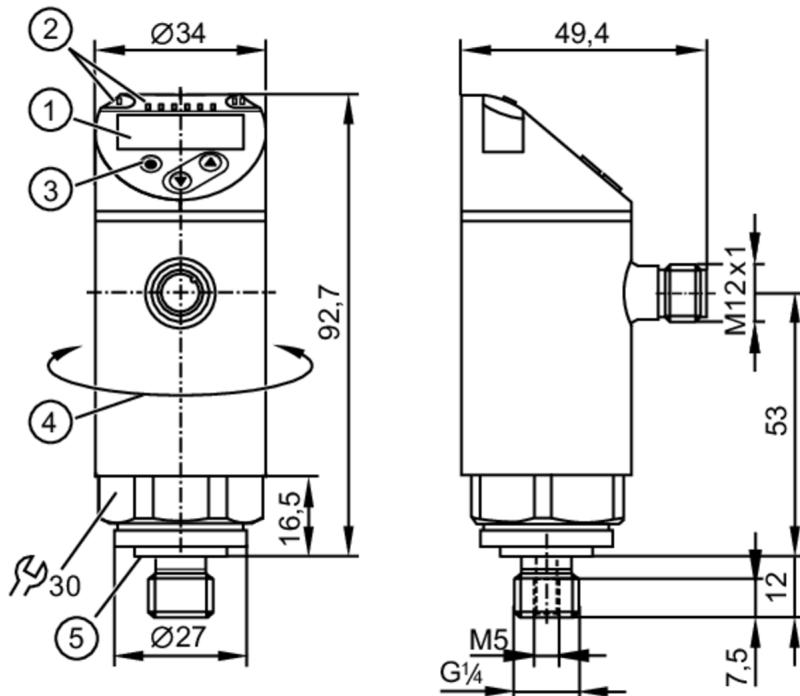


## Pressure sensor with display

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



- 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
Process connection	threaded connection G 1/4 external thread Internal thread:M5		

## Application

System	gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]		-25...80	
Min. bursting pressure	50 bar	725 psi	5000 kPa
Pressure rating	20 bar	290 psi	2000 kPa
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		

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## Pressure sensor with display

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Power-on delay time	[s]	< 0.3		
Integrated watchdog		yes		
<b>Inputs / outputs</b>				
Number of inputs and outputs	Number of digital outputs: 2			
<b>Outputs</b>				
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 / closed; (configurable)			
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		yes (non-latching)		
Overload protection		yes		
<b>Measuring/setting range</b>				
Measuring range	0...2.5 bar	0...2500 mbar	0...36.2 psi	0...250 kPa
<b>Factory setting / CMPT = 2</b>				
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	
<b>Status_B High Resolution / CMPT = 3</b>				
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	
<b>Accuracy / deviations</b>				
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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## Pressure sensor with display

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[% of the span / 10 K]

Reaction times		
Response time	[ms]	< 3
Delay time programmable dS, dr	[s]	0...50
Software / programming		
Parameter setting options		hysteresis / window; normally open / 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 class		A; (when pin 2 not connected: B)
Process data analog		1
Process data binary		2
Supported DeviceIDs	Type of operation	DeviceID
	Factory setting / CMPT = 2	404
	PN7006	312
	Status_B High Resolution / CMPT = 3	602
Note	For further information please see the IODD PDF file at "Downloads"	
Factory setting / CMPT = 2		
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
Min. process cycle time	[ms]	2.3
IO-Link resolution pressure	[bar]	0.01
IO-Link resolution pressure	[MPa]	0.0001
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 ED2: Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
Min. process cycle time	[ms]	3
IO-Link resolution pressure	[bar]	0.001
IO-Link resolution pressure	[MPa]	0.0001
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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## Pressure sensor with display

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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 number	J001
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

### Mechanical data

Weight [g]	260
Material	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC
Materials (wetted parts)	stainless steel (1.4404 / 316L); ceramics; FKM
Min. pressure cycles	100 million
Tightening torque [Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)
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.
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### Electrical connection

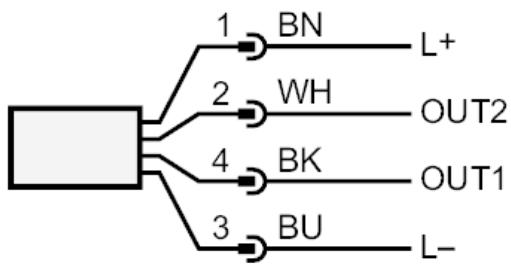
Connector: 1 x M12; coding: A; Contacts: gold-plated



## Pressure sensor with display

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

### Connection



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