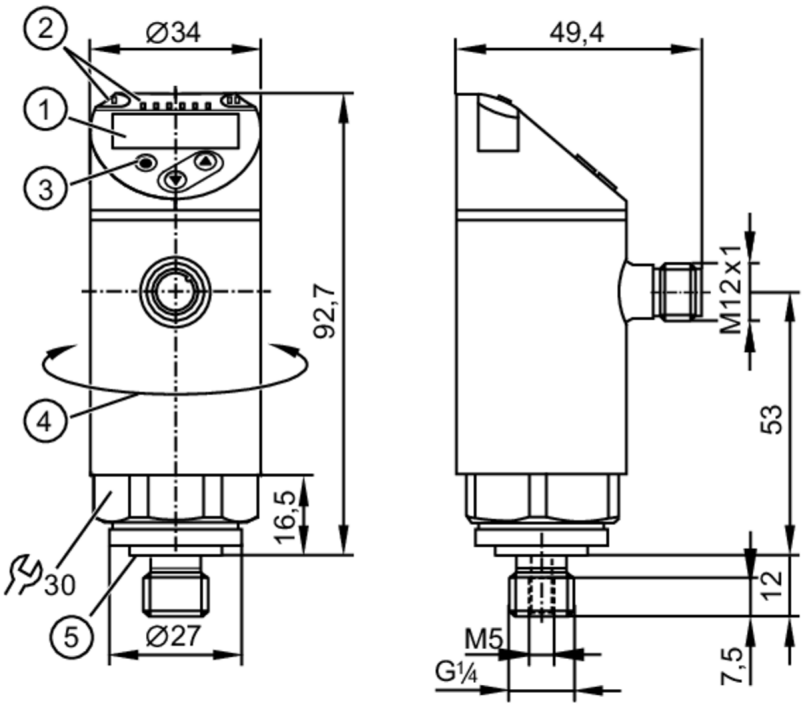
PN7593

Pressure sensor with display

PN-025-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...25 bar	0...362 psi	0...2.5 MPa
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		
Conditionally suitable for		Bei_gasfoermigen_Medien_ist_der_Einsatzbereich_auf_max_25_bar_begrenzt		
Medium temperature	[°C]	-25...80		
Min. burst pressure		350 bar	5075 psi	35 MPa
Pressure rating		150 bar	2175 psi	15 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		

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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		
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...25 bar	0...362 psi	0...2.5 MPa
Factory setting / CMPT = 2				
Set point SP		0.2...25 bar	4...362 psi	0.02...2.5 MPa
Reset point rP		0.1...24.9 bar	2...360 psi	0.01...2.49 MPa
Min. difference between SP and rP		0.2 bar	2 psi	0.02 MPa
In steps of		0.1 bar	2 psi	0.01 MPa
Status_B High Resolution / CMPT = 3				
Set point SP		0.2...25 bar	3...363 psi	0.02...2.5 MPa
Reset point rP		0.1...24.9 bar	1...361 psi	0.01...2.49 MPa
Min. difference between SP and rP		0.2 bar	2 psi	0.02 MPa
In steps of		0.1 bar	1 psi	0.01 MPa
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)		

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Temperature coefficient span [% of the span / 10 K]		< ± 0,2; (-0...80 °C)
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	402
	Status_B High Resolution / CMPT = 3	600
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	0.1 bar	0.01 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	0.01 bar	0.001 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

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Protection		IP 65; 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	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]	260.5	
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, MPa)
		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

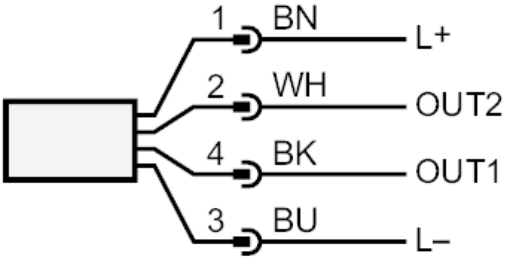


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Connection



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