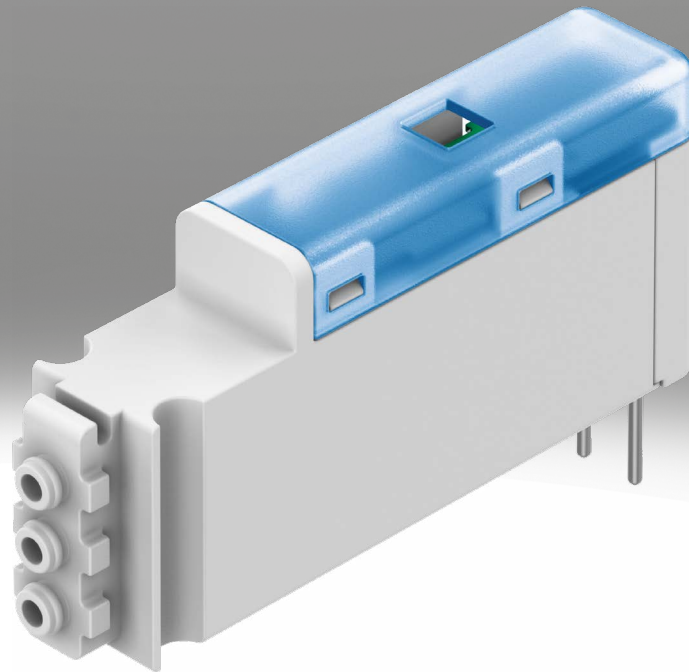


Solenoid valve VOVK

FESTO



Type codes

| | | |
|-------------|---|--|
| 001 | Series | |
| VOVK | Solenoid valve | |
| 002 | Type of directional control valve | |
| B | Sub-base valve | |
| 003 | Design principle | |
| T | Poppet valve | |
| 004 | Size | |
| 6 | Size 6 | |
| 005 | Valve function | |
| M32C | 3/2-way valve, normally closed | |
| 006 | Reset method for single solenoid valves | |
| M | Mechanical spring | |
| 007 | Pilot air | |
| N | None | |

| | | |
|-------------|---------------------------|--|
| 008 | Nominal operating voltage | |
| 1 | 24 V DC | |
| 5 | 12 V DC | |
| 009 | Electrical connection | |
| H5Z | Plug pattern H5Z | |
| T1 | Pin | |
| 010 | Circuitry | |
| P | Protective circuit | |
| 011 | Pneumatic connection | |
| F | Flange/sub-base | |
| B3 | Barbed connector, 3 mm | |
| B3.2 | Barbed connector, 3.2 mm | |
| 012 | Connection direction | |
| F | Front | |
| B | Underneath | |

Key features

At a glance

- Miniature switching valve 3/2 NC
- Optimised for very small installation spaces, with a width of only 5.9 mm
- Large pressure range from 0.9 ... 7 bar, therefore also vacuum-compatible
- Can be easily connected in series
- Very low power consumption of 0.5 W
- With LED and overvoltage protection circuit
- Different variants 12, 24 V DC, with plug+ cable (H5Z), or with pins (T1)

Pneumatic connection

There are three versions for the various applications:

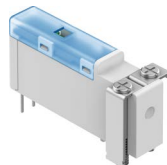
- [B3F], [B3.2F] As individual valve with barbed connectors
- [FB] With flanged connection underneath for mounting valves on a manifold duct plate
- [FF] Up to 20 valves that can be directly connected in series as a valve block, with barbed connector

[B3] Barbed connector, 3 mm



- Individual valve, direct, with barbed connectors

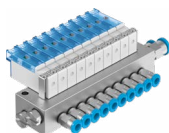
[F] Flange/sub-base



- Individual valves with flanged connection

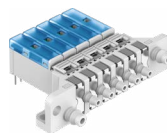
Connection direction

[B] Underneath



- VOVK...-FB with flanged connection underneath
- Manifold block for an individual valve or for ten valves

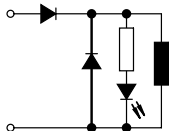
[F] Front



- VOVK...-FF with flanged connection on the front
- For easy side-by-side installation of 2 ... 20 valves
- Working ports with barbed connector for 3 mm or 4 mm O.D. tubing
- Common supply and exhaust with barbed connectors for 6 mm O.D. tubing

Circuitry

[P] Protective circuit



Data sheet

| General technical data | |
|---------------------------------|---|
| Type ID code | VOVK |
| Valve function | 3/2-way, closed, single solenoid |
| Design | Connection direction underneath; connection direction at front; poppet valve with spring return |
| Sealing principle | Soft |
| Actuation type | Electrical |
| Reset method | Mechanical spring |
| Type of control | Electrical |
| Flow direction | Reversible |
| Exhaust function | Can be throttled |
| Manual override | None |
| Type of mounting | Via through-hole |
| Mounting position | Any |
| Nominal width | 0.36 mm |
| Standard nominal flow rate | 5.5 l/min |
| Width | 5.9 mm |
| Switching time on ¹⁾ | ≤13 ms |
| Note on switching time on | ≤= 6 ms at 0 < p < 6 bar, ≤= 13 ms at -1 < p < 0 bar |
| Switching time off | ≤6 ms |
| Note on switching time off | At -1 < p < 6 bar |

1) 13 ms with vacuum of -0.9 bar at port 1

| Operating and environmental conditions | |
|---|---|
| Type ID code | VOVK |
| Operating medium | Compressed air to ISO 8573-1:2010 [6:4:1] |
| Note on the operating/pilot medium | Lubricated operation not possible |
| Operating pressure | -0.1 ... 0.7 MPa |
| Operating pressure | -1 ... 7 bar |
| Operating pressure | -14.5 ... 100 psi |
| Ambient temperature | 5 ... 50°C |
| Temperature of medium | 5 ... 50°C |

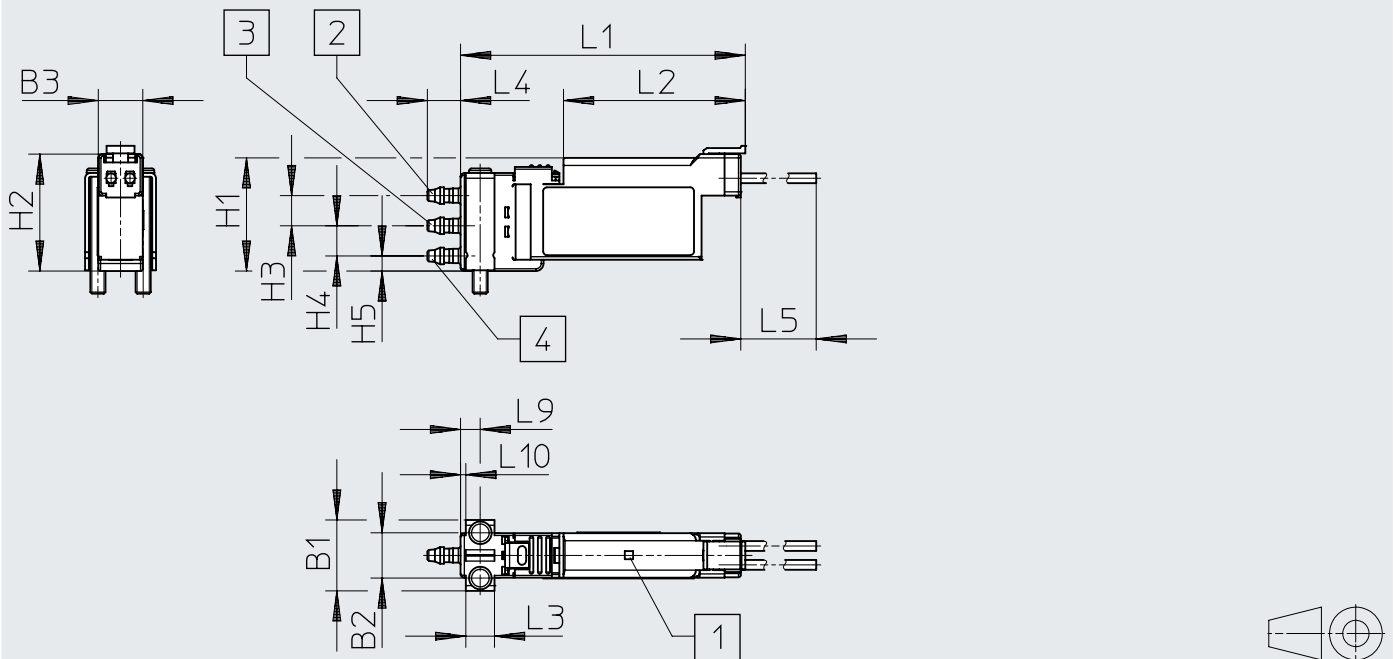
| Electrical data | |
|--|-------------------|
| Type ID code | VOVK |
| Nominal operating voltage DC ¹⁾ | 12 V, 24 V |
| Electrical connection | 2-pin, cable |
| Electrical power consumption | 0.5 W |
| Duty cycle | 100% within 500 h |

1) +/- 10%

| Materials | |
|-------------------|--|
| Type ID code | VOVK |
| Housing material | PBT |
| Spring material | High-alloy stainless steel |
| Note on materials | Contains paint-wetting impairment substances; RoHS-compliant |

Dimensions

Dimensions – Individual valve with barbed connectors, connection H5

Download CAD data → www.festo.com

- [1] LED indicator
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

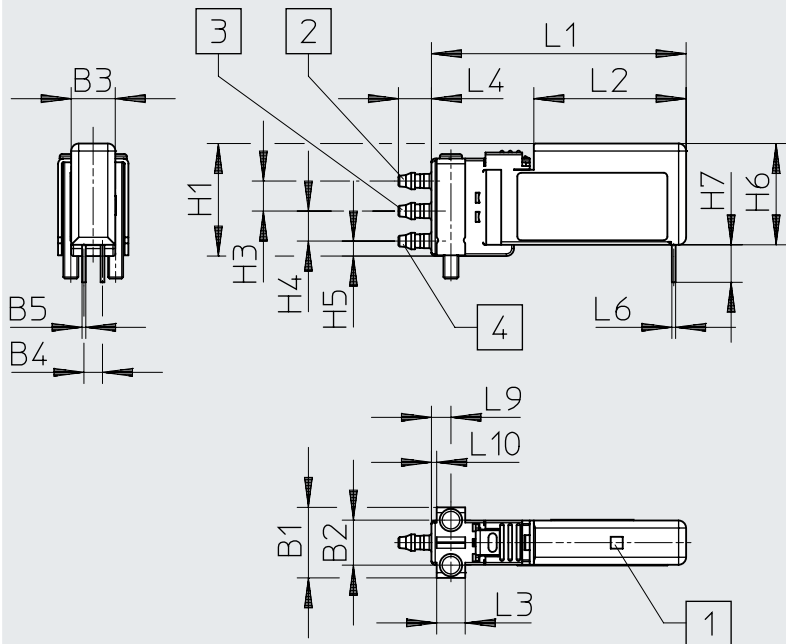
| | B1 | B2 | B3 | H1 | H2 | H3 | H4 | H5 |
|----------------------|-----|----|-----|----|------|----|----|----|
| VOVK-...-1H5ZP-B3F | 9,4 | 6 | 5,9 | 15 | 15,5 | 4 | 4 | 2 |
| VOVK-...-5H5ZP-B3F | | | | | | | | |
| VOVK-...-1H5ZP-B3.2F | | | | | | | | |
| VOVK-...-5H5ZP-B3.2F | | | | | | | | |

| | L1 | L2 | L3 | L4 | L5 | L9 | L10 |
|----------------------|------|------|-----|----|-----|-----|-----|
| VOVK-...-1H5ZP-B3F | 37,8 | 24,1 | 3,8 | 5 | 300 | 2,6 | 0,7 |
| VOVK-...-5H5ZP-B3F | | | | | | | |
| VOVK-...-1H5ZP-B3.2F | | | | | | | |
| VOVK-...-5H5ZP-B3.2F | | | | | | | |

Dimensions

Dimensions – Individual valve with barbed connectors, connection via pins

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- [1] LED indicator
- [2] Connection 1
- [3] Connection 2
- [4] Connection 3

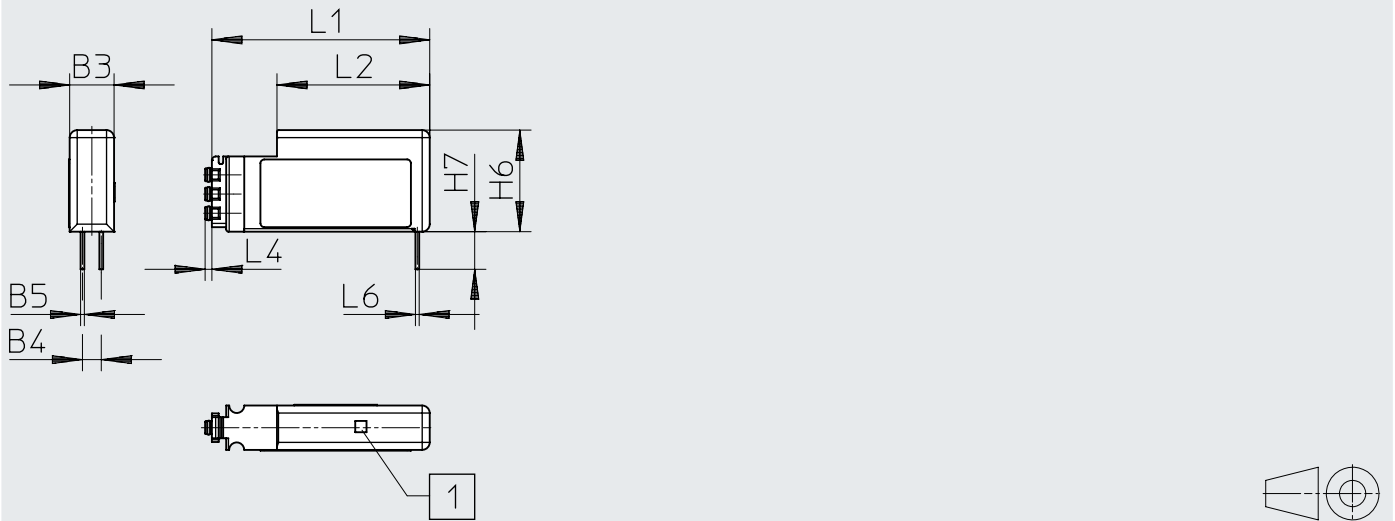


| | B1 | B2 | B3 | B4 | B5 | H1 | H3 | H4 | H5 |
|--------------------|-----|----|-----|-----|-----|----|----|----|----|
| VOVK...-1T1P-B3F | 9,4 | 6 | 5,9 | 2,5 | 0,5 | 15 | 4 | 4 | 2 |
| VOVK...-5T1P-B3F | | | | | | | | | |
| VOVK...-1T1P-B3.2F | | | | | | | | | |
| VOVK...-5T1P-B3.2F | | | | | | | | | |

| | H6 | H7 | L1 | L2 | L3 | L4 | L6 | L9 | L10 |
|--------------------|------|----|----|------|-----|----|-----|-----|-----|
| VOVK...-1T1P-B3F | 13,5 | 5 | 34 | 20,3 | 3,8 | 5 | 0,5 | 2,6 | 0,7 |
| VOVK...-5T1P-B3F | | | | | | | | | |
| VOVK...-1T1P-B3.2F | | | | | | | | | |
| VOVK...-5T1P-B3.2F | | | | | | | | | |

Dimensions

Dimensions – Individual valve, flange at front, connection via pins

Download CAD data → www.festo.com

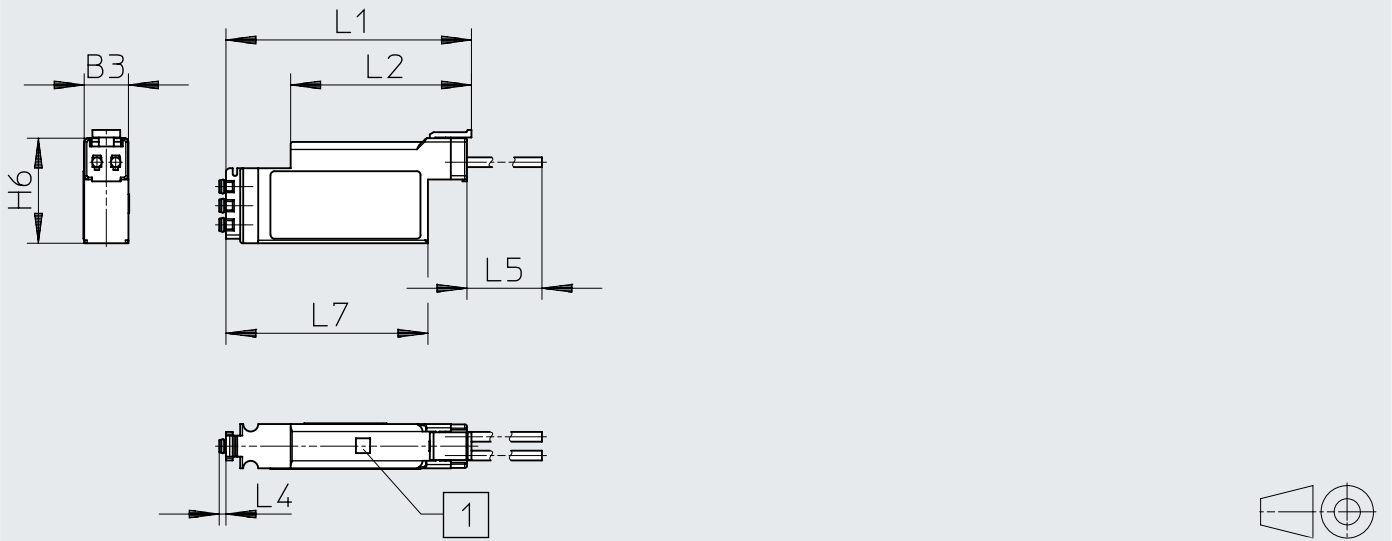
[1] LED indicator

| | B3 | B4 | B5 | H6 | H7 | L1 | L2 | L4 | L6 |
|-----------------|-----|-----|-----|------|----|----|------|-----|-----|
| VOVK...-1T1P-FF | 5,9 | 2,5 | 0,5 | 13,5 | 5 | 29 | 20,3 | 0,9 | 0,5 |
| VOVK...-5T1P-FF | | | | | | | | | |

Dimensions

Dimensions – Individual valve, flange at front, connection H5

Download CAD data → www.festo.com

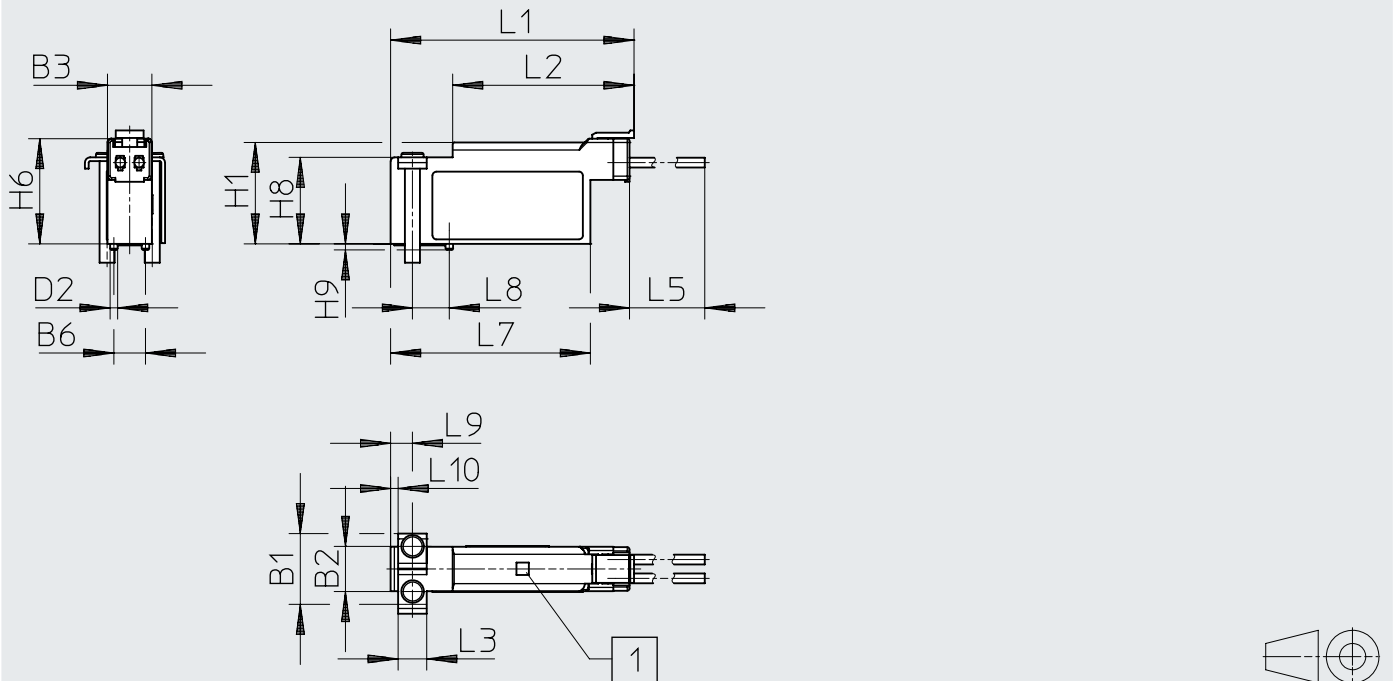


[1] LED indicator

| | B3 | H6 | L1 | L2 | L4 | L5 | L7 |
|------------------|-----|----|------|------|-----|-----|----|
| VOVK...-1H5ZP-FF | 5,9 | 14 | 32,8 | 24,1 | 0,9 | 300 | 27 |
| VOVK...-5H5ZP-FF | | | | | | | |

Dimensions

Dimensions – Individual valve, flange underneath, connection H5

Download CAD data → www.festo.com

[1] LED indicator

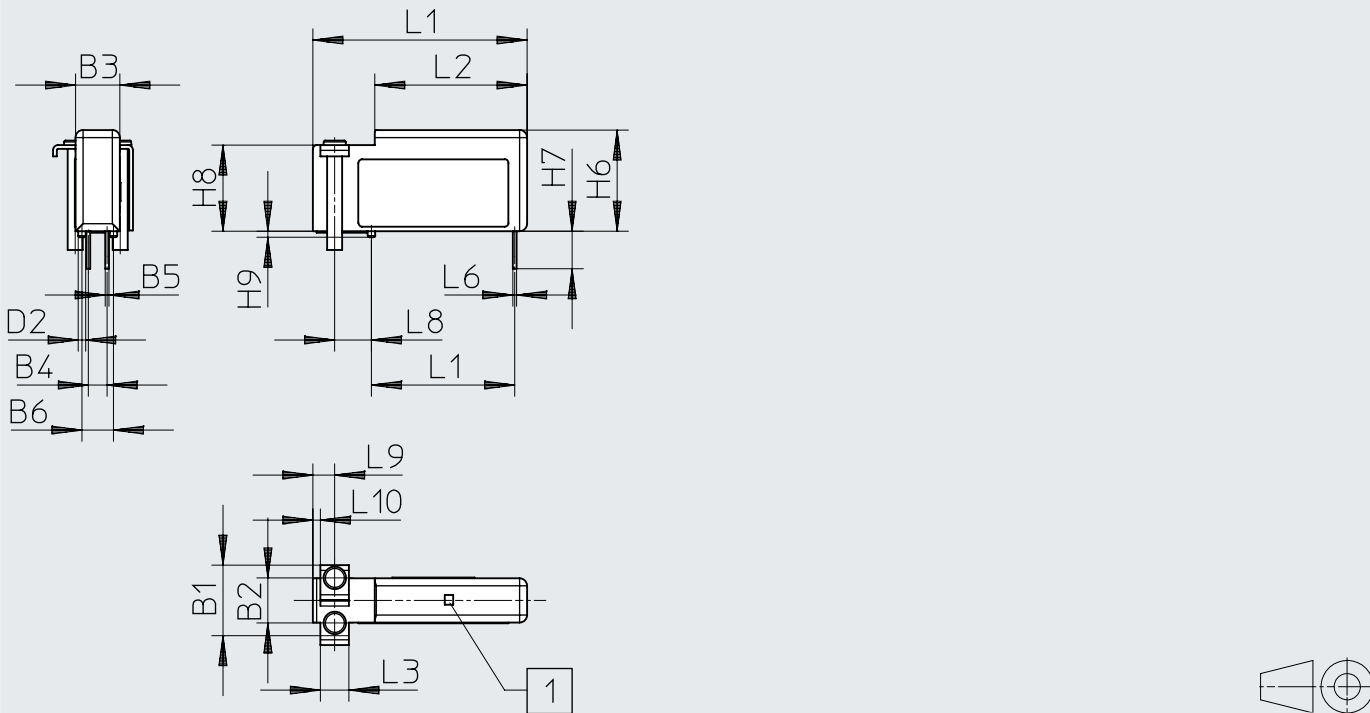
| | B1 | B2 | B3 | B6 | D2 ∅ | H1 | H6 | H8 | H9 |
|-------------------|-----|----|-----|-----|---------|------|----|------|-----|
| VOVK-...-1H5ZP-FB | 9,4 | 6 | 5,9 | 4,2 | 1 | 13,5 | 14 | 11,5 | 0,8 |
| VOVK-...-5H5ZP-FB | | | | | | | | | |

| | L1 | L2 | L3 | L5 | L7 | L8 | L9 | L10 |
|-------------------|------|------|-----|-----|------|-----|-----|-----|
| VOVK-...-1H5ZP-FB | 32,4 | 24,1 | 3,8 | 300 | 26,6 | 4,9 | 2,9 | 1 |
| VOVK-...-5H5ZP-FB | | | | | | | | |

Dimensions

Dimensions – Individual valve, flange underneath, connection via pins

Download CAD data → www.festo.com



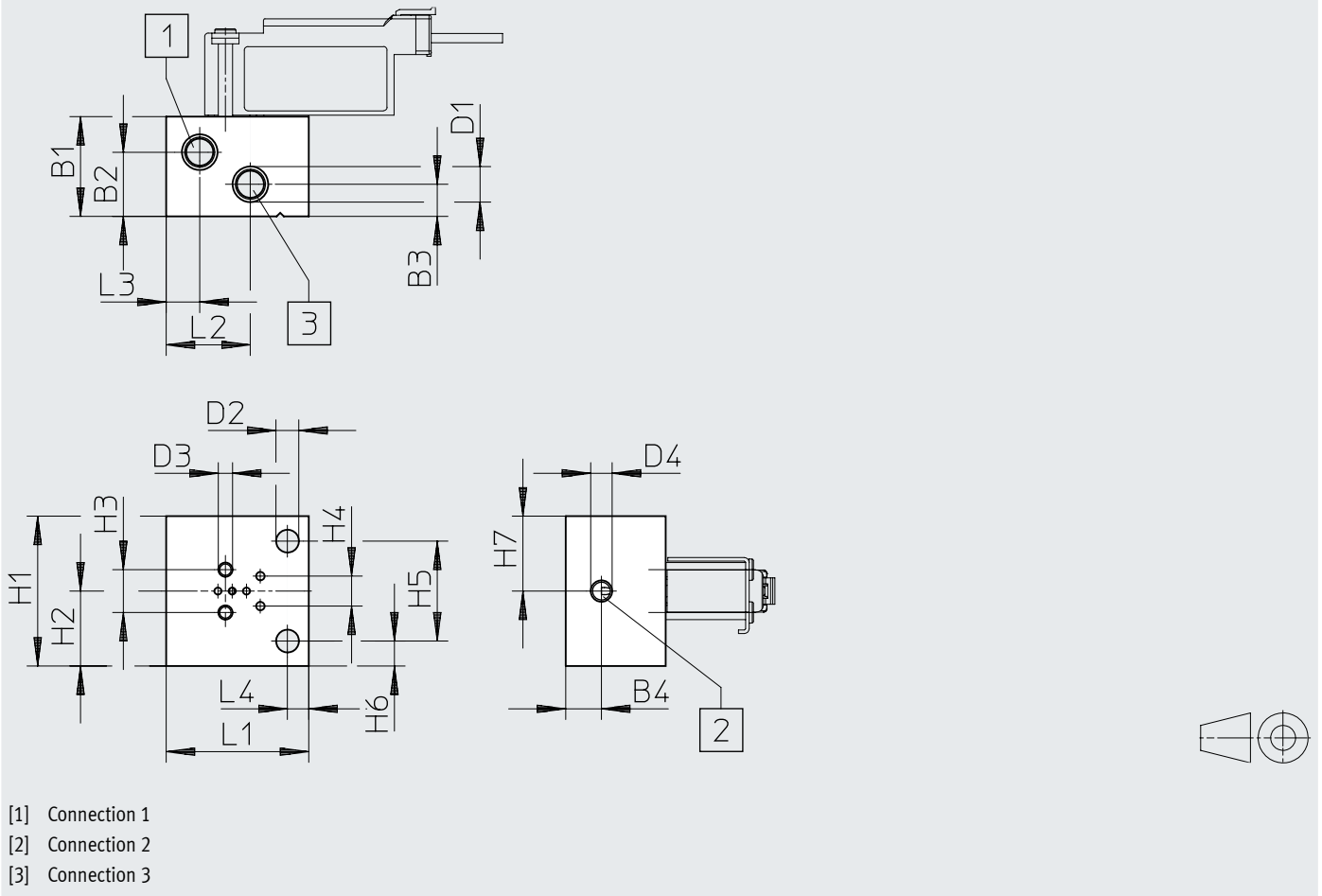
[1] LED indicator

| | B1 | B2 | B3 | B4 | B5 | B6 | D2 ∅ | H6 | H7 |
|------------------|-----|----|-----|-----|-----|-----|---------|------|----|
| VOVK-...-1T1P-FB | 9,4 | 6 | 5,9 | 2,5 | 0,5 | 4,2 | 1 | 13,5 | 5 |
| VOVK-...-5T1P-FB | | | | | | | | | |

| | H8 | H9 | L1 | L2 | L3 | L6 | L8 | L9 | L10 | L11 |
|------------------|------|-----|------|------|-----|-----|-----|-----|-----|------|
| VOVK-...-1T1P-FB | 11,5 | 0,8 | 28,6 | 20,3 | 3,8 | 0,5 | 4,9 | 2,9 | 1 | 19,1 |
| VOVK-...-5T1P-FB | | | | | | | | | | |

Dimensions

Dimensions – Manifold block, individual valve

Download CAD data → www.festo.com

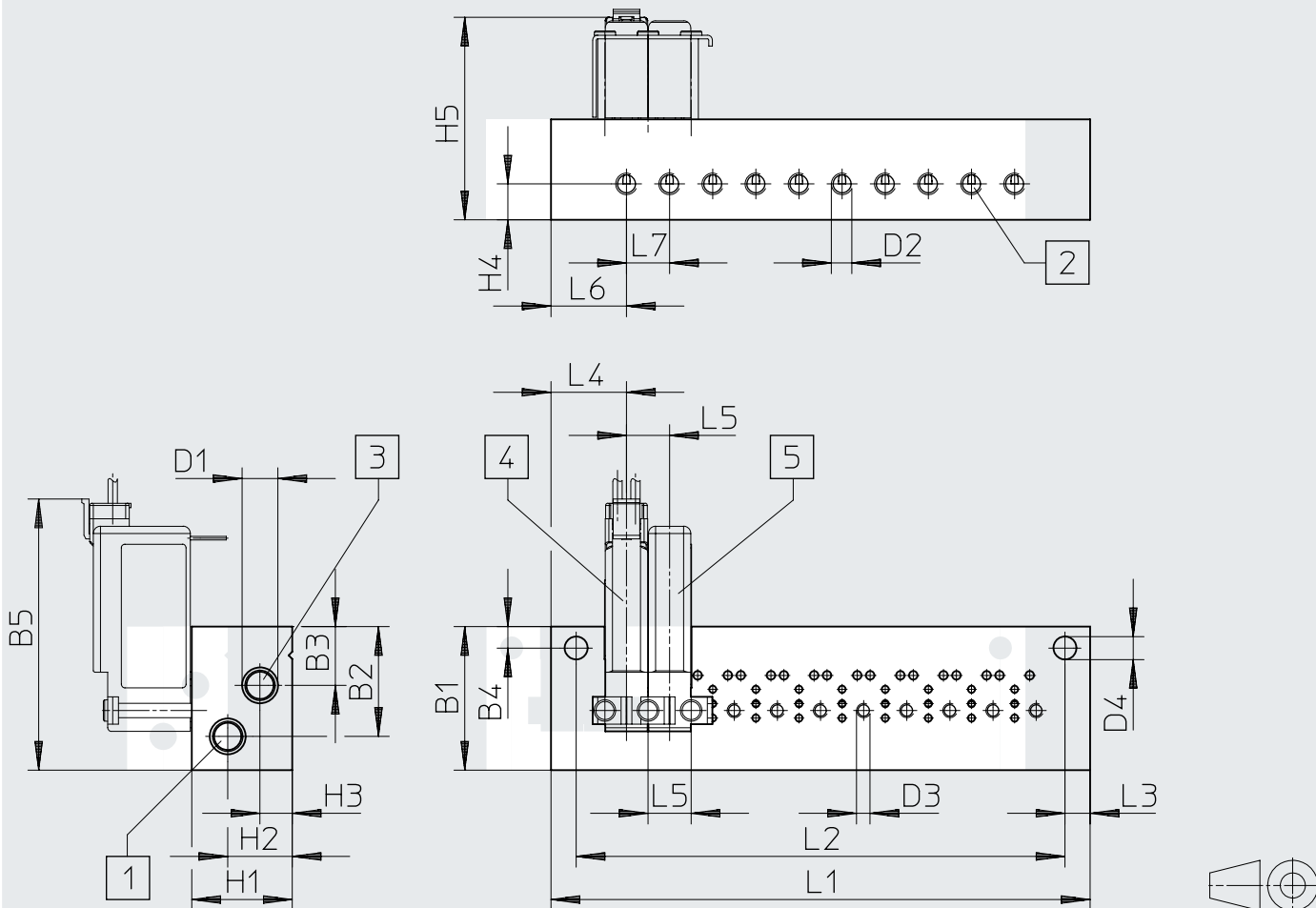
| | B1 | B2 | B3 | B4 | D1 | D2 ∅ | D3 | D4 | H1 |
|------------------|----|----|-----|----|--------|---------|--------|--------|----|
| VOVK-...-H5ZP-FB | 14 | 9 | 4,5 | 5 | M5x0,8 | 3,2 | M2x0,4 | M3x0,5 | 21 |
| VABS-C12-6-B-M3 | | | | | | | | | |

| | H2 | H3 | H4 | H5 | H6 | H7 | L1 | L2 | L3 | L4 |
|------------------|------|----|-----|----|-----|------|----|------|-----|----|
| VOVK-...-H5ZP-FB | 10,5 | 6 | 4,2 | 14 | 3,5 | 10,5 | 20 | 11,8 | 4,7 | 3 |
| VABS-C12-6-B-M3 | | | | | | | | | | |

Dimensions

Dimensions – Manifold block, 10 valves

Download CAD data → www.festo.com



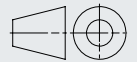
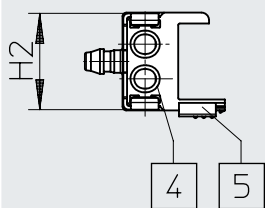
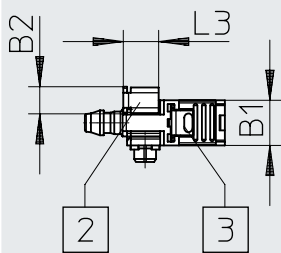
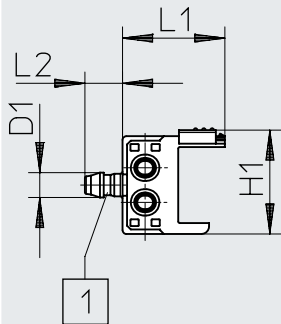
- [1] Connection 1
- [2] Connection 2
- [3] Connection 3
- [4] VOVK-...-H5ZP-FB
- [5] VOVK-...-T1P-FB

| | B1 | B2 | B3 | B4 | B5 | D1 | D2 | D3 | D4 ∅ | H1 |
|--------------|----|------|-----|----|------|--------|--------|--------|---------|----|
| VABM-C12-... | 20 | 15,3 | 8,2 | 3 | 37,8 | M5x0,8 | M3x0,5 | M2x1,4 | 3,2 | 14 |

| | H2 | H3 | H4 | H5 | L1 | L2 | L3 | L4 | L5 | L6 | L7 |
|--------------|----|-----|----|------|----|----|-----|------|----|------|----|
| VABM-C12-... | 9 | 4,5 | 5 | 28,2 | 68 | 61 | 3,5 | 10,5 | 6 | 10,5 | 6 |

Dimensions

Dimensions – Sub-base

Download CAD data → www.festo.com

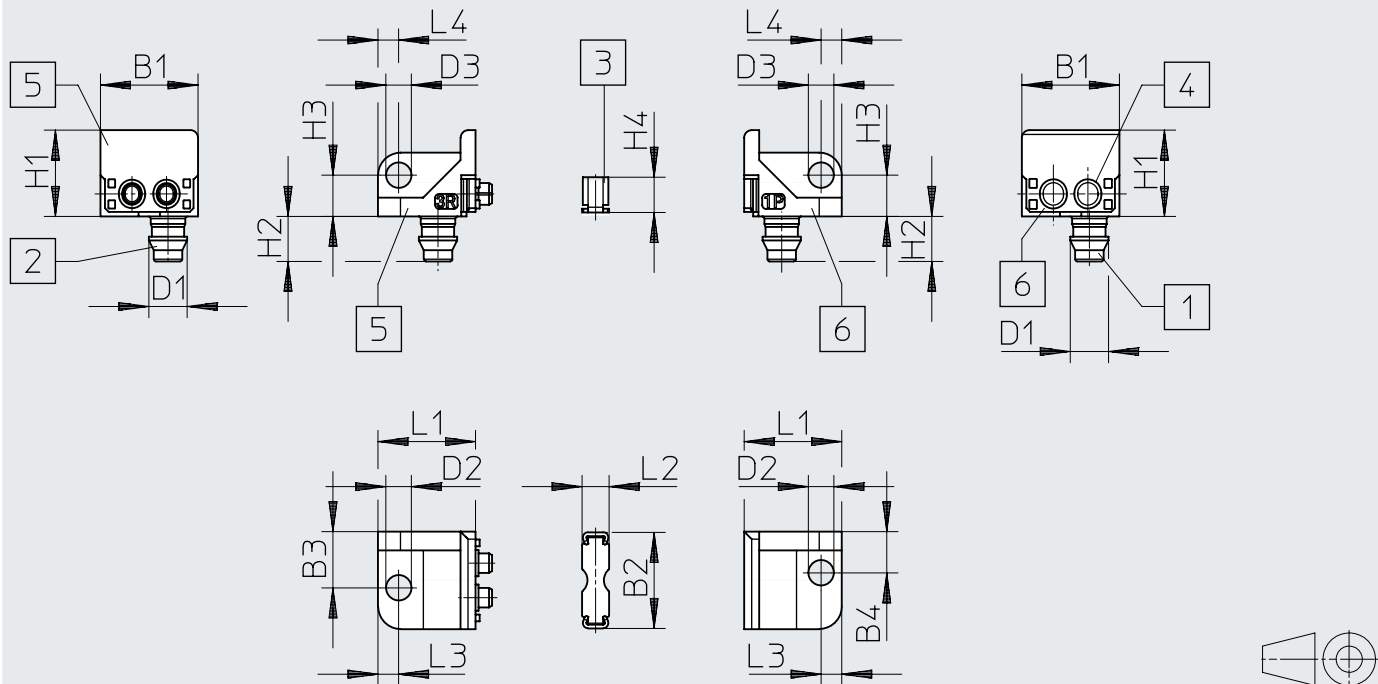
- [1] Connection 2
- [2] Connection fitting
- [3] Mounting bracket connection
- [4] O-ring
- [5] Cover

| | B1 | B2 | D1 ∅ | H1 | H2 | L1 | L2 | L3 |
|-----------------|----|-----|---------|------|------|------|----|-----|
| VABS-C12-6-S-B3 | 6 | 3,6 | 2,6 | 13,9 | 12,8 | 13,6 | 5 | 4,7 |
| VABS-C12-6-S-B4 | 6 | 3,6 | 3,3 | 13,9 | 12,8 | 13,6 | 5 | 4,7 |

Dimensions

Dimensions – End plates

Download CAD data → www.festo.com

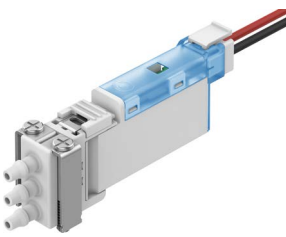


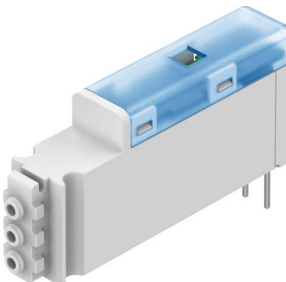
- [1] Connection 1
- [2] Connection 3
- [3] Connection fitting
- [4] O-ring
- [5] Left end plate
- [6] Right end plate

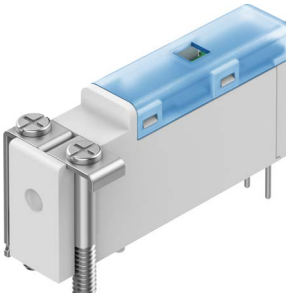
| | B1 | B2 | B3 | B4 | D1 ∅ | D2 ∅ | D3 ∅ | H1 |
|--------------|----|------|-----|-----|---------|---------|---------|------|
| VABS-C12-6-S | 13 | 12,8 | 7,5 | 5,5 | 5,1 | 3,4 | 3,4 | 11,5 |

| | H2 | H3 | H4 | L1 | L2 | L3 | L4 |
|--------------|----|-----|-----|----|-----|-----|-----|
| VABS-C12-6-S | 6 | 5,5 | 4,7 | 13 | 3,6 | 2,8 | 2,8 |

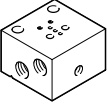
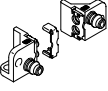
Ordering data

| Individual valve with barbed connectors | | | | |
|---|---------------------------|-----------------------|----------|------------------------------|
| | Nominal operating voltage | Electrical connection | Part no. | Type |
|  | 24 V DC | Plug pattern H5Z | 8122783 | VOVK-BT6-M32C-MN-1H5ZP-B3.2F |
| | | Pin | 8122782 | VOVK-BT6-M32C-MN-1H5ZP-B3F |
| | 12 V DC | Plug pattern H5Z | 8122785 | VOVK-BT6-M32C-MN-1T1P-B3.2F |
| | | Pin | 8122784 | VOVK-BT6-M32C-MN-1T1P-B3F |
| | | Plug pattern H5Z | 8122787 | VOVK-BT6-M32C-MN-5H5ZP-B3.2F |
| | | Pin | 8122786 | VOVK-BT6-M32C-MN-5H5ZP-B3F |
| | | | 8122789 | VOVK-BT6-M32C-MN-5T1P-B3.2F |
| | | | 8122788 | VOVK-BT6-M32C-MN-5T1P-B3F |

| Individual valve with flanged connection at front | | | | |
|---|---------------------------|-----------------------|----------|---------------------------|
| | Nominal operating voltage | Electrical connection | Part no. | Type |
|  | 24 V DC | Plug pattern H5Z | 8122779 | VOVK-BT6-M32C-MN-1H5ZP-FF |
| | | Pin | 8122778 | VOVK-BT6-M32C-MN-1T1P-FF |
| | 12 V DC | Plug pattern H5Z | 8122781 | VOVK-BT6-M32C-MN-5H5ZP-FF |
| | | Pin | 8122780 | VOVK-BT6-M32C-MN-5T1P-FF |

| Individual valve with flanged connection underneath | | | | |
|---|---------------------------|-----------------------|----------|---------------------------|
| | Nominal operating voltage | Electrical connection | Part no. | Type |
|  | 24 V DC | Plug pattern H5Z | 8122775 | VOVK-BT6-M32C-MN-1H5ZP-FB |
| | | Pin | 8122774 | VOVK-BT6-M32C-MN-1T1P-FB |
| | 12 V DC | Plug pattern H5Z | 8122777 | VOVK-BT6-M32C-MN-5H5ZP-FB |
| | | Pin | 8122776 | VOVK-BT6-M32C-MN-5T1P-FB |

Accessories

| Connection accessories | | | | |
|--|----------------------|--|-----------|----------------------|
| | Connection direction | Article comparison texts (description) | Part no. | Type |
| Manifold block | | | | |
|  | Underneath | Individual sub-base | ★ 8122793 | VABS-C12-6-B-M3 |
| | | For 10 valves | ★ 8122794 | VABM-C12-6M-M5-M3-10 |
| Manifold block SET | | | | |
|  | Front | End plate SET for tubing O.D. 6 mm | ★ 8122790 | VABS-C12-6-S |
| | | Manifold block for tubing O.D. 4 mm | ★ 8122791 | VABS-C12-6-S-B4 |
| | | Manifold block for tubing O.D. 3 mm | ★ 8122792 | VABS-C12-6-S-B3 |