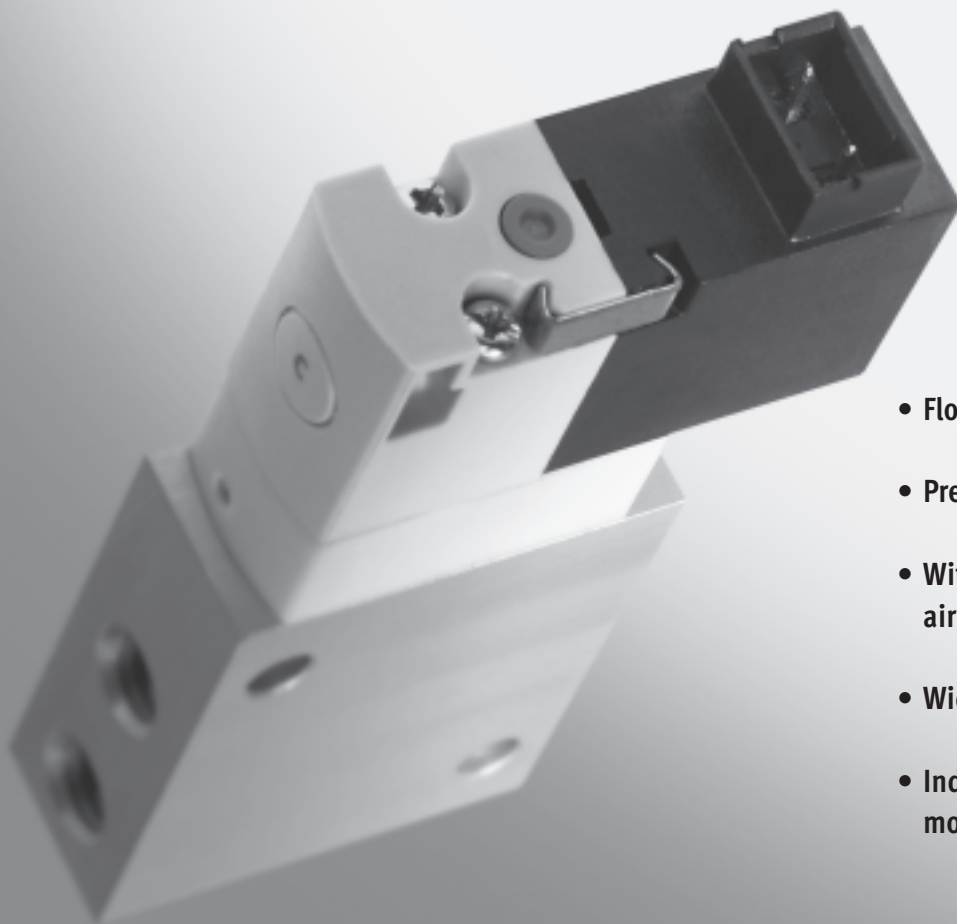


Solenoid valves VOVG

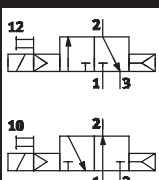
FESTO

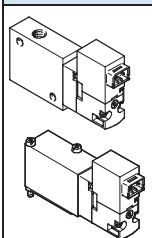
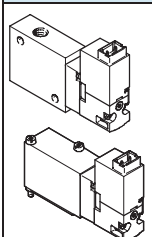


- Flow rate 200 l/min
- Pressure range -0.9 to 8 bar
- With internal or external pilot air
- Width 10 and 12 mm
- Individual or manifold mounting

Solenoid valves VOVG

Product range overview

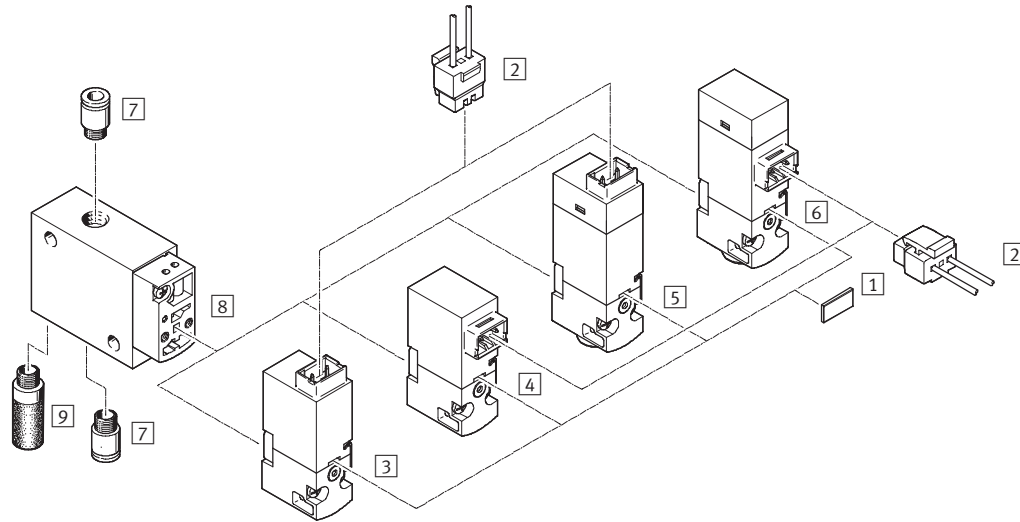
| Function | Symbol | Version | Normal position | | Voltage [V DC] | | | →Page |
|---------------|---|--------------------|-----------------|--------|----------------|----|----|-----------|
| | | | Open | Closed | 5 | 12 | 24 | |
| 3/2-way valve |  | In-line valve | ■ | ■ | ■ | ■ | ■ | 2 / 3.8-8 |
| | | Semi in-line valve | ■ | ■ | ■ | ■ | ■ | 2 / 3.8-8 |
| | | Sub-base valve | ■ | ■ | ■ | ■ | ■ | 2 / 3.8-8 |

| Mounting options | | | | | |
|---|-------------------|------|------|------|---------|
| Voltage [V DC] | | 5 | 12 | 24 | |
| Signal status display | | none | none | none | via LED |
| Horizontal plug connection (H2) | | | | | |
|  | Direct mounting | ■ | ■ | ■ | ■ |
| | Manifold assembly | ■ | ■ | ■ | ■ |
| Vertical plug connection (H3) | | | | | |
|  | Direct mounting | ■ | ■ | ■ | ■ |
| | Manifold assembly | ■ | ■ | ■ | ■ |

Solenoid valves VOVG

Peripherals overview

In-line valve

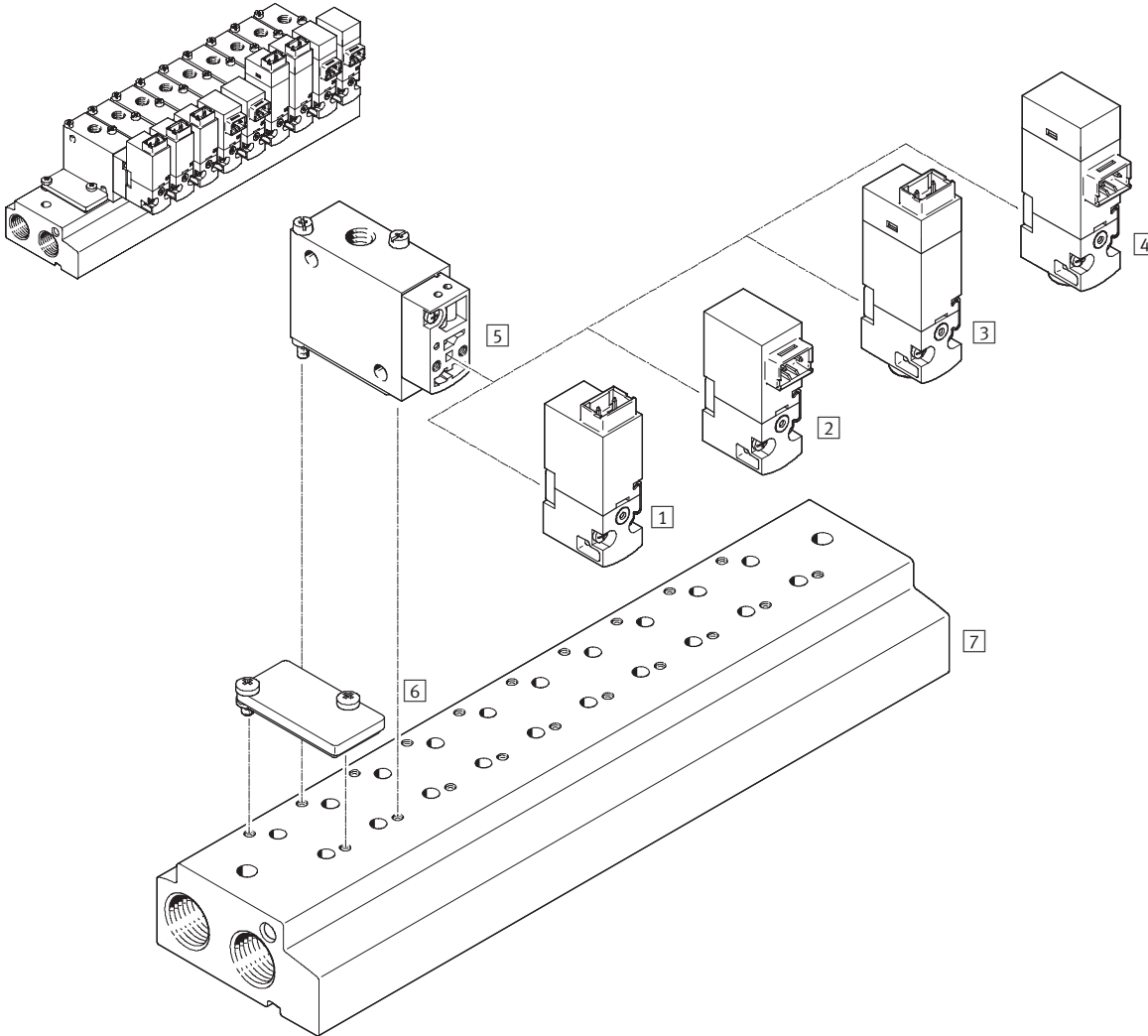


| Component parts | | | | |
|-----------------|------------------------|-------------------|--|------------|
| | Type | Brief description | → Page | |
| 1 | Inscription label | MH-BZ-80X | For identifying the solenoid valves | 2 / 3.8-18 |
| 2 | Plug socket with cable | KMH | For solenoid coils | 2 / 3.8-18 |
| 3 | Pilot valve | - | Modular assembly of valve VOVG with vertical plug connection | 2 / 3.8-8 |
| 4 | Pilot valve | - | Modular assembly of valve VOVG with horizontal plug connection | |
| 5 | Pilot valve | - | Modular assembly of valve VOVG with vertical plug connection and LED | |
| 6 | Pilot valve | - | Modular assembly of valve VOVG with horizontal plug connection and LED | |
| 7 | Push-in fitting | QS/QSM | For standard O.D. tubing | 2 / 3.8-17 |
| 8 | Basic valve | - | Assembly of the solenoid valve VOVG | 2 / 3.8-8 |
| 9 | Silencer | U | For fitting in exhaust ports | 2 / 3.8-17 |

Solenoid valves VOVG

System overview

Manifold assembly – Semi in-line valves

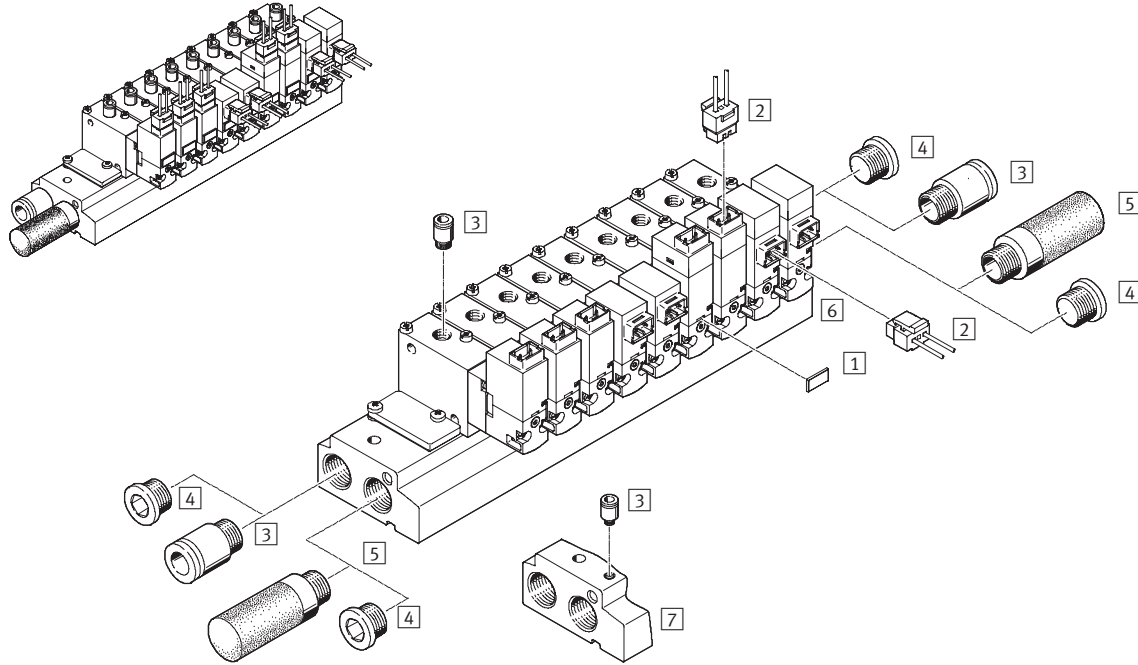


| Component parts | | | |
|-----------------|--------------|--|------------|
| | Type | Brief description | → Page |
| 1 | – | Modular assembly of valve VOVG with vertical plug connection | 2 / 3.8-8 |
| 2 | – | Modular assembly of valve VOVG with horizontal plug connection | |
| 3 | – | Modular assembly of valve VOVG with vertical plug connection and LED | |
| 4 | – | Modular assembly of valve VOVG with horizontal plug connection and LED | |
| 5 | – | Assembly of the solenoid valve VOVG | |
| 6 | VABB-C7-12-W | For vacant positions | 2 / 3.8-17 |
| 7 | VABM-C7-... | For semi in-line valves | 2 / 3.8-15 |

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Semi in-line valves with accessories

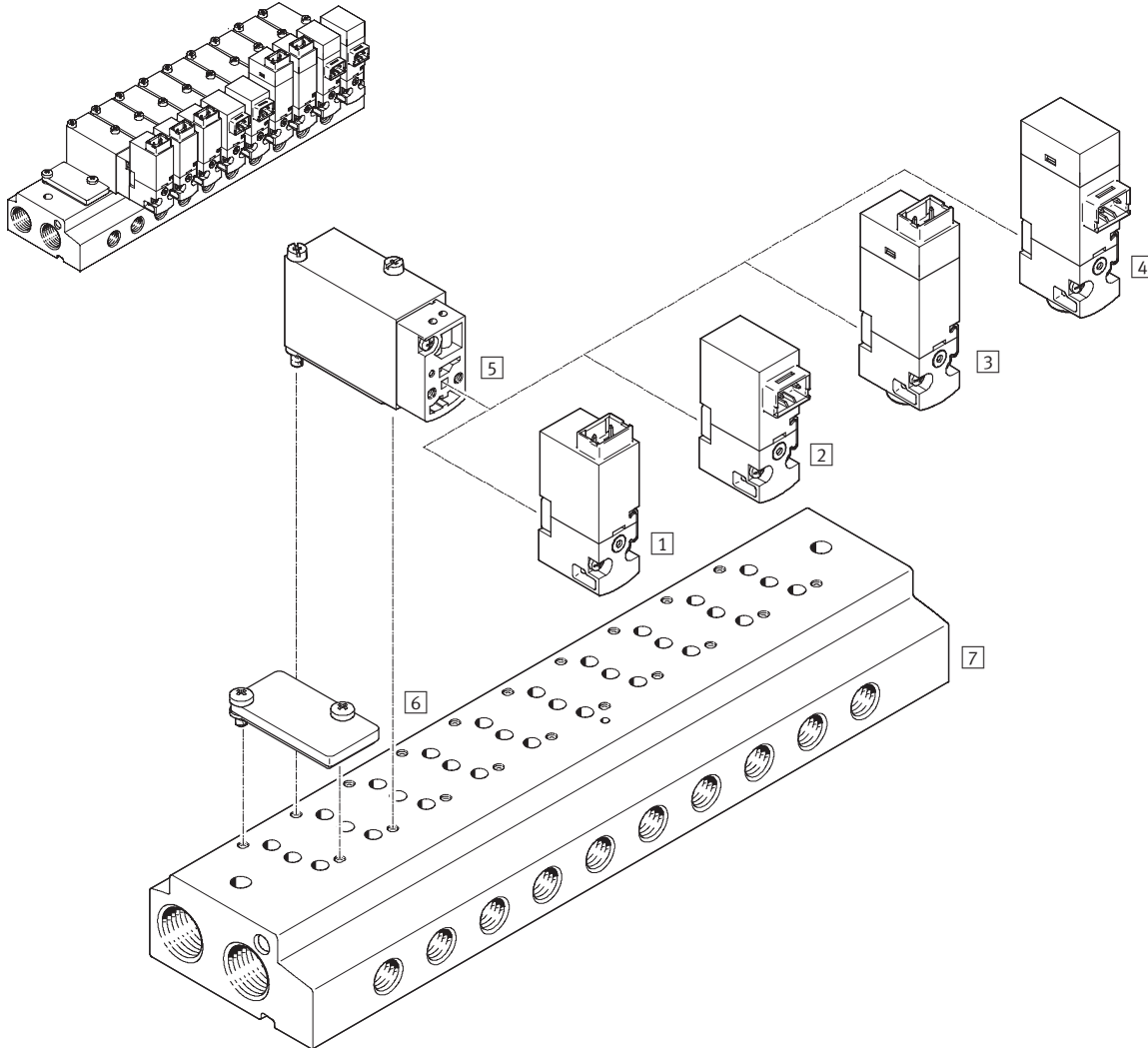


| Component parts | | | | |
|-----------------|------------------------|-------------------|-------------------------------------|------------|
| | Type | Brief description | → Page | |
| 1 | Inscription label | MH-BZ-80X | For identifying the solenoid valves | 2 / 3.8-18 |
| 2 | Plug socket with cable | KMH | For solenoid coils | 2 / 3.8-18 |
| 3 | Push-in fitting | QS/QSM | For standard O.D. tubing | 2 / 3.8-17 |
| 4 | Blanking plug | B | For sealing unused ports | 2 / 3.8-17 |
| 5 | Silencer | U | For fitting in exhaust ports | 2 / 3.8-17 |
| 6 | Manifold rail | VABM-...-P... | Without port for external pilot air | 2 / 3.8-15 |
| 7 | Manifold rail | VABM-...-G... | With port for external pilot air | 2 / 3.8-15 |

Solenoid valves VOVG

System overview

Manifold assembly – Sub-base valves

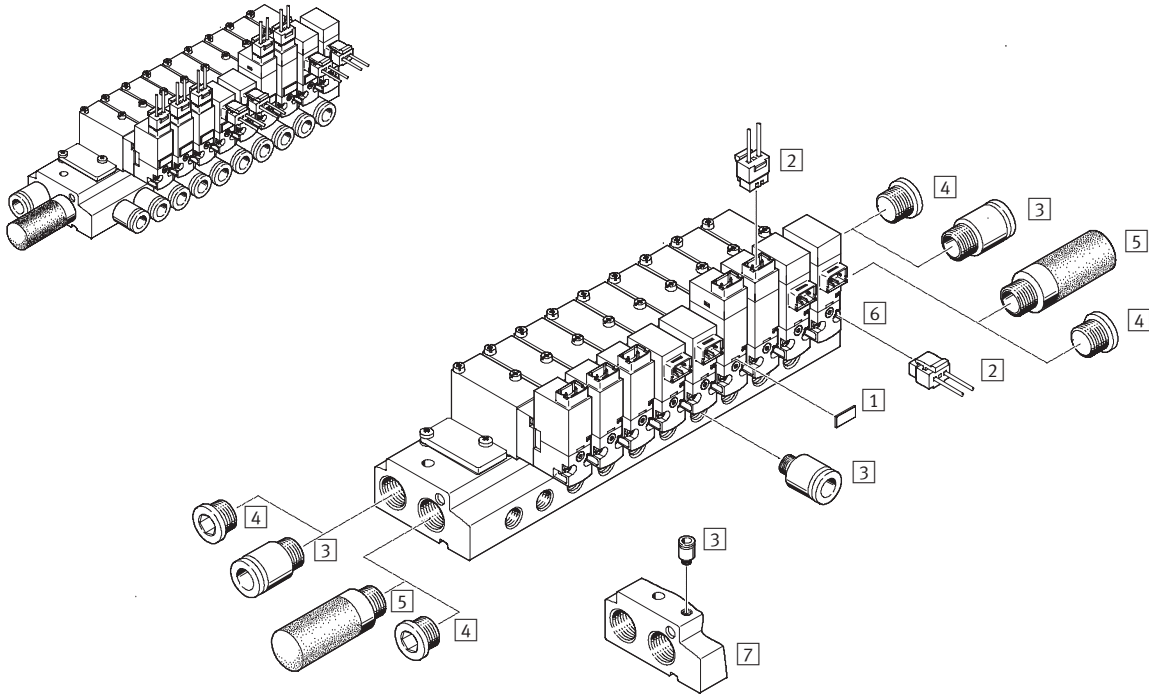


| Component parts | | | |
|-----------------|--------------|--|------------|
| | Type | Brief description | → Page |
| 1 | – | Modular assembly of valve VOVG with vertical plug connection | 2 / 3.8-8 |
| 2 | – | Modular assembly of valve VOVG with horizontal plug connection | |
| 3 | – | Modular assembly of valve VOVG with vertical plug connection and LED | |
| 4 | – | Modular assembly of valve VOVG with horizontal plug connection and LED | |
| 5 | – | Assembly of the solenoid valve VOVG | |
| 6 | VABB-C7-12-W | For vacant positions | 2 / 3.8-17 |
| 7 | VABM-C7-... | For sub-base valves | 2 / 3.8-15 |

Solenoid valves VOVG

Peripherals overview

Manifold assembly – Sub-base valves with accessories

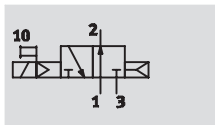
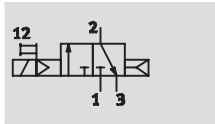


| Component parts | | | | |
|-----------------|------------------------|-------------------|-------------------------------------|------------|
| | Type | Brief description | → Page | |
| 1 | Inscription label | MH-BZ-80X | For identifying the solenoid valves | 2 / 3.8-18 |
| 2 | Plug socket with cable | KMH | For solenoid coils | 2 / 3.8-18 |
| 3 | Push-in fitting | QS/QSM | For standard O.D. tubing | 2 / 3.8-17 |
| 4 | Blanking plug | B | For sealing unused ports | 2 / 3.8-17 |
| 5 | Silencer | U | For fitting in exhaust ports | 2 / 3.8-17 |
| 6 | Manifold rail | VABM-...-M... | Without port for external pilot air | 2 / 3.8-15 |
| 7 | Manifold rail | VABM-...-W... | With port for external pilot air | 2 / 3.8-15 |


Solenoid valves VOVG


Technical data

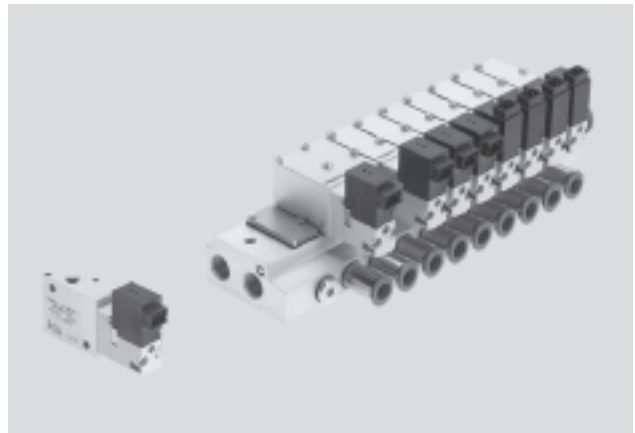
Function



 Voltage
5, 12, 24 V DC

 Pressure
-0.9 ... +8 bar

 Temperature range
-5 ... +50 °C



| General technical data | | | |
|----------------------------|--------------------------|--|----------------|
| Constructional design | In-line valve | Semi in-line valve | Sub-base valve |
| Valve function | 3/2-way, single solenoid | | |
| Design | Piston spool | | |
| Sealing principle | Soft | | |
| Actuation type | Electric | | |
| Reset method | Pneumatic spring | | |
| Type of actuation | Piloted | | |
| Direction of flow | Non-reversible | | |
| Exhaust function | With flow control | | |
| Manual override | Pushing/detenting | Pushing | |
| Type of mounting | Via through-holes | On sub-base or manifold, via through-holes | |
| Assembly position | Any | | |
| Nominal size | [mm] | 2.1 | |
| Standard nominal flow rate | [l/min] | 200 | 180 |
| Grid dimension | [mm] | 10/12 | 12 |
| Pneumatic connection | M5 | Manifold sub-base | |

| Operating and environmental conditions | |
|---|--|
| Operating medium | Filtered compressed air, lubricated or unlubricated Grade of filtration 40 µm |
| Operating pressure at internal pilot air supply | [bar] 2 ... 8 |
| Operating pressure at external pilot air supply ¹⁾ | [bar] -0.9 ... 8 |
| Pilot pressure | [bar] 3 ... 8 |
| Ambient temperature | [°C] -5 ... +50 |
| Temperature of medium | [°C] -5 ... +50 |

1) Vacuum operation possible with special connection method

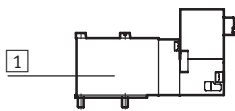
Solenoid valves VOVG

Technical data

| Electrical data | | |
|---------------------------------|--------|----------------------------|
| Operating voltage | [V DC] | 5 ±10%, 12 ±10% or 24 ±10% |
| Type of connection | | Plug connector |
| Power consumption | [W] | 1 |
| Duty cycle | | 100% |
| Protection class to EN 60529 | | |
| With plug socket with cable KMH | | IP40 |

| Response times | | |
|----------------------|------|-------|
| Response time on/off | [ms] | 12/10 |

Materials



| | | |
|---|---------|--|
| 1 | Housing | Aluminium |
| - | Seals | Fluorocarbon rubber, hydrogenated nitrile rubber, nitrile rubber |

Dimensions – Valve

In-line valve Download CAD data → www.festo.com/en/engineering

1 Electrical connection rear

2 Electrical connection top

3 Pilot air supply

4 Silencer

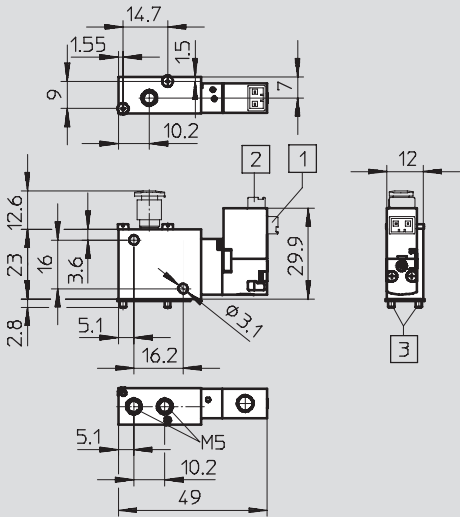
Solenoid valves VOVG

Technical data

Dimensions – Valve

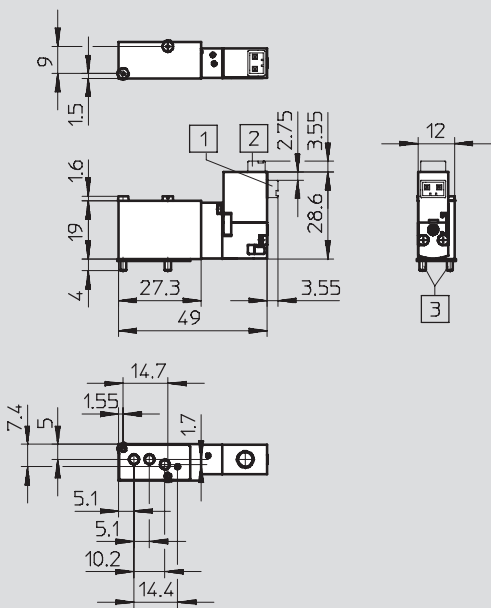
Download CAD data → www.festo.com/en/engineering

Semi in-line valve



- 1 Electrical connection rear
- 2 Electrical connection top
- 3 Mounting screws, M2x23

Sub-base valve



- 1 Electrical connection rear
- 2 Electrical connection top
- 3 Mounting screws, M2x23

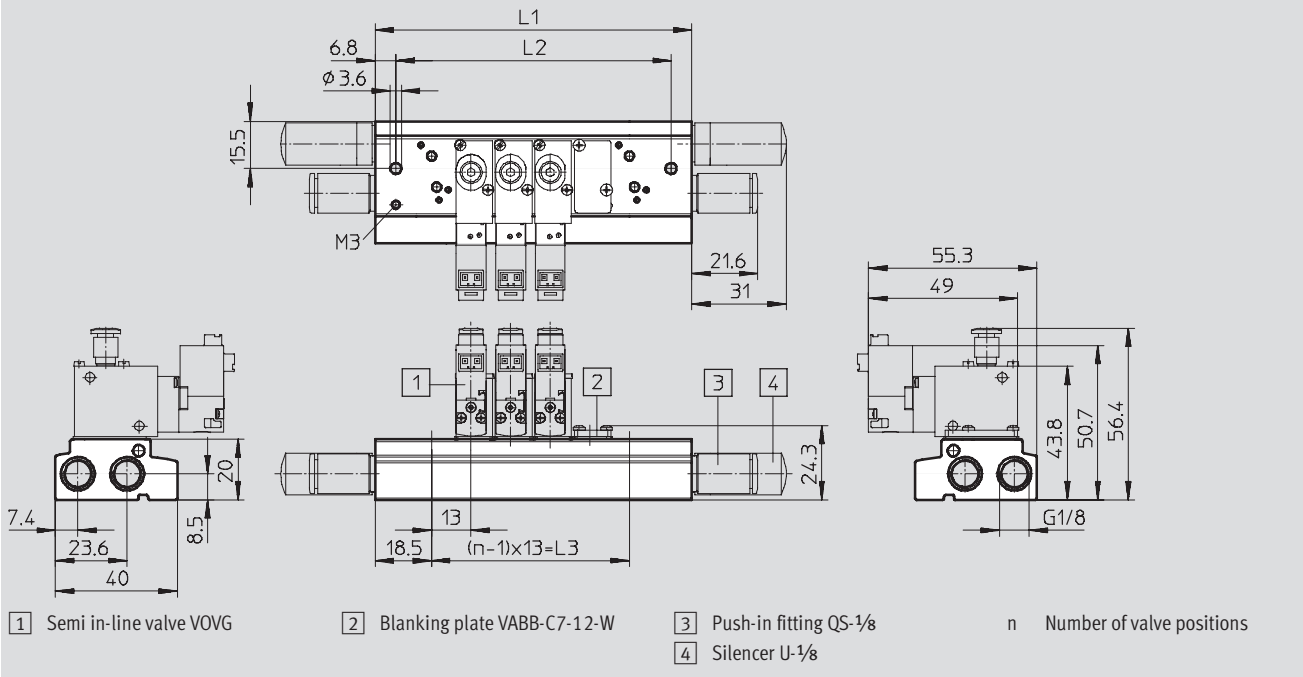
Solenoid valves VOVG

Technical data

Dimensions – Manifold assembly

Download CAD data → www.festo.com/en/engineering

Semi in-line valve



| Number of valve positions n | L1 | L2(-0/+0.4) | L3 |
|-----------------------------|-----|-------------|-----|
| 2 | 52 | 45 | 13 |
| 3 | 65 | 58 | 26 |
| 4 | 78 | 71 | 39 |
| 5 | 91 | 84 | 52 |
| 6 | 104 | 97 | 65 |
| 7 | 117 | 110 | 78 |
| 8 | 130 | 123 | 91 |
| 9 | 143 | 136 | 104 |
| 10 | 156 | 149 | 117 |

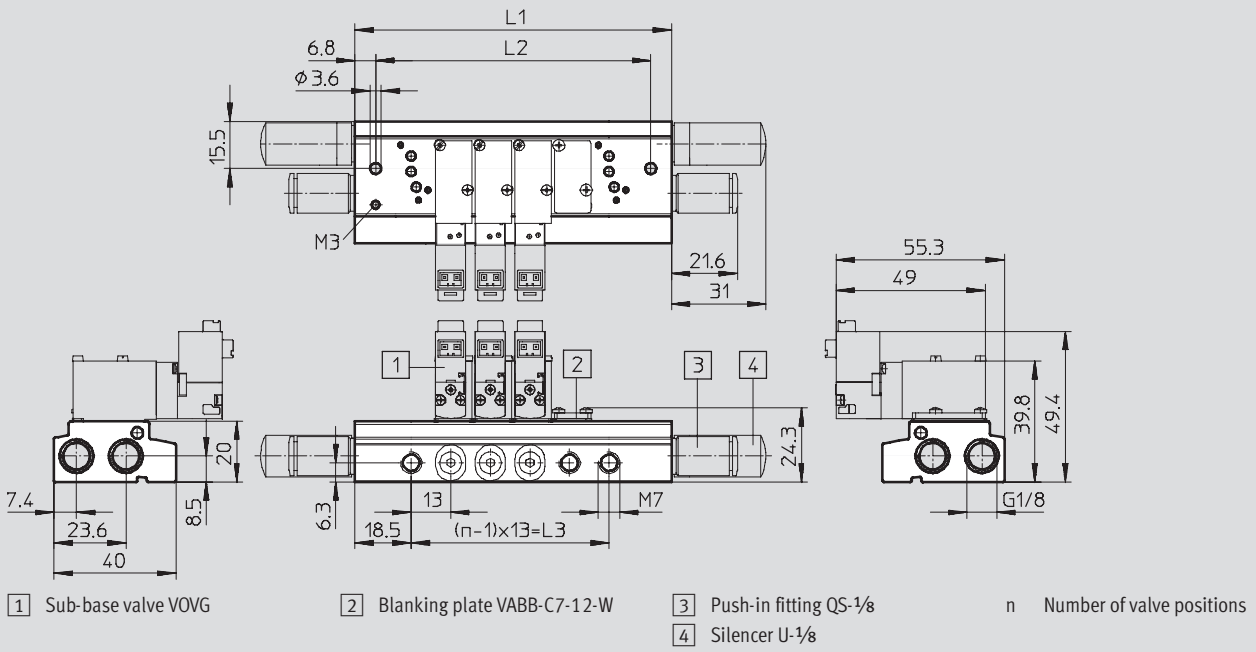
Solenoid valves VOVG

Technical data

Dimensions – Manifold assembly

Download CAD data → www.festo.com/en/engineering

Sub-base valve



| Number of valve positions n | L1 | L2(-0/+0.4) | L3 |
|-----------------------------|-----|-------------|-----|
| 2 | 52 | 45 | 13 |
| 3 | 65 | 58 | 26 |
| 4 | 78 | 71 | 39 |
| 5 | 91 | 84 | 52 |
| 6 | 104 | 97 | 65 |
| 7 | 117 | 110 | 78 |
| 8 | 130 | 123 | 91 |
| 9 | 143 | 136 | 104 |
| 10 | 156 | 149 | 117 |

Solenoid valves VOVG

Ordering data – Modular products

M Mandatory data **O** Options →

| Module No. | Valve | Valve type | Size | Valve function | Reset method | Pilot air supply |
|----------------------|-------|-------------|----------|----------------|--------------|------------------|
| 549 438 | VOVG | B S L | 10 12 | M32C M32U | A | - Z |
| Order example | | | | | | |
| 549 438 | VOVG | - L | 12 | - M32U | - A | |

| Ordering table | | Condi- tions | Code | Enter code |
|---------------------------|---|-----------------|--------------|---------------|
| M Module No. | 549 438 | | | |
| Valve | Solenoid valve | | VOVG | VOVG |
| Valve type | Sub-base valve | | -B | |
| | Semi in-line valve | | -S | |
| | In-line valve | | -L | |
| Size | 10 (200 l/min) | ¹ | 10 | |
| | 12 (200 l/min) | | 12 | |
| Valve function | 3/2-way valve, single solenoid, normally closed | | -M32C | |
| | 3/2-way valve, single solenoid, normally open | | -M32U | |
| Reset method | Pneumatic spring | | -A | -A |
| O Pilot air supply | Internal pilot air supply | | | |
| | External pilot air supply | | Z | |

¹ 10, D, U Not with valve type B, S

Transfer order code

| | | | | | | | | | |
|---------|------|---|--|--|---|--|---|---|--|
| 549 438 | VOVG | - | | | - | | - | A | |
|---------|------|---|--|--|---|--|---|---|--|

Solenoid valves VOVG

Ordering data – Modular products

| Options | | | | Mandatory data | | | Options |
|-----------------|---------------------------|----------|---------------|---------------------------|-----------------------|---------|------------------------|
| Manual override | Pneumatic connection | Exhaust | Pilot exhaust | Nominal operating voltage | Electrical connection | Display | Electrical accessories |
| H D | F M5 Q3 Q4 Q6 | - U | - | 1 4 5 | H2 H3 | - L | W1, W2, W3, W4 |
| H | - Q3 | U | | - 4 | H3 | | + W1 |

| Ordering table | | | Condi- tions | Code | Enter code |
|----------------|----------------------------------|-------------------------|-----------------|------------|---------------|
| M | Manual override | Pushing | | H | |
| | | Pushing/detenting | 1 2 | D | |
| M | Pneumatic connection | Flange/sub-base | 3 | -F | |
| | | Metric thread M5 | 4 | -M5 | |
| | | Push-in connectors 3 mm | 4 | -Q3 | |
| | | Push-in connectors 4 mm | 4 | -Q4 | |
| | | Push-in connectors 6 mm | 4 | -Q6 | |
| O | Exhaust | Ducted | | | |
| | | Silencer | 1 5 | U | |
| O | Pilot exhaust | Unducted | | | |
| M | Nominal operating voltage [V DC] | 24 | | -1 | |
| | | 5 | | -4 | |
| | | 12 | | -5 | |
| M | Electrical connection | Horizontal plug | | H2 | |
| | | Vertical plug | | H3 | |
| O | Display | None | | | |
| | | LED signal display | 2 | L | |
| O | Electrical accessories | | | + | + |
| O | Connecting cable | Without sheath, 0.5 m | | W1 | |
| | | Without sheath, 1 m | | W2 | |
| | | Without sheath, 2.5 m | | W3 | |
| | | Without sheath, 5 m | | W4 | |

- 1 **10, D, U** Not with valve type B, S
- 2 **D, L** Not with nominal operating voltage 4 (5 V DC), 5 (12 V DC)
- 3 **F** Not with valve type L, S
- 4 **M5, Q3, Q4, Q6** Not with valve type B
- 5 **U** Not with pneumatic connection F, M5

Transfer order code

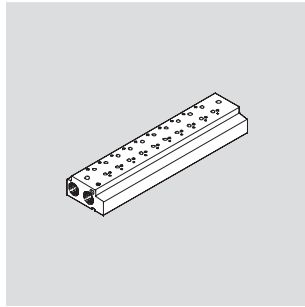
| | | | | | | |
|--|---|--|---|--|---|--|
| | - | | - | | + | |
|--|---|--|---|--|---|--|

Solenoid valves VOVG

Technical data – Manifold rail

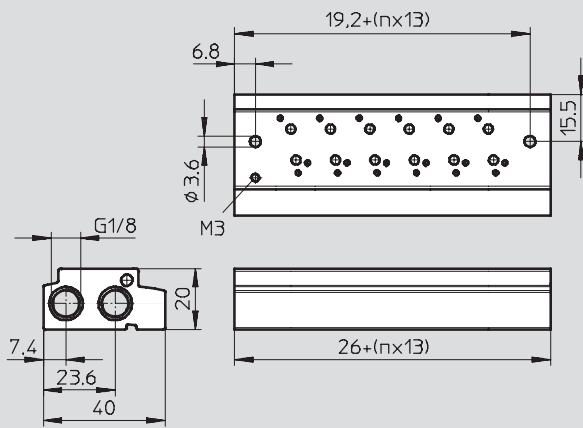
Manifold rail VABM-C7 for semi in-line valve

Material:
Wrought aluminium alloy



Dimensions – Manifold rails for semi in-line valves

Download CAD data → www.festo.com/en/engineering



n Number of valve positions

Ordering data – Manifold rails for semi in-line valves

| Valve positions n | Weight [g] | CRC | Part No. | Type |
|---|------------|-----------------|----------|--------------------|
| For valves with internal pilot air | | | | |
| 2 | 84 | 2 ¹⁾ | 552 652 | VABM-C7-12P-G18-2 |
| 3 | 105 | 2 ¹⁾ | 552 653 | VABM-C7-12P-G18-3 |
| 4 | 126 | 2 ¹⁾ | 552 654 | VABM-C7-12P-G18-4 |
| 5 | 147 | 2 ¹⁾ | 552 655 | VABM-C7-12P-G18-5 |
| 6 | 168 | 2 ¹⁾ | 552 656 | VABM-C7-12P-G18-6 |
| 7 | 189 | 2 ¹⁾ | 552 657 | VABM-C7-12P-G18-7 |
| 8 | 210 | 2 ¹⁾ | 552 658 | VABM-C7-12P-G18-8 |
| 9 | 231 | 2 ¹⁾ | 552 659 | VABM-C7-12P-G18-9 |
| 10 | 252 | 2 ¹⁾ | 552 660 | VABM-C7-12P-G18-10 |
| For valves with external pilot air | | | | |
| 2 | 84 | 2 ¹⁾ | 552 661 | VABM-C7-12G-G18-2 |
| 3 | 105 | 2 ¹⁾ | 552 662 | VABM-C7-12G-G18-3 |
| 4 | 126 | 2 ¹⁾ | 552 663 | VABM-C7-12G-G18-4 |
| 5 | 147 | 2 ¹⁾ | 552 664 | VABM-C7-12G-G18-5 |
| 6 | 168 | 2 ¹⁾ | 552 665 | VABM-C7-12G-G18-6 |
| 7 | 189 | 2 ¹⁾ | 552 666 | VABM-C7-12G-G18-7 |
| 8 | 210 | 2 ¹⁾ | 552 667 | VABM-C7-12G-G18-8 |
| 9 | 231 | 2 ¹⁾ | 552 668 | VABM-C7-12G-G18-9 |
| 10 | 252 | 2 ¹⁾ | 552 669 | VABM-C7-12G-G18-10 |

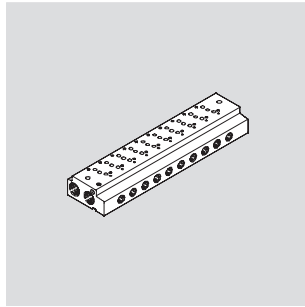
1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves VOVG

Technical data – Manifold rail

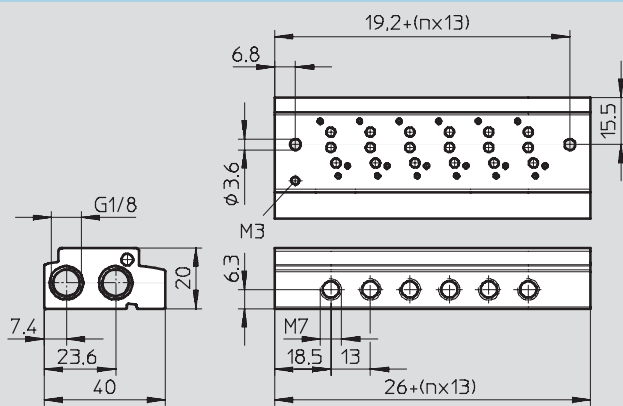
Manifold rail VABM-C7 for sub-base valves

Material:
Wrought aluminium alloy



Dimensions – Manifold rails for sub-base valves

Download CAD data → www.festo.com/en/engineering



n Number of valve positions

Ordering data – Manifold rails for sub-base valves

| Valve positions | Weight [g] | CRC | Part No. | Type |
|---|------------|-----------------|----------|--------------------|
| For valves with internal pilot air | | | | |
| 2 | 82 | 2 ¹⁾ | 549 639 | VABM-C7-12M-G18-2 |
| 3 | 102 | 2 ¹⁾ | 549 640 | VABM-C7-12M-G18-3 |
| 4 | 122 | 2 ¹⁾ | 549 641 | VABM-C7-12M-G18-4 |
| 5 | 142 | 2 ¹⁾ | 549 642 | VABM-C7-12M-G18-5 |
| 6 | 162 | 2 ¹⁾ | 549 643 | VABM-C7-12M-G18-6 |
| 7 | 182 | 2 ¹⁾ | 549 644 | VABM-C7-12M-G18-7 |
| 8 | 202 | 2 ¹⁾ | 549 645 | VABM-C7-12M-G18-8 |
| 9 | 222 | 2 ¹⁾ | 549 646 | VABM-C7-12M-G18-9 |
| 10 | 242 | 2 ¹⁾ | 549 647 | VABM-C7-12M-G18-10 |
| For valves with external pilot air | | | | |
| 2 | 82 | 2 ¹⁾ | 549 648 | VABM-C7-12W-G18-2 |
| 3 | 102 | 2 ¹⁾ | 549 649 | VABM-C7-12W-G18-3 |
| 4 | 122 | 2 ¹⁾ | 549 650 | VABM-C7-12W-G18-4 |
| 5 | 142 | 2 ¹⁾ | 549 651 | VABM-C7-12W-G18-5 |
| 6 | 162 | 2 ¹⁾ | 549 652 | VABM-C7-12W-G18-6 |
| 7 | 182 | 2 ¹⁾ | 549 653 | VABM-C7-12W-G18-7 |
| 8 | 202 | 2 ¹⁾ | 549 654 | VABM-C7-12W-G18-8 |
| 9 | 222 | 2 ¹⁾ | 549 655 | VABM-C7-12W-G18-9 |
| 10 | 242 | 2 ¹⁾ | 549 656 | VABM-C7-12W-G18-10 |

1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves VOVG

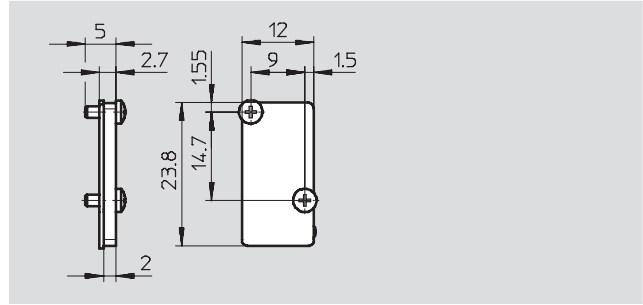
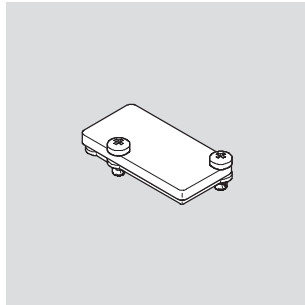
Accessories

Blanking plate VABB-C7

Material:

Blanking plate: Steel

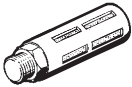

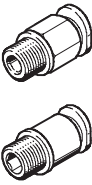
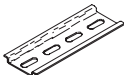

Seal: Nitrile rubber



| Ordering data | | | | |
|------------------------------------|------------|-----------------|----------|--------------|
| | Weight [g] | CRC | Part No. | Type |
| Blanking plate for spare positions | 6 | 2 ¹⁾ | 552 651 | VABB-C7-12-W |


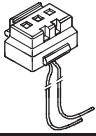
1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

| Ordering data – Accessories | | | | |
|---|---|------------------|---------------------|----------------------|
| Designation | | Part No. | Type | |
| Silencer | | | | |
|  | Connecting thread G $\frac{1}{8}$ | 2 307 | U- $\frac{1}{8}$ | |
| | | 6 841 | U- $\frac{1}{8}$ -B | |
| Blanking plug | | | | |
|  | Thread G $\frac{1}{8}$ | 10 pieces | 3 568 | B- $\frac{1}{8}$ |
| Push-in fitting | | | | |
|  | Connecting thread G $\frac{1}{8}$ for tubing O.D. | 6 mm (10 pieces) | 153 002 | QS- $\frac{1}{8}$ -6 |
| | | 8 mm (10 pieces) | 153 004 | QS- $\frac{1}{8}$ -8 |
| | Connecting thread M3 for tubing O.D. | 3 mm (10 pieces) | 153 312 | QSM-M3-3-I |
| | | 4 mm (10 pieces) | 153 313 | QSM-M5-3-I |
| | Connecting thread M5 for tubing O.D. | 4 mm (10 pieces) | 153 315 | QSM-M5-4-I |
| | | 6 mm (10 pieces) | 153 317 | QSM-M5-6-I |
| Connecting thread M7 for tubing O.D. | 4 mm (10 pieces) | 153 319 | QSM-M7-4-I | |
| | 6 mm (10 pieces) | 153 321 | QSM-M7-6-I | |
| H-rail | | | | |
|  | | | 35 430 | NRH-35-2000 |
| Mounting | | | | |
|  | For H-rail | | 527 392 | CPASC1-BG-NRH |

Solenoid valves VOVG

Accessories

| Ordering data – Accessories | | | |
|---|--------------------|-----------|--------------------------|
| Designation | | Part No. | Type |
| Inscription label | | | |
|  | For solenoid valve | 80 pieces | 197 259 MH-BZ-80X |
| Plug socket with cable | | | |
|  | For 1 coil, 2-wire | 0.5 m | 197 263 KMH-0.5 |
| | | 1 m | 197 264 KMH-1 |
| | | 2.5 m | 527 400 KMH-2,5 |
| | | 5 m | 527 401 KMH-5 |