

PE3004



Pressure sensor with display

PE-010-RDR14-MFPKG/US/ /E



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



Application			
Media	liquids and gases		
Cannot be used for	oils		
Medium temperature [°C]	-25...80		
Pressure rating	75 bar	1087 psi	7.5 MPa
Min. bursting pressure	150 bar	2175 psi	15 MPa
Type of pressure	relative pressure		
Electrical data			
Operating voltage [V]	18...36 DC; (according to EN 50178 SELV/PELV)		
Current consumption [mA]	< 50		
Min. insulation resistance [MΩ]	100; (500 V DC)		
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: 1; Number of analogue outputs: 1		



Pressure sensor with display

PE-010-RDR14-MFPKG/US/ /E

Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; (configurable)	
Electrical design		PNP	
Number of digital outputs		1	
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	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20; (0 bar = 4 mA; 10 bar = 20 mA)	
Max. load	[Ω]	500	
Analogue voltage output	[V]	0...10; (0 bar = 0 V; 10 bar = 10 V)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Measuring/setting range			
Measuring range		-1...10 bar	-14.5...145 psi -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 MPa
In steps of		0.05 bar	1 psi 0.005 MPa
Factory setting			SP1 = 2.50 bar rP1 = 2.30 bar
Accuracy / deviations			
Switch point accuracy		< ± 0,5	
	[% of the span]		
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	
Max. response time analogue output	[ms]	3	

PE3004



Pressure sensor with display

PE-010-RDR14-MFPKG/US/ /E

Software / programming		
Parameter setting options		hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; Display unit; current/voltage output
Operating conditions		
Ambient temperature	[°C]	-20...80
Storage temperature	[°C]	-40...100
Protection		IP 67
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-5 Surge	0,5/1 kV
	EN 61000-4-6 HF conducted	10 V
Shock resistance		DIN IEC 68-2-27 50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6 20 g (10...2000 Hz)
MTTF [years]		231
Mechanical data		
Weight [g]		262.2
Materials		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; 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	LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		

PE3004



Pressure sensor with display

PE-010-RDR14-MFPKG/US/ /E

Connection

