Display unit		mbar, psi, kPa		
Measuring range		-50...1000 mbar	-0.7...14.5 psi	-5.0...100 kPa
Setting range				
Set point, SP		-45...999 mbar	-0.7...14.5 psi	-4.5...99.9 kPa
Reset point, rP		-50... 994 mbar	-0.7...14.4 psi	-5.0...99.4 kPa
Analogue start point, ASP		-50...749 mbar	-0.7...10.9 psi	-5.0...74.9 kPa
Analogue end point, AEP		200...999 mbar	2.9...14.5 psi	20.0...99.9 kPa
in steps of		1 mbar	0.1 psi	0.1 kPa
Factory setting		SP1 = 250 mbar; rP1 = 230 mbar ASP = 0 mbar; AEP = 999 mbar		
Accuracy / deviations				
Accuracy / deviations (in % of the span) Turn down 1:1				
Characteristics deviation *)		< ± 0.6		
Linearity		< ± 0.5		
Hysteresis		< ± 0.1		
Repeatability **)		< ± 0.1		
Long-term stability ***)		< ± 0.1		
Temperature coefficients (TEMPCO) in the temperature range 0...80° C (in % of the span per 10 K)				
Greatest TEMPCO of the zero point		< ± 0.1		
Greatest TEMPCO of the span		< ± 0.2		
Reaction times				
Power-on delay time	[s]	0.2		
Response time analogue output	[ms]	3		
Integrated watchdog		yes		
Software / programming				
Programming options		hysteresis / window function; N.O. / N.C; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit		
Environment				
Ambient temperature	[°C]	-25...80		
Storage temperature	[°C]	-40...100		
Protection		IP 67		
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 61000-4-6 HF conducted: 10 V		

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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]		170

Mechanical data

Process connection	G1 A
Materials (wetted parts)	ceramics (99.9 % Al2 O3); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; PBT (Pocan); PC (Makrolon); PEI; EPDM/X (Santoprene); FPM (Viton)
Switching cycles min.	100 million
Weight [kg]	0.361

Displays / operating elements

Display	Switching status 2 x LED red Function display 7-segment LED display Measured values 7-segment LED display

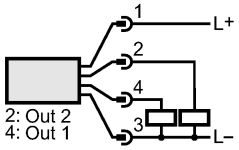
Electrical connection

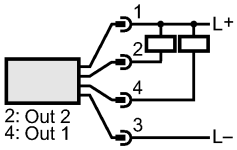
Connection	M12 connector; gold-plated contacts

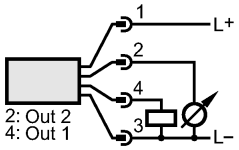
Wiring

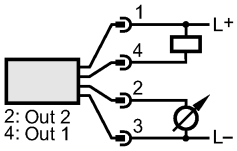
Programming of the output function (OUT1 / OUT2):
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed
Complementary outputs:
output 1: = Hno, output 2: = Hnc
(with the same SP / rP)

Programming of the analogue output (OUT2):
I = current output (4...20 mA)
U = voltage output (0...10 V)









Remarks

Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in % of the span per year The 3A authorisation is only valid if adapters with 3A authorisation are used for installation.
Pack quantity [piece]	1

Other data

Min. response time switching output [ms]	3
Damping for the switching output (dAP) [s]	0...4
Damping for the analogue output (dAA) [s]	0 - 0.1 - 0.5 - 2