Pressure sensor SPAW-P2R-G12M-2PA-M12 Part number: 8022787



Data sheet

	1 BN 4 BK 2 WH Rt 5 GY Rt 3 BU
PNP	<u>00 111</u> 0V

General operating condition

Certification RCM compliance mark c UL us - Listed (0L) CE marking (see declaration of conformity) As per EU RMC directive As per EU RMC directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RMC instructions Note on materials RoHS-compliant Measured variable Relative pressure Method of measurement Piezoresistive pressure sensor Pressure measuring range initial value 0 bar Pressure measuring range initial value 0 bar Pressure measuring range initial value 0 bar Pressure measuring range of value 2 bar Pressure measuring range end value 2 bar Pressure measuring range end value 20 pressure measuring range end value Overload pressure 0.4 MPa Overload pressure 0.4 MPa Overload pressure 0.4 bar Overload pressure 0.4 MPa Overload pressure 0.4 MPa Overload pressure 0.4 MPa Overload pressure 0.2 %C	Feature	Value
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As per EU ROHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK RoHS instructions Note on materials RoHS-compliant Measured variable Relative pressure Method of measurement Piezoresistive pressure sensor Pressure measuring range initial value O MPa Pressure measuring range initial value O bar Pressure measuring range on value O zhar Overload pressure O.4 MPa Overload pressure O.4 MPa Overload pressure O.4 MPa Overload pressure O.4 MPa Overload pressure O se social Overload pressure O se social Overload pressure Se psi Overload pressure Se social Overload pressure O se conseco social Temperature of medium -20 °C 85 °C Accuracy in ±% FS 0.15 %	Certification	
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Measured variableRelative pressureMethod of measurementPiezoresistive pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value0.2 MPaPressure measuring range end value2 barPressure measuring range end value2 barOverload pressure0.4 MPaOverload pressure0.4 MPaOverload pressure0.4 MPaOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010[-:]Liquid media Gaseous mediaGaseous mediaTemperature of medium-20 °C 85 °CArbient temperature0 °C 80 °CAccuracy in ± %FS15%FSSwitching output2xPNPSwitching functionSwitchableMax. output current250 mAAnalog output4 -20 mAShort -circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionFeugre presting voltageElectrical connection 1, connection typePlug	UKCA marking (see declaration of conformity)	
Method of measurementPiezoresistive pressure sensorPressure measuring range initial value0 MPaPressure measuring range initial value0 barPressure measuring range initial value0 psiPressure measuring range end value0.2 MPaPressure measuring range end value2 barPressure measuring range end value2 barOverload pressure0.4 MPaOverload pressure0.4 MPaOverload pressure58 psiOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:-:-] Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAntimetermperature0 °CAccuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching output2xPNPSwitching outputSichableMax. output current250 mAAnalog output4 -20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionPlug	Note on materials	RoHS-compliant
Pressure measuring range initial valueO MPaPressure measuring range initial valueO barPressure measuring range initial valueO psiPressure measuring range end value0.2 MPaPressure measuring range end value2 barPressure measuring range end value2.9 psiOverload pressure0.4 MPaOverload pressure4 barOverload pressure58 psiOverload pressure58 psiOverload pressure58 psiOverload pressure58 psiOverload pressure0.4 MPaOverload pressure58 psiOverload pressure58 psiOverload pressure58 psiOverload pressure0.2 0°C 85 °CAmbient temperature0°C 80 °CAccuracy in ± % FS1%FSSwitching output2xPNPSwitching output2xPNPSwitching outputSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionPlug	Measured variable	Relative pressure
Pressure measuring range initial value 0 bar Pressure measuring range end value 0.2 MPa Pressure measuring range end value 2 bar Pressure measuring range end value 29 psi Overload pressure 0.4 MPa Overload pressure 0.4 MPa Overload pressure 4 bar Overload pressure 58 psi Operating medium Compressed air as per ISO 8573-1:2010 [-::-] Liquid media Gaseous media Temperature of medium -20 °C 85 °C Ambient temperature 0 °C 80 °C Accuracy in ± % FS 1 %FS Switching output 2xPNP Switching function Freely programmable Switching element function Switchable Max. output current 250 mA Analog output 4 - 20 mA Rise time 3 ms Short-circuit protection yes DC operating voltage range 15 V 35 V Reverse polarity protection For operating voltage	Method of measurement	Piezoresistive pressure sensor
Pressure measuring range initial value0 psiPressure measuring range end value0.2 MPaPressure measuring range end value2 barPressure measuring range end value29 psiOverload pressure0.4 MPaOverload pressure4 barOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-::-]Liquid media Gaseous mediaGaseous mediaTemperature of medium20 °C 85 °CAmbient temperature0 °C 85 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2x PNPSwitching element functionSwitchableMax output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionFlugElectrical connection 1, connection typePlug	Pressure measuring range initial value	0 MPa
Pressure measuring range end value0.2 MPaPressure measuring range end value2 barPressure measuring range end value29 psiOverload pressure0.4 MPaOverload pressure4 barOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 []Uiquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSSwitching output2xPNPSwitching utputSwitchableSwitching utput250 mAAnalog output50 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDe operating voltage range15 V 35 VReverse polarity protectionFreely programing polarity voltageElectrical connection 1, connection typePlug	Pressure measuring range initial value	0 bar
Pressure measuring range end value2 barPressure measuring range end value29 psiOverload pressure0.4 MPaOverload pressure4 barOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010[-:-:-] Liquid media Gaseous mediaTemperature of medium-20 °C 80 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS0.15 % FSSwitching output2xPNPSwitching functionFreely programmableSwitching lement functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionFlugElectrical connection 1, connection typePlug	Pressure measuring range initial value	0 psi
Pressure measuring range end value 29 psi Overload pressure 0.4 MPa Overload pressure 4 bar Overload pressure 58 psi Operating medium Compressed air as per ISO 8573-1:2010 [-::] Liquid media Gaseous media Temperature of medium 20 °C 85 °C Ambient temperature 0 °C 85 °C Accuracy in ± % FS 0.15 %FS Repetition accuracy in ± %FS 0.15 %FS Switching output 2xPNP Switching function Freely programmable Switching function Switchable Max. output current 250 mA Analog output 4 - 20 mA Rise time 3 ms Short-circuit protection yes DC operating voltage range 15 V 35 V Reverse polarity protection 1, connection type Plug	Pressure measuring range end value	0.2 MPa
Overload pressure0.4 MPaOverload pressure4 barOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-::-] Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching lement functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Pressure measuring range end value	2 bar
Overload pressure4 barOverload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:] Liquid media Gaseous mediaTemperature of medium-20 °C 85 °CAmbient temperature0 °C 80 °CAccuracy in ± % FS1 %FSRepetition accuracy in ± %FS0.15 %FSSwitching output2xPNPSwitching functionFreely programmableSwitching lement functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Pressure measuring range end value	29 psi
Overload pressure58 psiOperating mediumCompressed air as per ISO 8573-1:2010 [-:-:-] Liquid media Gaseous mediaTemperature 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 output3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionFlugElectrical connection 1, connection typePlug	Overload pressure	0.4 MPa
Operating mediumCompressed air as per ISO 8573-1:2010 [-:-:-] Liquid media Gaseous mediaTemperature 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 output3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Overload pressure	4 bar
Liquid media Gaseous mediaTemperature 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 output3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Overload pressure	58 psi
Ambient temperature0 °C 80 °CAccuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2x PNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection 1, connection typePlug	Operating medium	Liquid media
Accuracy in ± % FS1 % FSRepetition accuracy in ± % FS0.15 % FSSwitching output2x PNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output4 · 20 mARise 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 output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection typePlug	Ambient temperature	0 °C 80 °C
Switching output2xPNPSwitching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection typePlug	Accuracy in ± % FS	1 %FS
Switching functionFreely programmableSwitching element functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection typePlug	Repetition accuracy in ± %FS	0.15 %FS
Switching element functionSwitchableMax. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protection typePlug	Switching output	2xPNP
Max. output current250 mAAnalog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionfor operating voltageElectrical connection typePlug	Switching function	Freely programmable
Analog output4 - 20 mARise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionfor operating voltageElectrical connection 1, connection typePlug	Switching element function	Switchable
Rise time3 msShort-circuit protectionyesDC operating voltage range15 V 35 VReverse polarity protectionfor operating voltageElectrical connection 1, connection typePlug	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	4 - 20 mA
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

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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 external thread
Mounting position	Any
Pneumatic connection	External thread G1/2
Product weight	230 g
Housing material	ABS High-alloy stainless steel
Materials in contact with the media	High-alloy stainless steel
Sealing ring material	NBR
Display type	4-character alphanumeric LED display
Displayable unit(s)	MPa bar kPa kg/cm ² 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