

Front panel valves SV

FESTO



Key features



Actuator attachments

Pushbuttons

Pushbuttons return to their initial switching position after they are actuated.

Switches

Switches have several switching positions that can be alternated between as required. Key actuators can only be actuated using the key. The key can be removed in any switching position.

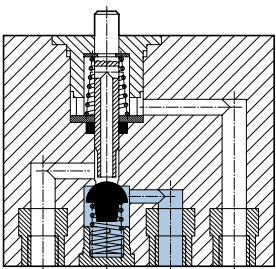
Mushroom pushbuttons/mushroom pushbuttons with detent

Mushroom pushbuttons return to their initial switching position after they are actuated. Mushroom pushbuttons with detent are actuated by pressing them and return to their initial switching position after they are unlocked:

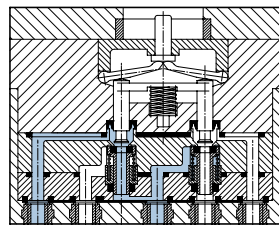
- Type PR: the attachment is unlocked by rotating the detent ring on the mushroom head.
- Type PRS: the attachment can only be unlocked using the key. The key can be removed in both switching positions.

Basic valves

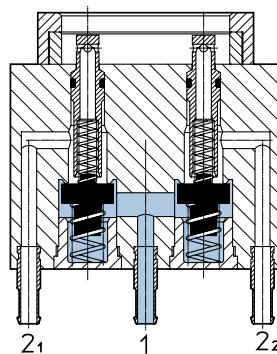
3/2-way valve



5/2-way valve




2x 3/2-way valve



Key features

- The basic valves are poppet valves that have no overlap:
- No overflow between the ducts during switching
 - Limited self-cleaning by air flow during operation

Data sheet – Actuator attachments

 Temperature range
 -10 ... +60°C



General technical data – Actuator attachments with 22.5 mm installation diameter

| | T-22-SW | T-22-GE | T-22-RT | N-22-SW | H-22-SW | Q-22-B | P-22-SW | PR-22-RT | PRS-22-RT-B |
|-----------------------|---------|---------|---------|---------|---------|----------------|---------|----------|----------------|
| Actuating force [N] | 14 | 14 | 14 | – | – | – | 14 | 25 | – |
| Actuating torque [Nm] | – | – | – | 0.4 | 0.14 | – | – | – | – |
| Product weight [g] | 14 | 14 | 14 | 21 | 19 | 37 | 20 | 26 | 45 |
| Colour | Black | Yellow | Red | Black | Black | Black | Black | Red | Red |
| Note on materials | – | – | – | – | – | RoHS-compliant | – | – | RoHS-compliant |

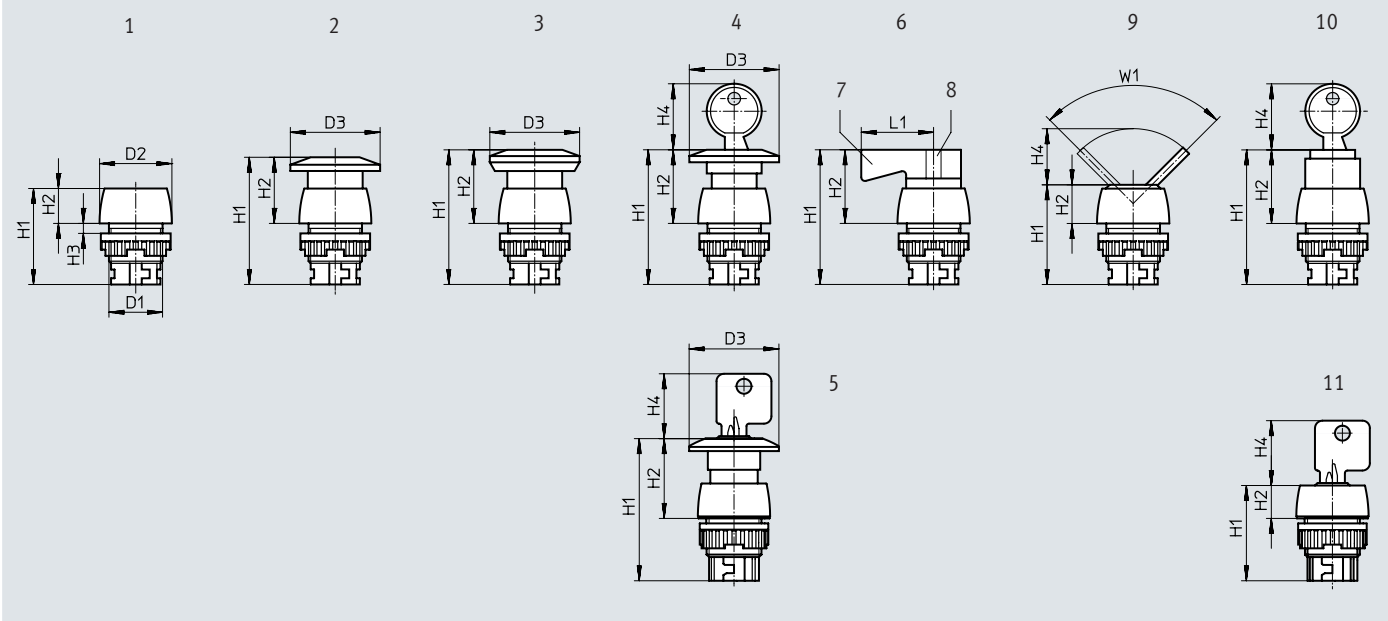
General technical data – Actuator attachments with 30.5 mm installation diameter

| | T-30-SW | T-30-GE | T-30-RT | N-30-SW | H-30-SW | Q-30 | P-30-SW | PR-30-RT | PRS-30-RT |
|-----------------------|---------|---------|---------|---------|---------|------|---------|----------|-----------|
| Actuating force [N] | 14 | 14 | 14 | – | – | 23 | 14 | 25 | 23 |
| Actuating torque [Nm] | – | – | – | 0.4 | 0.14 | – | – | – | – |
| Product weight [g] | 22 | 22 | 22 | 30 | 27 | 88 | 28 | 37 | 91 |
| Colour | Black | Yellow | Red | Black | Black | – | Black | Red | Red |
| Note on materials | – | – | – | – | – | – | – | – | – |

Data sheet – Actuator attachments




Dimensions – Actuator attachments

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| No. | Designation | Installation ø | ø D1 | ø D2 | ø D3 | H1 | H2 | H3 | H4 | L1 | W1 |
|-------------------|--|-------------------|---------|------|------|------|------|---------|------|----|-----|
| [1] | Pushbutton actuator T | 22.5 | M22x1.5 | 29 | – | 38.5 | 14 | 1 ...6 | – | – | – |
| | | 30.5 | M30x1.5 | 36 | – | 39 | 8.5 | 1 ...12 | – | – | – |
| [2] | Mushroom pushbutton P | 22.5 | M22x1.5 | 29 | 36 | 51 | 26.5 | 1 ...6 | – | – | – |
| | | 30.5 | M30x1.5 | 36 | 36 | 51.5 | 21 | 1 ...12 | – | – | – |
| [3] | Mushroom pushbutton with detent PR | 22.5 | M22x1.5 | 29 | 36 | 54 | 29.5 | 1 ...6 | – | – | – |
| | | 30.5 | M30x1.5 | 36 | 36 | 54.5 | 24 | 1 ...12 | – | – | – |
| [4] | Mushroom pushbutton with detent, lockable PRS | 30.5 | M30x1.5 | 36 | 36 | 56 | 25.5 | 1 ...12 | 26.5 | – | – |
| [5] | Mushroom pushbutton with detent, lockable PRS | 22.5 | M22x1.5 | 29 | 36 | 57 | 32 | 1 ...6 | 26 | – | – |
| [6] [7] [8] | Selector switch N Position "ON" Position "OFF" | 22.5 | M22x1.5 | 29 | – | 54 | 29.5 | 1 ...6 | – | 29 | – |
| | | 30.5 | M30x1.5 | 36 | – | 54.5 | 24 | 1 ...12 | – | 29 | – |
| [9] | Toggle switch H | 22.5 | M22x1.5 | 29 | – | 40 | 15.5 | 1 ...6 | 22.5 | – | 90° |
| | | 30.5 | M30x1.5 | 36 | – | 40 | 9.5 | 1 ...12 | 22.5 | – | 90° |
| [10] | Key actuator Q | 30.5 | M30x1.5 | 36 | – | 54.5 | 24 | 1 ...12 | 26.5 | – | – |
| [11] | Key actuator Q | 22.5 | M22x1.5 | 29 | – | 38.2 | 13.2 | 1 ...6 | 26 | – | – |

Data sheet – Basic valves

-  Flow rate
65 ... 120 l/min
-  Pressure
-0,095 ... +0,8 MPa
-  Temperature range
-10 ... +60°C



General technical data – Basic valves

| | 3/2-way valve | | | 5/2-way valve | 2x 3/2-way valve |
|------------------------------------|---|---------------------------------|------------------|---------------------------------|--------------------|
| | SV-3-M5 | SVS-3-1/8 | SVOS-3-1/8 | SV-5-M5-B | SV/O-3-PK-3X2 |
| Valve function | Closed, monostable | Closed, monostable | Open, monostable | Open, monostable | Closed, monostable |
| Design | Poppet valve with spring return | Poppet | Poppet | Poppet valve with spring return | – |
| Overlap | Positive overlap | – | Positive overlap | Positive overlap | – |
| Note on forced checking procedure | – | Switching frequency min. 1/week | – | – | – |
| Flow direction | Non-reversible | Non-reversible | Non-reversible | – | Reversible |
| Type of control | Direct | Piloted | Direct | Direct | Direct |
| Actuation type | Manual | Mechanical | Mechanical | Manual | – |
| Reset method | Mechanical spring | | | | |
| Sealing principle | Soft | | | | |
| Mounting position | Any | | | | |
| Type of mounting | Front panel mounting, with through-hole | | | | |
| Pneumatic connection 1 | M5 | G1/8 | G1/8 | M5 | PK-3 |
| Pneumatic connection 2 | – | G1/8 | G1/8 | – | PK-3 |
| Pneumatic connection 3 | – | G1/8 | G1/8 | – | – |
| Nominal width [mm] | 2 | 3.5 | 3.5 | 2.3 | 2.5 |
| Standard nominal flow rate [l/min] | 65 | 120 | 120 | 95 | 70 |
| Actuating force [N] | 12 | 8 | 8 | 17 | – |
| Weight [g] | 40 | – | – | 53 | 34 |

Materials

| | 3/2-way valve | | | 5/2-way valve | 2x 3/2-way valve |
|-------------------|---------------|----------------|----------------|---------------|------------------|
| | SV-3-M5 | SVS-3-1/8 | SVOS-3-1/8 | SV-5-M5-B | SV/O-3-PK-3X2 |
| Housing | Polymer | – | – | Polymer | – |
| | Brass | Aluminium | Aluminium | Brass | – |
| Cover | – | POM | POM | – | – |
| Seals | NBR | NBR, TPE-U(PU) | NBR, TPE-U(PU) | NBR | NBR |
| Note on materials | – | RoHS-compliant | RoHS-compliant | – | – |

Operating and environmental conditions

| | 3/2-way valve | | | 5/2-way valve | 2x 3/2-way valve |
|----------------------------------|---|-----------------|--------------|---------------|---|
| | SV-3-M5 | SVS-3-1/8 | SVOS-3-1/8 | SV-5-M5-B | SV/O-3-PK-3X2 |
| Operating medium | Compressed air to ISO 8573-1:2010 [–:–:–] | | | | Compressed air to ISO 8573-1:2010 [7:–:–] |
| Operating pressure ¹⁾ | [MPa] | -0.095 ... +0.8 | 0.35 ... 0.8 | 0.35 ... 0.8 | 0 ... 0.8 |
| | [bar] | -0.95 ... +8 | 3.5 ... 8 | 3.5 ... 8 | 0 ... 8 |
| Temperature of medium [°C] | – | -10 ... +60 | – | – | – |
| Ambient temperature [°C] | -10 ... +60 | | | | |

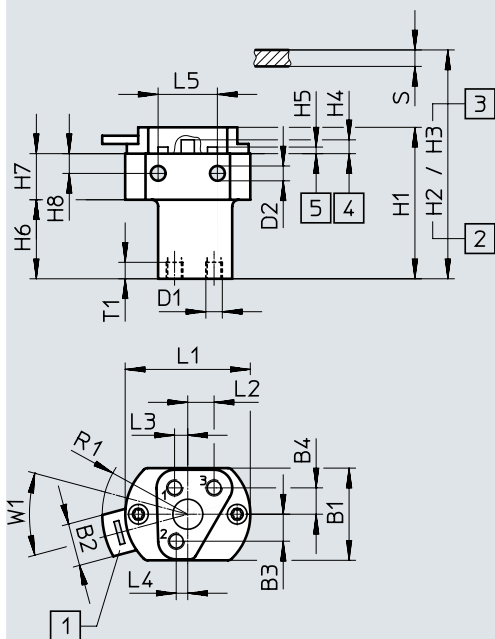
1) SV-3-M5: Vacuum connection at port 1

Data sheet – Basic valves

Dimensions – Basic valves

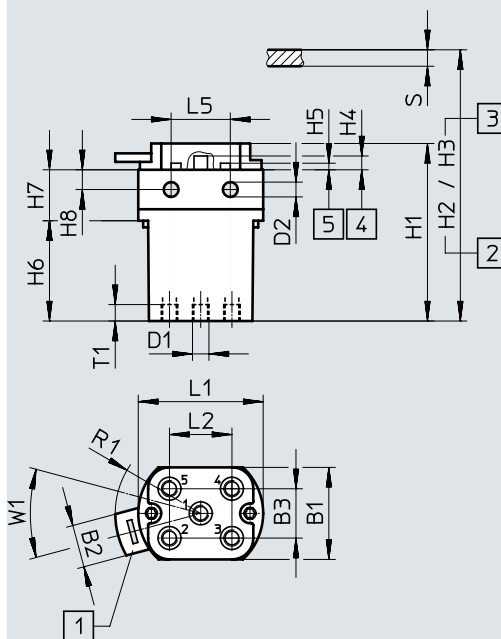
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SV-3-M5



- [1] Quick latching coupler for actuator attachments
- [2] Installation dimensions for $\varnothing 22.5$
- [3] Installation dimensions for $\varnothing 30.5$
- [4] Max. stroke
- [5] Max. opening
- s Front panel thickness

SV-5-M5-B



- [1] Quick latching coupler for actuator attachments
- [2] Installation dimensions for $\varnothing 22.5$
- [3] Installation dimensions for $\varnothing 30.5$
- [4] Max. stroke
- [5] Max. opening
- s Front panel thickness

| | B1 | B2 | B3 | B4 | D1 | D2 \varnothing | H1 | H2 | H3 | H4 ± 0.2 | H5 |
|-----------|----|----|-----|----|----|---------------------|----|------|------|-----------------|----|
| SV-3-M5 | 28 | 13 | 8.2 | 8 | M5 | 4.5 | 46 | 63.5 | 69.5 | 4.2 | 2 |
| SV-5-M5-B | | | 15 | - | | | 54 | 71.5 | 77.5 | | |

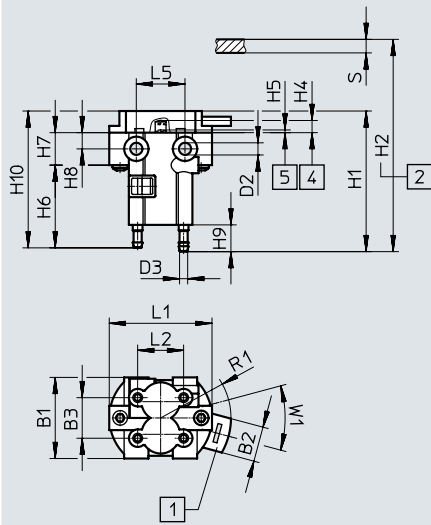
| | H6 | H7 | H8 | L1 | L2 | L3 | L4 | L5 | R1 | T1 | W1 |
|-----------|------|------|-----|----|----|----|-----|----|----|----|-----|
| SV-3-M5 | 24 | 14 | 6 | 38 | 8 | 4 | 3.5 | 18 | 26 | 5 | 30° |
| SV-5-M5-B | 30.5 | 15.5 | 9.5 | | 19 | - | - | | | | |

Data sheet – Basic valves

Dimensions – Basic valves

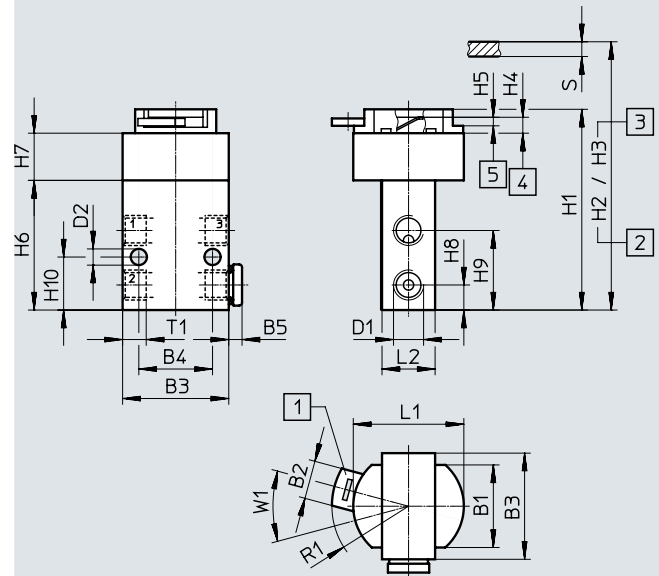
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SV/O-3-PK-3X2



- [1] Quick latching coupler for actuator attachments
- [2] Installation dimensions for $\varnothing 22.5$
- [4] Max. stroke
- [5] Max. opening

SVS-3-1/8, SVOS-3-1/8



- [1] Quick latching coupler for actuator attachments
- [2] Installation dimensions for $\varnothing 22.5$
- [3] Installation dimensions for $\varnothing 30.5$
- [4] Max. stroke
- [5] Max. opening

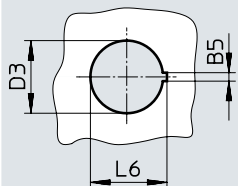
| | B1 | B2 | B3 | B4 | B5 | D1 | D2 \varnothing | D3 \varnothing | H1 | H2 | H3 | H4 ± 0.2 |
|-------------------------|----|----|----|----|-----|------|---------------------|---------------------|----|------|----|-----------------|
| SV/O-3-PK-3X2 | 30 | 13 | 15 | - | - | - | 4.5 | 3 | 52 | 68.5 | - | 4.5 |
| SVS-3-1/8 SVOS-3-1/8 | 28 | | 36 | 25 | 4.5 | G1/8 | 5.5 | - | 68 | 86 | 91 | 6 |

| | H5 +0.4 -0.8 | H6 | H7 | H8 | H9 | H10 | L1 | L2 | L5 | R1 | T1 | W1 |
|-------------------------|--------------------|------|----|-----|-----|------|------|----|----|----|----|-----|
| SV/O-3-PK-3X2 | 1 | 30.6 | 12 | 6 | 9.9 | 50.6 | 38 | 17 | 18 | 26 | - | 30° |
| SVS-3-1/8 SVOS-3-1/8 | 2 ... 3 | 44 | 16 | 8.5 | 27 | 18 | 37.5 | 18 | - | | 8 | |

Dimensions

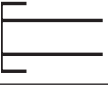

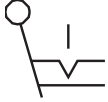
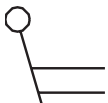
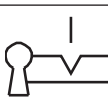
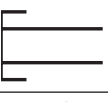

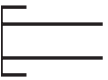

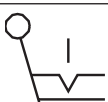
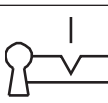
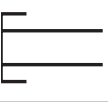

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Installation opening (control panel cut-out)

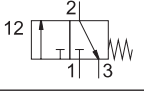
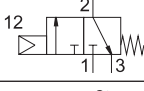
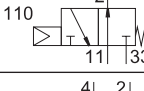

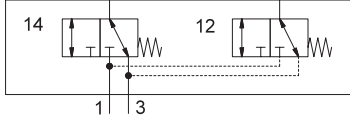


| | B5 | D3 | L6 |
|---|-----|------|------|
| Installation opening $\varnothing 22.5$ | 2.6 | 22.3 | 23.5 |
| Installation opening $\varnothing 30.5$ | 3.1 | 30.3 | 31.5 |

Data sheet

| Ordering data | | | | Part no. | Type |
|--|--------------------------------|-------------------|--------|-------------|------|
| Circuit symbol | Description | | | | |
| Actuator attachments installation \varnothing 22.5 mm, degree of protection IP40 | | | | | |
|  | Pushbutton actuator | Black | 9289 | T-22-SW | |
| | | Yellow | 9290 | T-22-GE | |
| | | Red | 9997 | T-22-RT | |
|  | Selector switch | Black | 9301 | N-22-SW | |
| | | | 25261 | NR-22-SWX2 | |
|  | Toggle switch, detenting | Black | 9305 | H-22-SW | |
|  | Toggle switch | Black | 25749 | H-22-SWX2 | |
|  | Key actuator with key | Black | 573107 | Q-22-B | |
|  | Mushroom pushbutton | Black | 9293 | P-22-SW | |
|  | Mushroom pushbutton, detenting | Red, not lockable | 9297 | PR-22-RT | |
| | | Red, lockable | 573108 | PRS-22-RT-B | |
| Actuator attachments installation \varnothing 30.5 mm, degree of protection IP40 | | | | | |
|  | Pushbutton actuator | Black | 9291 | T-30-SW | |
| | | Yellow | 9292 | T-30-GE | |
| | | Red | 10014 | T-30-RT | |
|  | Selector switch | Black | 9302 | N-30-SW | |
|  | Toggle switch | Black | 9306 | H-30-SW | |
|  | Key actuator with key | - | 9304 | Q-30 | |
|  | Mushroom pushbutton | Black | 9295 | P-30-SW | |
|  | Mushroom pushbutton, detenting | Red, not lockable | 9298 | PR-30-RT | |
| | | Red, lockable | 9300 | PRS-30-RT | |

Data sheet

| Ordering data | | | | |
|---|-----------------------------------|----------------------|---------------|----------------------|
| Circuit symbol | Description | Pneumatic connection | Part no. | Type |
| Basic valves | | | | |
|  | 3/2-way valve, normally closed | M5 | 6817 | SV-3-M5 |
|  | 3/2-way valve, normally closed | G1/8 | 10190 | SVS-3-1/8 |
|  | 3/2-way valve, normally open | G1/8 | 10191 | SVOS-3-1/8 |
|  | 5/2-way valve | M5 | 11914 | SV-5-M5-B |
|  | 2x 3/2-way valve, normally closed | PK-3 | 184135 | SV/O-3-PK-3X2 |

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