## Pressure sensor SPAW-P16R-G14F-2NV-M12

Part number: 8022835



## **Data sheet**

	<u>BN</u> +24V <u>BK RL</u> <u>WH RL</u>
	<u>GY R⊾</u> BU ]
NPN	0V 1 0V

**FESTO** 

## General operating condition

Symbol00995380CertificationRCM compliance mark c UL us - Listed (OL)CE marking (see declaration of conformity)As per EU EMC directive As per EU RMS directive UKCA marking (see declaration of conformity)UKCA marking (see declaration of conformity)To UK instructions for EMC To UK instructionsNote on materialsRoHS-compliantMeasured variableRelative pressureMethod of measurementMetal thin-film pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value3.2 MPaOverload pressure3.2 MPaOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS0.15 %FSSwitching output2xNPN	
c UL us - Listed (OL)CE marking (see declaration of conformity)As per EU EMC directive As per EU RoHS directiveUKCA marking (see declaration of conformity)To UK instructions for EMC To UK RoHS instructionsNote on materialsRoHS-compliantMeasured variableRelative pressureMethod of measurementMetal thin-film pressure sensorPressure measuring range initial value0 barPressure measuring range initial value0 barPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value3.2 MPaOverload pressure3.2 MPaOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS0.15 %FS	
As per EU RoHS directiveUKCA marking (see declaration of conformity)To UK instructions for EMC To UK RoHS instructionsNote on materialsRoHS-compliantMeasured variableRelative pressureMethod of measurementMetal thin-film pressure sensorPressure measuring range initial value0 barPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value3.2 MPaOverload pressure3.2 MPaOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± %FS0.15 %FS	
To UK RoHS instructionsNote on materialsRoHS-compliantMeasured variableRelative pressureMethod of measurementMetal thin-film pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1.%FSRepetition accuracy in ± %FS0.15 %FS	
Measured variableRelative pressureMethod of measurementMetal thin-film pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Method of measurementMetal thin-film pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573: Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS0.15 %FS	
Pressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-Liquid mediaGaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Pressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1.%FSRepetition accuracy in ± %FS0.15 %FS	
Pressure measuring range initial value0 psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Pressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573: Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Pressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Pressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Overload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Overload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 85 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Overload pressure464 psiOperating mediumCompressed air as per ISO 8573 Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Operating mediumCompressed air as per ISO 8573- Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FS	
Ambient temperature0 °C 80 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FS	1:2010 [-:-:-]
Accuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FS	
Repetition accuracy in ± %FS 0.15 %FS	
Switching output 2xNPN	
Switching function Freely programmable	
Switching element function Switchable	
Max. output current 250 mA	
Analog output 0 - 10 V	
Rise time 3 ms	
Short-circuit protection yes	
DC operating voltage range 15 V 35 V	
Reverse polarity protection for operating voltage	
Electrical connection 1, connection type Plug	
Electrical connection 1, connection technology M12x1 A-coded as per EN 61076	

Feature	Value
Electrical connection 1, number of pins/wires	5
Electrical connection 1, type of mounting	Screw-type lock
Electrical connection for input 1, connection pattern	00995383
Type of mounting	With internal thread With accessories
Pneumatic connection	Internal thread G1/4
Product weight	230 g
Housing material	ABS High-alloy stainless steel
Materials in contact with the media	High-alloy stainless steel
Display type	4-character alphanumeric LED display
Displayable unit(s)	MPa bar kPa kg/cm <sup>2</sup> psi
Switching status indication	LED red
Setting options	Via display and pushbuttons
Protection against tampering	PIN code
Setting range threshold value	0.5 % 100 %
Setting range hysteresis	0.5 % 99.5 %
Degree of protection	IP65 IP67
Corrosion resistance class (CRC)	4 - Particularly high corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III