Pressure sensors SPAU

FESTO

Pressure sensors SPAU

At a glance

Product description

The pressure sensor SPAU is suitable for monitoring compressed air and non-corrosive gases. The variant with display offers the option of reading the pressure and set values on-site. The pressure value is transmitted to the connected control system as a switching signal, as an analogue signal or via IO-Link®.

The pressure sensor without display transmits the pressure value to the connected control system as an analogue signal. Display of the pressure and parameterisation of the sensor are provided centrally, e.g. via a display that is part of a machine control system. The pressure sensor can be parameterised using IO-Link® as a tamper-proof pressure switch without display with up to two switching outputs.

Areas of application

- Network monitoring (pressure present)
- Regulator monitoring (pressure in the setpoint range)

- Vacuum (part picked up)
- Leak test (pressure drop over time)
- Object detection (back pressure present)

Product benefits

An assembly concept with short assembly times that is easy to implement in all installation situations. Female/male thread or push-in fitting QS – the perfect pneumatic adapter for every application.

Mounting:
- Threaded mounting
- H-rail mounting
- Front panel mounting
- Mounting bracket
- Wall mounting
- Adapter for MS4, MS6

Electronic system:
- Maximum versatility and reduced warehousing thanks to switchable electrical outputs (PNP/NPN/ N/C/N/O contact and current/ voltage output)

Pressure sensors SPAU

Key features

Operation

Monitoring and setting of a pressure threshold, a pressure range or a pressure difference, using a teach-in function or by entering values.

Variants with display:

- Pressure indicator, pressure switching outputs and readout of analogue value from a device can be set on-site
- Quick commissioning of the pressure sensor thanks to straightforward menu navigation
- Display colour blue/red as visual feedback about the pressure of the medium

- Min./max. value memory for monitoring compressed air (display of rapid pressure peaks that are not visible to the human eye)
- Adjustable filter evens out the sensor signal generated by pressure peaks
- Scaling the analogue output to increase the signal dynamics

- Choice of pressure units: bar, MPa, PSI and more
- Offset compensation possible
- ECO function "Switch off display" available
- Optional security code can be freely chosen (4-digit code)

- All settings that have been carried out on one sensor (master) can be transferred (replication) to other, identical sensors (device). This significantly shortens the commissioning time

Variants without display:

- Analogue value output and pressure switching outputs proportional to the pressure

- Switching output behaviour can be set on the machine display using IO-Link®

- Other functions can be set using IO-Link®
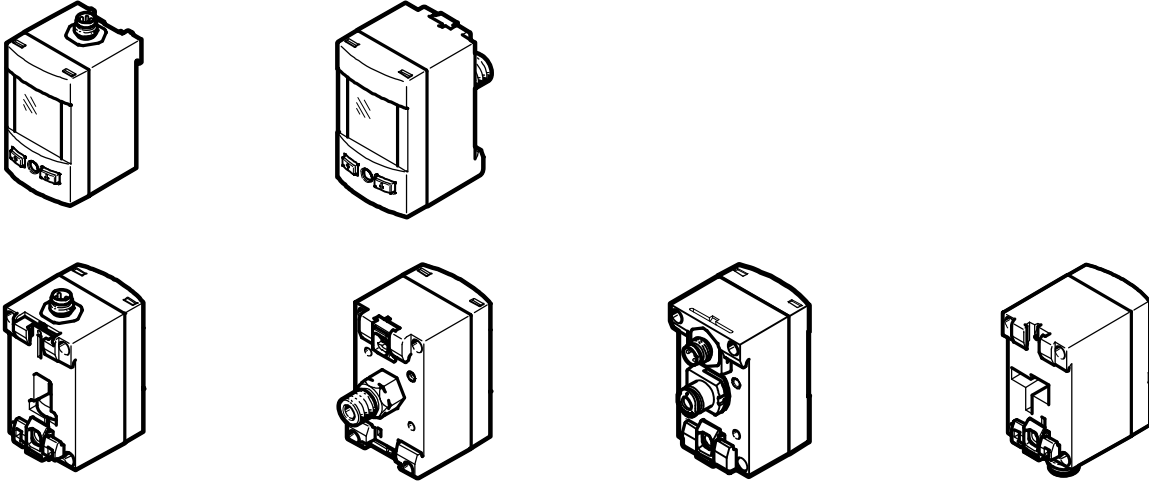
Variants with IO-Link®:

- With and without display
- Serial communication integrated using IO-Link® 1.1
- Analogue process value is provided digitally

- The sensor can be parameterised and maintained remotely at control level using an IO-Link® master

- Automatic parameterisation following a sensor change means there is no need to repeat parameterisation and sensor settings after changing the sensor
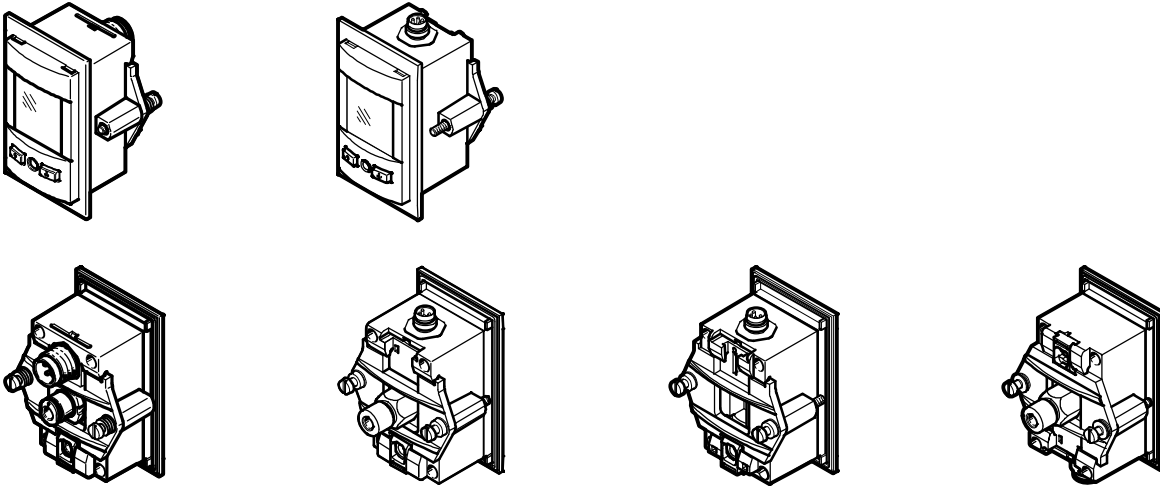
Pressure sensors SPAU
Key features
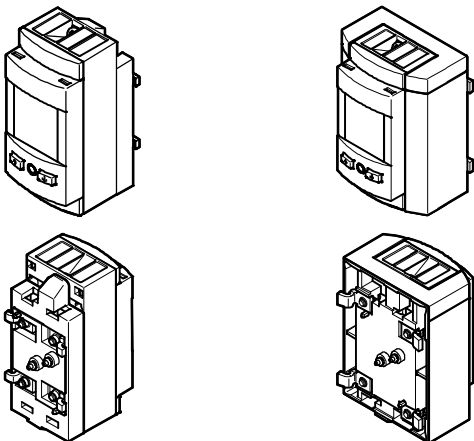
Device variants

Variants with display

Variants with display for front panel mounting

The connections shown are by way of example.
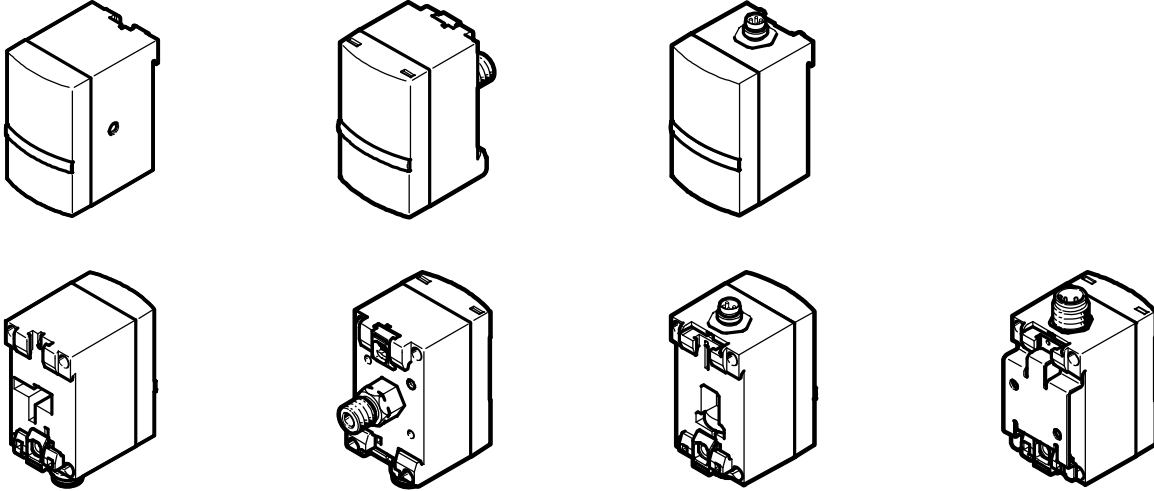
Variants with display and MS adapter -o-

Device variants
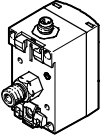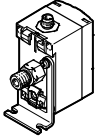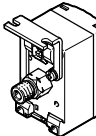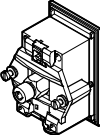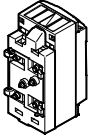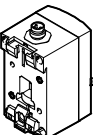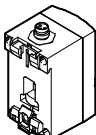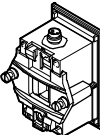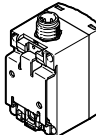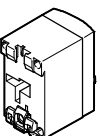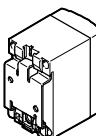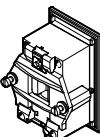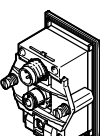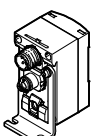
Variants without display
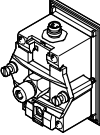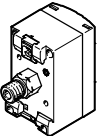
The connections shown are by way of example.

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Key features

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Housing variants	Types of mounting		Pneumatic connection
• Pneumatic connection at rear • Electrical connection on top	Threaded mounting[1]	Mounting bracket (standing)	Male thread: G1/8, R1/8, N1/8, R1/4 Female thread: M5, M7
	Front panel mounting		
• Pneumatic connection at rear • Electrical connection underneath	Threaded mounting	Mounting bracket (suspended)	Male thread: G1/8, R1/8, N1/8, R1/4 Female thread: M5, M7 Flange
	Front panel mounting	MS adapter	
• Pneumatic connection underneath • Electrical connection on top	Threaded mounting	H-rail	Female thread: G1/8, R1/8, N1/8, M7 Push-in connector: QS4, QS6, QS5/32
	Front panel mounting	Wall mounting	
• Pneumatic connection underneath • Electrical connection underneath	H-rail	Wall mounting	Push-in connector: QS4, QS5/32
	Front panel mounting		
• Pneumatic connection at rear • Electrical connection at rear	Front panel mounting	Mounting bracket (standing)	Push-in connector: QS4, QS6, QS5/32

1) Threaded mounting with M5 female thread not recommended

➔ **Internet: www.festo.com/catalogue/...**

Subject to change – 2018/11

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Peripherals overview

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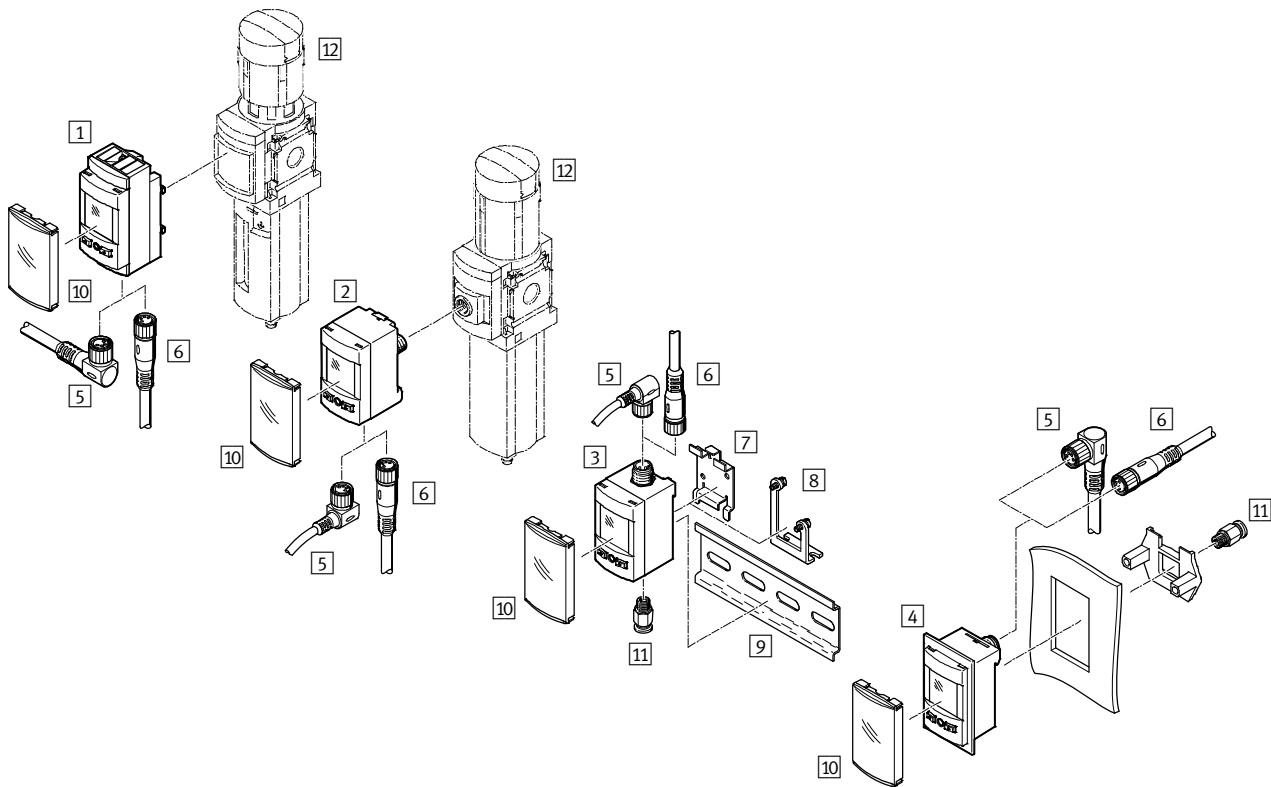
Accessories	→ Page/Internet
1 Pressure sensors SPAU, display variants for MS service unit components	10
2 Pressure sensors SPAU, variants for threaded mounting	10
3 Pressure sensors SPAU, variants for H-rail, wall mounting or mounting bracket	10
4 Pressure sensors SPAU, variants for front panel mounting	10
5 Connecting cable, angled plug socket M8x1	24
6 Connecting cable, straight socket M8x1	24
5 Connecting cable, angled plug socket M12x1	24

Accessories	→ Page/Internet
6 Connecting cable, straight socket M12x1	24
7 Wall mounting SAMH-PU-W	22
8 Mounting bracket SAMH-PU-A	22
9 H-rail to DIN EN 60715	nrh
10 Safety guard SACC-PU-G	23
11 Pressure supply port	–
12 Service unit component MS4, MS6	ms4, ms6

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Type codes

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SPAU	–	B2	R	–	H	–	Q4		D	–

Type

SPAU	Pressure sensor

Pressure measuring range [bar]

P025	0 … 0.25
P05	0 … 0.5
P1	0 … 1
P2	0 … 2
P6	0 … 6
P10	0 … 10
P12	0 … 12
P16	0 … 16
B2	−1 … 1
B11	−1 … 10
V025	0 … −0.25
V05	0 … −0.5
V1	0 … −1

Supply port

R	Relative pressure

Type of mounting

T	Threaded mounting
H	H-rail mounting
W	Wall mounting
A	Mounting bracket
F	Front panel mounting
MS4	Adapter MS4 -◌-
MS6	Adapter MS6 -◌-

Pneumatic connection

G18	G 1/8
R14	R 1/4
R18	R 1/8
N18	1/8NPT
M5	M5
M7	M7
Q4	Push-in connector 4 mm
Q6	Push-in connector 6 mm
T532	Push-in connector 5/32
F	Flange

Thread type

–	None
M	Male thread
F	Female thread

Outlet direction

–	At rear
D	Underneath

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Type codes

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| | | | – | LK | – | A | – | M8 | | + | 2,5S | | G | | T |

Display	
–	None
L	LCD, backlit

Electrical output 1	
PNLK	PNP, NPN, IO-Link®
LK	IO-Link®

Electrical output 2	
PNVBA	PNP, NPN, 0 … 10 V, 1 … 5 V, 4 … 20 mA
V	0 … 10 V
B	1 … 5 V
A	4 … 20 mA

Electrical connection	
M8	Plug M8
M12	Plug M12, A-coded

Electrical outlet direction	
–	At rear
D	Underneath
U	On top

Electrical accessories	
–	None
2,5A	Angled plug socket, cable 2.5 m
2,5S	Straight socket, cable 2.5 m
5A	Angled plug socket, cable 5 m
5S	Straight socket, cable 5 m

Protective devices	
–	None
G	Safety guard

Certificate	
–	None
T	Test report

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Technical data

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Display ... -L

Variant without display
Voltage output preset ... -LK-V
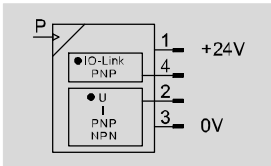
Variant without display
Current output preset ... -LK-A

-⌐- Voltage
20 ... 30 V DC

-⏚- Pressure measuring range
−1 ... +16 bar

-⌐- Temperature range
0 ... +50 °C
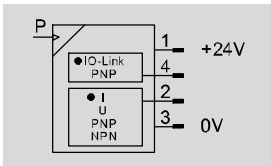
General technical data	
Certification	RCM compliance mark
	c UL us - Listed (OL)[1]
CE marking	To EU EMC Directive
(see declaration of conformity)	To EU RoHS Directive
KC mark	KC EMC
Electrical connection	To EN 60947-5-24-pin plug, round design
Mounting position	Any
Note on materials	RoHS-compliant

1) Not variant MS4, MS6

Input signal, measuring element								
SPAU		-B2	-B11	-V025	-V05	-V1	-P025	-P05
Measured variable		Relative pressure						
Method of measurement		Piezoresistive pressure sensor						
Pressure measuring range start value	[bar]	−1		0				
Pressure measuring range end value	[bar]	1	10	−0.25	−0.5	−1	0.25	0.5
Overload range	[bar]	5	15	1	2	5	1	2
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]						
		Inert gases						
Note on the operating/pilot medium		Lubricated operation possible						
Temperature of medium	[°C]	0 ... +50						
Ambient temperature	[°C]	0 ... +50						

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SPAU		-P1	-P2	-P6	-P10	-P12	-P16
Measured variable		Relative pressure					
Method of measurement		Piezoresistive pressure sensor					
Pressure measuring range start value	[bar]	0					
Pressure measuring range end value	[bar]	1	2	6	10	12	16
Overload range	[bar]	5	6	15	15	15	20
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]					
		Inert gases					
Note on the operating/pilot medium		Lubricated operation possible					
Temperature of medium	[°C]	0 … +50					
Ambient temperature	[°C]	0 … +50					

Signal processing		
Resolution ADC	[bit]	12

Output, general		-B2	-B11	-V025	-V05	-V1	-P025	-P05
Accuracy FS	[%]	±1.5						
Repetition accuracy	[%FS]	±0.3						
Temperature coefficient	[%FS/K]	±0.05						

Output, general		-P1	-P2	-P6	-P10	-P12	-P16
Accuracy FS	[%]	±1.5					±2
Repetition accuracy	[%FS]	±0.3					
Temperature coefficient	[%FS/K]	±0.05					

Switching output		
	-PNLK	-LK
Switching output	2x PNP or 2x NPN, switchable	2x PNP[1]
Switching function	Freely programmable	
Switching element function	N/C or N/O contact, switchable	

1)   Second PNP output can only be activated using IO-Link®

Analogue output					
		-PNLK-PNVBA	-LK-A	-LK-V	-LK-B
Analogue output	[V]	0 … 10	– [1]	0 … 10	– [1]
	[V]	1 … 5	– [2]	– [2]	1 … 5
	[mA]	4 … 20	4 … 20	– [3]	– [3]
Rise time	[ms]	3			
Max. output current	[mA]	100			
Max. load resistance of current output	[Ω]	500			
Min. load resistance of voltage output	[kΩ]	10			

1)   0 … 10 V analogue output can only be activated using IO-Link®
2)   1 … 5 V analogue output can only be activated using IO-Link®
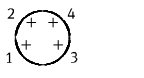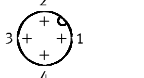3)   4 … 20 mA analogue output can only be activated using IO-Link®

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Additional output data	
Short circuit protection	Yes
Overload protection	Available

IO-Link device to IEC 61131-9		
Protocol	IO-Link®	
IO-Link®		
Protocol version	Device V 1.1	
Profile	Smart Sensor profile	
Function classes	Binary data channel (BDC)	
	Diagnostics	
	Identification	
	Process data variable (PDV)	
	Teach channel	
Communication mode	COM2 (38.4 kBaud)	
SIO mode support	Yes	
Port class	A	
Process data width OUT	0 bytes	
Process data width IN	2 bytes	
Process data content IN	14 bit PDV (pressure reading)	
	2 bit BDC (pressure monitoring)	
Minimum cycle time	[ms]	3
Data memory required	[kB]	0.5

Electronic system		
Operating voltage range DC	[V]	20 ... 30
Reverse polarity protection		For all electrical connections

Pin allocation to EN 60947-5-2

Plug, 4-pin

M8x1	M12x1	Pin	Wire colour	Allocation
		1	Brown	Operating voltage: +24 V DC
		3	Blue	Operating voltage 0 V
		4	Black	Switching output (C/Q-...)
		2	White	Switching output or analogue output

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Display/operation		
SPAU	−L−PNLK	−LK
Display type	Illuminated LCD	LED
Displayable units	bar	−
	inchH2O	−
	inchHg	−
	kgf/cm²	−
	kPa	−
	mmHg	−
	MPa	−
	psi	−
Setting options	IO-Link®	
	Teach-in	−
	Via display and keys	−
Protection against tampering	IO-Link®	
	PIN code	−
Threshold value setting range [%]	0 … 100	
Hysteresis setting range [%]	0 … 90	

Immissions/emissions	−T/H/W/A	−F/MS4/MS6
Degree of protection	IP67, IP65	IP65
Corrosion resistance class CRC[1]	2	

1) Corrosion resistance class 2 to Festo standard 940070
   Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment or media such as coolants or lubricating agents.
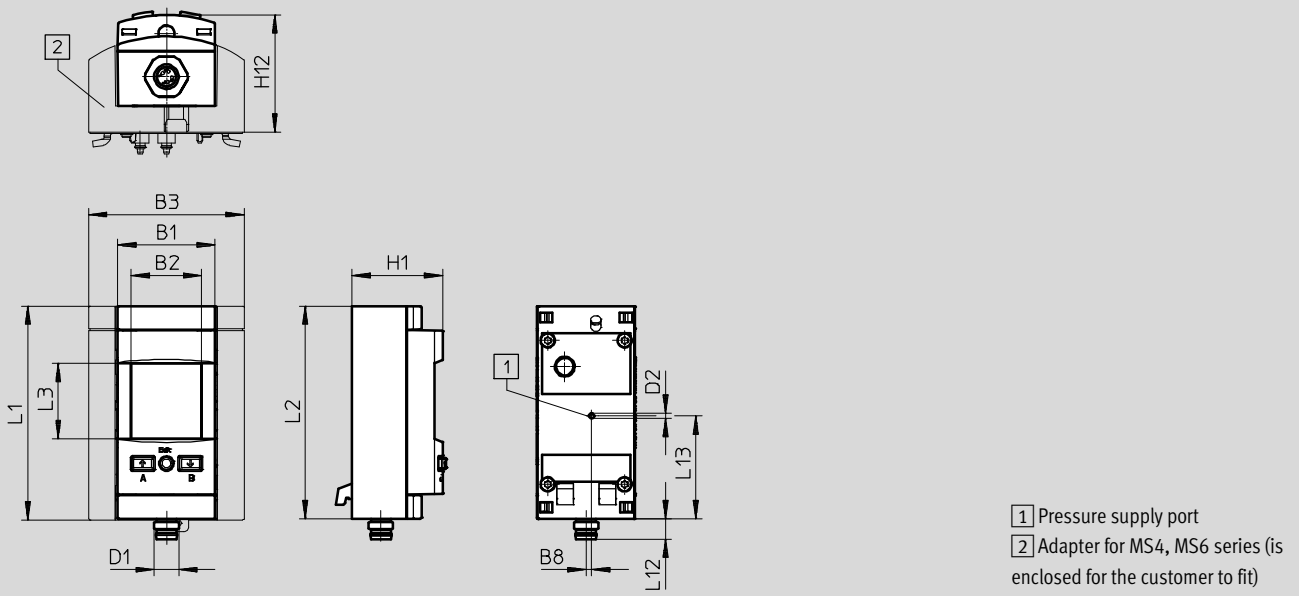
Pressure sensors SPAU
Technical data

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Dimensions   Download CAD data → **www.festo.com**

SPAU-...-F-...-L-PNLK-...   SPAU-...-L-PNLK-...   SPAU-...-LK-...
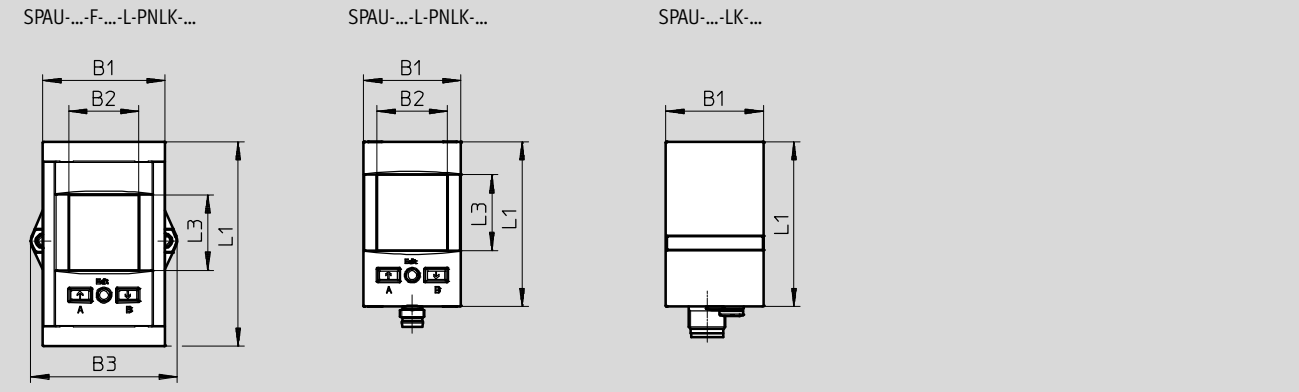
Type	B1	B2	B3	L1	L3
SPAU-...-F-...-L-PNLK-...	40	23	48	67	24.8
SPAU-...-L-PNLK-...	32		–	54	
SPAU-...-LK-...	32	–	–	54	–

Service unit dimensions   Download CAD data → **www.festo.com**

[1] Pressure supply port
[2] Adapter for MS4, MS6 series (is enclosed for the customer to fit)

Type	B1	B2	B3	B8	D1	D2	H1	H12	L1	L2	L3	L12	L13
SPAU-P10R-MS-...-L-...-M8	32	23	–	1.8	M8x1	1.8	29.8	–	–	69.8	24.8	6.7	33.8
SPAU-P10R-MS-...-L-...-M12	32	23	–	1.8	M12x1	1.8	29.8	–	–	69.8	24.8	6.7	33.8
SPAU-P10R-MS4-F-L-...-M8D	32	23	32	1.8	M8x1	1.8	29.8	~38.3	70.2	69.8	24.8	6.7	33.8
SPAU-P10R-MS6-F-L-...-M8D	32	23	51	1.8	M8x1	1.8	29.8	~38.3	70.2	69.8	24.8	10	33.8
SPAU-P10R-MS4-F-L-...-M12D	32	23	32	1.8	M12x1	1.8	29.8	~38.3	70.2	69.8	24.8	6.7	33.8
SPAU-P10R-MS6-F-L-...-M12D	32	23	51	1.8	M12x1	1.8	29.8	~38.3	70.2	69.8	24.8	10	33.8

Technical data

Dimensions of connections

Download CAD data ➔ **www.festo.com**

SPAU-…-G18M-…
SPAU-…-R18M-…
SPAU-…-N18M-…
SPAU-…-M5F-…

SPAU-…-R14M-…

SPAU-…-M7F-…
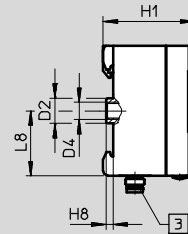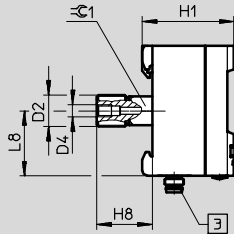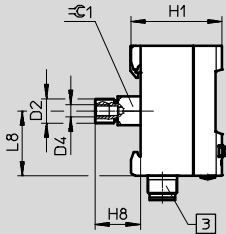
SPAU-…-G18MD-…
SPAU-…-R18MD-…
SPAU-…-N18MD-…
SPAU-…-M7FD-…

SPAU-…-Q4D-…-MxU
SPAU-…-Q6D-…-MxU
SPAU-…-Q532D-…MxU

SPAU-…-Q4D-…-MxD
SPAU-…-Q532D-…MxD

SPAU-…-Q4-…-Mx
SPAU-…-Q532-…Mx
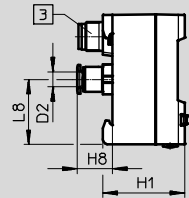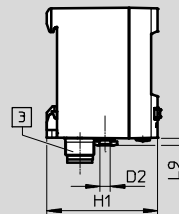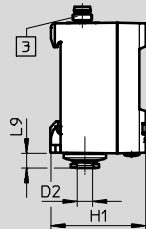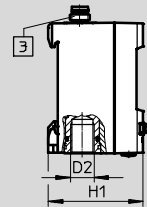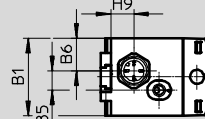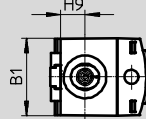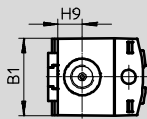
3	Connections
	SPAU-…-M12… M12, 4-pin
	SPAU-…-M8… M8, 4-pin

| Type	B1	B5	B6	D2	Thread length		Thread engagement	D4	H1	H8	H9	L8	L9	⌒1
					Male (M)	Female (F)								
SPAU-…-G18M-…-MxD	–			G1/8	8	–	Until stop	M5	37.9	19	–	27	–	12
SPAU-…-R18M-…-MxD				R1/8			Min. 6.5							
SPAU-…-N18M-…-MxD				1/8NPT			Min. 6.9							
SPAU-…-M5F-…-MxD				M5	–	6	Until stop							
SPAU-…-R14M-…-MxD				R1/4	12	–	Min. 9.7			23				
SPAU-…-M7F-…-MxD				M7		8	Until stop	M7		3				
SPAU-…-G18FD-…-MxU	32	–	–	G1/8		12	Until stop	–	39.4	–	10	–	–	–
SPAU-…-R18FD-…-MxU				R1/8	–		Min. 6.5							
SPAU-…-N18FD-…-MxU				1/8NPT		8	Min. 6.9							
SPAU-…-M7FD-…-MxU				M7			Until stop							
SPAU-…-Q4D-…-MxU				QS4									6.1	
SPAU-…-Q6D-…-MxU				QS6										
SPAU-…-T532D-…-MxU				T5/32										
SPAU-…-Q4D-…-MxD		8	13.5	QS4	–	–	–		45.9		9.5		3	
SPAU-…-T532D-…-MxD				T5/32										
SPAU-…-Q4-…-Mx	–	–	–	QS4					33.9	14.8	–	27	–	
SPAU-…-Q6-…-Mx				QS6										
SPAU-…-T532-…-Mx				T5/32										

Pressure sensors SPAU

Technical data

Dimensions for front panel mounting

Download CAD data ➔ www.festo.com

1 Pressure supply port

Recess for front panel
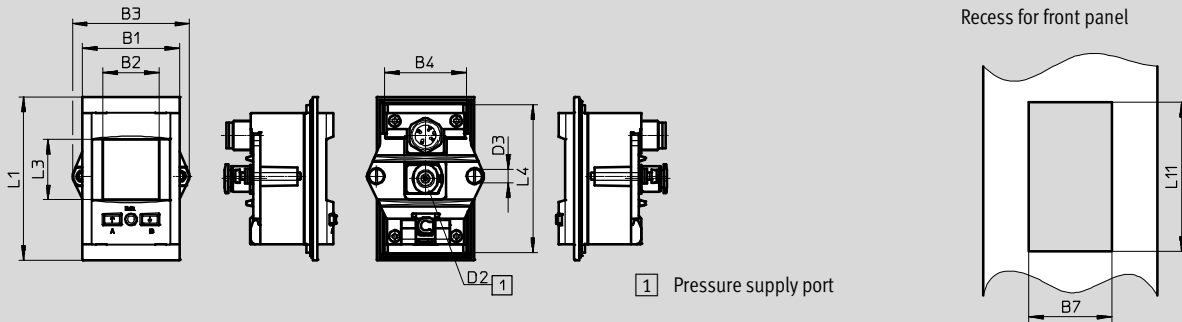
SPAU-…-F-… -MxD

SPAU-…-F-… -MxU

SPAU-…-F-… FD-…-MxU
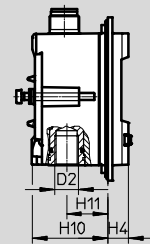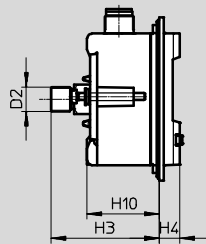
SPAU-…-F-Q… D-…-MxU
SPAU-…-F-T532D-…-MxU

SPAU-…-F-Q4D-…-MxD
SPAU-…-F-T532D-…-MxD

SPAU-…-F-Q…-…-Mx
SPAU-…-F-T532-…-Mx

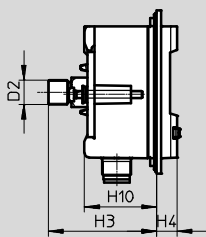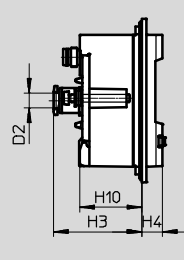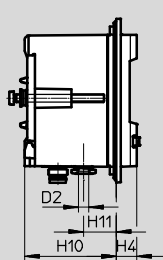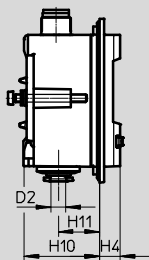| Type	B1	B2	B3	B4	B7 ±0.3	D2	D3	H3	H4	H10	H11	L1	L3	L4	L11 ±0.3
SPAU-…-F-…18M-…-MxD						–		44.4							
SPAU-…-F-R14M-…-MxD						R1/8		48.4							
SPAU-…-F-M7F-…-MxD						M7		28.4							
SPAU-…-F-M5F-…-MxD						M5		–		29.5	–				
SPAU-…-F-…18M-…-MxU						–		44.4							
SPAU-…-F-R14M-…-MxU						R¼		48.4							
SPAU-…-F-M7F-…-MxU	40	23	48	33.5	34	M7	M3	28.4	8.4			67	24.8	60.5	61
SPAU-…-F-M5F-…-MxU						M5									
SPAU-…-F-…18FD-…-MxU						–									
SPAU-…-F-M7FD-…-MxU						M7				31	16.9				
SPAU-…-F-Q…D-…-MxU						–		–							
SPAU-…-F-T532D-…-MxU						T5/32									
SPAU-…-F-Q4D-…-MxD						QS4				37.5	13.4				
SPAU-…-F-T532D-…-MxD						T5/32									
SPAU-…-F-Q…-…-Mx						–		36.1		25.5	–				
SPAU-…-F-T532-…-Mx						T5/32									

Pressure sensors SPAU

Technical data

Ordering data – Variants with display							
	Type of mounting	Pneumatic connection	Outlet direction	Electrical connection	Outlet direction	Product weight	Part no.	Type
Pressure measuring range −1 ... +1								
	Thread	R1/8	At rear	M8x1	Underneath	80	**8001207**	**SPAU-B2R-T-R18M-L-PNLK-PNVBA-M8D**
	H-rail	G1/8	Underneath	M8x1	On top	70	**8001219**	**SPAU-B2R-H-G18FD-L-PNLK-PNVBA-M8U**
Pressure measuring range 0 ... −1								
	H-rail	G1/8	Underneath	M8x1	On top	70	**8001223**	**SPAU-V1R-H-G18FD-L-PNLK-PNVBA-M8U**
		QS-4	Underneath	M8x1	Underneath	65	**8001213**	**SPAU-V1R-H-Q4D-L-PNLK-PNVBA-M8D**
		QS-5/32	Underneath	M8x1	Underneath	65	**8001217**	**SPAU-V1R-H-T532D-L-PNLK-PNVBA-M8D**
		QS-5/32	Underneath	M12x1	Underneath	65	**8001218**	**SPAU-V1R-H-T532D-L-PNLK-PNVBA-M12D**
	Wall/surface bracket	G1/8	Underneath	M8x1	On top	70	**8001235**	**SPAU-V1R-W-G18FD-L-PNLK-PNVBA-M8U**
		G1/8	Underneath	M12x1	On top	70	**8001234**	**SPAU-V1R-W-G18FD-L-PNLK-PNVBA-M12U**
		QS-4	Underneath	M8x1	Underneath	65	**8001239**	**SPAU-V1R-W-Q4D-L-PNLK-PNVBA-M8D**
		QS-4	Underneath	M12x1	Underneath	65	**8001214**	**SPAU-V1R-H-Q4D-L-PNLK-PNVBA-M12D**
		QS-4	Underneath	M12x1	Underneath	65	**8001238**	**SPAU-V1R-W-Q4D-L-PNLK-PNVBA-M12D**
	Front panel mounting	QS-4	At rear	M12x1	At rear	70	**8001227**	**SPAU-V1R-F-Q4-L-PNLK-PNVBA-M12**
		QS-6	At rear	M12x1	At rear	70	**8001228**	**SPAU-V1R-F-Q6-L-PNLK-PNVBA-M12**
		QS-5/32	At rear	M12x1	At rear	70	**8001229**	**SPAU-V1R-F-T532-L-PNLK-PNVBA-M12**
Pressure measuring range 0 ... 2								
	Wall/surface bracket	G1/8	Underneath	M8x1	On top	70	**8001232**	**SPAU-P2R-W-G18FD-L-PNLK-PNVBA-M8U**
Pressure measuring range 0 ... 6								
	Wall/surface bracket	G1/8	Underneath	M8x1	On top	70	**8001233**	**SPAU-P6R-W-G18FD-L-PNLK-PNVBA-M8U**

Pressure sensors SPAU
Technical data

Ordering data – Variants with display							
Type of mounting	Pneumatic connection	Outlet direction	Electrical connection	Outlet direction	Product weight	Part no.	Type
Pressure measuring range 0 … 10							
Thread	G1/8	At rear	M8x1	Underneath	80	**8001201**	**SPAU-P10R-T-G18M-L-PNLK-PNVBA-M8D**
	G1/8	At rear	M12x1	Underneath	80	**8001204**	**SPAU-P10R-T-G18M-L-PNLK-PNVBA-M12D**
	R1/8	At rear	M8x1	Underneath	80	**8001203**	**SPAU-P10R-T-R18M-L-PNLK-PNVBA-M8D**
	R1/8	At rear	M12x1	Underneath	80	**8001206**	**SPAU-P10R-T-R18M-L-PNLK-PNVBA-M12D**
	R1/4	At rear	M8x1	Underneath	80	**8001209**	**SPAU-P10R-T-R14M-L-PNLK-PNVBA-M8D**
	R1/4	At rear	M12x1	Underneath	80	**8001208**	**SPAU-P10R-T-R14M-L-PNLK-PNVBA-M12D**
	1/8-27NPT	At rear	M8x1	Underneath	80	**8001202**	**SPAU-P10R-T-N18M-L-PNLK-PNVBA-M8D**
	1/8-27NPT	At rear	M12x1	Underneath	80	**8001205**	**SPAU-P10R-T-N18M-L-PNLK-PNVBA-M12D**
H-rail	G1/8	Underneath	M8x1	On top	70	**8001221**	**SPAU-P10R-H-G18FD-L-PNLK-PNVBA-M8U**
	G1/8	Underneath	M12x1	On top	70	**8001220**	**SPAU-P10R-H-G18FD-L-PNLK-PNVBA-M12U**
	QS-4	Underneath	M8x1	Underneath	65	**8001211**	**SPAU-P10R-H-Q4D-L-PNLK-PNVBA-M8D**
	QS-4	Underneath	M12x1	Underneath	65	**8001212**	**SPAU-P10R-H-Q4D-L-PNLK-PNVBA-M12D**
	QS-5/32	Underneath	M8x1	Underneath	65	**8001215**	**SPAU-P10R-H-T532D-L-PNLK-PNVBA-M8D**
	QS-5/32	Underneath	M12x1	Underneath	65	**8001216**	**SPAU-P10R-H-T532D-L-PNLK-PNVBA-M12D**
Wall/surface bracket	G1/8	Underneath	M8x1	On top	70	**8001231**	**SPAU-P10R-W-G18FD-L-PNLK-PNVBA-M8U**
	G1/8	Underneath	M12x1	On top	70	**8001230**	**SPAU-P10R-W-G18FD-L-PNLK-PNVBA-M12U**
	QS-4	Underneath	M8x1	Underneath	70	**8001237**	**SPAU-P10R-W-Q4D-L-PNLK-PNVBA-M8D**
	QS-4	Underneath	M12x1	Underneath	70	**8001236**	**SPAU-P10R-W-Q4D-L-PNLK-PNVBA-M12D**
Front panel mounting	QS-4	At rear	M12x1	At rear	70	**8001224**	**SPAU-P10R-F-Q4-L-PNLK-PNVBA-M12**
	QS-6	At rear	M12x1	At rear	70	**8001225**	**SPAU-P10R-F-Q6-L-PNLK-PNVBA-M12**
	QS-5/32	At rear	M12x1	At rear	70	**8001226**	**SPAU-P10R-F-T532-L-PNLK-PNVBA-M12**
Service unit	Flange MS4	At rear	M8x1	Underneath	80	**8035302**	**SPAU-P10R-MS4-F-L-PNLK-PNVBA-M8D** - ◉ -
	Flange MS4	At rear	M12x1	Underneath	80	**8035304**	**SPAU-P10R-MS4-F-L-PNLK-PNVBA-M12D** - ◉ -
	Flange MS6	At rear	M8x1	Underneath	80	**8035303**	**SPAU-P10R-MS6-F-L-PNLK-PNVBA-M8D** - ◉ -
	Flange MS6	At rear	M12x1	Underneath	80	**8074906**	**SPAU-P10R-MS6-F-L-PNLK-PNVBA-M12D** - ◉ -
Pressure measuring range 0 … 16							
Thread	R1/4	At rear	M8x1	Underneath	80	**8001210**	**SPAU-P16R-T-R14M-L-PNLK-PNVBA-M8D**
H-rail	G1/8	Underneath	M12x1	On top	70	**8001222**	**SPAU-P16R-H-G18FD-L-PNLK-PNVBA-M12U**

Ordering data – Variants without display							
Type of mounting	Pneumatic connection	Outlet direction	Electrical connection	Analogue output	Product weight	Part no.	Type
Pressure measuring range 0 … −1							
Thread	G1/8	At rear	M12x1	0 … 10 V	80	**8003347**	**SPAU-V1R-T-G18M-LK-V-M12D**
		At rear		4 … 20 mA		**8003348**	**SPAU-V1R-T-G18M-LK-A-M12D**
H-rail	QS-4	Underneath		0 … 10 V	65	**8003351**	**SPAU-V1R-H-Q4D-LK-V-M12D**
		Underneath		4 … 20 mA		**8003352**	**SPAU-V1R-H-Q4D-LK-A-M12D**
Pressure measuring range 0 … 10							
Thread	G1/8	At rear	M12x1	0 … 10 V	80	**8003345**	**SPAU-P10R-T-G18M-LK-V-M12D**
		At rear		4 … 20 mA		**8003346**	**SPAU-P10R-T-G18M-LK-A-M12D**
H-rail	QS-4	Underneath		0 … 10 V	65	**8003349**	**SPAU-P10R-H-Q4D-LK-V-M12D**
		Underneath		4 … 20 mA		**8003350**	**SPAU-P10R-H-Q4D-LK-A-M12D**

Pressure sensors SPAU

Ordering data – Modular product system

FESTO

Ordering table					
Pressure sensor SPAU			Conditions	Code	Entry code
Ⓜ Module no.	**8001200**				
Product type	SPAU, U series		SPAU		SPAU
Pressure measuring range	−1… 1 bar		-B2		
	−1… 10 bar		-B11		
	0… −0.25 bar		-V025		
	0… −0.5 bar		-V05		
	0… −1 bar		-V1		
	0… 0.25 bar		-P025		
	0… 0.5 bar		-P05		
	0… 1 bar		-P1		
	0… 2 bar		-P2		
	0… 6 bar		-P6		
	0… 10 bar		-P10		
	0… 12 bar		-P12		
	0… 16 bar		-P16		
Supply port	Relative pressure		R		R
Type of mounting	Threaded mounting		-T		
	Mounting bracket		-A		
	Front panel mounting		-F		
	H-rail mounting		-H		
	Wall mounting		-W		
	Adapter MS4		-MS4		
	Adapter MS6		-MS6		

Ⓜ Mandatory data
Ⓞ Options

Transfer order code

	SPAU	–		R	–	

Pressure sensors SPAU
Ordering data – Modular product system

FESTO

Ordering table					
Pressure sensor SPAU			Condi- tions	Code	Entry code
M Pneumatic connection	G1/8	-G18			
	M5	-M5		1	
	M7	-M7			
	NPT1/8	-N18			
	Push-in connector 4 mm	-Q4		2	
	Push-in connector 6 mm	-Q6		2	
	R1/4	-R14		15	
	R1/8	-R18			
	Push-in connector 5/32	-T532		2	
	Flange	-F		17	
Thread type	None				
	Male thread	M		3, 4	
	Female thread	F		3, 5	
Outlet direction	At rear			6	
	Underneath	D		7	
Display	None				
	LCD, backlit	-L		8	

1   Only with type of mounting A, F
2   Not with type of mounting T
    Not with pressure measuring range P16
3   Mandatory in combination with G1/8, N1/8, R1/8, R1/4, M7, M5
4   Not with type of mounting H, W, MS4, MS6
    Not with pneumatic connection Q4, Q6, T532, M7, M5
5   Not with type of mounting A if pneumatic connection G1/8, R1/8, N1/8
    Not with type of mounting MS4, MS6
    Not with pneumatic connection Q4, Q6, Q532
6   Not with type of mounting W, H
    Not with thread type F if pneumatic connection G1/8, R1/8, N1/8

7   Not with pneumatic connection M5
    Not with type of mounting A, MS4, MS6
    Not with thread type M
8   In combination with type of mounting F, MS4, MS6

M   Mandatory data
O   Options

Transfer order code

– ☐☐☐☐   ☐☐☐☐   ☐☐☐☐ – ☐☐☐☐

Pressure sensors SPAU

Ordering data – Modular product system

FESTO

Ordering table					
SPAU			Condi-tions	Code	Entry code
M Electrical output 1	PNP or NPN or IO-Link®		-PNLK	10	
	IO-Link®		-LK	9	
Electrical output 2	PNP or NPN or 0 … 10 V or 1 … 5 V or 4 … 20 mA		-PNVBA	10	
	0 … 10 V		-V	9	
	1 … 5 V		-B	9	
	4 … 20 mA		-A	9	
Electrical connection	Plug M8		-M8		
	Plug M12, A-coded		-M12		
Electrical outlet direction	On top		U	13	
	Underneath		D	12	
	At rear			11	
Electrical accessories	None				
	Angled plug socket, cable 2.5 m		+2,5A		
	Straight socket, cable 2.5 m		+2,5S		
	Angled plug socket, cable 5 m		+5A		
	Straight socket, cable 5 m		+5S		
Protective devices	None				
	Safety guard		G	16	
Certificate	None				
	Test report		T		

9   Not with display L
10 Not without display
11 Only with type of mounting A, F
    Not with G18, N18, R18, M7, M5
    Not with outlet direction D, U
    Only with thread type "none"
12 Only with type of mounting MS4, MS6
    Only with outlet direction D if QS4
    or T532 selected
    Not with outlet direction at the rear
    if QS4, QS6, T532

13 Only with outlet direction U if QS4
    or T532 selected
    Not with outlet direction at the rear
    if QS4, QS6, T532
15 Only with thread type M
    Outlet direction at the rear only
    Not with type of mounting W/H
    Not with electrical outlet direction at the rear
16 Only with display L
17 Only with type of mounting MS4, MS6

M Mandatory data
O Options

Transfer order code

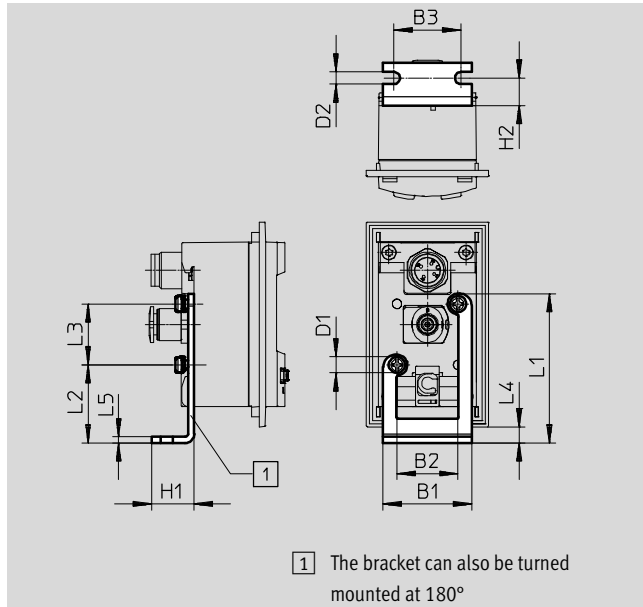– ⬚⬚⬚⬚⬚⬚ – ⬚⬚⬚⬚⬚⬚ – ⬚⬚⬚⬚⬚⬚ ⬚⬚⬚⬚⬚⬚ + ⬚⬚⬚⬚⬚⬚ ⬚⬚⬚⬚⬚⬚

Mounting bracket SAMH-PU-A

Type of mounting: via through-hole and screw

Material: high-alloy stainless steel

Note on materials: RoHS-compliant

Only for variants with pneumatic connection and rear outlet direction

1 The bracket can also be turned mounted at 180°

Ordering data

Type	B1	B2	B3	D1	D2 $-\varnothing-$	H1	H2	L1	L2	L3	L4	L5	CRC[1]	Part no.	Type
SAMH-PU-A	29	20	22	M3x8	4	14	9	49	25.6	20	8.6	2	2	**8003354**	**SAMH-PU-A**

1) Corrosion resistance class 2 to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment or media such as coolants or lubricating agents.
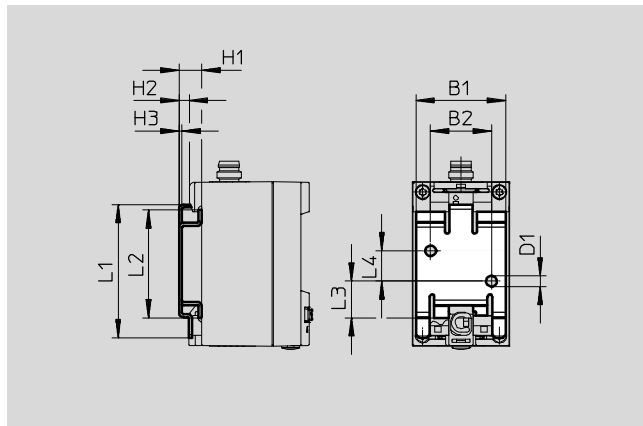
Wall mounting SAMH-PU-W

Type of mounting: with through-hole

Material: high-alloy stainless steel

Note on materials: RoHS-compliant

Only for variants with pneumatic connection and outlet direction underneath

Dimensions and ordering data

Type	B1	B2	D1 $-\varnothing-$	H1	H2	H3	L1	L2	L3	L4	CRC[1]	Part no.	Type
SAMH-PU-W	29.4	20	3.5	7.5	3.4	1	43.8	35.4	12	10	2	**8003355**	**SAMH-PU-W**

1) Corrosion resistance class 2 to Festo standard 940070
Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements which are in direct contact with the surrounding industrial environment or media such as coolants or lubricating agents.
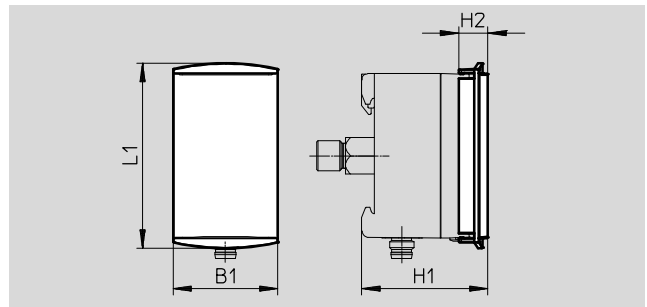
Accessories – Ordering data

Safety guard SACC-PU-G
to protect the display and operating components

Material: PA

Note on materials:
RoHS-compliant

Only for variants with display

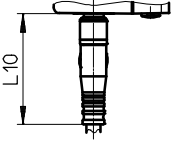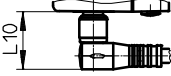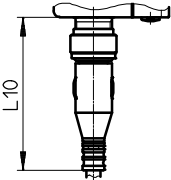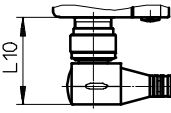| Dimensions and ordering data								
Type		B1	H1	H2	L1	CRC	Part no.	Type
SACC-PU-G	SPAU- … R-T- …	34.5	41.6	9.6	60.8	2	**8003353**	**SACC-PU-G**
	SPAU- … R-H- … -D-L- …		49.6					
	SPAU- … R-H- … -FD-L- …		43.6					
	SPAU- … R-F- …		37.6					
	SPAU- … R-W- … -D-L- …		43.6					
	SPAU- … R-W- … -FD-L- …		49.6					

Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Pressure sensors SPAU

Accessories – Ordering data

Connecting cables

				L10
		M8	Straight socket	36.3
			Angled plug socket	18.7
		M12	Straight socket	50
			Angled plug socket	28.5

Ordering data

Technical data ➔ Internet: nebu

	Number of wires	Cable length [m]	Part no.	Type
M8x1, straight socket				
	4	2.5	**541342**	**NEBU-M8G4-K-2.5-LE4**
		5	**541343**	**NEBU-M8G4-K-5-LE4**
M8x1, angled plug socket				
	4	2.5	**541344**	**NEBU-M8W4-K-2.5-LE4**
		5	**541345**	**NEBU-M8W4-K-5-LE4**

Ordering data

Technical data ➔ Internet: nebu

	Number of wires	Cable length [m]	Part no.	Type
M12x1, straight socket				
	4	2.5	**550326**	**NEBU-M12G5-K-2.5-LE4**
		5	**541328**	**NEBU-M12G5-K-5-LE4**
M12x1, angled plug socket				
	4	2.5	**550325**	**NEBU-M12W5-K-2.5-LE4**
		5	**541329**	**NEBU-M12W5-K-5-LE4**