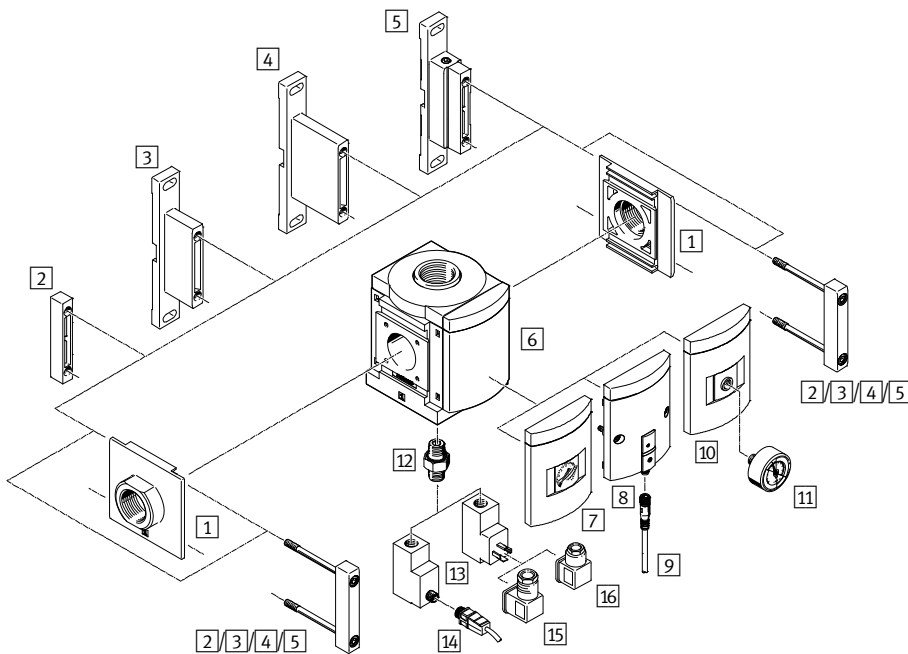


Branching modules MS-FRM, MS series, NPT



Branching modules MS9-FRM, MS series, NPT

Peripherals overview



Note

Additional accessories:

- Module connector for combination with size MS6, MS9 or MS12
- Internet: rmv, armv

| Mounting attachments and accessories | | | | |
|--------------------------------------|--|--|--|---------------------|
| | Individual component | Combination | | → Page/ Internet |
| | | With female thread N $\frac{3}{4}$ or N1 | With connecting plate AQ... Module without connecting thread, without connecting plate NG | |
| 1 | Connecting plate-SET MS9-AQ... | - | ■ | ms9-aq |
| 2 | Module connector MS9-MV | - | ■ | ms9-mv |
| 3 | Mounting bracket MS9-WP | ■ | ■ | ms9-wp |
| 4 | Mounting bracket MS9-WPB | ■ | ■ | ms9-wp |
| 5 | Mounting bracket MS9-WPM | - | ■ | ms9-wp |
| 6 | Cover plate VS | ■ | ■ | 8 |
| 7 | MS pressure gauge AG | ■ | ■ | 8 |
| 8 | Pressure sensor without display AD7 ... AD10 | ■ | ■ | 8 |
| 9 | Connecting cable NEBU-M8...-LE3 | ■ | ■ | 10 |
| 10 | Adapter plate for EN pressure gauge $\frac{1}{4}$ A4 | ■ | ■ | 8 |
| 11 | Pressure gauge MA | ■ | ■ | 10 |
| 12 | Double nipple (included in the scope of delivery) ESK | ■ | ■ | - |
| 13 | Pressure switch PEV X/Y/M12 | ■ | ■ | 8 |
| 14 | Connecting cable NEBU-M12...-LE4 | ■ | ■ | 10 |
| 15 | Angled socket PEV- $\frac{1}{4}$ -WD-LED-... | ■ | ■ | 11 |
| 16 | Plug socket MSSD-C-4P | ■ | ■ | 11 |

Branching modules MS9-FRM, MS series, NPT

FESTO

Type codes

| | | MS | 9 | - | FRM | - | NG | - | VS | - | Y |
|------------------------------------|--|----|---|---|-----|---|----|---|----|---|---|
| Series | | | | | | | | | | | |
| MS | Standard service unit | | | | | | | | | | |
| Size | | | | | | | | | | | |
| 9 | Grid dimension 90 mm | | | | | | | | | | |
| Service function | | | | | | | | | | | |
| FRM | Branching module | | | | | | | | | | |
| Pneumatic connection | | | | | | | | | | | |
| NG | Module without connecting thread, without connecting plate | | | | | | | | | | |
| Pressure gauge alternatives | | | | | | | | | | | |
| VS | Cover plate | | | | | | | | | | |
| Pressure switch | | | | | | | | | | | |
| | Without pressure switch | | | | | | | | | | |
| Y | With pressure switch | | | | | | | | | | |

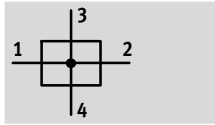
Additional variants can be ordered using the modular system → 8




- Pneumatic connection
- Pressure gauge/pressure gauge alternatives
- Alternative pressure gauge scale
- Pressure switch
- Type of mounting
- UL certification
- Flow direction

Branching modules MS9-FRM, MS series, NPT

Technical data

Function



-  - Flow rate
10,000 ... 50,000 l/min
-  - Temperature range
-10 ... +60 °C
-  - Operating pressure
0 ... 20 bar



- Pneumatic manifold with 4 connections
- Attachment facility for auxiliary modules
- Outlet at top and bottom
- Can be used as an intermediate distributor for varying air qualities
- Optional pressure sensor

| General technical data | | | | |
|---------------------------|---|---------------------------------------|--|---|
| Pneumatic connection 1, 2 | NPT $\frac{3}{4}$ -14 (Female thread) | NPT1-11 $\frac{1}{2}$ (Female thread) | NPT $\frac{1}{2}$ -14 ... NPT1 $\frac{1}{2}$ -11 $\frac{1}{2}$ (With connecting plate AQ...) | – (Module without connecting thread, without connecting plate NG) |
| Pneumatic connection 3, 4 | NPT1-11 $\frac{1}{2}$ | | | |
| Design | Branching module | | | |
| Type of mounting | Via accessories | | | |
| | In-line installation | | | |
| | Front panel mounting | | | |
| Mounting position | Any ¹⁾ | | | |
| Pressure display | Via pressure sensor for displaying output pressure via operational status indicator and electrical output | | | |
| | Via pressure gauge for displaying output pressure | | | |
| | Via pressure gauge with red/green scale for displaying output pressure | | | |
| | G $\frac{1}{4}$ prepared | | | |

1) The branching module must be mounted vertically when combined with a pressure sensor as condensate must not collect in the pressure sensor.

| Standard nominal flow rate $q_n N^1$ [l/min] | | | | | |
|--|----------------------|---|---|----------------------|----------------------|
| Pneumatic connection | Connecting plate AQR | Female thread NPT $\frac{3}{4}$ -14 or connecting plate AQS | Female thread NPT1-11 $\frac{1}{2}$ or connecting plate AQT | Connecting plate AQU | Connecting plate AQV |
| In main flow direction 1 \rightarrow 2 | 10,000 | 25,000 | 45,000 | 47,000 | 50,000 |
| Outlet at top | 13,000 | | | | |
| Outlet at bottom | 13,000 | | | | |

1) Measured at $p_1 = 6$ bar and $p_2 = 5$ bar, $\Delta p = 1$ bar

Branching modules MS9-FRM, MS series, NPT

FESTO

Technical data

| Operating and environmental conditions | | | |
|--|---|----------------------------|--------------------------|
| Variant | Standard | Pressure switch X/Y/M12 | Pressure sensor AD... |
| Operating pressure [bar] | 0 ... 20 | 0 ... 12 | 0 ... 10 |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [7:4:4] | | |
| Note on operating/pilot medium | Operation with lubricated medium possible | | |
| Ambient temperature [°C] | -10 ... +60 | -10 ... +60 | 0 ... +50 |
| Temperature of medium [°C] | -10 ... +60 | -10 ... +60 | 0 ... +50 |
| Storage temperature [°C] | -10 ... +60 | -10 ... +60 | -10 ... +60 |
| Corrosion resistance class CRC ¹⁾ | 2 | | |
| Certification (variant UL1) | cULus recognized (OL) | | |

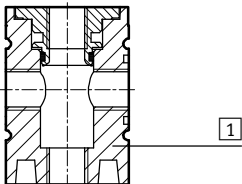
1) Corrosion resistance class CRC 2 to Festo standard FN 940070

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.

| Weight [g] | |
|--|-------|
| Branching module | 1,000 |
| Branching module with pressure switch X/Y/M12 | 1,100 |

Materials

Sectional view

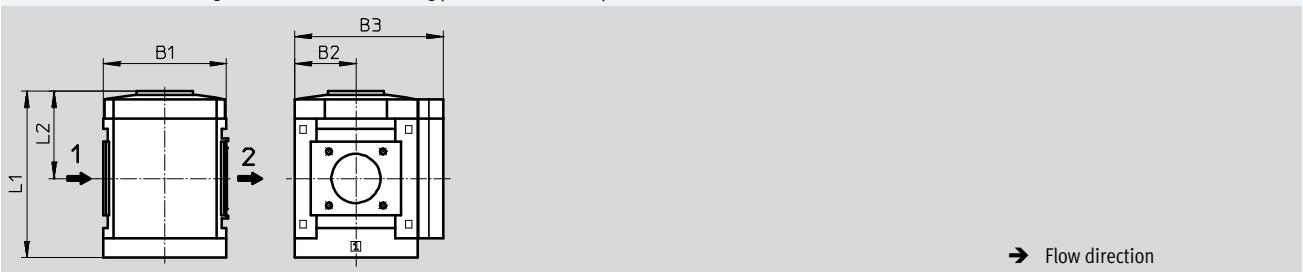


| Branching module | | |
|-------------------|--|---|
| 1 | Housing | Die-cast aluminium |
| - | Cover | PA reinforced |
| - | Connecting plate, module connector, mounting bracket | Die-cast aluminium |
| Note on materials | | RoHS-compliant |
| | | Free of copper and PTFE (not with variant AG) |

Dimensions – Basic version

Download CAD data → www.festo.com

Module without connecting thread, without connecting plate NG, with cover plate VS



| Type | B1 | B2 | B3 | L1 | L2 |
|------------|----|----|-----|-----|----|
| MS9-FRM-NG | 90 | 45 | 109 | 122 | 64 |

Branching modules MS9-FRM, MS series, NPT

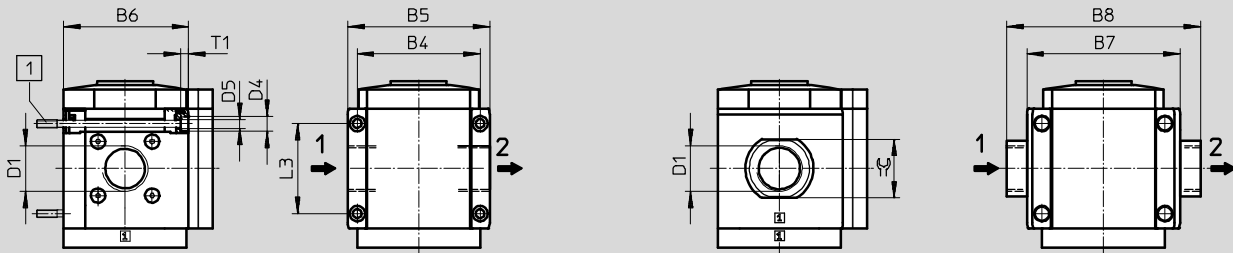
Technical data

Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

With female thread N $\frac{3}{4}$ or N1

With connecting plate AQ...



1 Mounting screw M6xmin.90 to DIN 912 (not included in the scope of delivery) for wall mounting without mounting bracket

→ Flow direction

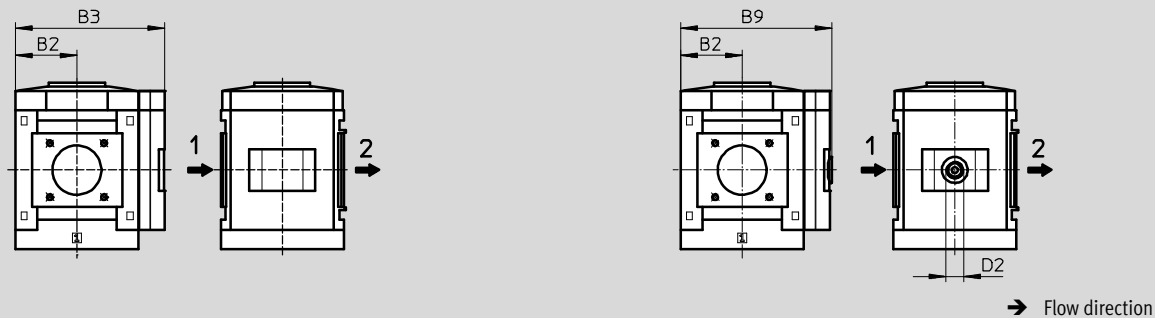
| Type | B4 | B5 | B6 | B7 | B8 | D1 | D4 | D5 | L3 | T1 | ∅ |
|-------------------------|----|-----|------|-----|-----|--------------------------------------|----|-----|----|----|----|
| MS9-FRM-N $\frac{3}{4}$ | 90 | 104 | 91.5 | - | - | NPT $\frac{3}{4}$ -14 | 11 | 6.5 | 66 | 6 | - |
| MS9-FRM-N1 | | | | | | NPT1-11 $\frac{1}{2}$ | | | | | |
| MS9-FRM-AQR | - | - | - | 112 | 132 | NPT $\frac{1}{2}$ -14 | - | - | - | - | 30 |
| MS9-FRM-AQS | | | | | 132 | NPT $\frac{3}{4}$ -14 | | | | | 36 |
| MS9-FRM-AQT | | | | | 142 | NPT1-11 $\frac{1}{2}$ | | | | | 41 |
| MS9-FRM-AQU | | | | | 162 | NPT1 $\frac{1}{4}$ -11 $\frac{1}{2}$ | | | | | 50 |
| MS9-FRM-AQV | | | | | 176 | NPT1 $\frac{1}{2}$ -11 $\frac{1}{2}$ | | | | | 55 |

Dimensions – Pressure gauge/pressure gauge alternatives

Download CAD data → www.festo.com

Integrated MS pressure gauge with standard scale AG or red/green scale RG

Adapter plate A4 for EN pressure gauge $\frac{1}{4}$, without pressure gauge



→ Flow direction

| Type | B2 | B3 | B9 | D2 |
|-------------------|----|-----|-----|-----------------|
| MS9-FRM-...-AG/RG | 45 | 109 | - | - |
| MS9-FRM-...-A4 | | - | 110 | G $\frac{1}{4}$ |

Branching modules MS9-FRM, MS series, NPT

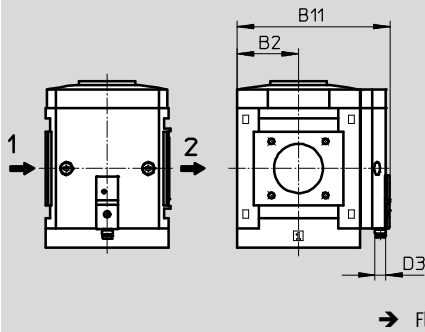
Technical data

Dimensions – Pressure gauge/pressure gauge alternatives

Pressure sensor with operational status indicator AD7 ... AD10

Download CAD data → www.festo.com

Technical data → Internet: sde5



Variant AD7:
SDE5-D10-O-...-P-M8 with 3-pin plug M8x1, threshold value comparator, 1 switching output PNP, N/O contact

Variant AD9:
SDE5-D10-O3-...-P-M8 with 3-pin plug M8x1, window comparator, 1 switching output PNP, N/O contact

Variant AD8:
SDE5-D10-C-...-P-M8 with 3-pin plug M8x1, threshold value comparator, 1 switching output PNP, N/C contact

Variant AD10:
SDE5-D10-C3-...-P-M8 with 3-pin plug M8x1, window comparator, 1 switching output PNP, N/C contact

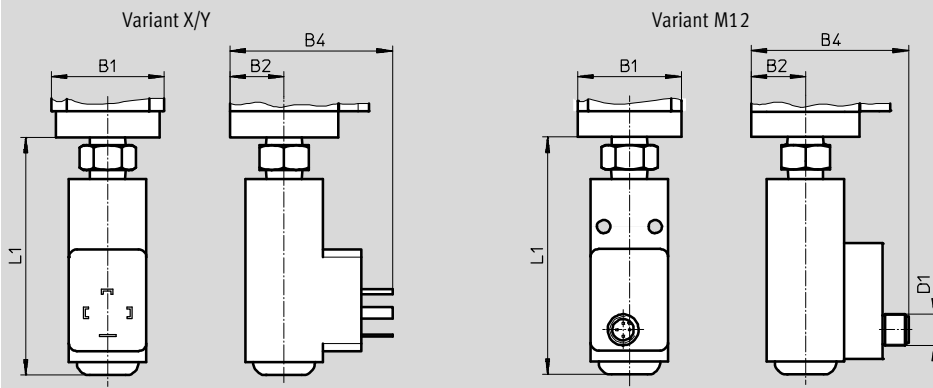
| Type | B2 | B11 | D3 |
|------------------------------|----|-----|----|
| MS9-FRM-...-AD7/AD8/AD9/AD10 | 45 | 112 | M8 |

Dimensions – Pressure switch

Pressure switch with adjustable pressure switching point X/Y/M12

Download CAD data → www.festo.com

Technical data → Internet: pev-1/4



Variant X:
PEV-1/4-SC-OD with display, plug, square design to EN 175 301, type A

Variant Y:
PEV-1/4-B-OD, plug, square design to EN 175 301, type A

Variant M12:
PEV-1/4-B-M12 with 4-pin plug M12x1

| Type | B1 | B2 | B4 | D1 | L1 |
|-----------------|----|----|----|-------|-----|
| MS9-FRM-...-X/Y | 90 | 45 | 87 | – | 105 |
| MS9-FRM-...-M12 | 90 | 45 | 85 | M12x1 | 105 |

Ordering data

| Size | Connection | Standard | | With pressure switch PEV-1/4-B-OD (variant Y) | |
|------|------------|----------|-----------------------------|---|-------------------------------|
| | | Part No. | Type | Part No. | Type |
| MS9 | – | 564148 | MS9-FRM-NG-VS ¹⁾ | 564150 | MS9-FRM-NG-VS-Y ¹⁾ |

1) Free of copper and PTFE

Branching modules MS9-FRM, MS series, NPT

Ordering data – Modular products

M **Mandatory data** →

| Module No. | Series | Size | Function | Pneumatic connection |
|-------------------------|-----------|----------|--------------|---|
| 562534 | MS | 9 | FRM | N $\frac{3}{4}$, N1, AQR, AQS, AQT, AQU, AQV, NG |
| Ordering example | | | | |
| 562534 | MS | 9 | - FRM | - AQS |

| Ordering table | | Grid dimension | [mm] | 90 | Condi- tions | Code | Enter code |
|----------------|----------------------|--|------|----|-----------------|-----------------------------------|---------------|
| M | Module No. | 562534 | | | | | |
| | Series | Standard | | | | MS | MS |
| | Size | 9 | | | | 9 | 9 |
| | Function | Branching module | | | | -FRM | -FRM |
| | Pneumatic connection | Female thread NPT $\frac{3}{4}$ | | | | -N$\frac{3}{4}$ | |
| | | Female thread NPT1 | | | | -N1 | |
| | | Connecting plate NPT $\frac{1}{2}$ | | | | -AQR | |
| | | Connecting plate NPT $\frac{3}{4}$ | | | | -AQS | |
| | | Connecting plate NPT1 | | | | -AQT | |
| | | Connecting plate NPT1 $\frac{1}{4}$ | | | | -AQU | |
| | | Connecting plate NPT1 $\frac{1}{2}$ | | | | -AQV | |
| | | Module without connecting thread, without connecting plate | | | | -NG | |

Transfer order code

| | | | | | | |
|---------------|-----------|----------|---|------------|---|--|
| 562534 | MS | 9 | - | FRM | - | |
|---------------|-----------|----------|---|------------|---|--|

Branching modules MS9-FRM, MS series, NPT

Ordering data – Modular products

FESTO

| → M | | O Options | | | |
|--|---|------------------------|-------------------------|-------------------------|-----------------------|
| Pressure gauge/ pressure gauge alternatives | Alternative pressure gauge scale | Pressure switch | Type of mounting | UL certification | Flow direction |
| AG, VS, A4, RG, AD7 ... AD10 | PSI, MPA, BAR | X, Y, M12 | WP, WPM, WPB | UL1 | Z |
| - VS | | | | | |

| Ordering table | | | | | |
|---|--|----|-----------------|--------------|---------------|
| Grid dimension | [mm] | 90 | Condi- tions | Code | Enter code |
| M Pressure gauge/pressure gauge alternatives | MS pressure gauge | | | -AG | |
| | Cover plate | | | -VS | |
| | Adapter plate for EN pressure gauge 1/4, without pressure gauge | | | -A4 | |
| | Integrated pressure gauge, red/green scale | | 1 | -RG | |
| | Pressure sensor with operational status indicator, plug M8, threshold value comparator, PNP, N/O contact | | 2 | -AD7 | |
| | Pressure sensor with operational status indicator, plug M8, threshold value comparator, PNP, N/C contact | | 2 | -AD8 | |
| | Pressure sensor with operational status indicator, plug M8, window comparator, PNP, N/O contact | | 2 | -AD9 | |
| | Pressure sensor with operational status indicator, plug M8, window comparator, PNP, N/C contact | | 2 | -AD10 | |
| O Alternative pressure gauge scale | PSI | | 3 | -PSI | |
| | MPa | | 3 | -MPA | |
| | Bar | | 3 | -BAR | |
| Pressure switch | Pressure switch PEV with display, plug socket, EN175301, type A, cube | | 4 | -X | |
| | Pressure switch PEV without display, plug socket, EN 175301, type A, cube | | 4 | -Y | |
| | Pressure switch PEV without display, plug socket, round, M12, 4-pin | | 4 | -M12 | |
| Type of mounting | Mounting bracket | | 5 | -WP | |
| | Mounting bracket | | 5 | -WPM | |
| | Mounting bracket for large wall gap | | 5 | -WPB | |
| UL certification | cULus, ordinary location for Canada and USA | | | -UL1 | |
| Flow direction | Flow direction from right to left | | | -Z | |


- | | | | |
|-------------------------------|---|------------------------------|---|
| 1 RG | Not with alternative pressure gauge scale PSI, PSI scale serves only as an auxiliary scale | 4 X, Y, M12 | Max. permissible operating pressure P1 = 12 bar |
| 2 AD7 ... AD10 | Measuring range max. 10 bar | 5 WP, WPM, WPB | Not with module NG |
| 3 PSI, MPA, BAR | Not with pressure gauge alternatives VS, A4, AD7, AD8, AD9, AD10 | | |

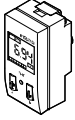
Transfer order code



- - - - - -



Branching modules MS-FRM, MS series, NPT

Accessories

| Ordering data – Pressure gauge MA | | | | | | |
|---|--|----------------------|---------------|-----------|--------------------------------|--------------------------------|
| | Nominal size | Pneumatic connection | Display range | | Part No. | Type |
| | | | [bar] | [psi] | | |
|  | Pressure gauge MA, EN 837-1 Technical data → Internet: ma | | | | | |
| | 40 | R $\frac{1}{4}$ | 0 ... 16 | 0 ... 232 | 187080 | MA-40-16-R $\frac{1}{4}$ -EN |
| | | G $\frac{1}{4}$ | 0 ... 16 | 0 ... 232 | 183901 | MA-40-16-G $\frac{1}{4}$ -EN |
| | Pressure gauge MA, EN 837-1, with red-green range Technical data → Internet: ma | | | | | |
| | 40 | R $\frac{1}{8}$ | 0 ... 16 | – | 525726 | MA-40-16-R $\frac{1}{8}$ -E-RG |
| 50 | R $\frac{1}{4}$ | 0 ... 16 | – | 525729 | MA-50-16-R $\frac{1}{4}$ -E-RG | |

| Ordering data – Pressure sensor SDE1 | | | | | | Technical data → Internet: sde1 | |
|--|-----------------------------|-------------------------|--|-----------------|-----------------|---------------------------------|-------------------------|
| | Pneumatic connection | Electrical output | Electrical connection | Display | Part No. | Type | |
| Pressure sensor SDE1 for direct mounting on the service unit with pressure gauge connection (adapter plate for pneumatic connection included in scope of delivery), pressure measurement range 0 ... 10 bar, relative pressure measurement | | | | | | | |
|  | Male thread R $\frac{1}{8}$ | 1 switching output PNP | M8x1, 3-pin | LCD | 192026 | SDE1-D10-G2-R18-C-P1-M8 | |
| | | | M8x1, 3-pin | Illuminated LCD | 529970 | SDE1-D10-G2-R18-L-P1-M8 | |
| | | | M12x1, 3-pin | Illuminated LCD | 534064 | SDE1-D10-G2-R18-L-P1-M12 | |
| | | 2 switching outputs PNP | M8x1, 4-pin | LCD | 192027 | SDE1-D10-G2-R18-C-P2-M8 | |
| | | | 1 switching output PNP and 0 ... 10 V analogue | M8x1, 4-pin | LCD | 529958 | SDE1-D10-G2-R18-C-PU-M8 |
| | | | | M8x1, 4-pin | Illuminated LCD | 529972 | SDE1-D10-G2-R18-L-PU-M8 |
| | Male thread R $\frac{1}{4}$ | 1 switching output PNP | M8x1, 3-pin | LCD | 192028 | SDE1-D10-G2-R14-C-P1-M8 | |
| | | | M8x1, 3-pin | Illuminated LCD | 529967 | SDE1-D10-G2-R14-L-P1-M8 | |
| | | | M12x1, 3-pin | Illuminated LCD | 534157 | SDE1-D10-G2-R14-L-P1-M12 | |
| | | 2 switching outputs PNP | M8x1, 4-pin | LCD | 192029 | SDE1-D10-G2-R14-C-P2-M8 | |
| | | | 1 switching output PNP and 0 ... 10 V analogue | M8x1, 4-pin | LCD | 529968 | SDE1-D10-G2-R14-L-P2-M8 |
| | | | | M8x1, 4-pin | Illuminated LCD | 529957 | SDE1-D10-G2-R14-C-PU-M8 |
| | | | M8x1, 4-pin | Illuminated LCD | 529969 | SDE1-D10-G2-R14-L-PU-M8 | |


| Ordering data – Connecting cable NEBU-M8 | | | | | Technical data → Internet: nebu |
|---|-----------------------|-----------------|------------------|----------|---------------------------------|
| | Electrical connection | Number of wires | Cable length [m] | Part No. | Type |
|  | M8x1, straight socket | 3 | 2.5 | 541333 | NEBU-M8G3-K-2.5-LE3 |
| | | | 5 | 541334 | NEBU-M8G3-K-5-LE3 |
| | | 4 | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 |
| | | | 5 | 541343 | NEBU-M8G4-K-5-LE4 |
|  | M8x1, angled socket | 3 | 2.5 | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | | 5 | 541341 | NEBU-M8W3-K-5-LE3 |
| | | 4 | 2.5 | 541344 | NEBU-M8W4-K-2.5-LE4 |
| | | | 5 | 541345 | NEBU-M8W4-K-5-LE4 |


| Ordering data – Connecting cable NEBU-M12 | | | | | Technical data → Internet: nebu |
|---|------------------------|-----------------|------------------|----------|---------------------------------|
| | Electrical connection | Number of wires | Cable length [m] | Part No. | Type |
|  | M12x1, straight socket | 3 | 2.5 | 541363 | NEBU-M12G5-K-2.5-LE3 |
| | | | 5 | 541364 | NEBU-M12G5-K-5-LE3 |
| | | 4 | 2.5 | 550326 | NEBU-M12G5-K-2.5-LE4 |
| | | | 5 | 541328 | NEBU-M12G5-K-5-LE4 |
|  | M12x1, angled socket | 3 | 2.5 | 541367 | NEBU-M12W5-K-2.5-LE3 |
| | | | 5 | 541370 | NEBU-M12W5-K-5-LE3 |
| | | 4 | 2.5 | 550325 | NEBU-M12W5-K-2.5-LE4 |
| | | | 5 | 541329 | NEBU-M12W5-K-5-LE4 |


Branching modules MS-FRM, MS series, NPT

FESTO

Accessories

| Ordering data – Angled socket PEV | | | | | Technical data → Internet: pev-1/4 | |
|---|--------------------|--------------------------|-----------------------|--------------------------|------------------------------------|---------------------------|
| | Description | Operating voltage range | Electrical connection | Switching status display | Part No. | Type |
|  | For PEV-1/4-...-OD | 15 ... 30 V DC | 4-pin | Yellow LED | 164274 | PEV-1/4-WD-LED-24 |
| | | ≤ 230 V AC ≤ 180 V DC | 4-pin | Yellow LED | 164275 | PEV-1/4-WD-LED-230 |

| Ordering data – Plug socket MSSD | | | | | Technical data → Internet: mssd-c-4p | |
|---|--------------------|-------------------------|-----------------------|------------------------------------|--------------------------------------|------------------|
| | Description | Operating voltage range | Electrical connection | Type of mounting: cable connection | Part No. | Type |
|  | For PEV-1/4-...-OD | ≤ 250 V AC/DC | 3-pin | Clamping screws | 171157 | MSSD-C-4P |

| Ordering data – Double nipple ESK | | | | | |
|---|--|----------------------|------|---------------|--------------------|
| | Description | Pneumatic connection | | Part No. | Type |
|  | Adjustable for angular compensation • For retrofitting pressure switch PEV to branching module MS-FRM | R1/4 | R1/4 | 151521 | ESK-1/4-1/4 |
| | | | R1/2 | 534153 | ESK-1/4-1/2 |

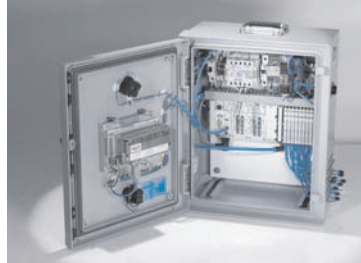
Product Range and Company Overview

A Complete Suite and Company Overview

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drivers



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 16,000 employees in 60 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

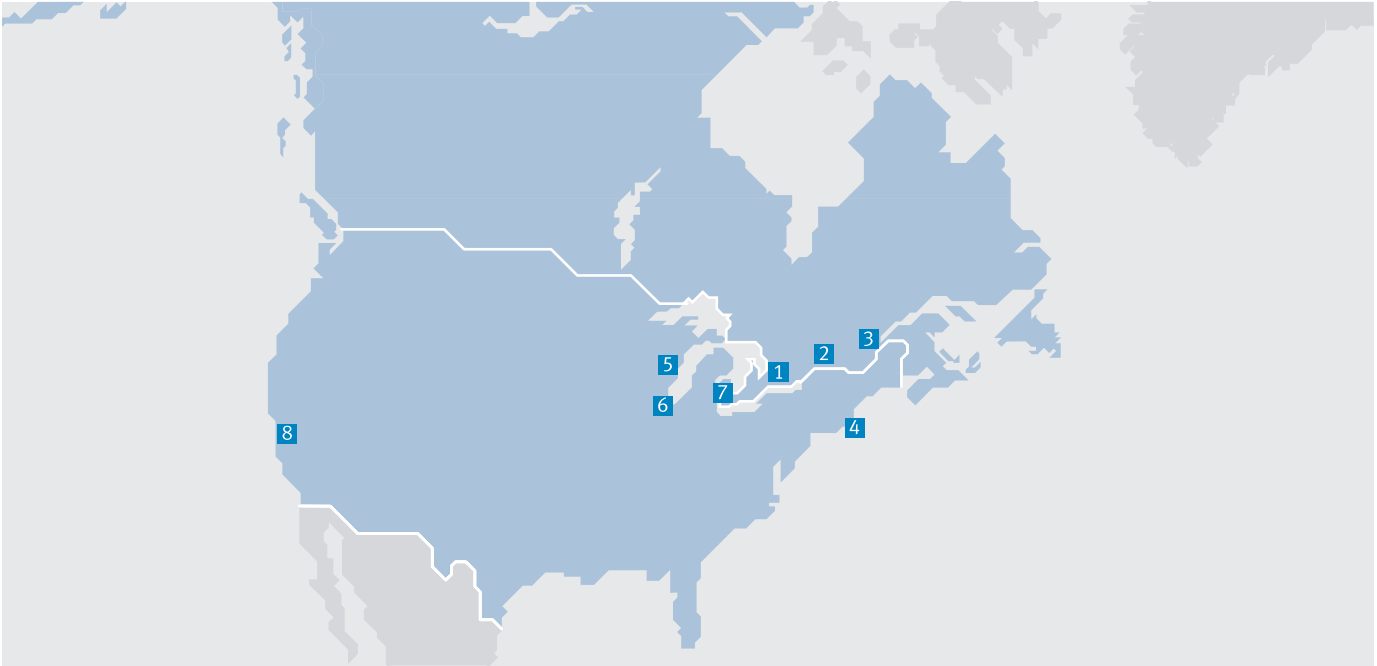


© Copyright 2013, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmental friendly printing plant.

Festo North America



**1 Festo Canada
Headquarters
Festo Inc.**
5300 Explorer Drive
Mississauga, ON
L4W 5G4

2 Montréal
5600, Trans-Canada
Pointe-Claire, QC
H9R 1B6

3 Québec City
2930, rue Watt#117
Québec, QC
G1X 4G3



**4 Festo United States
Headquarters
Festo Corporation**
395 Moreland Road
Hauppauge, NY
11788

5 Appleton
North 922 Tower View Drive, Suite N
Greenville, WI
54942

7 Detroit
1441 West Long Lake Road
Troy, MI
48098

6 Chicago
85 W Algonquin - Suite 340
Arlington Heights, IL
60005

8 Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA
94550

Festo Regional Contact Center

Canadian Customers

Commercial Support:
Tel: 1 877 GO FESTO (1 877 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: festo.canada@ca.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 877 FX FESTO (1 877 393 3786)
Email: technical.support@ca.festo.com

USA Customers

Commercial Support:
Tel: 1 800 99 FESTO (1 800 993 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: customer.service@us.festo.com

Technical Support:
Tel: 1 866 GO FESTO (1 866 463 3786)
Fax: 1 800 96 FESTO (1 800 963 3786)
Email: product.support@us.festo.com