Pressure Sensor PY7001

URL:https://www.sxplc.com/pressure-sensor-py7001

Product data sheet

Product Characteristics

Total number of inputs and outputs

Number of digital outputs: 2

Measuring range

0.... .250 bar

0... .3625 psi .3625 psi

Measuring range [MPa]

0... .25

System connections

Flange female thread: G 1/4; female thread: M6

APPLICATIONS

Special features

Gold-plated contacts

Design

with flange adapter

Media

Liquid and gaseous media

Conditionally applicable

for gaseous media pressures > 25 bar only on request

Medium temperature [°C]

-25.... .80

Burst pressure min.

850 bar

12300 psi

Burst Pressure Min [MPa]

85

Compressive Strength

400 bar

5800 psi

Compressive Strength [MPa]

40

Pressure

Relative pressure

Electrical Data

Operating voltage [V]

18.... .36 DC; (according to SELV/PELV)

Current loss [mA]

< 50

Insulation resistance min.

100; (500 V DC)

Protection class

III

Inverted phase protection

yes

Overvoltage protection

Yes; (< 40 V)

Power-on delay time [s]

0.3

Watchdog

Yes

Total Inputs/Outputs

Total number of inputs and outputs

Number of digital outputs: 2

Outputs

Number of outputs

2

Output signals

Switching signal; IO-Link; (configurable)

Electrical design

PNP/NPN

Number of digital outputs

2

Output function

Normally open/closed; (parameterizable)

Switching output DC voltage drop maximum value [V]

2

Continuous current load of switching output DC [mA]

250

Switching frequency DC [Hz]

< 170

Short circuit protection

Yes

Type of short-circuit protection

Pulse

Measuring/setting range

Measuring range

0.... .250 bar

0.... .3625 psi

Measuring range [MPa]

0... .25

Switching point, SP

2.... .250 bar

40.... .3620 psi

Switching point, SP [MPa]

0.2.... .25

Recovery point, rP

1.... .249 bar

20.... .3600 psi

Recovery Point, rP [MPa]

0.1.... .24.9

Setting step

1 bar

20 psi

Setting step [MPa]

0.1

Factory setting

SP1 = 63 bar

rP1 = 58 bar

SP2 = 188 bar

rP2 = 183 bar

Accuracy / Deviation

Switching point accuracy [% of measuring range value]

< ± 0,5

Repeatability [% of measuring range value] < ± 0,1; (temperature fluctuations < 10 K)

< ± 0,1; (temperature fluctuations < 10 K)

Characteristic curve deviation [% of measuring range] < ± 0,5; (temperature fluctuations < 10 K)

< ± 0,5; (linearity, including hysteresis and repeatability, limit values according to DIN EN IEC 62828-1)

Hysteresis deviation [% of measuring range value] < ± 0,25

< ± 0,25

Stability over time [% of measuring range value] < ± 0,05; (% of measuring range value)

< ± 0,05; (every 6 months)

Temperature coefficient zero [% of measured range value / 10 K]

0,2; (0.... .80 °C)

Temperature coefficient range [% of measured range value / 10 K] 0,2; (0...80 °C)

0,2; (0... .80 °C) .80 °C)

Reaction time

Programmable delay time dS, dr [s]

0; 0,2... .50 °C .50

Software / Programming

Parameter setting

Hysteresis/Window; Normally open/closed; Diagnostic function; Output polarity; ON delay, OFF delay; Damping; Display unit

Interfaces

Communication Interface

IO-Link

Transmission type

COM2 (38,4 kBaud)

IO-Link revision

1.1

SDCI standards

IEC 61131-9 CDV

Outline

No profile

SIO Mode

Yes

Required mater port type

A

Analog process data

1

2-digit output process data

2

Process cycle minimum [ms]

2.3

Supported DeviceID

Operation mode

DeviceID

default

308

Operating conditions

Ambient temperature [°C]

-20.... .80

Storage temperature [°C]

-40.... .100

Enclosure protection class

IP 67

Certification/Testing

EMC Electromagnetic Compatibility

EN 61000-4-2 ESD

4 kV CD / 8 kV AD

EN 61000-4-3 HF EMF radiation

10 V/m

EN 61000-4-4 Burst

2 kV

EN 61000-4-5 Surge

0,5/1 kV

EN 61000-4-6 Conducted immunity for RF field induction

10 V

Shock resistance

DIN IEC 68-2-27

50 g (11 ms)

Vibration

DIN IEC 68-2-6

20 g (10.... .2000 Hz)

Pressurized Equipment Directive

good engineering practice; can be used for Group 2 fluids; on demand for Group 1 fluids

Mechanical Technical Data

Weight [g]

382.5

Material

Stainless steel (1.4301/304); PC; PBT; PEI; FKM

Material (wetted parts)

Steel (1.4104 / 430F); Ceramic; FKM

Switching life

100 million

System Interface

Flange Female thread: G 1/4; Female thread: M6

Integrated limiter element

No

Display/operating elements

Display

Display units

3 x LED, green

Switching status

2 x LED, yellow

Function display

Alphanumeric display, 4 digits

Measured values

Alphanumeric display, 4 digits

Comments

Packaging unit

1 piece

Electrical connection

Connection 1: M12 Transistor: A; Contacts: gold-plated