



Pressure sensor with display

PN-010-RER14-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°



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 2		
Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Process connection	threaded connection G 1/4 internal thread		
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. bursting pressure	150 bar	2175 psi	15 MPa
Pressure rating	75 bar	1087 psi	7.5 MPa
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		
Power-on delay time [s]	< 0.3		



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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		
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	-1...10 bar	-14.5...145 psi	-0.1...1 MPa
Set point SP	-0.9...10 bar	-13.5...145 psi	-0.09...1 MPa
Reset point rP	-0.95...9.95 bar	-14...144.5 psi	-0.095...0.995 MPa
In steps of	0.05 bar	0.5 psi	0.005 MPa
Accuracy / deviations			
Switch point accuracy [X21]	< ± 0,5		
Repeatability [X21]	< ± 0,1; (with temperature fluctuations < 10 K)		
Characteristics deviation [X21]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)		
Hysteresis deviation [X21]	< ± 0,25		
Long-term stability [X21]	< ± 0,05; (per 6 months)		
Temperature coefficient zero point [X22]	0,2; (-25...80 °C)		
Temperature coefficient span [X22]	0,2; (-25...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		
Operating conditions			
Ambient temperature [°C]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 65; IP 67		
Tests / approvals			
EMC	DIN EN 61000-6-2		
	DIN EN 61000-6-3		

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Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [ANN]	256	
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]	231.5	
Materials	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 internal thread	
Switching cycles mechanical	100 million	
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.
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Electrical connection

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



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Connection



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

Other data

Parameter	Factory setting
SP1	0.04 MPa
rP1	0.03 MPa
ou1	Hnc
SP2	0.35 MPa
rP2	0.30 MPa
ou2	Hno
ds1/ds2	0 ms
dr1/dr2	0 ms
coF	0 %
P-n	pnp
dAP	60 ms