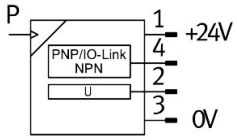
Pressure sensor
SPAF-B11R-Q4-L-PNLK-VB-M12

Part number: 8181232





Data sheet

Feature	Value
Approval	RCM
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with 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
Measurement method	Piezoresistive pressure sensor
Start value for pressure measuring range	-0.1 MPa -1 bar -14.5 psi
End value for pressure measuring range	1 MPa 10 bar 145 psi
Overload pressure	1.5 MPa 15 bar 217.5 psi
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gas
Note on operating and pilot medium	Ester oil < 0.1mg/m³, according to ISO 8573-1:2010 [-:-:2] Lubricated operation possible
Media temperature	0 °C...50 °C
Ambient temperature	0 °C...50 °C
Accuracy in ± % FS	1.5 %FS
Repetition accuracy in ± %FS	0.3 %FS
Temperature coefficient in ± %FS/K	0.05 %FS/K
Switching output	PNP/NPN, switchable
Switching function	Window comparator Threshold value comparator Threshold value with variable hysteresis
Switching element function	NC or NO, switchable
Switch-on time	3 ms
Switch-off time	3 ms
Max. output current	100 mA
Voltage drop	1.6 V

Feature	Value
Analogue output	0 - 10 V 1 - 5 V
Output characteristic curve start value	0 V
Output characteristic curve end value	10 V
Accuracy analogue output in ± %FS	1.5 %FS
Linearity error in ± %FS	0.3 %FS
Rise time	6 ms
Min. load resistance voltage output	20 kOhm
Display range start value	0 %FS
Display range end value	100 %FS
Short circuit current rating	Yes
Overload protection	Available
Protocol	IO-Link®
IO-Link, revision ID	V1.1
IO-Link, device profile	Firmware update Function locator Function Product URI Function quantity detection Smart Sensor - SSP 4.1.1
IO-Link, transmission rate	COM3
IO-Link, SIO-Mode support	Yes
IO-Link, port type	Class A
IO-Link, process data length output	0 bit
IO-Link, process data length input	32 bit
IO-Link, Process data content IN	Pressure measured value 16 bit MDC Pressure monitoring 2 bit SSC
IO-Link, Service data IN	Temperature 16 bit
IO-Link, minimum cycle time	0.9 ms
IO-Link, Data storage required	0.5 KB
Operational voltage range DC	15 V...30 V
Reverse polarity protection	For all electrical connections
Electrical connection 1, connection type	Plug
Electrical connection 1, connector system	M12x1, A-coded to EN 61076-2-101
Electrical connection 1, number of connections/cores	4
Electrical connection 1, type of mounting	Screw-type lock Not rotatable
Electrical connection 1, compatible type of mounting	Compatible with rotatable screw-type lock
Material connector housing	High-alloy stainless steel
Type of mounting	With accessories
Mounting position	Any
Pneumatic connection	QS-4
Product weight	30 g
Material housing	Reinforced PA
Material in contact with the medium	Stainless steel NBR Reinforced PA
Display type	Backlit blue LCD
Displayable units	MPa bar kPa psi
Ready status indication	Through backlighting
Setting options	IO-Link® Teach-in Via display and buttons
Protection against tampering	IO-Link® PIN code

Feature	Value
Setting range threshold value	0 %...100 %
Degree of protection	IP65
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L
Suitability for the production of Li-ion batteries	Suitable for battery production with reduced Cu/Zn/Ni values (F1a)
Cleanroom suitability, measured according to ISO 14644-14	Class 4 according to ISO 14644-1