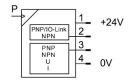
## Pressure sensor SPAN-B11R-R18M-PNLK-PNVBA-L1

**FESTO** 

Part number: 609554





## **Data sheet**

Feature	Value
Approval	RCM trademark c UL us listed (OL)
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
Certificate issuing authority	UL E322346
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
Max. overload pressure	15 bar
Overload pressure	1.5 MPa 15 bar 217.5 psi
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gases
Note on operating and pilot medium	Lubricated operation possible
Media temperature	0 ℃50 ℃
Ambient temperature	0 ℃50 ℃
Accuracy in ± % FS	1.5 %FS
Repetition accuracy in ± %FS	0.3 %FS
Temperature coefficient 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 or N/O contact, switchable
Max. output current	100 mA

4 - 20 mA   1 - 5 V	Feature	Value
1 - 5 V	Analogue output	
Max. Joad resistance current output  Min. load resistance routput  Zo Kohm  Short circuit current rating  yes  Protocol  IO-Link, Protocol Vol.  Ol-Link, Function classes  Protocol  IO-Link, Function classes  IO-Link, Function c		
Min. load resistance voltage output  Short circuit current rating  yes  Protocol  IO-Link/Protocol version  Device V 1.1  OL-Link, Protocil version  OL-Link, Function classes  Binary data channel (BDC) Process data variable (PDV) Individual variable (P	May load resistance current output	<del>-</del>
Short circuit current rating Protocol 10-Link@ 10-Link, Protocol version 10-Link, Frontile 10-Link, Fr	·	
Protocol   O-Link, Protocol version   Device V 1.1	· · · · · · · · · · · · · · · · · · ·	
IO-Link, Protocol version		, ·
O-Link, Ponfile   Smart sensor profile   Smart sensor profile   O-Link, Function classes   Process data variable (PDV)   Identification   Diagnostics   Process data length (PDV)   Identification   Diagnostics   Process data length (PDV)   Diagnostics   Di		
D. Link, Function classes   Binary data channel (BDC)   Process data variable (PDV)   Identification   Ide		
Process data variable (PDV)		·
Diagnostics   Diagnostics   Dearch Chamnel	10-Link, Function classes	
Teach channel   COLInk, communication mode   COM2 (38.4 kBaud)     IO-Link, SIO-Mode support   Yes     IO-Link, Porcess data length OUT   O bytes     IO-Link, Process data length OUT   O bytes     IO-Link, Process data length IN   2 bytes     IO-Link, Process data content IN   2 bit BDC (pressure measurement value)     IO-Link, Min. cycle time   3 ms     IO-Link, Data storage required   O.5 KB     IO-Link, Data s		
10-Link, SIO-Mode support   Yes		
IO-Link, Protess data length OUT	IO-Link, communication mode	COM2 (38.4 kBaud)
IO-Link, Process data length OUT   2 bytes     IO-Link, Process data centent IN   2 bytes     IO-Link, Process data centent IN   1 bit FDV (pressure measurement value)     2 bit BDC (pressure monitoring)     IO-Link, Data storage required   0.5 KB     Operational voltage range DC   15 V30 V     Reverse polarity protection   For all electrical connections     IElectrical connection 1, connection type   Plugs     IElectrical connection 1, number of connections/cores   4     Type of mounting   Front panel mounting     Via thread   Via wall/surface bracket     Mounting position   Optional     Product weight   46 g     Material in contact with the medium   FPM     High-allo stained LCD     Displayable units   MPa     Disp	IO-Link, SIO-Mode support	Yes
IO-Link, Process data length IN   2 bytes   1 bit PDV (pressure measurement value)   2 bit IsBOC (pressure monitoring)   10-Link, Min. cycle time   3 ms   5 kBC (pressure monitoring)   10-Link, Min. cycle time   3 ms   15 kJ 30 V   15 kBC (pressure monitoring)   10-Link, Data storage required   0.5 kB   15 kJ 30 V   15 kJ 30 kJ	IO-Link, Port class	A
O-Link, Process data content IN	IO-Link, Process data length OUT	0 bytes
D-Link, Min. cycle time   3 ms   3	IO-Link, Process data length IN	2 bytes
IO-Link, Min. cycle time   3 ms   10-Link, Data storage required   0.5 kB   15 V30 V   15 V3	IO-Link, Process data content IN	
O-Link, Data storage required   O.5 KB     Operational voltage range DC   15 V30 V     Reverse polarity protection   For all electrical connections     Electrical connection 1, connection type   Plugs     Electrical connection 1, connector system   Connection pattern L1     Electrical connection 1, number of connections/cores   4		2 bit BDC (pressure monitoring)
Operational voltage range DC Reverse polarity protection For all electrical connections Electrical connection 1, connection type Electrical connection 1, connection system Connection pattern L1J Electrical connection 1, number of connections/cores  4 Type of mounting Front panel mounting Via thread Via wall/surface bracket  Mounting position Optional Pneumatic connection Male thread R1/8 Female thread M5 Product weight A6 g Material housing Material in contact with the medium FPM High-alloy stainless steel Display type Ulluminated LCD Displayable units  MPa Dar Mare Mare Mare Mare Mare Mare Mare Ma		
Reverse polarity protection Electrical connection 1, connection type Electrical connection 1, connection type Electrical connection 1, connector system Connection pattern L1) Electrical connection 1, number of connections/cores 4 Type of mounting Type of mounti		
Electrical connection 1, connection type  Electrical connection 1, connector system  Electrical connection 1, number of connections/cores  4  Type of mounting  Mounting position  Pneumatic connection  Pneumatic connection  Preduct weight  Material in contact with the medium  Displayable units  Electrical connection  Setting range threshold value  Protection against tampering  Dicplace and a size and a si		
Electrical connection 1, connector system  Electrical connection 1, number of connections/cores  Type of mounting  Front panel mounting Via thread Via wall/surface bracket  Mounting position  Pneumatic connection  Preduct weight  Male thread M5  Product weight  Material housing  PA-reinforced  Material in contact with the medium  PPM High-alloy stainless steel  Display type  Displayable units  MPa bar inH2O inHg kPa kgf/cm² mbar mmHg psi  Setting options  LO-Link® Prodection against tampering  Display theresis  Despree of protection  Petton against resources  O %100 %  Setting range threshold value  O %100 %  Setting range hysteresis  O %90 %  Degree of protection  P40  Corrosion resistance class CRC   Connection pattern L1J  Connection pattern L1  Connection pattern L1  Advantage  Proto pattern L1  In contect with the medium  PA-reinforced  Material R1/8  Female thread M5  Female thread		
Electrical connection 1, number of connections/cores  Type of mounting  Front panel mounting Via thread Via wall/surface bracket  Mounting position  Pneumatic connection  Preduct weight  Male thread R1/8 Female thread M5  Product weight  A6 g  Material housing  PA-reinforced  Material in contact with the medium  PPM High-alloy stainless steel  Display type  Illuminated LCD  Displayable units  MPa bar inH2O inHg kPa kRf/cm² mbar mmHg psi  Setting options  IO-Link® Freach-in Via display and keys  Protection against tampering  IO-Link PIN code  Setting range threshold value  O %100 %  Setting range hysteresis  O %90 %  Degree of protection  IP40  Corrosion resistance class CRC  2 - Moderate corrosion stress		
Type of mounting Via thread Via wall/surface bracket  Mounting position optional  Pneumatic connection Male thread R1/8 Female thread M5  Product weight 46 g  Material housing PA-reinforced  Material in contact with the medium FPM High-alloy stainless steel  Display type Illuminated LCD  Displayable units MPa bar in H2O in Hg R2 kgf/cm² mbar mmHg psi  Setting options IO-Link® Teach-in Via display and keys  Protection against tampering IO-Link PIN Code  Setting range threshold value 0 %100 %  Setting range hysteresis 0 %90 %  Degree of protection  EPA Optional mounting Via thread Via wall/surface bracket  Optional mounting Via thread Via wall/surface bracket  Male thread R1/8 Female R1/8 Female R1/8 Female Thread M5  Male thread R1/8 Female R1/8 F	· · · · · · · · · · · · · · · · · · ·	<u> </u>
Via thread Via wall/surface bracket       Mounting position     optional       Pneumatic connection     Male thread R1/8 Female thread M5       Product weight     46 g       Material housing     PA-reinforced       Material in contact with the medium     FPM High-alloy stainless steel       Display type     Illuminated LCD       Displayable units     MPa bar inH2O		
Mounting position     Optional       Pneumatic connection     Male thread R1/8 Female thread M5       Product weight     46 g       Material housing     PA-reinforced       Material in contact with the medium     FPM High-alloy stainless steel       Display type     Illuminated LCD       Displayable units     MPa bar high alloy stainless steel       Displayable units     MPa high alloy stainless steel       Displayable units     Displayable units       Setting options     In High alloy stainless steel       Setting options     Teach in via display and keys       Protection against tampering     In U-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	Type of mounting	
Pineumatic connection  Male thread R1/8 Female thread M5  Product weight  Material housing  Material in contact with the medium  Display type  Displayable units  MPa bar inH2O inH3 kPa kgf/cm² mbar mmHg psi  Setting options  Protection against tampering  Setting range threshold value  Despree of protection  Despree of protection  Despree of protection  Male thread R1/8 Female thread M5  M4 G M4 G MA G MPa MPa bar inH2O inH3 kPa kgf/cm² mbar mmHg psi  D0-Link® Teach-in Via display and keys  D1-Link® Teach-in Via display and keys  D0-Link® Teach-in Via display and keys  D1-Link® Teach-in Via display a		
Female thread M5         Product weight       46 g         Material housing       PA-reinforced         Material in contact with the medium       FPM High-alloy stainless steel         Display type       Illuminated LCD         Displayable units       MPa bar inH2O inHg kPa kgf/cm² mbar mbar mmH psi         Setting options       IO-Link® Teach-in Via display and keys         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	Mounting position	optional
Product weight  Material housing  Material in contact with the medium  PPM High-alloy stainless steel  Display type  Illuminated LCD  Displayable units  MPa bar inH2O inHg kPa kgf/cm² mbar mbar mmHg psi  Setting options  Protection against tampering  Protection against tampering  Display tampering  Displayable units  O100 %  Setting range threshold value  Do100 %  Setting range hysteresis  Do90 %  Degree of protection  IP40  Corrosion resistance class CRC  Prodection against tampering  Defraction against tampering  Defraction against tampering  Degree of protection	Pneumatic connection	
Material housing       PA-reinforced         Material in contact with the medium       FPM High-alloy stainless steel         Display type       Illuminated LCD         Displayable units       MPa bar inH2O inHg kPa akgf/cm² mbar mmHg psi         Setting options       IO-Link® Teach-in via display and keys         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		
Material in contact with the medium  FPM High-alloy stainless steel  Display type  Illuminated LCD  MPa bar inH2O inH2 kPa kgf/cm² mbar mmHg psi  Setting options  IlO-Link® Teach-in Via display and keys  Protection against tampering  Display type  Ilo-Link PIN code  Setting range threshold value  Setting range hysteresis  Degree of protection  Degree of protection  Corrosion resistance class CRC  PFM High-alloy stainless steel  Illuminated LCD  MPa bar inH2O inH2 kPa kgf/cm² mbar mbar mbar mbar mbar mbar mbar mbar		
Display typeIlluminated LCDDisplayable unitsMPa bar inH2O inH9g kPa kgf/cm² mbar mmHg psiSetting optionsIO-Link® Teach-in Via display and keysProtection against tamperingIO-Link plN codeSetting range threshold value0 %100 %Setting range hysteresis0 %90 %Degree of protectionIP40Corrosion resistance class CRC2 - Moderate corrosion stress		
Displayable units  MPa bar inH2O inHg kPa kgf/cm² mbar mmHg psi  Setting options  IO-Link® Teach-in Via display and keys  Protection against tampering Protection against tampering Setting range threshold value Setting range hysteresis Degree of protection Page of protection Corrosion resistance class CRC  Illuminated LCD  MPa bar hPla bar inH2O inHg kPa kgf/cm² mbar mmHg psi  IO-Link® Teach-in Via display and keys  Protection against tampering PlN code Setting range threshold value O %100 % Setting range hysteresis O %90 %  Degree of protection IP40 Corrosion resistance class CRC	Material in contact with the medium	
Displayable units  MPa bar inH2O inHg kPa kgf/cm² mbar mmHg psi  Setting options  IO-Link® Teach-in Via display and keys  Protection against tampering  IO-Link PIN code  Setting range threshold value  Setting range hysteresis  O %100 %  Setting range hysteresis  Degree of protection  IP40  Corrosion resistance class CRC  AMPa BAP BAP BAP Corrosion stress  MPa BAP	Display type	
bar inH2O inHg kPa kgf/cm² kgf/cm² mbar mmHg psi  Setting options  IlO-Link® Teach-in Via display and keys  Protection against tampering  IlO-Link PIN code  Setting range threshold value  Setting range hysteresis  Degree of protection  IP40  Corrosion resistance class CRC  In H2O inH2O i		
inHg kPa kgf/cm² mbar mmHg psi  Setting options  Frotection against tampering  Protection against tampering  IO-Link PIN code  Setting range threshold value  Setting range hysteresis  Degree of protection  IP40  Corrosion resistance class CRC  In Hg kPa kgf/cm² mbar mmHg psi  IO-Link PIN code  0 %100 %  Setting range hysteresis  1P40  2 - Moderate corrosion stress	Sprayaste ames	bar
kPa kgf/cm² mbar mmHg psi         Setting options       IO-Link® Teach-in Via display and keys         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		
Setting optionsIO-Link® Teach-in Via display and keysProtection against tamperingIO-Link PIN codeSetting range threshold value0 %100 %Setting range hysteresis0 %90 %Degree of protectionIP40Corrosion resistance class CRC2 - Moderate corrosion stress		
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Setting optionsIO-Link® Teach-in Via display and keysProtection against tamperingIO-Link PIN codeSetting range threshold value0 %100 %Setting range hysteresis0 %90 %Degree of protectionIP40Corrosion resistance class CRC2 - Moderate corrosion stress		
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Teach-in Via display and keys  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	Setting options	
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		
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	Protection against temporise	
Setting range hysteresis 0 %90 %  Degree of protection IP40  Corrosion resistance class CRC 2 - Moderate corrosion stress	Protection against tampering	
Degree of protection IP40 Corrosion resistance class CRC 2 - Moderate corrosion stress	Setting range threshold value	0 %100 %
Corrosion resistance class CRC 2 - Moderate corrosion stress	Setting range hysteresis	0 %90 %
	Degree of protection	IP40
LABS (PWIS) conformity VDMA24364-B1/B2-L	Corrosion resistance class CRC	2 - Moderate corrosion stress
	LABS (PWIS) conformity	VDMA24364-B1/B2-L

Feature	Value
	Product corresponds to the internal product definition from Festo for use in battery production:Metals with more than 1% by mass of copper, zinc or nickel are excluded from use.The exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils
Cleanroom class	Class 4 according to ISO 14644-1