efector500 ifm electronic

Pressure sensors

PI7993

Electronic pressure monitor
PI79

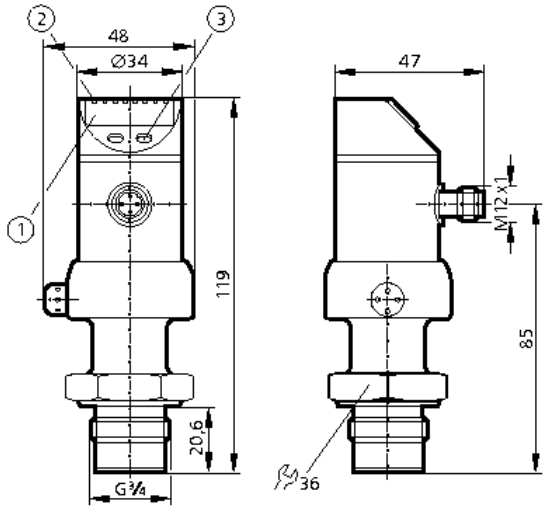
Process connection G ¾ A

no dead space
Freely rotatable housing 350°
Zero and span adjustable
Display units:
bar, PSI, MPa, % of the span
Function programmable

2 outputs
OUT1 = switching output or diagnostic output
OUT2 = switching output

4-digit alphanumeric display

Measuring range
-1.00...25.00 bar
-14.4...362.7 PSI
-0.100...2.500 MPa



1: 4-digit alphanumeric display
2: LEDs (display unit / switching status)
3: Programming button

CE FDA

Application	**Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases**		
Electrical design	**DC PNP/NPN**		
Output	**2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)**		
Operating voltage [V]	18...32 DC		
Current rating [mA]	2 x 250		
Short-circuit protection	pulsed		
Reverse polarity protection	yes		
Overload protection	yes		
Integrated watchdog	yes		
Voltage drop [V]	< 2		
Current consumption [mA]	< 50		
Pressure rating	100 bar	1450 PSI	10 MPa
Bursting pressure min.	350 bar	5070 PSI	35 MPa
Setting range			
Set point, SP	-0.96...25.00 bar	-13.8...362.7 PSI	-0.096...2.500 MPa
Reset point, rP	-1.00...24.96 bar	-14.4...362.1 PSI	-0.100...2.496 MPa
in steps of	0.02 bar	0.3 PSI	0.002 MPa
Programming options	hysteresis / window function; N.O. / N.C; output polarity; damping; calibration of displayed values; display can be rotated / deactivated; display unit		
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

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Power-on delay time [s]	0.5
Min. response time switching outputs [ms]	6
Damping for the switching output (dAP) [s]	0.0...100.0
Switching frequency [Hz]	85
Operating temperature [°C]	-25...80
Medium temperature [°C]	-25...125 (145 max. 1h)
Storage temperature [°C]	-40...100
Protection	IP 67 / IP 69K, III
Insulation resistance [MΩ]	> 100 (500 V DC)
Shock resistance	DIN IEC 68-2-27:50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6:20 g (10...2000 Hz)
Switching cycles min.	100 million
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
Housing material	stainless steel (316S12); PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Materials (wetted parts)	ceramics (99.9 % Al2 O3); PTFE; stainless steel 316L / 1.4435; Surface characteristics: Ra 0.4 / Rz 4
Display	Switching status 2 LED yellow Display unit 4 LED green Measured values 4-digit alphanumeric display Programming 4-digit alphanumeric display
Connection	M12 connector; gold-plated contacts
Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in % of the span per year

Wiring

Programming of the output function
----------OUT1----------
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed
dESI = diagnostic function (normally closed)
----------OUT2----------
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open
Fnc = window function / normally closed