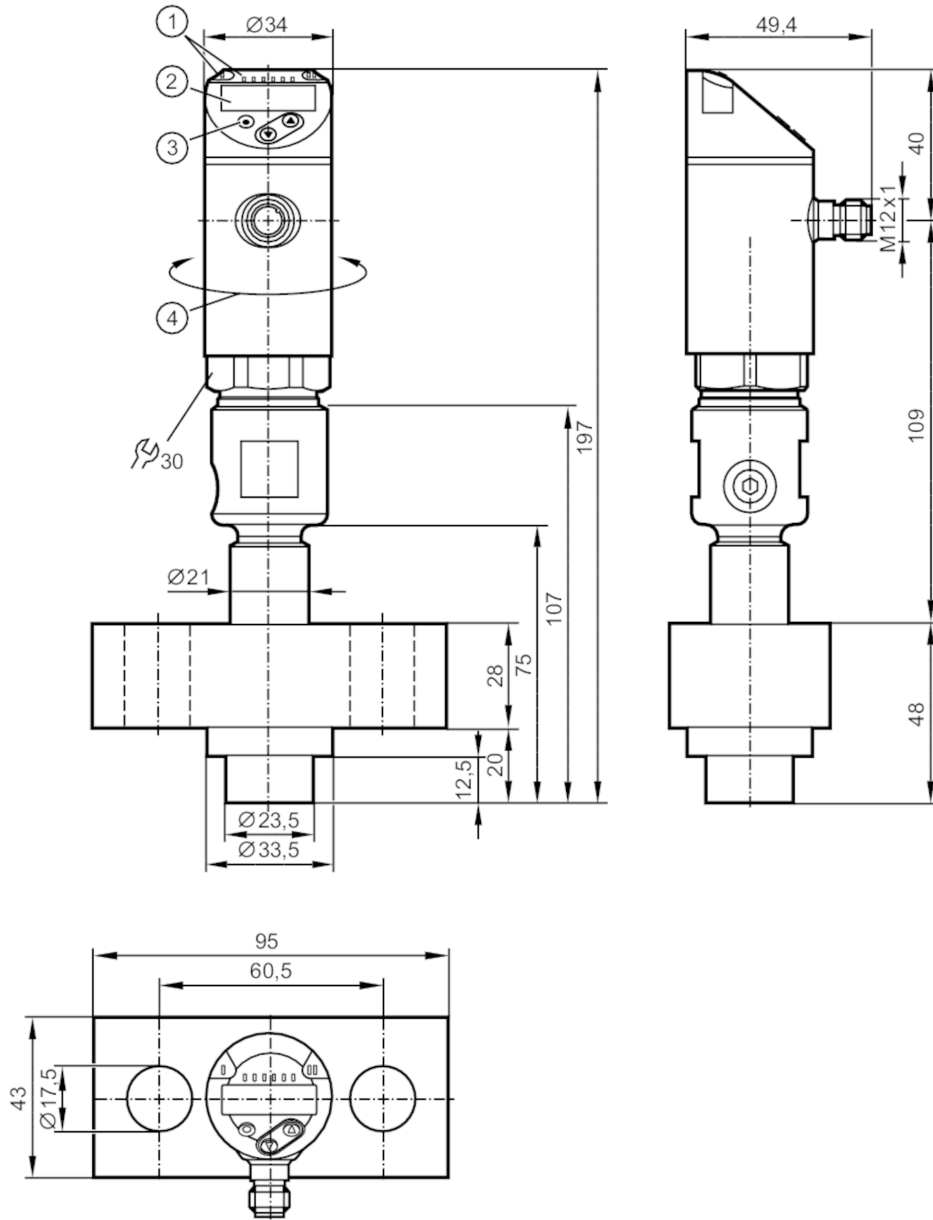


PY9070



Pressure sensor with display

PN-400-SE MFRKG/US/ /



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



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1	
Measuring range	0...400 bar	0...5800 psi
Measuring range [MPa]	0...40	
Process connection	homogenizer connection	

Application

System	gold-plated contacts
Measuring element	diaphragm seal

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Application	flush mountable for the food and beverage industry	
Media	liquids and gases	
Medium temperature [°C]	5...90; (for further details see section Diagrams and graphs)	
Min. bursting pressure	1000 bar	14500 psi
Min. bursting pressure [MPa]	100	
Pressure rating	600 bar	8700 psi
Pressure rating [MPa]	60	
Vacuum resistance [mbar]	-1000	
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 analog outputs: 1	
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Outputs

Total number of outputs	2	
Output signal	switching signal; analog signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	2	
Output function	normally open / closed; (configurable)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	250	
Switching frequency DC [Hz]	< 500	
Number of analog outputs	1	
Analog current output [mA]	4...20; (scalable 1:5)	
Max. load [Ω]	500	
Analog voltage output [V]	0...10; (scalable 1:5)	
Min. load resistance [Ω]	2000	
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Overload protection	yes	

Measuring/setting range

Measuring range	0...400 bar	0...5800 psi
Measuring range [MPa]	0...40	
Set point SP	2.5...400 bar	40...5800 psi
Set point SP [MPa]	0.25...40	
Reset point rP	1...398.5 bar	10...5780 psi

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Reset point rP	[MPa]	0.1...39.85	
Analog start point		0...320 bar	0...4640 psi
Analog start point	[MPa]	0...32	
Analog end point		80...400 bar	1160...5800 psi
Analog end point	[MPa]	8...40	
In steps of		0.5 bar	10 psi
In steps of	[MPa]	0.05	

Accuracy / deviations

Switch point accuracy	[% of the span]	< ± 0,4; (Turn down 1:1)	
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation	[% of the span]	< ± 1; (linearity, incl. hysteresis and repeatability; limit value setting to DIN EN IEC 62828-1)	
Hysteresis deviation	[% of the span]	< ± 0,1; (Turn down 1:1)	
Long-term stability	[% of the span]	< ± 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)	

Reaction times

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

Software / programming

Parameter setting options	hysteresis / window; normally open / closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output		
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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 class	A		
Process data analog	1		
Process data binary	2		
Min. process cycle time	[ms]	2.3	

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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)
Vibration resistance	DIN EN 60068-2-6	10 g (10...2000 Hz)
Mechanical data		
Weight [g]		1479
Material	stainless steel (630/1.4542/17-4 PH); stainless steel (1.4404 / 316L); stainless steel (1.4435 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4435 / 316L)	
Min. pressure cycles	60 million; (at 1.2 times nominal pressure)	
Process connection	homogenizer 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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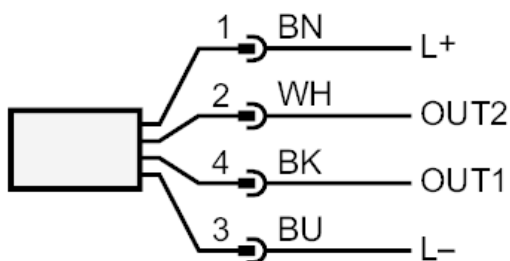


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Electrical connection

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

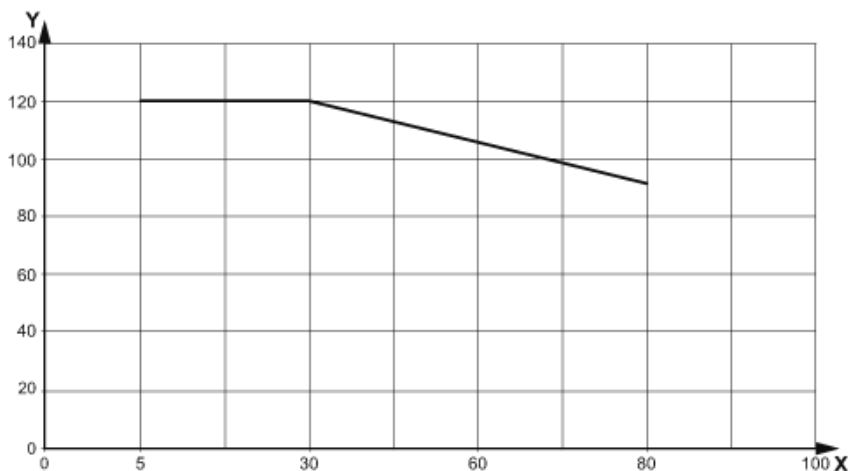


OUT1 switching output or IO-Link
OUT2 switching output or analog output
Colors to DIN EN 60947-5-2

Core colors :

BK = black
BN = brown
BU = blue
WH = white

Diagrams and graphs



X Ambient temperature

Y Medium temperature