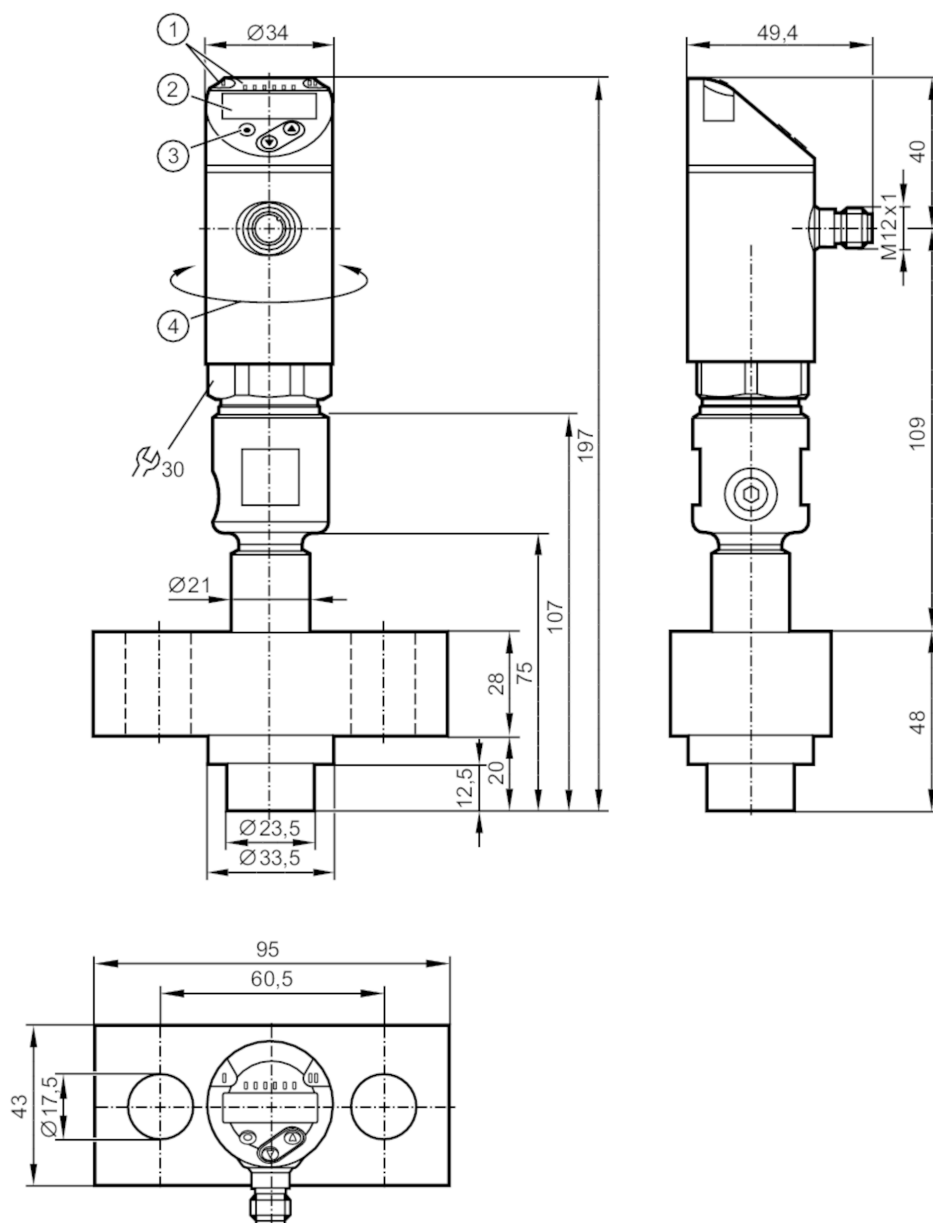


Pressure sensor with display

PN-400-SE MFRKG/US/ I



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button

CE EC 1935/2004 FCM FDA UK CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	0...400 bar	0...5800 psi	0...40 MPa
Process connection	homogeniser connection		

Application

Special feature	Gold-plated contacts
Measuring element	diaphragm seal
Application	flush mountable for the food and beverage industry

PY9070



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PN-400-SE MFRKG/US/ I

Media	liquids and gases		
Medium temperature [°C]	5...125; (150 maximum 1h)		
Min. bursting pressure	1000 bar	14500 psi	100 MPa
Pressure rating	600 bar	8700 psi	60 MPa
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)		
Current consumption [mA]	< 35		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Power-on delay time [s]	0.3		
Integrated watchdog	yes		

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
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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)		
Max. voltage drop switching output DC [V]	2		
Permanent current rating of switching output DC [mA]	250		
Switching frequency DC [Hz]	< 500		
Number of analogue outputs	1		
Analogue current output [mA]	4...20; (scalable 1:5)		
Max. load [Ω]	500		
Analogue voltage output [V]	0...10; (scalable 1:5)		
Min. load resistance [Ω]	2000		
Short-circuit protection	yes		
Type of short-circuit protection	pulsed		
Overload protection	yes		

Measuring/setting range

Measuring range	0...400 bar	0...5800 psi	0...40 MPa
Set point SP	2.5...400 bar	40...5800 psi	0.25...40 MPa
Reset point rP	1...398.5 bar	10...5780 psi	0.1...39.85 MPa
Analogue start point	0...320 bar	0...4640 psi	0...32 MPa
Analogue end point	80...400 bar	1160...5800 psi	8...40 MPa
In steps of	0.5 bar	10 psi	0.05 MPa

Accuracy / deviations

Switch point accuracy	< ± 0.4; (Turn down 1:1)		
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PN-400-SE MFRKG/US/ /

	[% of the span]	
Repeatability	[% of the span]	$< \pm 0,1$; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	$< \pm 1$; (linearity, incl. hysteresis and repeatability; limit value setting to DIN EN IEC 62828-1)
Hysteresis deviation	[% of the span]	$< \pm 0,1$; (Turn down 1:1)
Long-term stability	[% of the span]	$< \pm 0,05$; (Turn down 1:1; per 6 months)
Temperature coefficient zero point	[% of the span / 10 K]	0,2; (5...80 °C)
Temperature coefficient span	[% of the span / 10 K]	0,2; (5...80 °C)

Response times		
Response time	[ms]	< 1.5
Delay time programmable dS, dr	[s]	0...50
Damping process value dAP	[s]	0...4
Damping for the analogue output dAA	[s]	0...4
Max. response time analogue output	[ms]	3

Software / programming		
Parameter setting options	hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output	

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time	[ms]	2.3
Supported DeviceIDs	Type of operation	DeviceID
	default	459

Operating conditions		
Ambient temperature	[°C]	5...80
Storage temperature	[°C]	-40...100
Protection		IP 67

Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)

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Vibration resistance	DIN EN 60068-2-6	10 g (10...2000 Hz)
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Mechanical data

Weight	[g]	1479
Housing		cylindrical
Dimensions	[mm]	Ø 34 / L = 197
Materials		stainless steel (630/1.4542/17-4 PH); stainless steel (316L/1.4404); stainless steel (316L/1.4435); PBT+PC-GF30; PBT-GF20; PC
Materials (wetted parts)		stainless steel (316L/1.4435)
Min. pressure cycles		60 million; (at 1.2 times nominal pressure)
Process connection		homogeniser connection

Displays / operating elements

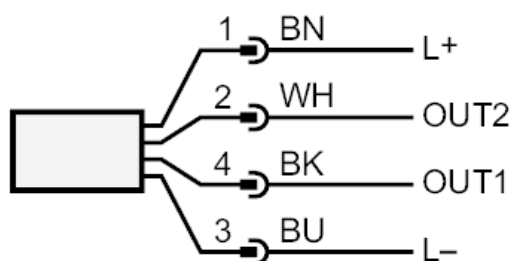
Display	Display unit	3 x LED, green (bar, psi, MPa)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit

Remarks

Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



OUT1	switching output or IO-Link
OUT2	switching output or analogue output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white