

## AVENTICS Series 490/579/589 Directional Control Valves

The AVENTICS Series 490/579/589 have a robust polymer housing that can be mounted individually or as a block. They cover a large range of voltages and feature fast connections for pneumatic tubing.

- Integrated connections
- Individual or block assemblies available
- Extensive voltage range
- Series suitable for dusty environments



## Technical data

|                     |                         |
|---------------------|-------------------------|
| Industry            | Industrial              |
| Activation          | Electrically            |
| Frame size          | 589                     |
| Valve type          | Poppet valve            |
| Switching principle | 3/2, with spring return |
| Valve function      | NC                      |
| Sealing principle   | Soft seal               |
| Connection type     | Pipe connection         |

|                                       |                 |
|---------------------------------------|-----------------|
| Compressed air connection type        | Push-in fitting |
| Compressed air connection input       | Ø 6x1           |
| Compressed air connection output      | Ø 6x1           |
| Compressed air connection, exhaust    | Ø 8x1           |
| Compressed air connection pilot input | Ø 4             |

|                             |           |
|-----------------------------|-----------|
| Nominal flow Q <sub>n</sub> | 520 l/min |
|-----------------------------|-----------|

|                       |         |
|-----------------------|---------|
| Min. working pressure | 0.5 bar |
| Max. working pressure | 8 bar   |

# 3/2-directional valve, Series 589

5894475220

Series  
490/579/589

2025-12-11

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Min. control pressure              | 3 bar                               |
| Max. control pressure              | 10 bar                              |
| Electrical connection type         | Plug                                |
| Electrical connection size         | ISO 15217, form C                   |
| Protection class with connection   | IP65                                |
| Reverse polarity protection        | Protected against polarity reversal |
| Operational voltage                | 24 V AC                             |
| Operational voltage AC at 50 Hz    | 24 V                                |
| Voltage tolerance AC 50 Hz         | -10 % / +15 %                       |
| Operational voltage AC at 60 Hz    | 24 V                                |
| Voltage tolerance AC 60 Hz         | -10 % / +15 %                       |
| Pilot                              | External                            |
| Coil width                         | 20 mm                               |
| Holding power AC 50 Hz             | 2.2 VA                              |
| Holding power AC 60 Hz             | 1.8 VA                              |
| Switch-on power AC 50 Hz           | 3 VA                                |
| Switch-on power AC 60 Hz           | 2.6 VA                              |
| Duty cycle                         | 100 %                               |
| Typ. switch-on time                | 18 ms                               |
| Typ. switch-off time               | 16 ms                               |
| Blocking principle                 | Single valve                        |
| Min. ambient temperature           | -15 °C                              |
| Max. ambient temperature           | 50 °C                               |
| Min. medium temperature            | -15 °C                              |
| Max. medium temperature            | 50 °C                               |
| Medium                             | Compressed air                      |
| Min. oil content of compressed air | 0 mg/m <sup>3</sup>                 |
| Max. oil content of compressed air | 1 mg/m <sup>3</sup>                 |
| Max. particle size                 | 5 µm                                |
| Weight                             | 0.093 kg                            |
| <b>Material</b>                    |                                     |
| Housing material                   | Polyamide                           |
| Seal material                      | Acrylonitrile butadiene rubber      |

Polyurethane

Part No.

5894475220

## Technical information

At an ambient temperature of  $[[40] \text{ }^{\circ}\text{C}]$  the max. working pressure is  $[[10] \text{ bar}]$ .

Versions with voltage of less than 50 V DC do not have a protective ground.

Working pressure with vacuum operation, connection 1: min.  $[[3] \text{ bar}]$ , connection 3: min.  $-[[0.95] \text{ bar}]$

The control pressure must be at least as high as the working pressure.

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  $15 \text{ }^{\circ}\text{C}$  less than ambient and medium temperature and may not exceed  $3 \text{ }^{\circ}\text{C}$ .

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>).

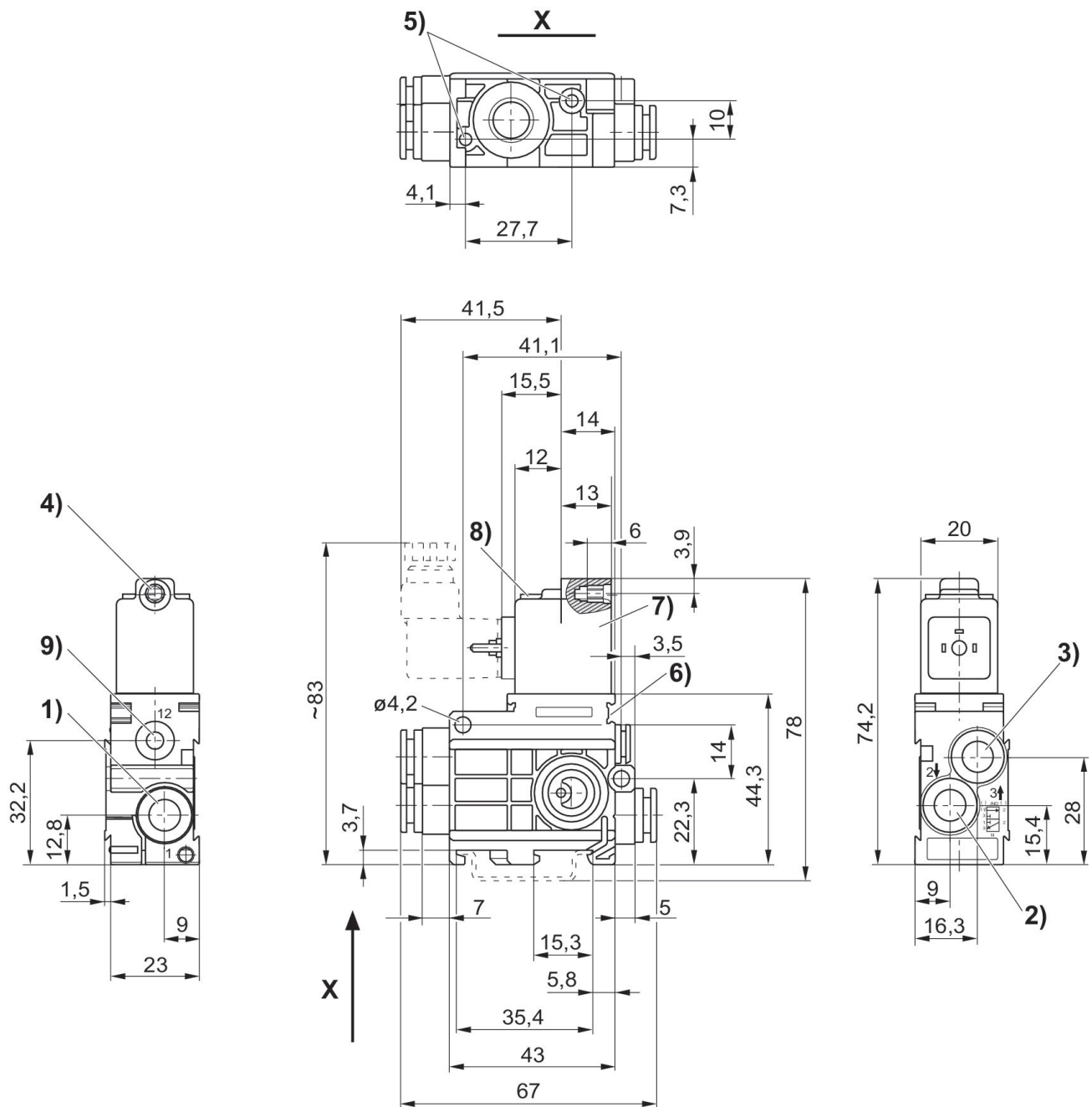
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## Dimensions



1) port 1 2) port 2 3) port 3 4) core Ø for M 5 5) pocket hole 6 mm deep for 3.5 self-tapping screw 6) mounting space for name plate 7) coil can be rotated at 180° intervals 8) LED 9) port 12