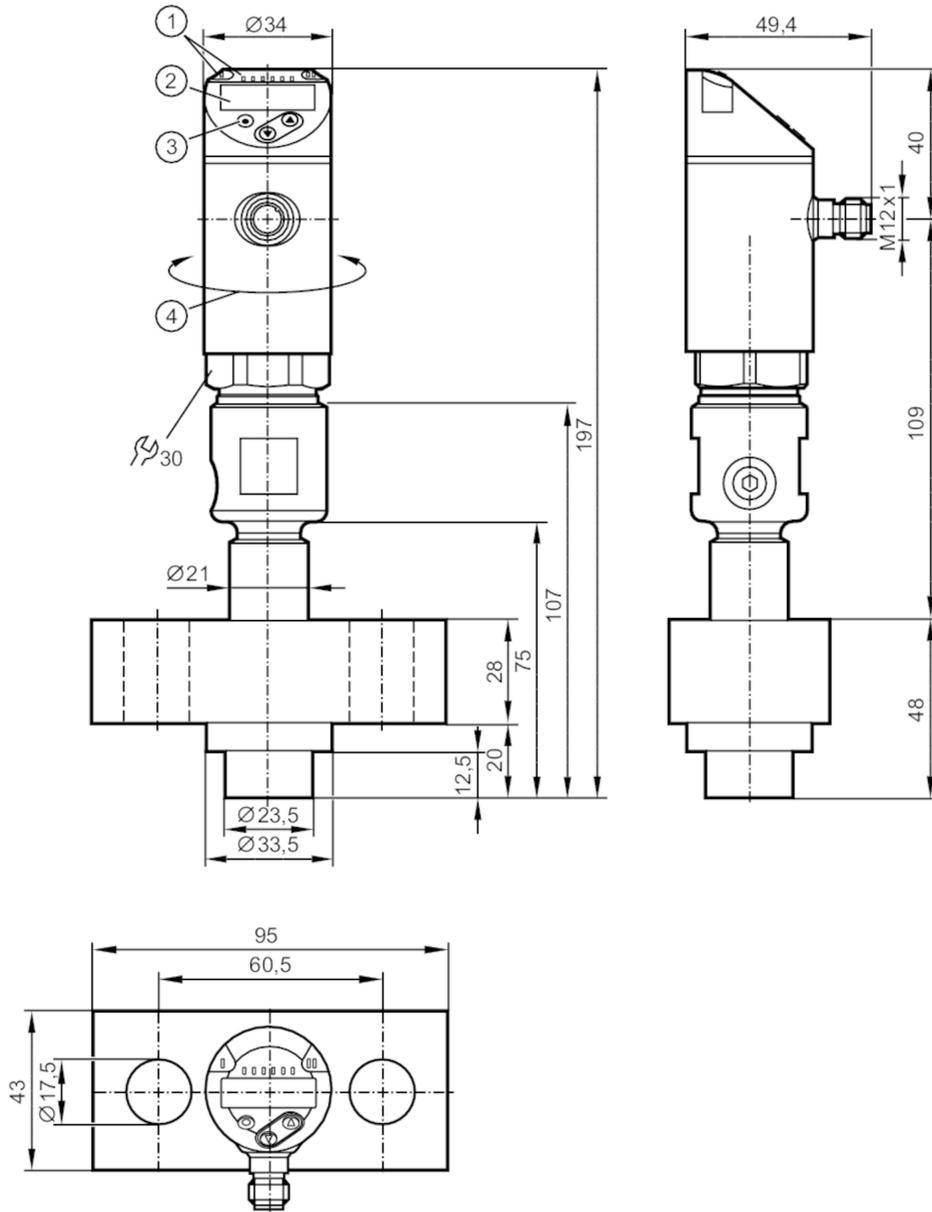


PY9071



Pressure sensor with display

PN-250-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...250 bar	0...3625 psi	0...25 MPa
Process connection	homogenizer connection		

Application

System	gold-plated contacts
Measuring element	diaphragm seal
Application	flush mountable for the food and beverage industry

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Media	liquids and gases		
Medium temperature [°C]	5...90; (for further details see section Diagrams and graphs)		
Min. bursting pressure	1000 bar	14500 psi	100 MPa
Pressure rating	500 bar	7250 psi	50 MPa
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

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...250 bar	0...3625 psi	0...25 MPa
Set point SP	1.5...250 bar	25...3625 psi	0.15...25 MPa
Reset point rP	0.5...249 bar	10...3610 psi	0.05...24.9 MPa
Analog start point	0...200 bar	0...2900 psi	0...20 MPa
Analog end point	50...250 bar	725...3625 psi	5...25 MPa
In steps of	0.5 bar	5 psi	0.05 MPa

Accuracy / deviations	
Switch point accuracy	< ± 0,4; (Turn down 1:1)

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	[% 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)

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				
Supported DeviceIDs	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>460</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	460
Type of operation	DeviceID				
default	460				

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)
MTTF [years]		142

Mechanical data

Weight [g]	1447
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

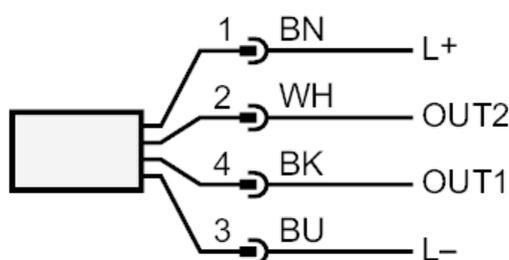
Display	Display unit	3 x LED, green (bar, psi, MPa)
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, red/green 4-digit

Remarks

Pack quantity	1 pcs.
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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

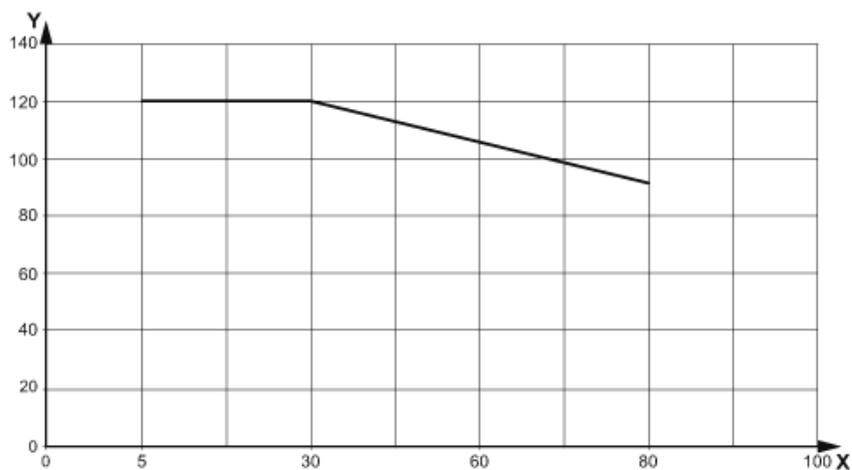
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Diagrams and graphs



X Ambient temperature

Y Medium temperature