## Pressure sensor SPAW-P16R-G14F-2PV-M12 Part number: 8022799



## **Data sheet**

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PNP	0V 111 0V

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## General operating condition

Tertification   RCM compliance mark cult us-Listed (OL)     EE marking (see declaration of conformity)   As per EU EMC directive As per EU EMC directive     JKCA marking (see declaration of conformity)   To UK Instructions for EMC To UK RMS instructions     Note on materials   RoHS-compliant     Weasured variable   Relative pressure     Method of measurement   Metal thin-film pressure sensor     Pressure measuring range initial value   O MPa     Pressure measuring range initial value   O bar     Pressure measuring range end value   1.6 MPa     Pressure measuring range end value   16 bar     Pressure measuring range end value   23 pai     Overload pressure   32 pai     Overload pressure   32 pai     Overload pressure   464 psi     Operating medium   Compressed air as per ISO 8573-1:2010 [-:-:]     Uquid media   Gaseous media     Gaseous media   32 par     Deveload pressure   0 °C< 80 °C     Accuracy in ± % FS   0.5 % FS     Switching output   22 NPI     Switching volupt   22 NPI     Switching element function   Switchable     Max. output current	Feature	Value
cUL us - listed (01)       ET marking (see declaration of conformity)     As per EU RMS directive       JKCA marking (see declaration of conformity)     To UK Instructions for EMC       D UK offsi instructions for EMC     To UK RoHS instructions       Vote on materials     RoHS-compliant       Weasured variable     Relative pressure       Wethol of measurement     Metal thin-film pressure sensor       Pressure measuring range initial value     O bar       Pressure measuring range initial value     O bar       Pressure measuring range initial value     O bar       Pressure measuring range end value     1.6 MPa       Pressure measuring range end value     2.2 psi       Doverload pressure     3.2 MPa       Doverload pressure     3.2 MPa       Doverload pressure     3.2 MPa       Doverload pressure     3.2 MPa       Doverload pressure     6 aseous media       Gaseous media     Gaseous media       Emperature of medium     -20°C 85 °C       Ambient temperature     0°C 80 °C       Accuracy in ± % FS     15 %FS       Switching output     20 PNP       Switching function	Symbol	00995378
As per EU RoHS directive       JKCA marking (see declaration of conformity)     To UK instructions for EMC       To UK RoHS instructions     To UK RoHS instructions       Weasured variable     Relative pressure       Wethod of measurement     Metal thin-film pressure sensor       Pressure measuring range initial value     O bar       Pressure measuring range initial value     O bar       Pressure measuring range initial value     O psi       Pressure measuring range end value     1.6 MPa       Pressure measuring range end value     1.6 MPa       Pressure measuring range end value     232 psi       Overload pressure     3.2 MPa       Overload pressure     6.6 psi       Overload pressure     0.6 mpressed air as per ISO 8573-1;2010[-:]       Uriguid media     Gaseous media       Femperature of medium     -20 °C 85 °C       Mabient temperature     0 °C 80 °C       Accuracy in ± % FS     0.15 %FS       Switching utput	Certification	
To UK ROHS instructionsNote on materialsRoHS-compliantWeasured variableRelative pressureWethod of measurementOMPaPressure measuring range initial valueO barPressure measuring range initial valueO barPressure measuring range initial valueO psiPressure measuring range initial valueO psiPressure measuring range end value1.6 MPaPressure measuring range end value1.6 JarPressure measuring range end value1.6 JarPressure measuring range end value3.2 MPaDoverload pressure3.2 MPaDoverload pressure3.2 MPaDoverload pressure6 Compressed air as per ISO 8573-1:2010 [-::-] Liquid media Gaseous mediaPreserute reference0 °C 80 °CMubient temperature0.9 °C 80 °CAccuracy in ± % FS0.15 %FSSwitching output20 °C 85 °CSwitching functionFreely programmableSwitching functionSwitchableMaag output2.0 °MAAnalog output2.5 °MAAnalog output3.0 °MAShort-Circuit protectionyesComparising voltage range15 V 35 VReverse polarity protectionFreely program outgage	CE marking (see declaration of conformity)	
NetworkRelative pressureWeasured variableRelative pressureWeasured variableO MPaPressure measuring range initial valueO barPressure measuring range initial valueO barPressure measuring range initial valueO psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure3.2 MPaOverload pressure3.2 MPaOverload pressure3.2 MPaOverload pressureCompressed air as per ISO 8573-1:2010 [-::-] Liquid media Gaseous mediaGaseous mediaO° C 80 °CAccuracy in ± % FS0.5 S %CAmbient temperature0.01 %FSSwitching output2xPNPSwitching lement functionSwitchableMax. output current250 mAAnalog output0 - 10 VSite ime3 msShort-circuit protectionyesCo operating voltage range15 V 35 VReverse polarity protectionFeures presting voltage	UKCA marking (see declaration of conformity)	
Method of measurement     Metal thin-film pressure sensor       Pressure measuring range initial value     0 MPa       Pressure measuring range initial value     0 bar       Pressure measuring range initial value     0 psi       Pressure measuring range end value     1.6 MPa       Pressure measuring range end value     1.6 MPa       Pressure measuring range end value     232 psi       Pressure measuring range end value     3.2 MPa       Overload pressure     3.2 MPa       Overload pressure     644 psi       Overload pressure     664 psi       Overload pressure     664 psi       Overload pressure     0 °C 85 °C       Ambient temperature of medium     20 °C 85 °C       Accuracy in ± % FS     0.15 % FS       Switching output     2xPNP       Switching output     2xPNP       Switching output     250 mA       Analog output     0.10 V       Switching output     3 ms       Switching output     3 ms       Solor - Cruciut protection     yes       Congressing solor - Cruciut protection     9 % S	Note on materials	RoHS-compliant
Pressure measuring range initial valueO MPaPressure measuring range initial valueO barPressure measuring range initial valueO psiPressure measuring range end value1.6 MPaPressure measuring range end value1.6 barPressure measuring range end value2.32 psiOverload pressure3.2 MPaOverload pressure3.2 MPaOverload pressure3.2 MPaOverload pressure464 psiOverload pressure20 °C 85 °COverload presture of medium20 °C 85 °CAccuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching output2xPNPSwitching functionFreely programmableSwitching output250 mAAnalog output0 nO VRise time3 msShort-circuit protectionyesOc operating voltage range15 V 35 VReverse polarity protectionFreely programing placeReverse polarity protectionPressDecomposition of place15 V 35 VReverse polarity protectionPlacePressing voltage range15 V 35 VReverse polarity protection 1, connection typePlace	Measured variable	Relative pressure
Pressure measuring range initial valueO barPressure measuring range initial valueO psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure3.2 barOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010[-:]Liquid media Gaseous mediaGaseous mediaFemperature of medium20° C 85 °CAmbient temperature0° C 85 °CAmbient temperature0° C 85 °CSwitching output2xPNPSwitching functionFreely programmableSwitching output2xPNPSwitching functionSwitchableManalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Method of measurement	Metal thin-film pressure sensor
Pressure measuring range initial valueO psiPressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiDiverload pressure3.2 MPaDiverload pressure32 barOverload pressure2464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [:-]Liquid media Gaseous mediaPeresture of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 % FSOutput2xPNPSwitching output2xPNPSwitching functionFreely programmableSwitchable3 msSwitchable3 msShort-circuit protectionyesOutput10 VReserve polarity protection15 V 35 VReverse polarity protection 1, connection typePlug	Pressure measuring range initial value	0 MPa
Deressure measuring range end value1.6 MPaPressure measuring range end value16 barPressure measuring range end value232 psiDiverload pressure3.2 MPaDiverload pressure32 barDiverload pressure32 barDiverload pressure464 psiCompressed air as per ISO 8573-1:2010 [-:-:-]Liquid mediaGaseous mediaFemperature of medium20 °C 85 °CAmbient temperature0 °C 85 °CAntheint temperature0 °C 80 °CAccuracy in ± % FS1 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching uput5 witchableWax. output current3 msAnalog output3 msShort-circuit protectionyesOc operating voltage range15 V 35 VReverse polarity protectionFreely programing polariting voltage	Pressure measuring range initial value	0 bar
bressure measuring range end value16 bar2ressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-::-]Liquid media Gaseous mediaEmperature of medium	Pressure measuring range initial value	0 psi
peressure measuring range end value232 psiOverload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:-:-] Liquid media Gaseous mediaDemetature of medium20 °C 85 °CAmbient temperature0 °C 85 °CAmbient temperature0 °C 85 °CAccuracy in ± % FS1 % FSSepetition accuracy in ± % FS0.15 % FSSwitching output2x NPSwitching functionFreely programmableSwitchable3 msSalo output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protectionFreugePlugPlug	Pressure measuring range end value	1.6 MPa
Duerload pressure3.2 MPaOverload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:] Liquid media Gaseous mediaCaseous media-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VSise time3 msShort-circuit protectionyesCoperating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Pressure measuring range end value	16 bar
Deveload pressure32 barOverload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:] Liquid media Gaseous mediaImperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitchable3 msAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Pressure measuring range end value	232 psi
Deveload pressure464 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-::-] Liquid media Gaseous mediaFemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2x PNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesCoperating voltage range15 V 35 VReverse polarity protectionFor operating voltageElectrical connection 1, connection typePlug	Overload pressure	3.2 MPa
Operating mediumCompressed air as per ISO 8573-1:2010 [-:-:-] Liquid media Gaseous mediaFemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesCoperating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Overload pressure	32 bar
Liquid media Gaseous mediaFemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Overload pressure	464 psi
Ambient temperature0 °C 80 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2x PNPSwitching functionFreely programmableSwitching element functionSwitchableSwitching output250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection typePlug	Operating medium	Liquid media
Accuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Temperature of medium	-20 °C 85 °C
Repetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protectionfor operating voltageElectrical connection 1, connection typePlug	Ambient temperature	0 °C 80 °C
Switching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableSwitchable250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Accuracy in ± % FS	1 %FS
Switching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Repetition accuracy in ± %FS	0.15 %FS
Switching element functionSwitchableMax. output current250 mAAnalog output0 - 10 VRise time3 msShort-circuit protectionyesOC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Switching output	2xPNP
Wax. output current   250 mA     Analog output   0 - 10 V     Rise time   3 ms     Short-circuit protection   yes     OC operating voltage range   15 V 35 V     Reverse polarity protection   for operating voltage     Electrical connection 1, connection type   Plug	Switching function	Freely programmable
Analog output0 - 10 VRise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionfor operating voltageElectrical connection 1, connection typePlug	Switching element function	Switchable
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	Max. output current	250 mA
Short-circuit protection yes   DC operating voltage range 15 V 35 V   Reverse polarity protection for operating voltage   Electrical connection 1, connection type Plug	Analog output	0 - 10 V
DC operating voltage range 15 V 35 V   Reverse polarity protection for operating voltage   Electrical connection 1, connection type Plug	Rise time	3 ms
Reverse polarity protection for operating voltage   Electrical connection 1, connection type Plug	Short-circuit protection	yes
Electrical connection 1, connection type Plug	DC operating voltage range	15 V 35 V
	Reverse polarity protection	for operating voltage
Electrical connection 1, connection technology M12x1 A-coded as per EN 61076-2-101	Electrical connection 1, connection type	Plug
	Electrical connection 1, connection technology	M12x1 A-coded as per EN 61076-2-101

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
Mounting position	Any
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/cm² 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