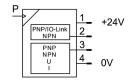
## **Pressure sensor** SPAN-P10R-Q4-PNLK-PNVBA-L1 Part number: 8035541

**FESTO** 





## **Data sheet**

General operating condition

Certification RCM compliance mark c UL us - Usted (OL)  CE marking (see declaration of conformity)  As per EU EMC directive As per EU RoHS directive UKCA marking (see declaration of conformity)  To UK instructions for EMC To UK RoHS instructions  Certificate issuing authority  UL E322346  Note on materials  RoHS-compliant  Measured variable  Relative pressure  Method of measurement  Pressure measuring range initial value  O MPa  Pressure measuring range initial value  O bar  Pressure measuring range initial value  O pasi  Pressure measuring range end value  1 MPa  Pressure meas	Feature	Value
c UL us - Listed (OL)  CE marking (see declaration of conformity)  As per EU BMC directive As per EU RMC directive As per EU RMC directive  As per EU RMC directive  As per EU RMC directive  UKCA marking (see declaration of conformity)  To UK instructions for EMC To UK RoM5 instructions  Certificate issuing authority  UL E322346  Note on materials  RoHS-compliant  Measured variable  Relative pressure  Method of measurement  Pressure measuring range initial value  O MPa  Pressure measuring range initial value  O bar  Pressure measuring range end value  O psi  Pressure measuring range end value  1 MPa  Pressure measuring range end value  1 1 MPa  Pressure measuring range end value  1 145 psi  Max. overload pressure  Overload pressure  1 5 bar  Overload pressure  1 5 bar  Overload pressure  Overload pressure  1 5 bar  Overload pressure  Overload pressure  Overload pressure  0 Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operating medium  O °C 50 °C  Ambient temperature  O °C 50 °C  Ambient temperature  O °C 50 °C  Accuracy in ± % FS  Repetition accuracy in ± % FS  Emperature co-efficient in ± % FS/K  O.05 % FS/K  Switching output  Switching function  N/C contact/N/O contact switchable	Symbol	00995685
As per EU ROHS directive  UKCA marking (see declaration of conformity)  To UK RoHS instructions for EMC TO UK ROHS instructions  Certificate issuing authority  UL E322346  Note on materials  RoHS-compliant  Measured variable  Relative pressure  Method of measurement  Pressure measuring range initial value  O MPa  Pressure measuring range initial value  O bar  Pressure measuring range end value  1 MPa  Pressure measuring range end value  1 MPa  Pressure measuring range end value  1 5 bar  Overload pressure  Overload pressure  1 5 bar  Overload pressure  1 5 bar  Overload pressure  Overload pressure  1 5 bar  Overload pressure  Overload pressure  Overload pressure  0 perating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Intering range and pilot media  Operation with oil lubrication possible  Temperature of medium  O °C 50 °C  Accuracy in ± % FS  Accuracy in ± % FS  Temperature co-efficient in ± % FS/K  Switching output  Switching element function  N/C contact/N/O contact switchable	Certification	
To UK ROHS instructions  Certificate issuing authority  UL 5322346  Note on materials  RoHS-compliant  Measured variable  Relative pressure  Method of measurement  Pressure measuring range initial value  O MPa  Pressure measuring range initial value  O psi  Pressure measuring range initial value  O psi  Pressure measuring range end value  1 MPa  Pressure measuring range end value  1 MPa  Pressure measuring range end value  1 S bar  Overload pressure  Overload pressure  1 5 bar  Overload pressure  1 5 bar  Overload pressure  Overload pressure  1 5 bar  Overload pressure  Overlo	CE marking (see declaration of conformity)	
Note on materials  Reasured variable  Measured variable  Method of measurement  Pressure measuring range initial value  Pressure measuring range initial value  O bar  Pressure measuring range initial value  O psi  Pressure measuring range end value  1 MPa  Pressure measuring range end value  10 bar  Pressure measuring range end value  10 bar  Pressure measuring range end value  110 bar  Pressure measuring range end value  125 psi  Max. overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  Overload pressure  Overload pressure  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O°C50°C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Repetition accuracy in ± %FS  Switching output  Switching function  Window comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	UKCA marking (see declaration of conformity)	
Measured variable  Method of measurement  Pressure measuring range initial value  O MPa  Pressure measuring range initial value  O bar  Pressure measuring range initial value  O psi  Pressure measuring range end value  1 MPa  Pressure measuring range end value  10 bar  Pressure measuring range end value  10 bar  Pressure measuring range end value  15 bar  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  17.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O ° C 50 ° C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  Switching function  N/C contact/N/O contact switchable	Certificate issuing authority	UL E322346
Method of measurement Pressure measuring range initial value O MPa Pressure measuring range initial value O bar Pressure measuring range initial value O psi Pressure measuring range end value 1 MPa Pressure measuring range end value 1 1 S bar Overload pressure 1 1 5 bar Overload pressure 1 15 bar Overload pressure 0 Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas Information on operating and pilot media Operation with oil lubrication possible Temperature of medium 0 ° C 50 ° C Arcuracy in ± % FS 1.5 % FS Repetition accuracy in ± % FS 1.5 % FS Repetition accuracy in ± % FS Temperature co-efficient in ± % FS/K Switching output 2 x PNP or 2 x NPN switchable Switching function Threshold value comparator Auto difference monitoring Switching element function N/C contact/N/O contact switchable	Note on materials	RoHS-compliant
Pressure measuring range initial value  Pressure measuring range initial value  Pressure measuring range initial value  Pressure measuring range end value  145 psi  Max. overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  17.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4]  Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  0°C50°C  Ambient temperature  0°C50°C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2x PNP or 2x NPN switchable  Window comparator  Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Measured variable	Relative pressure
Pressure measuring range initial value  Pressure measuring range initial value  Pressure measuring range end value  10 bar  Pressure measuring range end value  145 psi  Max. overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  217.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4]  Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  0 °C 50 °C  Ambient temperature  0 °C 50 °C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Window comparator  Threshold value comparator  Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Method of measurement	Piezoresistive pressure sensor
Pressure measuring range initial value  Pressure measuring range end value  145 psi  Max. overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  217.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  0° C 50° C  Andbient temperature  0° C 50° C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Pressure measuring range initial value	0 MPa
Pressure measuring range end value  Pressure measuring range end value  Pressure measuring range end value  145 psi  Max. overload pressure  15 bar  Overload pressure  1.5 MPa  Overload pressure  15 bar  Overload pressure  17.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O° C 50 °C  Ambient temperature  Accuracy in ± % FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Pressure measuring range initial value	0 bar
Pressure measuring range end value  Pressure measuring range end value  Max. overload pressure  Overload pressure  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O° C 50 °C  Ambient temperature  Accuracy in ± % FS  Repetition accuracy in ± % FS  Temperature co-efficient in ± % FS/K  Switching output  Switching function  Window comparator Threshold value comparator Auto difference monitoring  N/C contact/N/O contact switchable	Pressure measuring range initial value	0 psi
Pressure measuring range end value  Max. overload pressure  Overload pressure  1.5 MPa  Overload pressure  1.5 MPa  Overload pressure  15 bar  Overload pressure  15 bar  Overload pressure  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O° C 50 °C  Ambient temperature  O° C 50 °C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Pressure measuring range end value	1 MPa
Max. overload pressure  Overload pressure  1.5 MPa  Overload pressure  15 bar  Overload pressure  217.5 psi  Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O° C 50 °C  Ambient temperature  Accuracy in ± % FS  Repetition accuracy in ± % FS  Temperature co-efficient in ± % FS/K  Switching output  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Pressure measuring range end value	10 bar
Overload pressure  1.5 MPa Overload pressure  15 bar Overload pressure  217.5 psi Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas Information on operating and pilot media Operation with oil lubrication possible  Temperature of medium  0° C 50° C  Ambient temperature 0° C 50° C  Accuracy in ± % FS  1.5 %FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Pressure measuring range end value	145 psi
Overload pressure Overload pressure 217.5 psi Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas Information on operating and pilot media Operation with oil lubrication possible Temperature of medium O°C 50 °C Ambient temperature O°C 50 °C Accuracy in ± % FS 1.5 % FS Repetition accuracy in ± % FS Temperature co-efficient in ± % FS/K Switching output 2 x PNP or 2 x NPN switchable Switching function Window comparator Threshold value comparator Auto difference monitoring Switching element function N/C contact/N/O contact switchable	Max. overload pressure	15 bar
Overload pressure Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas Information on operating and pilot media Operation with oil lubrication possible Temperature of medium O°C 50 °C Ambient temperature O°C 50 °C Accuracy in ± % FS I.5 %FS Repetition accuracy in ± %FS Temperature co-efficient in ± %FS/K Switching output Over in the interval of the int	Overload pressure	1.5 MPa
Operating medium  Compressed air as per ISO 8573-1:2010 [7:4:4] Inert gas  Information on operating and pilot media  Operation with oil lubrication possible  Temperature of medium  O°C50°C  Ambient temperature  O°C50°C  Accuracy in ± % FS  1.5 % FS  Repetition accuracy in ± % FS  Temperature co-efficient in ± % FS/K  Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switchable	Overload pressure	15 bar
Inert gas  Information on operating and pilot media  Depration with oil lubrication possible  O °C 50 °C  Ambient temperature  O °C 50 °C  Accuracy in ± % FS  Repetition accuracy in ± %FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Overload pressure	217.5 psi
Temperature of medium  0 °C 50 °C  Ambient temperature  0 °C 50 °C  Accuracy in ± % FS  1.5 % FS  Repetition accuracy in ± % FS  0.3 % FS  Temperature co-efficient in ± % FS/K  Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Operating medium	' '
Ambient temperature 0 °C 50 °C  Accuracy in ± % FS 1.5 %FS  Repetition accuracy in ± %FS 0.3 %FS  Temperature co-efficient in ± %FS/K 0.05 %FS/K  Switching output 2 x PNP or 2 x NPN switchable  Switching function Window comparator Threshold value comparator Auto difference monitoring  Switching element function N/C contact/N/O contact switchable	Information on operating and pilot media	Operation with oil lubrication possible
Accuracy in ± % FS  Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Temperature of medium	0 °C 50 °C
Repetition accuracy in ± %FS  Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Ambient temperature	0 °C 50 °C
Temperature co-efficient in ± %FS/K  Switching output  2 x PNP or 2 x NPN switchable  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Accuracy in ± % FS	1.5 %FS
Switching output  2 x PNP or 2 x NPN switchable  Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Repetition accuracy in ± %FS	0.3 %FS
Switching function  Window comparator Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Temperature co-efficient in ± %FS/K	0.05 %FS/K
Threshold value comparator Auto difference monitoring  Switching element function  N/C contact/N/O contact switchable	Switching output	2 x PNP or 2 x NPN switchable
	Switching function	Threshold value comparator
Max. output current 100 mA	Switching element function	N/C contact/N/O contact switchable
	Max. output current	100 mA

Feature	Value
Analog output	0 - 10 V
	4 - 20 mA 1 - 5 V
Max. load resistance of current output	500 Ohm
Min. load resistance of current output	20 kOhm
Short-circuit protection	
Protocol	yes IO-Link®
IO-Link®, protocol version	Device V 1.1
IO-Link®, profile	Smart sensor profile
IO-Link®, function classes	Binary data channel (BDC)
10-Linke, function classes	Process data variable (PDV) Identification
	Diagnostics Teach channel
IO-Link®, communication mode	COM2 (38,4 kBd)
IO-Link®, SIO mode support	Yes
IO-Link®, port class	A
IO-Link®, process data width OUT	0 Byte
IO-Link®, process data width IN	2 Byte
IO-Link®, process data content IN	14 bit PDV (pressure measurement) 2 bit BDC (pressure monitoring)
IO-Link®, minimum cycle time	3 ms
IO-Link®, data memory required	500 byte
DC operating voltage range	15 V 30 V
Reverse polarity protection	for all electrical connections
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	Connection diagram L1J
Electrical connection 1, number of pins/wires	4
Electrical connection for input 1, connection pattern	00995428
Type of mounting	Front panel mounting With wall/surface bracket
Mounting position	Any
Pneumatic connection	For pneumatic tubing outside diameter 4 mm
Product weight	25 g
Housing material	PA-reinforced
Materials in contact with the media	FPM NBR
	PA-reinforced
Display type	Illuminated LCD
Displayable unit(s)	MPa
	bar
	inH2O inHg
	kPa
	kgf/cm² mbar
	mmHg
	psi
Setting options	IO-Link®
	Teach-in Via display and pushbuttons
Protection against tampering	IO-Link® PIN code
Setting range threshold value	0 % 100 %
Setting range hysteresis	0 % 90 %
Degree of protection	IP40
Corrosion resistance class (CRC)	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L
Cleanroom class	Class 4 according to ISO 14644-1
Cicamouni ciass	Ciass 4 according to 150 14044-1