

- 1: 7-segment LED display
2: Programming button



EC 1935/2004 EHEDG Certified



Product characteristics

Combined pressure sensor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Function programmable

Sealing cone G 1 male

Process connection: Sealing cone G 1 male

2 outputs

OUT1 = switching output

OUT2 = switching output or analog output

7-segment LED display

Measuring range: -1.0...100 bar / -10...1450 psi / -0.10...10.0 MPa

Application

Application

Type of pressure: relative pressure
Hygienic systems, viscous media and liquids with suspended particles
Liquids and gases
Use in gases at pressures > 25 bar only after contacting the manufacturer ifm

Pressure rating	200 bar	2900 psi	20 MPa
Bursting pressure min.	650 bar	9425 psi	65 MPa
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 analog output

Output function

2 x normally open / closed programmable or 1 x normally open / closed programmable
+ 1 x analog (4...20 mA / 0...10 V; programmable 1:4)

Current rating [mA]

2 x 250

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Voltage drop [V]	< 2		
Short-circuit protection	yes (non-latching)		
Overload protection	yes		
Switching frequency [Hz]	≤ 170		
Analog output	4...20 mA / 0...10 V		
Max. load [Ω]	4...20 mA: max. (U _b - 10 V) x 50 / 0...10 V: min. 2000		
Measuring / setting range			
Display unit	bar, psi, MPa		
Measuring range	-1.0...100 bar	-10...1450 psi	-0.10...10.0 MPa
Setting range			
Set point, SP	0.0...100 bar	0...1450 psi	0.00...10.0 MPa
Reset point, rP	-0.5...99.5 bar	-10...1440 psi	-0.05...9.95 MPa
Analog start point, ASP	-1.0...75.0 bar	-10...1090 psi	-0.10...7.50 MPa
Analog end point, AEP	24.0...100 bar	350...1450 psi	2.40...10.0 MPa
in steps of	0.1 bar	10 psi	0.01 MPa
Factory setting	SP1 = 25.0 bar; rP1 = 23.0 bar ASP = 0.0 bar; AEP = 100.0 bar		
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		
Min. response time switching output [ms]	3		
Damping for the switching output (dAP) [s]	0...4		
Damping for the analog output (dAA) [s]	0 - 0.1 - 0.5 - 2		
Response time analog 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		
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	Sealing cone G 1 male		
Materials (wetted parts)	ceramics; PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4		

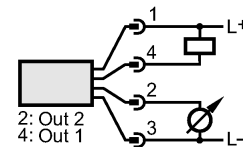
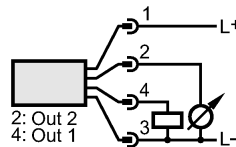
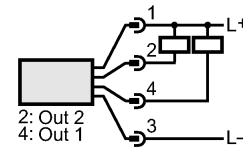
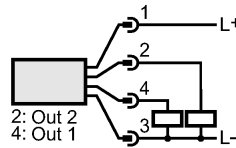
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Housing materials	stainless steel 316L / 1.4404; PBT (Pocan); PC (Makrolon); PEI; EPDM/X (Santoprene); FPM (Viton)
Switching cycles min.	100 million
Weight [kg]	0.343
Displays / operating elements	
Display	Switching status 2 x LED red Function display 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 analog 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 3-A qualification is only valid if adapters with 3-A qualification are used for installation.

Pack quantity [piece]	1
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