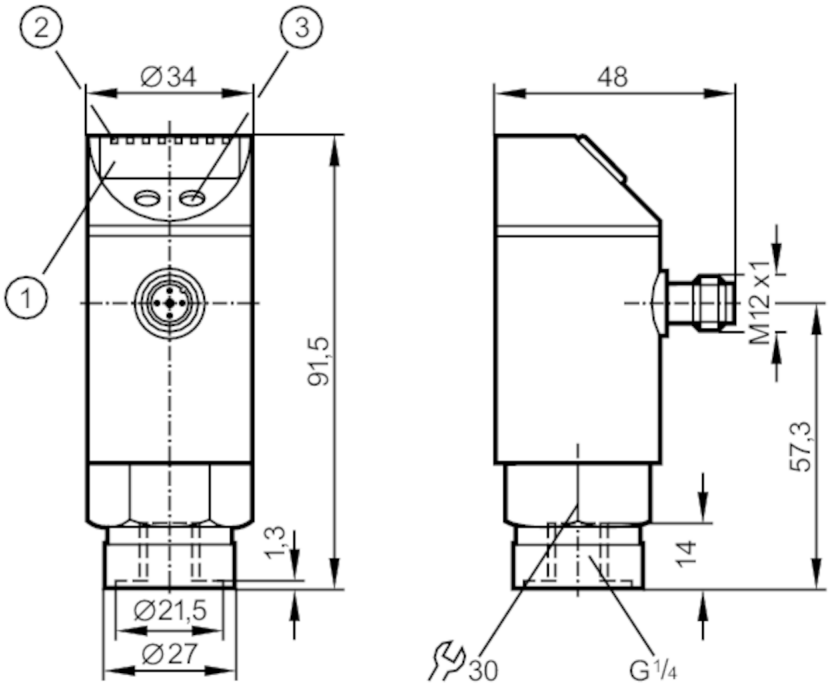
PE7004

Pressure sensor with display

PE-010-RDR14-QFRKG/US/ /E

phase-out article

Alternative articles: PE2094 or PE2594
When selecting an alternative article and accessories please note that technical data may differ!



1 alphanumeric display 4-digit
2 LEDs Display unit / switching status
3 programming button

Product characteristics				
Number of inputs and outputs		Number of digital outputs: 2		
Measuring range		-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Process connection		threaded connection G 1/4 internal thread		
Application				
Special feature		Gold-plated contacts		
Application		for industrial applications		
Media		liquids and gases		
Cannot be used for		oils		
Medium temperature	[°C]	-25...80		
Min. bursting pressure		150 bar	2175 psi	15 MPa
Pressure rating		75 bar	1087 psi	7.5 MPa
Type of pressure		relative pressure		
Electrical data				
Operating voltage	[V]	18...36 DC; (to SELV/PELV)		
Current consumption	[mA]	< 50		
Min. insulation resistance	[MΩ]	100; (500 V DC)		

PE7004

Pressure sensor with display

PE-010-RDR14-QFRKG/US/ /E

Protection class		III			
Reverse polarity protection		yes			
Overvoltage protection		yes; (< 40 V)			
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			
Permanent current rating of switching output DC	[mA]	250			
Switching frequency DC	[Hz]	< 170			
Short-circuit protection		yes			
Type of short-circuit protection		pulsed			
Measuring/setting range					
Measuring range		-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Set point SP		-0.9...10 bar	-12...145 psi		-0.09...1 MPa
Reset point rP		-0.95...9.95 bar	-13...144 psi		-0.095...0.995 MPa
In steps of		0.05 bar	1 psi		0.005 MPa
Factory setting			SP1 = 2.50 bar		rP1 = 2.30 bar
			SP2 = 7.50 bar		rP2 = 7.30 bar
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; (-20...80 °C)			
Temperature coefficient span	[% of the span / 10 K]	0,2; (-20...80 °C)			
Response times					
Delay time programmable dS, dr	[s]	0; 0,2...50			

PE7004

Pressure sensor with display

PE-010-RDR14-QFRKG/US/ /E

Software / programming			
Parameter setting options		hysteresis / window; normally open / normally closed; diagnostic function; 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	
Profiles		no profile	
SIO mode		yes	
Required master port type		A	
Process data analogue		1	
Process data binary		2	
Min. process cycle time	[ms]	2.3	
Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	311
Operating conditions			
Ambient temperature	[°C]	-20...80	
Storage temperature	[°C]	-40...100	
Protection		IP 67	
Tests / approvals			
EMC		EN 61000-6-2	
		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]	237	
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	261.5	
Materials		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; EPDM/X; PTFE	
Materials (wetted parts)		stainless steel (1.4404 / 316L); ceramics (99.9 % Al2O3); sealing of the measuring cell: EPDM	
Min. pressure cycles		100 million	
Process connection		threaded connection G 1/4 internal thread	
Displays / operating elements			
Display		Display unit	3 x LED, green
		switching status	2 x LED, yellow
		function display	alphanumeric display, 4-digit
		measured values	alphanumeric display, 4-digit
Remarks			
Pack quantity		1 pcs.	

PE7004

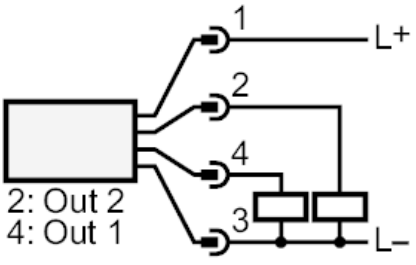
Pressure sensor with display

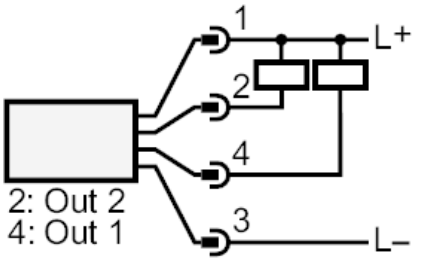
PE-010-RDR14-QFRKG/US/ /E

Electrical connection

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







OUT1	switching output
OUT2	switching output Diagnostic output