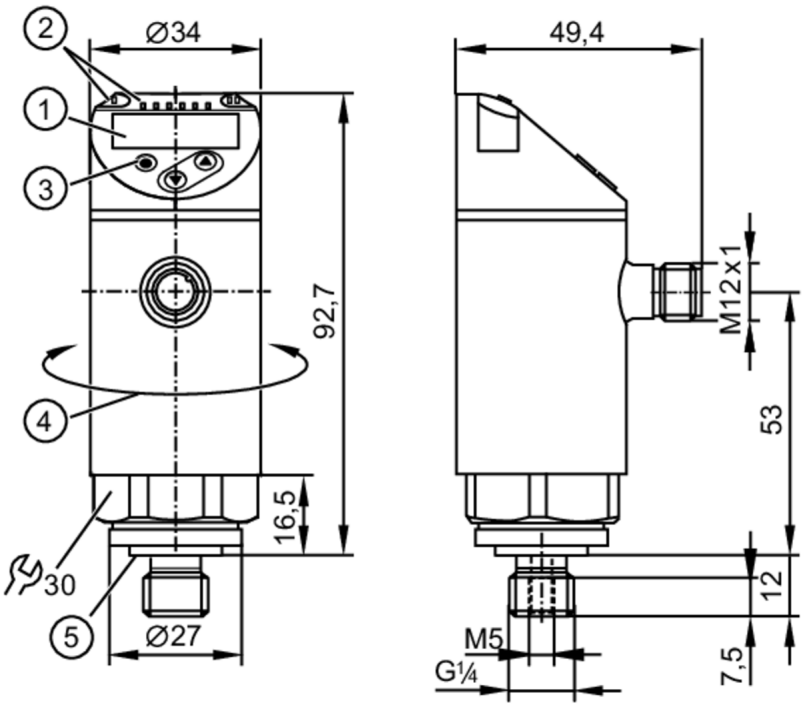
PN7596

Pressure sensor with display

PN-2,5-REG14-QFRKG/US/ /V



1 alphanumeric display 4-digit red/green
2 LEDs Display unit / switching status
3 programming button
4 upper part of the housing can be rotated 345°
5 Sealing

Product characteristics				
Number of inputs and outputs	Number of digital outputs: 2			
Measuring range	0...2.5 bar	0...2500 mbar	0...36.2 psi	0...250 kPa
Process connection	threaded connection G 1/4 external thread internal thread:M5			
Application				
Special feature	Gold-plated contacts			
Measuring element	ceramic-capacitive pressure measuring cell			
Application	for industrial applications			
Media	liquids and gases			
Medium temperature [°C]	-25...80			
Min. burst pressure	50 bar	725 psi	5000 kPa	
Pressure rating	20 bar	290 psi	2000 kPa	
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			

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Power-on delay time	[s]	< 0.3			
Integrated watchdog		yes			
Inputs / outputs					
Number of inputs and outputs		Number of digital outputs: 2			
Outputs					
Total number of outputs		2			
Output signal		switching 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]	2.5			
Permanent current rating of switching output DC	[mA]	150; (200 (...60 °C) 250 (...40 °C))			
Switching frequency DC	[Hz]	< 170			
Short-circuit protection		yes			
Type of short-circuit protection		pulsed			
Overload protection		yes			
Measuring/setting range					
Measuring range		0...2.5 bar	0...2500 mbar	0...36.2 psi	0...250 kPa
Factory setting / CMPT = 2					
Set point SP		0.02...2.5 bar	0.4...36.2 psi	2...250 kPa	
Reset point rP		0.01...2.49 bar	0.2...36 psi	1...249 kPa	
Min. difference between SP and rP		0.02 bar	0.2 psi	2 kPa	
In steps of		0.01 bar	0.2 psi	1 kPa	
Status_B High Resolution / CMPT = 3					
Set point SP		0.02...2.5 bar	0.3...36.3 psi	2...250 kPa	
Reset point rP		0.01...2.49 bar	0.1...36.1 psi	1...249 kPa	
Min. difference between SP and rP		0.02 bar	0.2 psi	2 kPa	
In steps of		0.01 bar	0.1 psi	1 kPa	
Accuracy / deviations					
Switch point accuracy	[% of the span]	< ± 0,5			
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)			
Characteristics deviation	[% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)			
Hysteresis deviation	[% of the span]	< ± 0,25			
Long-term stability	[% of the span]	< ± 0,05; (per 6 months)			
Temperature coefficient zero point	[% of the span / 10 K]	< ± 0,2; (-0...80 °C)			
Temperature coefficient span		< ± 0,2; (-0...80 °C)			

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[% of the span / 10 K]		

Response times		
Response time [ms]		< 3
Delay time programmable dS, dr [s]		0...50

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

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
SIO mode	yes	
Required master port type	A; (when pin 2 not connected: B)	
Process data analogue	1	
Process data binary	2	
Supported DeviceIDs	**Type of operation**	**DeviceID**
	Factory setting / CMPT = 2	404
	Status_B High Resolution / CMPT = 3	602
Note	For further information please see the IODD PDF file under "Downloads"	
Factory setting / CMPT = 2		
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis
Min. process cycle time [ms]	2.3	
IO-Link resolution pressure	0.01 bar	0.001 MPa
IO-Link process data (cyclical)	**function**	**bit length**
	pressure	14
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	
Status_B High Resolution / CMPT = 3		
Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis
Min. process cycle time [ms]	3	
IO-Link resolution pressure	0.001 bar	0.0001 MPa
IO-Link process data (cyclical)	**function**	**bit length**
	pressure	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)	application specific tag	

Operating conditions	
Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 65; IP 67

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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	20 g (10...2000 Hz)
MTTF	[years]	260	
UL approval		UL approval no.	J001
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	260
Materials		stainless steel (316L/1.4404); PBT+PC-GF30; PBT-GF20; PC
Materials (wetted parts)		stainless steel (316L/1.4404); ceramics; FKM
Min. pressure cycles		100 million
Tightening torque	[Nm]	25...35; (recommended tightening torque; depends on the lubrication, the seal and the pressure load)
Process connection		threaded connection G 1/4 external thread internal thread:M5
Restrictor element integrated		no (can be retrofitted)

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

Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated

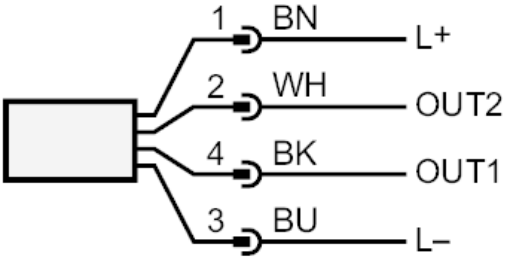


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Connection



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