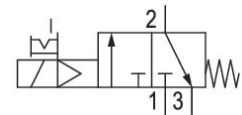


## AVENTICS Series 490/579/589 Directional Control Valves

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         |
| Manual override                    | with detent             |
| Compressed air connection type     | Push-in fitting         |
| Compressed air connection input    | Ø 8x1                   |
| Compressed air connection output   | Ø 8x1                   |
| Compressed air connection, exhaust | Ø 8x1                   |
| Nominal flow Q <sub>n</sub>        | 750 l/min               |
| Min. working pressure              | 3 bar                   |
| Max. working pressure              | 8 bar                   |

# 3/2-directional valve, Series 589

5894605270

Series  
490/579/589

2025-12-11

|                                  |                                     |
|----------------------------------|-------------------------------------|
| 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              | 110 V AC                            |
| Operational voltage AC at 50 Hz  | 110 V                               |
| Voltage tolerance AC 50 Hz       | -10 % / +15 %                       |
| Operational voltage AC at 60 Hz  | 110 V                               |
| Voltage tolerance AC 60 Hz       | -10 % / +15 %                       |

|                          |          |
|--------------------------|----------|
| Pilot                    | Internal |
| Coil width               | 20 mm    |
| Holding power AC 50 Hz   | 3 VA     |
| Holding power AC 60 Hz   | 2.4 VA   |
| Switch-on power AC 50 Hz | 4.2 VA   |
| Switch-on power AC 60 Hz | 3.4 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 |
|--------|----------|

## Material

|                  |                                                |
|------------------|------------------------------------------------|
| Housing material | Polyamide                                      |
| Seal material    | Acrylonitrile butadiene rubber<br>Polyurethane |

Part No.

5894605270

## 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 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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Technical drawing of a 3-position, 2-way solenoid valve, showing three views: front, side, and top. The drawing includes dimensions in millimeters and callouts for specific features.

**Front View (Top):** Shows the valve body with a central port and two side ports. Dimensions include a total width of 41.5 mm, a central port diameter of 10 mm, and a distance of 27.7 mm between the side ports. Callout 5 points to the central port.

**Side View (Middle):** Shows the valve body from the side. Dimensions include a total height of 83 mm, a central port diameter of 10 mm, and a distance of 41.1 mm between the side ports. Callout 9 points to the central port.

**Top View (Bottom):** Shows the valve body from above. Dimensions include a total width of 67 mm, a central port diameter of 10 mm, and a distance of 43 mm between the side ports. Callout 7 points to the central port.

**Callouts:**

- 1: Solenoid coil
- 2: Solenoid coil
- 3: Solenoid coil
- 4: Solenoid coil
- 5: Central port
- 6: Side port
- 7: Side port
- 8: Side port
- 9: Central port

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) manual override 7) Pilot valve 8) coil can be rotated at 180° intervals