



Pressure Sensors SPAB, with Display

Pressure sensors SPAB, with display

Product range overview

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- Pressure measuring range –1 ... +1 or 0 ... 10 bar
- Relative pressure measurement
- Pressure supply port G $\frac{1}{8}$, R $\frac{1}{8}$ or NPT $\frac{1}{8}$ -27
- Switch output PNP, NPN and analogue output
- Two-part, multi-coloured display
- Copy function (settings can be transferred from device to device)
- Simple commissioning thanks to intuitive operation
- Compact design 30x30 mm

Detailed product information

➔ www.festo.com/catalogue/spab

Product range overview							
Method of measurement	Measured variable	Pressure measuring range [bar]	Switching function	Pneumatic connection		Electrical output	
				Male thread	Female thread	Digital	Analogue
Piezoresistive pressure sensor with display	1x relative pressure	–1 ... +1 or 0 ... 10	Freely programmable	G $\frac{1}{8}$, R $\frac{1}{8}$ or NPT $\frac{1}{8}$ -27	M5	1x PNP	1 ... 5 V
						2x PNP	–
						1x NPN	1 ... 5 V
						2x NPN	–

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Type codes

		SPAB	-	P10	R	-	G18	-	PB	-	K1
Sensor function											
SPAB	Piezoresistive pressure sensor with multi-coloured display										
Pressure measuring range											
B2	-1 ... +1 bar										
P10	0 ... 10 bar										
Measured variable											
R	Relative pressure										
Pneumatic connection											
G18	Male thread G1/8 and female thread M5										
R18	Male thread R1/8 and female thread M5										
N18	Male thread NPT1/8-27 and female thread M5										
Electrical output											
2P	2 switch outputs PNP										
2N	2 switch outputs NPN										
PB	1 switch output PNP and 1 ... 5 V analogue										
NB	1 switch output NPN and 1 ... 5 V analogue										
Electrical connection											
K1	Cable, 2.5 m long (included in scope of delivery)										
M8	Plug M8x1										

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Technical data

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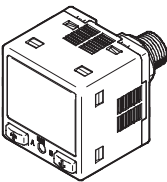
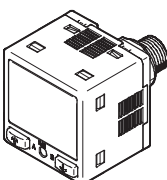
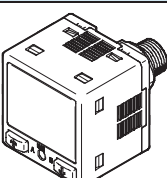
General technical data				
Design				
Pressure measuring range	[bar]	−1 ... +1		0 ... 10
Measured variable		Relative pressure		
Pneumatic connection		Male thread G1⁄8, R1⁄8 or NPT1⁄8-27 Female thread M5		
Type of display		Multi-coloured illuminated LCD		
Accuracy FS ¹⁾		±1%	±2%	
Setting options		Via display and buttons Teach-in		
Type of mounting		Screw-in Via accessories		
Electrical data				
Switch output		2x PNP or 2x NPN	1x PNP or 1x NPN	2x PNP or 2x NPN
Analogue output	[V]	–	1 ... 5	–
Switching element function		Switchable		
Switching function		Freely programmable		
Operating voltage range	[V DC]	12 ... 24		
Max. output current	[mA]	100		
Electrical connection		Plug M8x1, 4-pin, round design to EN 60 947-5-2 Cable, 4-wire		
Protection against short circuit		Yes		
Protection against polarity reversal		For operating voltage		
Protection class		IP40		
Operating and environmental conditions				
Operating medium		Filtered compressed air, unlubricated, grade of filtration 40 µm		
Ambient temperature	[°C]	−10 ... +50		
CE mark (see declaration of conformity)		In accordance with EU EMC directive		
Certification		C-UL-US listed (OL) C tick		
Materials				
Housing		Reinforced acrylic butadiene styrene, reinforced polybutylene terephthalate		
Note on materials		Conforms to RoHS		

1) % FS = % of measuring range (full scale)

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Technical data

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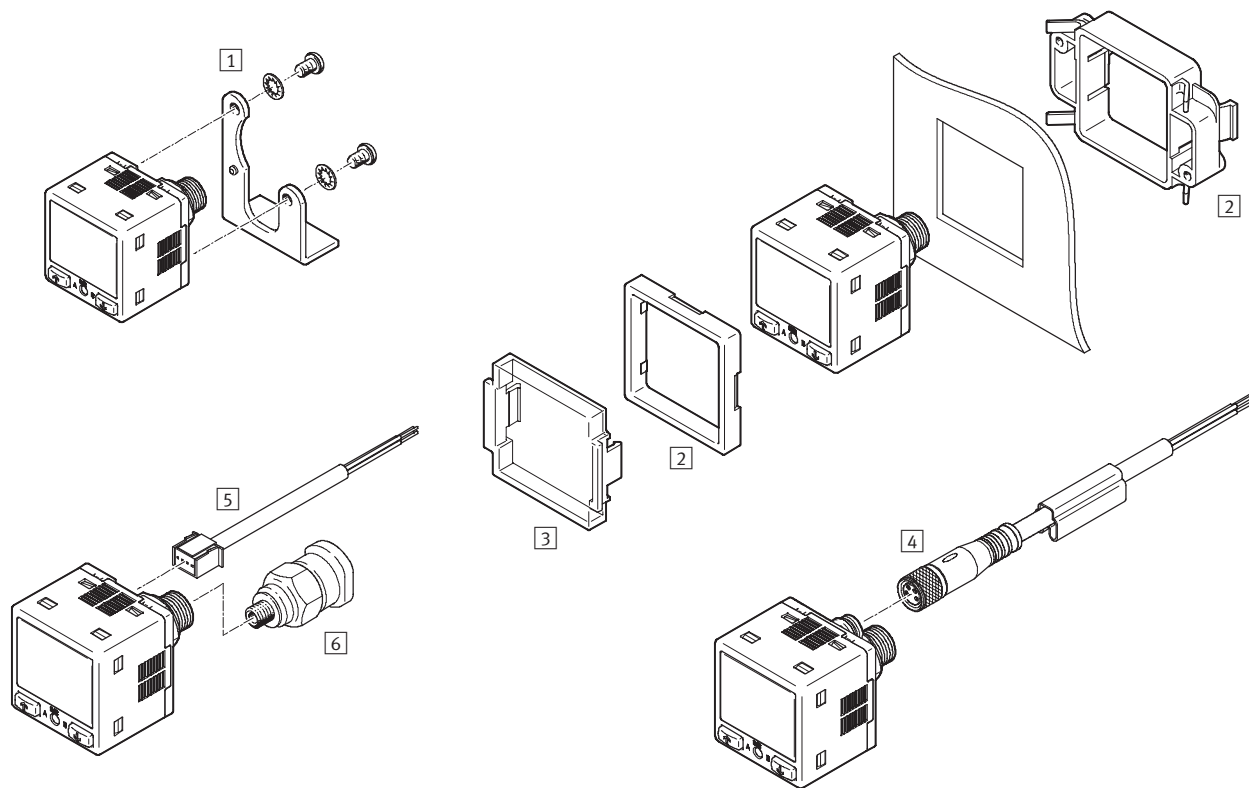
Ordering data							
Version	Pressure measuring range [bar]	Electrical output		Electrical connection			
		Digital	Analogue	Cable ¹⁾		Plug	
				Part No.	Type	Part No.	Type
Pneumatic connection G1/8							
	-1 ... +1	1x PNP	1 ... 5 V	552 356	SPAB-B2R-G18-PB-K1	553 152	SPAB-B2R-G18-PB-M8
		2x PNP	–	552 350	SPAB-B2R-G18-2P-K1	553 146	SPAB-B2R-G18-2P-M8
		1x NPN	1 ... 5 V	552 359	SPAB-B2R-G18-NB-K1	553 155	SPAB-B2R-G18-NB-M8
		2x NPN	–	552 353	SPAB-B2R-G18-2N-K1	553 149	SPAB-B2R-G18-2N-M8
	0 ... 10	1x PNP	1 ... 5 V	552 368	SPAB-P10R-G18-PB-K1	553 164	SPAB-P10R-G18-PB-M8
		2x PNP	–	552 362	SPAB-P10R-G18-2P-K1	553 158	SPAB-P10R-G18-2P-M8
		1x NPN	1 ... 5 V	552 371	SPAB-P10R-G18-NB-K1	553 167	SPAB-P10R-G18-NB-M8
		2x NPN	–	552 365	SPAB-P10R-G18-2N-K1	553 161	SPAB-P10R-G18-2N-M8
Pneumatic connection R1/8							
	-1 ... +1	1x PNP	1 ... 5 V	552 357	SPAB-B2R-R18-PB-K1	553 153	SPAB-B2R-R18-PB-M8
		2x PNP	–	552 351	SPAB-B2R-R18-2P-K1	553 147	SPAB-B2R-R18-2P-M8
		1x NPN	1 ... 5 V	552 360	SPAB-B2R-R18-NB-K1	553 156	SPAB-B2R-R18-NB-M8
		2x NPN	–	552 354	SPAB-B2R-R18-2N-K1	553 150	SPAB-B2R-R18-2N-M8
	0 ... 10	1x PNP	1 ... 5 V	552 369	SPAB-P10R-R18-PB-K1	553 165	SPAB-P10R-R18-PB-M8
		2x PNP	–	552 363	SPAB-P10R-R18-2P-K1	553 159	SPAB-P10R-R18-2P-M8
		1x NPN	1 ... 5 V	552 372	SPAB-P10R-R18-NB-K1	553 168	SPAB-P10R-R18-NB-M8
		2x NPN	–	552 366	SPAB-P10R-R18-2N-K1	553 162	SPAB-P10R-R18-2N-M8
Pneumatic connection NPT1/8-27							
	-1 ... +1	1x PNP	1 ... 5 V	552 358	SPAB-B2R-N18-PB-K1	553 154	SPAB-B2R-N18-PB-M8
		2x PNP	–	552 352	SPAB-B2R-N18-2P-K1	553 148	SPAB-B2R-N18-2P-M8
		1x NPN	1 ... 5 V	552 361	SPAB-B2R-N18-NB-K1	553 157	SPAB-B2R-N18-NB-M8
		2x NPN	–	552 355	SPAB-B2R-N18-2N-K1	553 151	SPAB-B2R-N18-2N-M8
	0 ... 10	1x PNP	1 ... 5 V	552 370	SPAB-P10R-N18-PB-K1	553 166	SPAB-P10R-N18-PB-M8
		2x PNP	–	552 364	SPAB-P10R-N18-2P-K1	553 160	SPAB-P10R-N18-2P-M8
		1x NPN	1 ... 5 V	552 373	SPAB-P10R-N18-NB-K1	553 169	SPAB-P10R-N18-NB-M8
		2x NPN	–	552 367	SPAB-P10R-N18-2N-K1	553 163	SPAB-P10R-N18-2N-M8

1) Connecting cable NEBU-L1... (2.5 m long) included in scope of delivery.

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Peripherals overview

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


Sensors
Sensors for pressure and vacuum

1.2

Accessories	
1	Mounting bracket
2	Front panel installation kit
3	Safety guard

Accessories	
4	Connecting cable NEBU-M8...4
5	Connecting cable NEBU-L1G4 with square, straight socket
6	Push-in fitting QSM-M5

Ordering data – Connecting cables			Technical data ➔ 261	
	Number of cores	Cable length [m]	Part No.	Type
M8x1, straight socket				
	4	2.5	541 342	NEBU-M8G4-K-2.5-LE4
		5	541 343	NEBU-M8G4-K-5-LE4
M8x1, angled socket				
	4	2.5	541 344	NEBU-M8W4-K-2.5-LE4
		5	541 345	NEBU-M8W4-K-5-LE4
Square, straight socket				
	4	2.5	552 374	NEBU-L1G4-K-2.5-LE4 ¹⁾
		5	552 375	NEBU-L1G4-K-5-LE4

1) Included in the scope of delivery with SPAB-...-K1

Ordering data – Accessories			
	Description	Part No.	Type
	Mounting bracket	552 376	SAMH-P4-A
	Front panel installation kit	552 377	SAMH-P4-F
	Safety guard	552 378	SACC-P4-G

Ordering data – Push-in fittings			
Technical data → www.festo.com/catalogue/qsm-m5			
	Pneumatic connection	For tubing O.D. [mm]	Part No. Type
	M5	4	153 304 QSM-M5-4
		6	153 306 QSM-M5-6

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Festo North America

United States

Customer Resource Center

502 Earth City Expy., Suite 125
Earth City, MO 63045

For ordering assistance, or to find
your nearest Festo Distributor,

Call: 1.800.99.FESTO

Fax: 1.800.96.FESTO

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO

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Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788
www.festo.com/us

Sales Offices

Appleton

N. 922 Tower View Drive, Suite N
Greenville, WI 54942

Boston

120 Presidential Way, Suite 330
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2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326

New York

395 Moreland Road
Hauppauge, NY 11788

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550

Design and Manufacturing Operations



East: 395 Moreland Road, Hauppauge, NY 11788



Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056



West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters

Festo Pneumatic, S.A.
Av. Ceylán 3, Col. Tequesquihuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00
Fax: 011 52 [55] 53 21 66 65
Email: festo.mexico@mx.festo.com
www.festo.com/mx



Canada

Headquarters

Festo Inc.
5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Call: 1.905.624.9000
Fax: 1.905.624.9001
Email: info.ca@ca.festo.com
www.festo.com/ca



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