

# 5/2 directional safety valve, Series SV01

R412027211

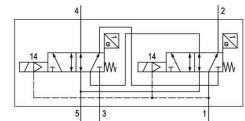
series SV01

2024-11-21

- Rapid response for minimum actuating time
- Position sensors for valve fault monitoring
- Pressure range from 3 - 10 bar
- Internal and external pilot supply as standard
- Category 4 performance level "e" according to ISO 13849-1

## AVENTICS Series SV01/03/05 Safety valves

AVENTICS dual valves are redundant 3/2 valves for external monitoring that meet the needs and requirements of safe 3/2 valves for the pressurization and exhaust of machines with pneumatic controls in accordance with the ISO 13849-1-2 requirements for safety functions. According to ISO 13849-1, Cat. 4, PL e



## Technical data

|                                  |  |
|----------------------------------|--|
| Industry                         | Industrial   |
| Activation                       | Electrically   |
| Switching principle              | 5/2  |
| Compressed air connection output | 1/8 NPT  |
| Operational voltage DC           | 24 V   |
| Voltage tolerance DC             | -10 % / +10 %  |
| Actuating control                | Double Solenoid  |
| Sealing principle                | Soft seal  |
| Pilot                            | Internal   |
| Certificates                     | DGUV Test<br>cCSAus                                      |
| Standards                        | ISO 13849-1, category 4, performance level: e (possible) |
| Valve type                       | Double spool valve                                       |
| Return                           | With spring return                                       |
| Compressed air connection input  | 1/8 NPT  |
| Power consumption DC             | 1.5 W  |
| Min. working pressure internal   | 3 bar  |
| Max. working pressure internal   | 10 bar   |
| Min. working pressure external   | 0 bar  |

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|                                    |                                |
|------------------------------------|--------------------------------|
| Max. working pressure external     | 10 bar                         |
| Min. control pressure              | 3 bar                          |
| Max. control pressure              | 10 bar                         |
| Min. ambient temperature           | 4 °C                           |
| Max. ambient temperature           | 50 °C                          |
| Min. medium temperature            | 4 °C                           |
| Max. medium temperature            | 50 °C                          |
| Medium                             | Compressed air                 |
| Max. particle size                 | 5 µm                           |
| Min. oil content of compressed air | 0 mg/m <sup>3</sup>            |
| Max. oil content of compressed air | 5 mg/m <sup>3</sup>            |
| Connector standard                 | EN 175301-803, form C          |
| Nominal flow Qn 1 to 2             | 1000 l/min                     |
| Nominal flow Qn 1 to 4             | 780 l/min                      |
| Nominal flow Qn 2 to 3             | 700 l/min                      |
| Nominal flow Qn 4 to 5             | 980 l/min                      |
| Protection class with connection   | IP65                           |
| Duty cycle                         | 100 %                          |
| Typ. switch-on time                | 23 ms                          |
| Typ. switch-off time               | 45 ms                          |
| Max. current consumption           | 23 mA                          |
| Type sensor                        | PNP                            |
| Electrical connection for sensor   | Plug                           |
| Sensor port size                   | M8                             |
| Sensor number of poles             | 3-pin                          |
| Weight                             | 1.25 kg                        |
| Housing material                   | Die-cast aluminum              |
| Seal material                      | Acrylonitrile butadiene rubber |
| Part No.                           | R412027211                     |

## Technical information

Silencer not included in scope of delivery

The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Directional safety valve series SV is delivered and configured for internal control pressure. It can easily be converted to external control pressure. Please refer to the operating instructions. The control pressure must be > 3 bar.

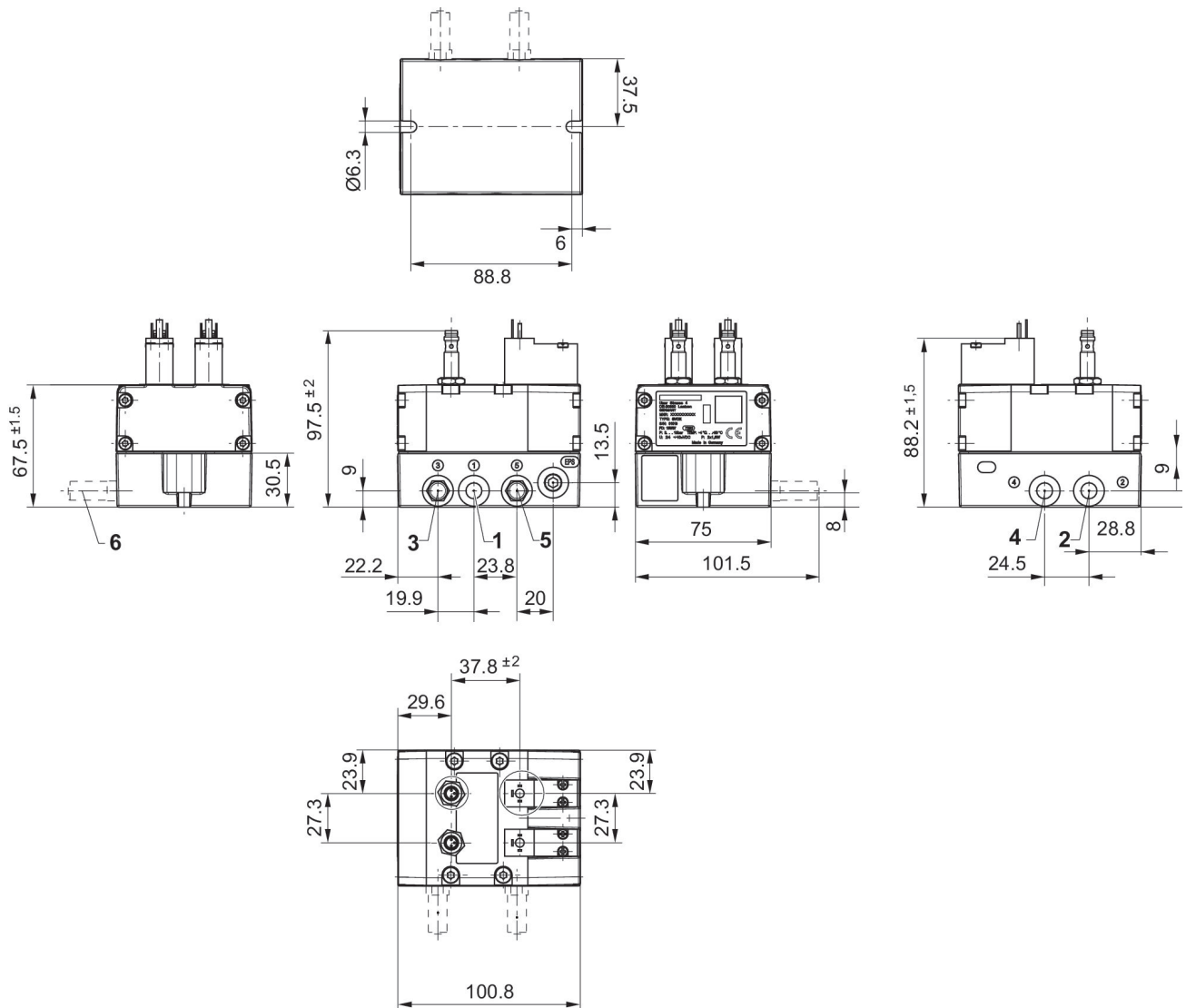
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## Dimensions



- 1) Port 1 (Input)
- 2) Port 2 (Output)
- 3) Port 3 (Exhaust)
- 4) Port 4 (Output)
- 5) Port 5 (Exhaust)
- 6) Silencer not included in scope of delivery

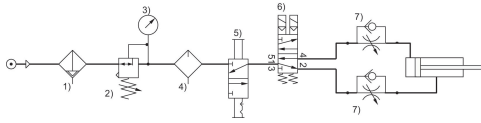
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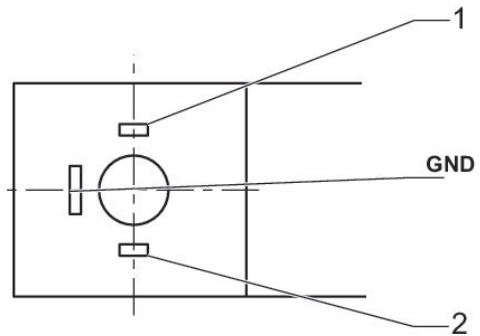
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Safe air supply and cylinder return via 5/2 directional valve  
Valve plug connector form C

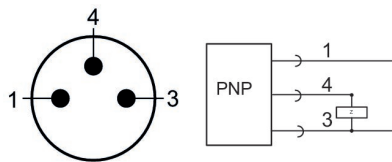


1) Filter 2) Pressure regulator 3) Pressure gauge 4) Lubricator 5) Lockout valve 6) Safety valve, Series SV 7) Check-choke valve



1) + 24 / 0 VDC  
2) 0 / + 24 VDC

PIN assignment sensor, plug M8  
3-pin



1) + 20 ... + 28 VDC  
3) 0 VDC  
4) OUT