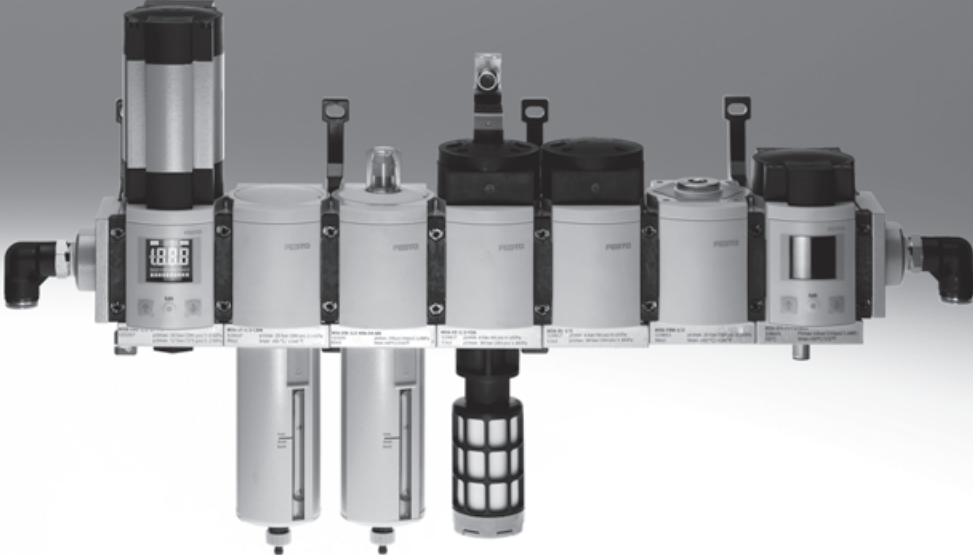
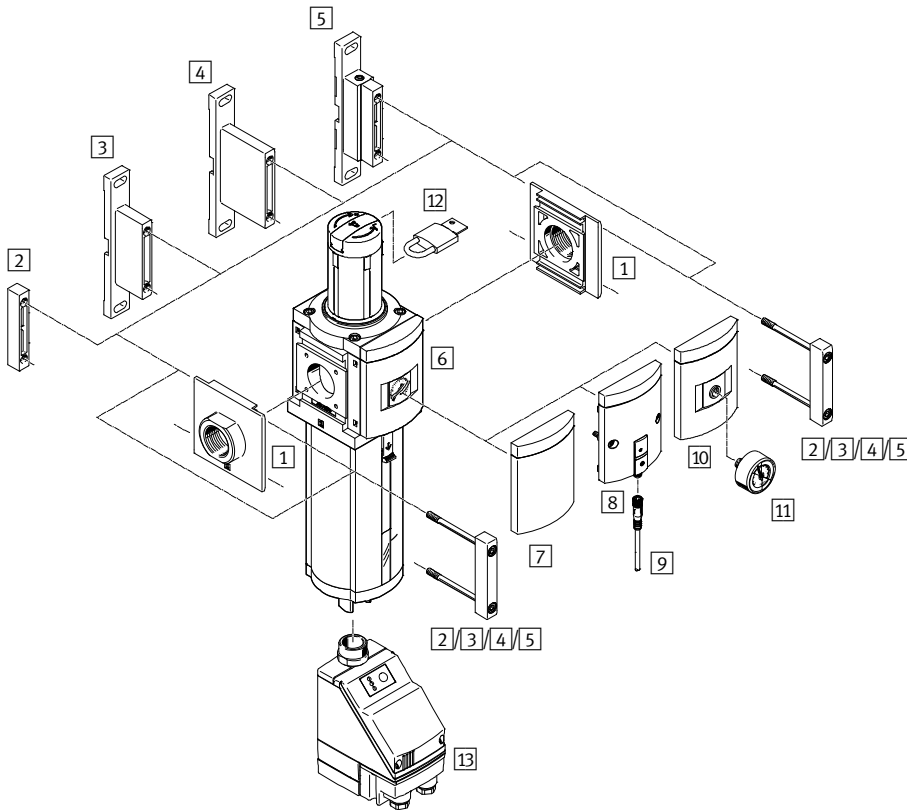



Filter regulators MS-LFR, MS series, NPT



Filter regulators MS9-LFR, MS series, NPT

Peripherals overview



 Note
Additional accessories:
– Module connector for combinations with size MS6, MS9 or MS12
→ Internet: rmv, armv

| Mounting attachments and accessories | | | | | |
|--------------------------------------|-------------------------------------------------------------------|------------------------------------------|-----------------------------|------------------------------------------------------------------------------|---------------------|
| | | Individual unit | | Combination Module without connecting thread, without connecting plate NG | → Page/ Internet |
| | | With female thread N $\frac{3}{4}$ or N1 | With connecting plate AQ... | | |
| 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 | MS pressure gauge AG | ■ | ■ | ■ | 12 |
| 7 | Cover plate VS | ■ | ■ | ■ | 12 |
| 8 | Pressure sensor without display AD7 ... AD10 | ■ | ■ | ■ | 12 |
| 9 | Connecting cable NEBU-M8...-LE3 | ■ | ■ | ■ | 15 |
| 10 | Adapter plate for EN pressure gauge $\frac{1}{4}$ A4 | ■ | ■ | ■ | 12 |
| 11 | Pressure gauge MA | ■ | ■ | ■ | 15 |
| 12 | Padlock LRVS-D | ■ | ■ | ■ | 15 |
| 13 | Condensate drain, fully automatic, electrically actuated E2/E3/E4 | ■ | ■ | ■ | 12 |

Filter regulators MS9-LFR, MS series, NPT

Type codes

| | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------|------------------------------------------------------------|----|---|---|-----|---|----|---|----|---|---|---|---|---|----|---|----|---|-----|---|----|
| | | MS | 9 | - | LFR | - | NG | - | D6 | - | E | U | M | - | DI | - | AG | - | PSI | - | AS |
| Series | | | | | | | | | | | | | | | | | | | | | |
| MS | Standard service unit | | | | | | | | | | | | | | | | | | | | |
| Size | | | | | | | | | | | | | | | | | | | | | |
| 9 | Grid dimension 90 mm | | | | | | | | | | | | | | | | | | | | |
| Service function | | | | | | | | | | | | | | | | | | | | | |
| LFR | Filter regulator | | | | | | | | | | | | | | | | | | | | |
| Connection size | | | | | | | | | | | | | | | | | | | | | |
| NG | Module without connecting thread, without connecting plate | | | | | | | | | | | | | | | | | | | | |
| Pressure regulation range/operation mode | | | | | | | | | | | | | | | | | | | | | |
| D6 | 0.5 ... 7 bar, manually operated | | | | | | | | | | | | | | | | | | | | |
| Grade of filtration | | | | | | | | | | | | | | | | | | | | | |
| C | 5 µm | | | | | | | | | | | | | | | | | | | | |
| E | 40 µm | | | | | | | | | | | | | | | | | | | | |
| Bowl guard | | | | | | | | | | | | | | | | | | | | | |
| U | Integrated as metal bowl | | | | | | | | | | | | | | | | | | | | |
| Condensate drain | | | | | | | | | | | | | | | | | | | | | |
| M | Manual rotary | | | | | | | | | | | | | | | | | | | | |
| V | Fully automatic | | | | | | | | | | | | | | | | | | | | |
| Regulator type | | | | | | | | | | | | | | | | | | | | | |
| | Piloted | | | | | | | | | | | | | | | | | | | | |
| DI | Directly actuated | | | | | | | | | | | | | | | | | | | | |
| Pressure gauge | | | | | | | | | | | | | | | | | | | | | |
| AG | MS pressure gauge | | | | | | | | | | | | | | | | | | | | |
| Pressure gauge scale | | | | | | | | | | | | | | | | | | | | | |
| PSI | Psi | | | | | | | | | | | | | | | | | | | | |
| Security | | | | | | | | | | | | | | | | | | | | | |
| AS | Rotary knob with detent, can be locked using accessories | | | | | | | | | | | | | | | | | | | | |

Additional variants can be ordered using the modular system → 12

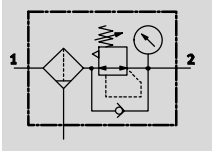
- Connecting plates
- Pressure regulation range
- Condensate drain
- Pressure gauge alternatives
- Alternative pressure gauge scale
- Secondary venting
- Security lock
- Type of mounting
- UL certification
- Alternative flow direction




Filter regulators MS9-LFR, MS series, NPT

Technical data

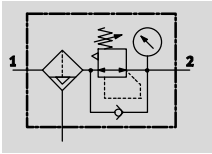
FESTO

Manual rotary condensate drain, with pressure gauge



-  - Flow rate
6,000 ... 23,000 l/min
-  - Temperature range
-10 ... +60 °C
-  - Supply pressure
1 ... 20 bar

Semi or fully automatic condensate drain, with pressure gauge



With this component, the filter and pressure regulator are combined into a single unit. The sintered filter with water separator removes contamination, pipe sinter, rust and condensate from the compressed air.

- Good regulation characteristics with low hysteresis and primary pressure compensation
- Good particle and condensate separation
- Piloted or directly actuated filter-diaphragm regulator
- High flow rates
- Available with or without secondary venting
- Four pressure regulation ranges: 0.5 ... 4 bar, 0.5 ... 7 bar, 0.5 ... 12 bar and 0.5 ... 16 bar
- Actuator lock to protect set values against adjustment
- Pressure gauge connection for different fitting options
- Available with manual, semi-automatic, fully automatic or fully automatic, electrically actuated condensate drain
- Optional pressure sensor
- Choice of filter cartridges: 5 µm or 40 µm
- New filter cartridges → 14



| General technical data | | | | | |
|------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------|----------------------------------|
| Pneumatic connection 1, 2 | | NPT3/4-14 | NPT1-11½ | NPT1/2-14 ... NPT1½-11½ (with connecting plate AQ...) | - (without connecting thread NG) |
| Design | | Piloted filter-diaphragm regulator | | | |
| | | Directly actuated filter-diaphragm regulator | | | |
| Regulator type | Piloted | Output pressure constant, with return flow action, with primary pressure compensation, with secondary venting | | | |
| | Directly actuated | Output pressure constant, with return flow action, with/without secondary venting | | | |
| Type of mounting | | Via accessories | | | |
| | | In-line installation | | | |
| Mounting position | | Vertical ±5° | | | |
| Grade of filtration | µm | 5 (air purity class at the output: compressed air in accordance with ISO 8573-1:2010 [6:4:4]) | | | |
| | | 40 (air purity class at the output: compressed air in accordance with ISO 8573-1:2010 [7:4:4]) | | | |
| Bowl guard | | Integrated as metal bowl | | | |
| Condensate drain | | Manual rotary | | | |
| | | Semi-automatic | | | |
| | | Fully automatic | | | |
| | | Fully automatic, electrically actuated | | | |
| Security | | Rotary knob with detent | | | |
| | | Rotary knob with detent, can be locked using accessories | | | |
| | | Rotary knob with integrated lock | | | |
| Pressure regulation range/operation mode | D5 [bar] | 0.5 ... 4, manually operated | | | |
| | D6 [bar] | 0.5 ... 7, manually operated | | | |
| | D7 [bar] | 0.5 ... 12, manually operated (0.5 ... 10 with pressure sensor variant AD...) | | | |
| | D8 [bar] | 0.5 ... 16, manually operated (0.5 ... 10 with pressure sensor variant AD...) | | | |
| Max. pressure hysteresis | [bar] | 0.4 | | | |
| 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 | | | |
| | | G¼ prepared | | | |
| Max. condensate volume | [ml] | 220 | | | |

Filter regulators MS9-LFR, MS series, NPT

Technical data

FESTO

| Standard nominal flow rate $q_{nN}^{1)2)}$ [l/min] | | | | | |
|------------------------------------------------------|------------------------------------|----------------------|-----------------------|-------------------------------------------------|-----------------------|
| Design | Piloted filter-diaphragm regulator | | | Directly actuated filter-diaphragm regulator DI | |
| Pneumatic connection | NPT $\frac{3}{4}$ -14 | | NPT1-11 $\frac{1}{2}$ | NPT $\frac{3}{4}$ -14 | NPT1-11 $\frac{1}{2}$ |
| D5 – Pressure regulation range 0.5 ... 4 bar | | | | | |
| Grade of filtration | 5 μ m | 17,000 ³⁾ | 20,000 ³⁾ | 16,000 ³⁾ | 18,000 ³⁾ |
| | 40 μ m | 18,000 ³⁾ | 23,000 ³⁾ | 16,000 ³⁾ | 20,000 ³⁾ |
| D6 – Pressure regulation range 0.5 ... 7 bar | | | | | |
| Grade of filtration | 5 μ m | 15,000 | 18,000 | 12,000 | 10,000 |
| | 40 μ m | 16,000 | 20,000 | 12,000 | 10,000 |
| D7 – Pressure regulation range 0.5 ... 12 bar | | | | | |
| Grade of filtration | 5 μ m | 15,000 | 18,000 | – | – |
| | 40 μ m | 16,000 | 20,000 | – | – |
| D8 – Pressure regulation range 0.5 ... 16 bar | | | | | |
| Grade of filtration | 5 μ m | 15,000 | 18,000 | – | – |
| | 40 μ m | 16,000 | 20,000 | – | – |

1) All values $\pm 15\%$

2) Measured at $p_1 = 10$ bar and $p_2 = 6$ bar, $\Delta p = 1$ bar

3) Measured at $p_1 = 10$ bar and $p_2 = 4$ bar, $\Delta p = 1$ bar

| Operating and environmental conditions | | | | | |
|----------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|--|
| Condensate drain | Manual rotary | Semi-automatic | Fully automatic | Fully automatic, electrically actuated | |
| | M | H | V | E2/E3/E4 | |
| Operating pressure [bar] | 1 ... 20 | 1.5 ... 12 | 2 ... 12 | 1 ... 16 | |
| Operating medium | Compressed air in accordance with ISO 8573-1:2010 [-:4:-] | Compressed air in accordance with ISO 8573-1:2010 [-:4:-] | Compressed air in accordance with ISO 8573-1:2010 [7:4:-] | Compressed air in accordance with ISO 8573-1:2010 [-:4:-] | |
| Ambient temperature [°C] | -10 ... +60 | +5 ... +60 | +5 ... +60 | +1 ... +60 | |
| Ambient temperature with pressure sensor AD [°C] | 0 ... +50 | +5 ... +50 | +5 ... +50 | +1 ... +50 | |
| Temperature of medium [°C] | -10 ... +60 | +5 ... +60 | +5 ... +60 | +1 ... +60 | |
| Temperature of medium with pressure sensor AD [°C] | 0 ... +50 | +5 ... +50 | +5 ... +50 | +1 ... +50 | |
| Storage temperature [°C] | -10 ... +60 | +5 ... +60 | +5 ... +60 | +1 ... +60 | |
| Corrosion resistance class CRC ¹⁾ | 2 | | | | |
| Certification (variant UL1) | cULus recognized (OL) | | | | |

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

| Weight [g] | | |
|---------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|
| Rotary knob | Without integrated lock E11 | With integrated lock E11 |
| Filter regulator with metal bowl U | 2,400 | 2,700 |
| Filter regulator with metal bowl U and fully automatic condensate drain, electrically actuated E2/E3/E4 | 2,800 | 3,100 |

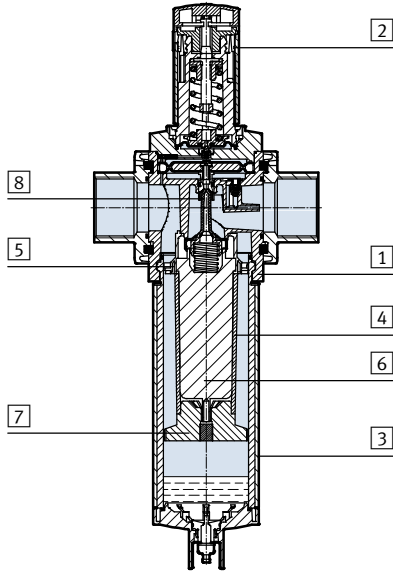
Filter regulators MS9-LFR, MS series, NPT

Technical data

FESTO

Materials

Sectional view



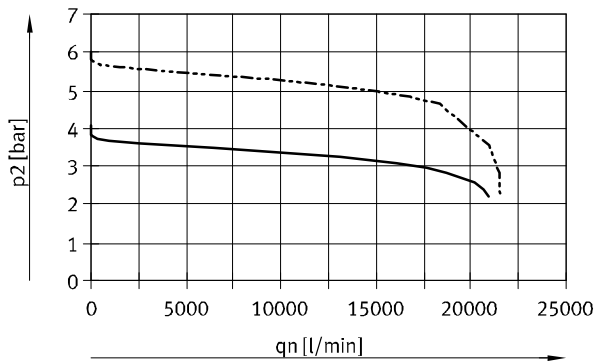
Filter regulator

| | | |
|-------------------|------------------------------------------------------|------------------------------------------------|
| 1 | Housing | Die-cast aluminium |
| 2 | Rotary knob | PA |
| | Rotary knob with integrated lock E11 | Aluminium |
| 3 | Bowl | Wrought aluminium alloy |
| | Inspection window | PA |
| 4 | Filter element | PE |
| 5 | Spin disc | POM |
| 6 | Filter holder | POM |
| 7 | Separating plate | POM |
| 8 | Valve stem | Wrought aluminium alloy, NBR, POM |
| - | Cover | PA reinforced |
| - | Connecting plate, module connector, mounting bracket | Die-cast aluminium |
| - | Seals, diaphragm | NBR |
| Note on materials | | RoHS-compliant (not with variant E2, E3 or E4) |

Standard flow rate q_n as a function of output pressure p_2 at operating pressure $p_1 = 10$ bar

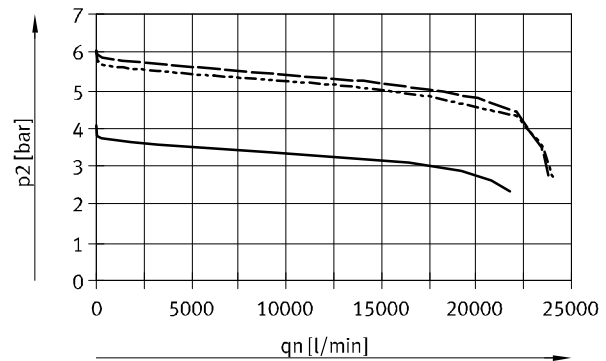
Piloted filter-diaphragm regulator

Grade of filtration 5 μm , pneumatic connection NPT $\frac{3}{4}$ -14



— D5: 0.5 ... 4 bar
 - - - D6: 0.5 ... 7 bar,
 . . . D7: 0.5 ... 12 bar,
 - . - D8: 0.5 ... 16 bar

Grade of filtration 40 μm , pneumatic connection NPT $\frac{3}{4}$ -14



— D5: 0.5 ... 4 bar
 - - - D6: 0.5 ... 7 bar,
 . . . D8: 0.5 ... 16 bar
 - . - D7: 0.5 ... 12 bar

Filter regulators MS9-LFR, MS series, NPT

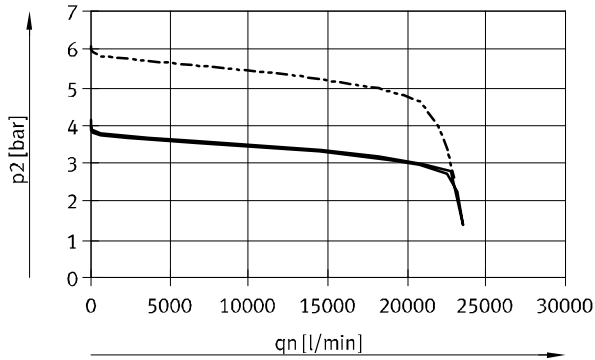
Technical data

FESTO

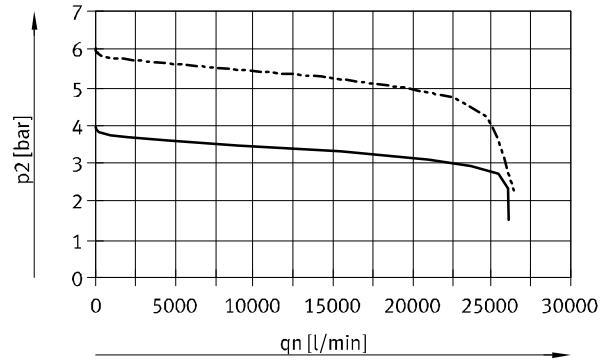
Standard flow rate q_n as a function of output pressure p_2 at operating pressure $p_1 = 10$ bar

Piloted filter-diaphragm regulator

Grade of filtration 5 μm , pneumatic connection NPT1-11 $\frac{1}{2}$



Grade of filtration 40 μm , pneumatic connection NPT1-11 $\frac{1}{2}$

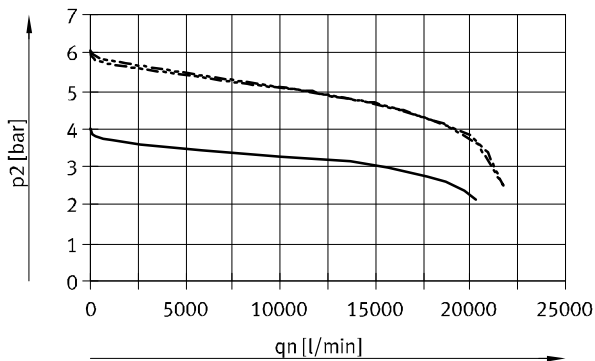


- D5: 0.5 ... 4 bar
- - - D6: 0.5 ... 7 bar,
- D7: 0.5 ... 12 bar,
- D8: 0.5 ... 16 bar

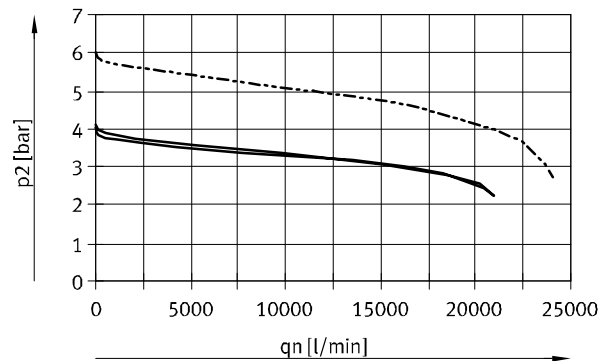
Standard flow rate q_n as a function of output pressure p_2 at operating pressure $p_1 = 10$ bar

Directly actuated filter-diaphragm regulator DI

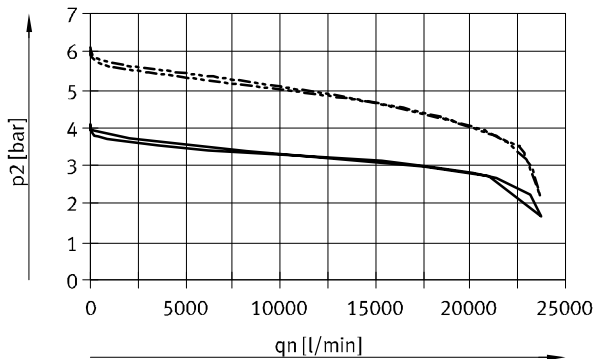
Grade of filtration 5 μm , pneumatic connection NPT $\frac{3}{4}$ -14



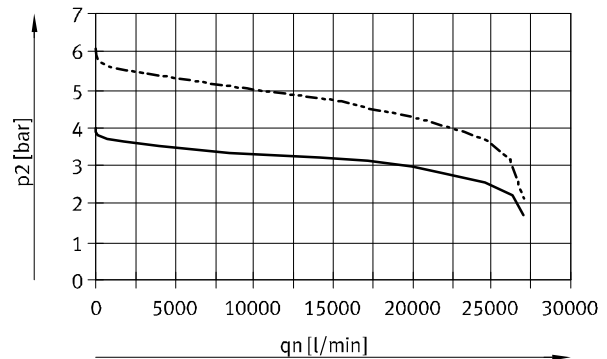
Grade of filtration 40 μm , pneumatic connection NPT $\frac{3}{4}$ -14



Grade of filtration 5 μm , pneumatic connection NPT1-11 $\frac{1}{2}$



Grade of filtration 40 μm , pneumatic connection NPT1-11 $\frac{1}{2}$



- D5: 0.5 ... 4 bar
- - - D6: 0.5 ... 7 bar

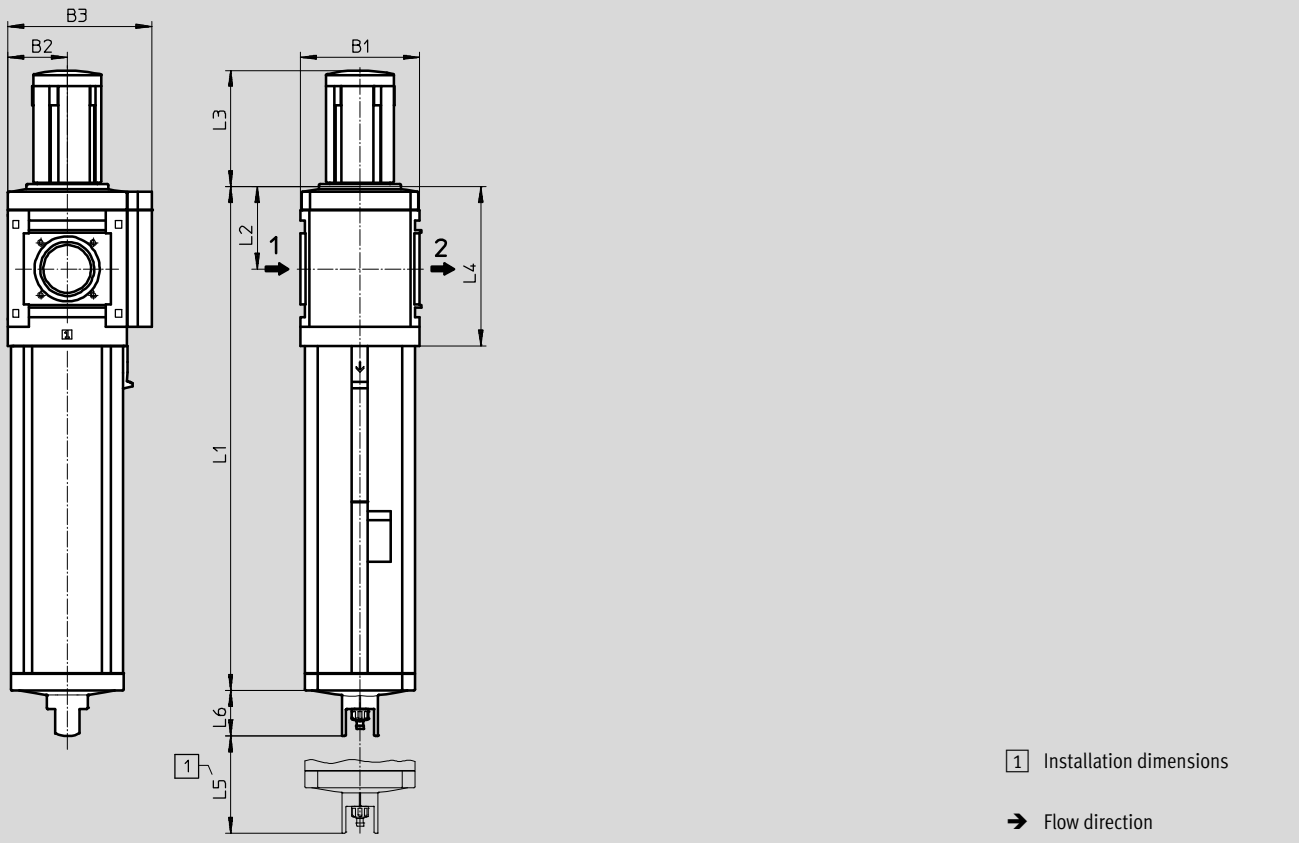
Filter regulators MS9-LFR, MS series, NPT

Technical data

Dimensions – Basic version

Download CAD data → www.festo.com

Without connecting thread NG, cover plate VS, rotary knob with detent



| Type | B1 | B2 | B3 | L1 | | L2 | | L3 | L4 | | L5 | L6 |
|------------|----|----|-----|----------------|----------------------|----------------|----------------------|----|----------------|----------------------|-----|------|
| | | | | pilot actuated | directly actuated DI | pilot actuated | directly actuated DI | | pilot actuated | directly actuated DI | | |
| MS9-LFR-NG | 90 | 45 | 109 | 320 | 313 | 69 | 62 | 86 | 127 | 120 | 150 | 34.5 |

Filter regulators MS9-LFR, MS series, NPT

Technical data

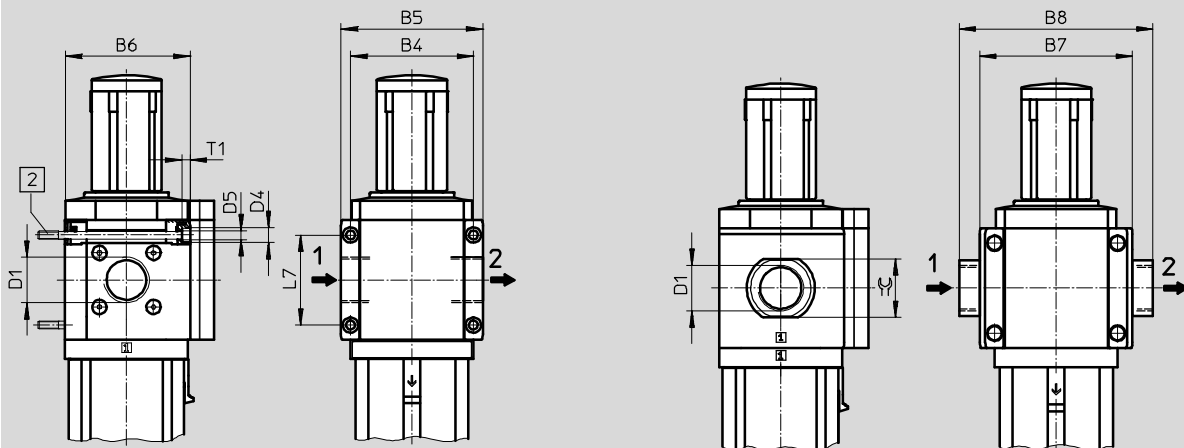
FESTO

Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

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

With connecting plate AQ...



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

→ Flow direction

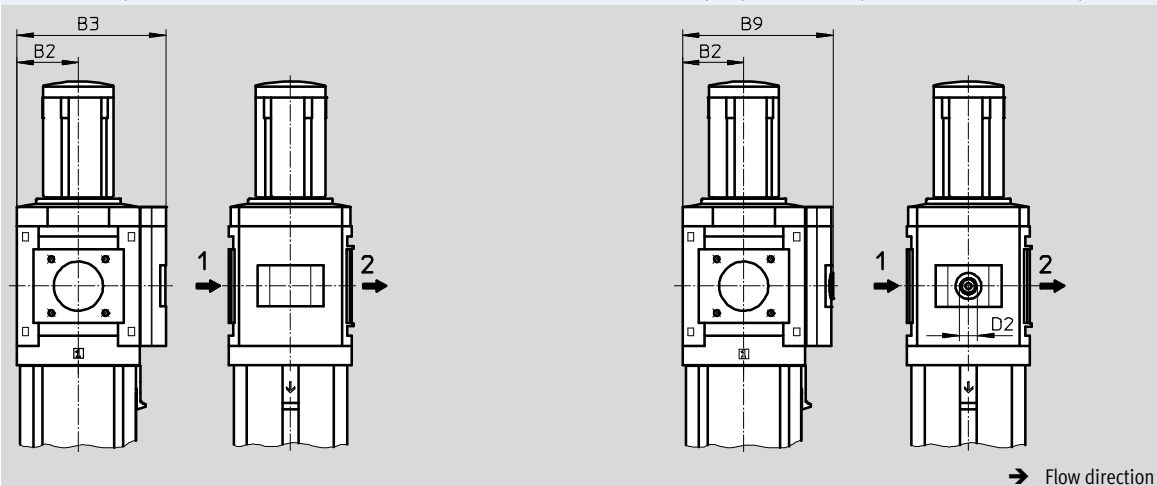
| Type | B4 | B5 | B6 | B7 | B8 | D1 | D4 | D5 | L7 | T1 | ⊕ |
|-------------------------|----|-----|------|-----|-----|--------------------------------------|----|-----|----|----|----|
| MS9-LFR-N $\frac{3}{4}$ | 90 | 104 | 91.5 | - | - | NPT $\frac{3}{4}$ -14 | 11 | 6.5 | 66 | 6 | - |
| MS9-LFR-N1 | | | | | | NPT1-11 $\frac{1}{2}$ | | | | | |
| MS9-LFR-AQR | - | - | - | 112 | 132 | NPT $\frac{1}{2}$ -14 | - | - | - | - | 30 |
| MS9-LFR-AQS | | | | | 132 | NPT $\frac{3}{4}$ -14 | | | | | 36 |
| MS9-LFR-AQT | | | | | 142 | NPT1-11 $\frac{1}{2}$ | | | | | 41 |
| MS9-LFR-AQU | | | | | 162 | NPT1 $\frac{1}{4}$ -11 $\frac{1}{2}$ | | | | | 50 |
| MS9-LFR-AQV | | | | | 176 | NPT1 $\frac{1}{2}$ -11 $\frac{1}{2}$ | | | | | 55 |

Dimensions – 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-LFR-...-AG/RG | 45 | 109 | - | - |
| MS9-LFR-...-A4 | | - | 110 | G $\frac{1}{4}$ |

Filter regulators MS9-LFR, MS series, NPT

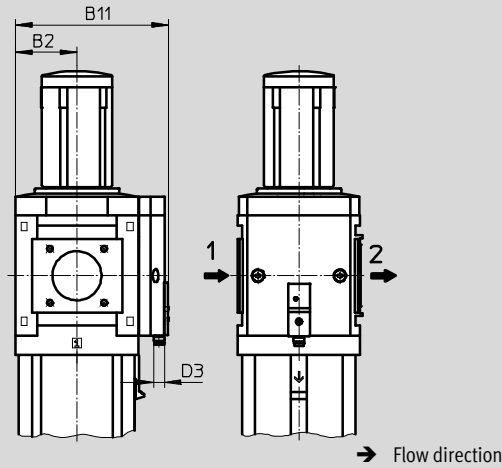
Technical data

Dimensions – Pressure gauge alternatives

Download CAD data → www.festo.com

Pressure sensor without LCD display (operational status indicator only) AD7 ... AD10

Technical data → Internet: sde5



Variant AD7:
SDE5-D10-O-...-P-M8 with
3-pin plug M8x1, threshold
value comparator, 1 switch-
ing 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 switch-
ing 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-LFR-...-AD7/AD8/AD9/AD10 | 45 | 112 | M8 |

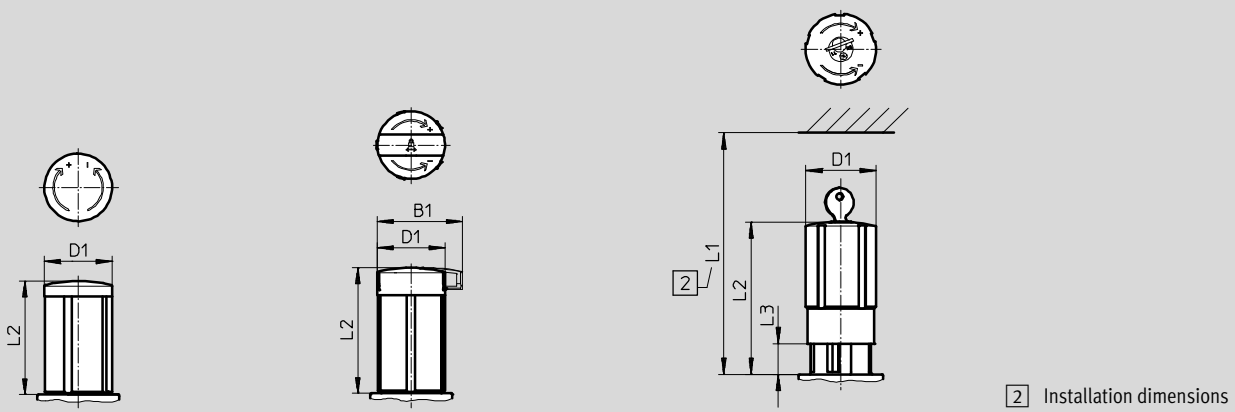
Dimensions – Rotary knob

Download CAD data → www.festo.com

Rotary knob with detent

Rotary knob with detent, can be
locked using accessories AS

Rotary knob with integrated lock
E11



| Type | B1 | D1 | L1 | L2 | L3 |
|-----------------|----|----|-----|-----|----|
| MS9-LFR | – | 52 | – | 86 | – |
| MS9-LFR-...-AS | 65 | 52 | – | 96 | – |
| MS9-LFR-...-E11 | – | 52 | 174 | 114 | 25 |

Filter regulators MS9-LFR, MS series, NPT

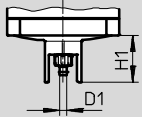
Technical data

FESTO

Dimensions – Condensate drain

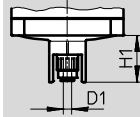
Download CAD data → www.festo.com

Manual rotary M/fully automatic V



Barbed connector for plastic tubing PCN-4

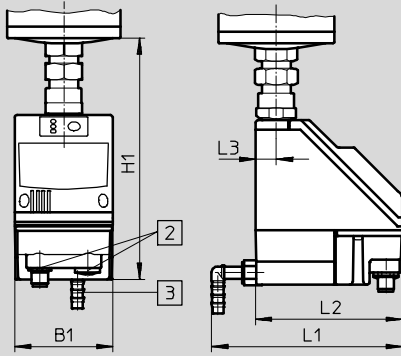
Semi-automatic H



QS connector for plastic tubing PUN-6/PAN-6

Fully automatic, electrically actuated E2/E3/E4

Technical data → Internet: pwea



Condensate drain PWEA:

- 2 Electrical connection: Screw terminal PG9
- 3 Connection 360° rotatable for plastic tubing PUN-H-12x2

| Type | B1 | D1 | H1 | L1 | L2 | L3 |
|----------------------|----|----|------|-----|-----|----|
| MS9-LFR-...-M/V | - | 5 | 34.5 | - | - | - |
| MS9-LFR-...-H | | 6 | | | | |
| MS9-LFR-...-E2/E3/E4 | 72 | - | 178 | 140 | 108 | 15 |

Ordering data

Pressure regulation range 0.5 ... 7 bar, integrated pressure gauge, display unit [psi], rotary knob with detent, can be locked using accessories

| Size | Condensate drain | Connection | Grade of filtration 5 µm | | Grade of filtration 40 µm | |
|----------------------------------------------|------------------|------------|--------------------------|--------------------------------|---------------------------|--------------------------------|
| | | | Part No. | Type | Part No. | Type |
| Directly actuated filter-diaphragm regulator | | | | | | |
| MS9 | Manual rotary | - | 564128 | MS9-LFR-NG-D6-CUM-DI-AG-PSI-AS | 564124 | MS9-LFR-NG-D6-EUM-DI-AG-PSI-AS |
| | Fully automatic | - | 564129 | MS9-LFR-NG-D6-CUV-DI-AG-PSI-AS | 564125 | MS9-LFR-NG-D6-EUV-DI-AG-PSI-AS |

Filter regulators MS9-LFR, MS series, NPT

Ordering data – Modular products

| M Mandatory data → | | | | | | | | |
|-------------------------|-----------|----------|--------------|---------------------------------------------------|-------------------------------|---------------------|------------|---------------------|
| Module No. | Series | Size | Function | Connection size | Pressure range/operation mode | Grade of filtration | Bowl | Condensate drain |
| 562531 | MS | 9 | LFR | N $\frac{3}{4}$, N1, AQR, AQS, AQT, AQU, AQV, NG | D5, D6, D7, D8 | E, C | U | M, H, V, E2, E3, E4 |
| Ordering example | | | | | | | | |
| 562531 | MS | 9 | - LFR | - NG | - D5 | - E | - U | - M |

| Ordering table | | Grid dimension [mm] | 90 | Condi-tions | Code | Enter code | |
|----------------|-------------------------------|------------------------------------------------------------|--------------------------------------|-------------|-----------------------------------|------------|--|
| M | Module No. | 562531 | | | | | |
| | Series | Standard | | | MS | MS | |
| | Size | 9 | | | 9 | 9 | |
| | Function | Filter regulator | | | -LFR | -LFR | |
| | Connection size | Thread NPT $\frac{3}{4}$ | | | -N$\frac{3}{4}$ | | |
| | | 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 | | |
| | Pressure range/operation mode | 0.5 ... 4 bar, manually operated | | | -D5 | | |
| | | 0.5 ... 7 bar, manually operated | | | -D6 | | |
| | | 0.5 ... 12 bar, manually operated | | | -D7 | | |
| | | 0.5 ... 16 bar, manually operated | | | -D8 | | |
| | Grade of filtration | 40 μ m | | | -E | | |
| | | 5 μ m | | | -C | | |
| | Bowl | Metal bowl | | | -U | -U | |
| | Condensate drain | Manual | | | -M | | |
| | | Semi-automatic (P1 max. 12 bar) | | | -H | | |
| | | Fully automatic (P1 max. 12 bar) | | | -V | | |
| | | External, fully automatic, electric | 110 V AC, terminals (P1 max. 16 bar) | | | -E2 | |
| | | | 230 V AC, terminals (P1 max. 16 bar) | | | -E3 | |
| | | | 24 V DC, terminals (P1 max. 16 bar) | | | -E4 | |

Transfer order code

| | | | | | | | | |
|---------------|-----------|----------|--------------|----------|----------|----------|------------|----------|
| 562531 | MS | 9 | - LFR | - | - | - | - U | - |
|---------------|-----------|----------|--------------|----------|----------|----------|------------|----------|

Filter regulators MS9-LFR, MS series, NPT

Ordering data – Modular products

| | | | | | | | |
|-----------------------|---------------------------------------------------|-----------------------------------------|--------------------------|-----------------|-------------------------|-------------------------|-----------------------------------|
| O | M | O Options | | | | | |
| Regulator type | Pressure gauge/pressure gauge alternatives | Alternative pressure gauge scale | Secondary venting | Security | Type of mounting | UL certification | Alternative flow direction |
| DI | AG, VS, A4, RG, AD7 ... AD10 | PSI, MPA, BAR | OS | AS, E11 | WP, WPM, WPB | UL1 | Z |
| - DI | - AG | - BAR | - OS | - AS | - | - | - |

| Ordering table | | Grid dimension [mm] | 90 | Condi-tions | Code | Enter code |
|----------------|--------------------------------------------|----------------------------------------------------------------------------------------|----|-------------|-------|------------|
| O | Regulator type | Directly actuated | | 1 | -DI | |
| 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 | | 2 | -RG | |
| | | Pressure sensor without display, plug M8, threshold value comparator, PNP, N/O contact | | 3 | -AD7 | |
| | | Pressure sensor without display, plug M8, threshold value comparator, PNP, N/C contact | | 3 | -AD8 | |
| | | Pressure sensor without display, plug M8, window comparator, PNP, N/O contact | | 3 | -AD9 | |
| | | Pressure sensor without display, plug M8, window comparator, PNP, N/C contact | | 3 | -AD10 | |
| O | Alternative pressure gauge scale | Psi | | 4 | -PSI | |
| | | MPa | | 4 | -MPA | |
| | | Bar | | 4 | -BAR | |
| | Secondary venting | Without secondary venting | | 5 | -OS | |
| | Security | Can be locked using accessories | | | -AS | |
| | | With integrated lock | | | -E11 | |
| | Type of mounting | Mounting bracket | | 6 | -WP | |
| | | Mounting bracket | | 6 | -WPM | |
| | | Mounting bracket for large wall gap | | 6 | -WPB | |
| | UL certification | cULus, ordinary location for Canada and USA | | | -UL1 | |
| | Alternative flow direction | Flow direction from right to left | | | -Z | |

- | | | | |
|-------------------------------|------------------------------------------------------------------|------------------------------|-----------------------------|
| 1 DI | Not with pressure range D7, D8 | 5 OS | Only with regulator type DI |
| 2 RG | Not with alternative pressure gauge scale PSI | 6 WP, WPM, WPB | Not with module NG |
| 3 AD7 ... AD10 | PSI scale serves only as an auxiliary scale | | |
| 4 PSI, MPA, BAR | Measuring range max. 10 bar | | |
| | Not with pressure gauge alternatives VS, A4, AD7, AD8, AD9, AD10 | | |

Transfer order code

- - - - - - - -

Filter regulators MS-LFR, MS series, NPT

Accessories

FESTO

Filter cartridges

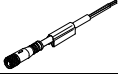





| Ordering data | | | |
|---------------|-----------------------------|----------|------------|
| Size | Grade of filtration [µm] | Part No. | Type |
| MS4 | 5 (colour: blue) | 534501 | MS4-LFP-C |
| | 40 (colour: white) | 534502 | MS4-LFP-E |
| MS6 | 5 (colour: blue) | 534499 | MS6-LFP-C |
| | 40 (colour: white) | 534500 | MS6-LFP-E |
| MS9 | 5 | 570309 | MS9-LFP-C |
| | 40 | 570310 | MS9-LFP-E |
| MS12 | 5 | 537143 | MS12-LFP-C |
| | 40 | 537144 | MS12-LFP-E |


Filter regulators MS-LFR, MS series, NPT


Accessories

FESTO

| 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 |
|  | M8x1, angled socket | 3 | 2.5 | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | | 5 | 541341 | NEBU-M8W3-K-5-LE3 |

| Ordering data – Connecting cable NEBU-M12 | | | | Technical data → Internet: nebu | |
|-----------------------------------------------------------------------------------|------------------------|-----------------|------------------|---------------------------------|----------------------|
| | Electrical connection | 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 socket | 4 | 2.5 | 550325 | NEBU-M12W5-K-2.5-LE4 |
| | | | 5 | 541329 | NEBU-M12W5-K-5-LE4 |

| Ordering data – Pressure gauge MA | | | | | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|------------------|-----------|--------------------------------|------------------------------|
| | Nominal size | Pneumatic connection | Indicating range | | Part No. | Type |
| | | | [bar] | [psi] | | |
|  | Pressure gauge MA, DIN 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, DIN 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 – Padlock LRVS-D | | |
|-------------------------------------------------------------------------------------|------------|---------------|
| | Weight [g] | Part No. Type |
|  | 120 | 193786 LRVS-D |

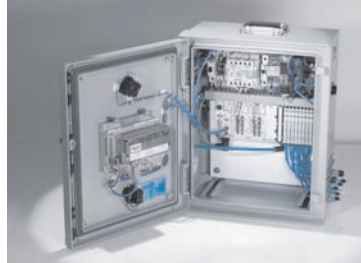
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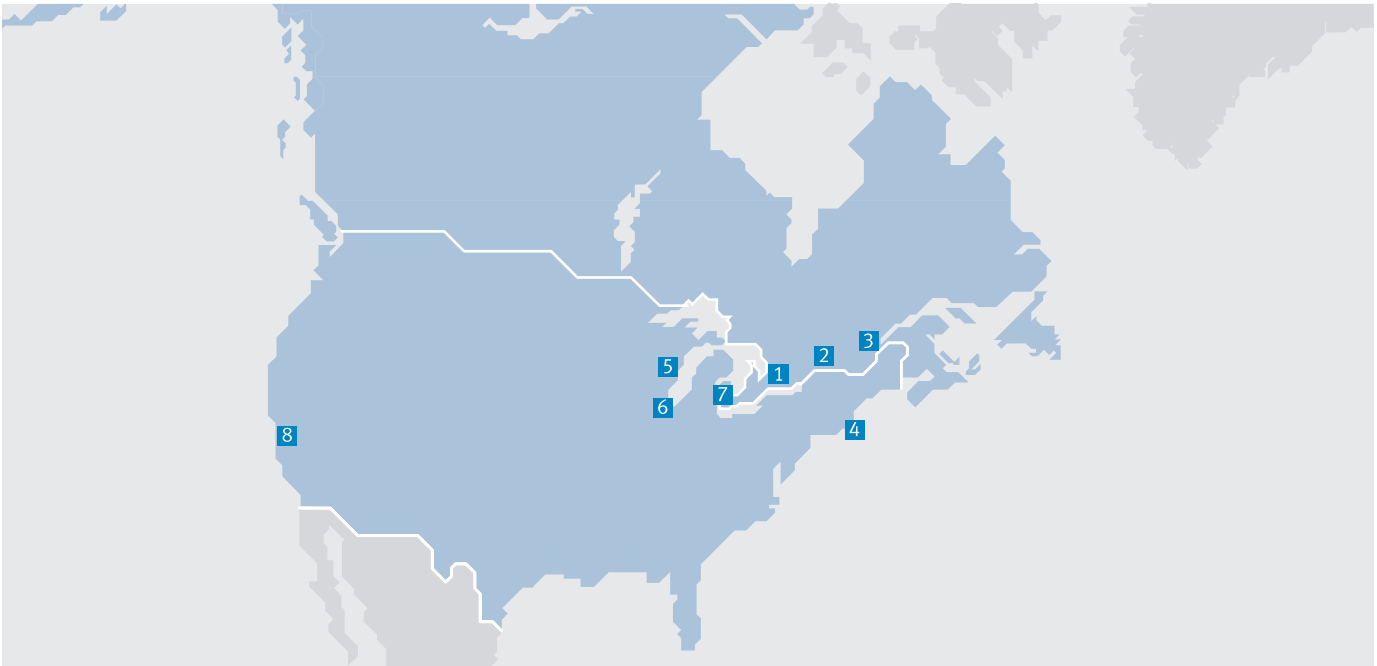


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Festo North America



**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