

## 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          | 579                     |
| Valve type          | Poppet valve            |
| Switching principle | 3/2, with spring return |
| Valve function      | NO                      |
| Sealing principle   | Soft seal               |
| Connection type     | Pipe connection         |

|                                       |                 |
|---------------------------------------|-----------------|
| Compressed air connection type        | Push-in fitting |
| Compressed air connection input       | Ø 8x1           |
| Compressed air connection output      | Ø 6x1           |
| 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   |
| Min. control pressure | 2 bar   |

# 3/2-directional valve, Series 579, Valve unit

5790520210

Series  
490/579/589

2025-12-11

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Max. control pressure              | 8 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                | 12 V DC                             |
| Operational voltage DC             | 12 V                                |
| Voltage tolerance DC               | -10 % / +10 %                       |
| Pilot                              | External                            |
| Coil width                         | 20 mm                               |
| Power consumption DC               | 1.6 W                               |
| Duty cycle                         | 100 %                               |
| Typ. switch-on time                | 18 ms                               |
| Typ. switch-off time               | 16 ms                               |
| Blocking principle                 | Inlet valve                         |
| Can be assembled into blocks       | Can be assembled into blocks        |
| 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. | 5790520210 |
|----------|------------|

## Technical information

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

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

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

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, exhaust air must not be throttled 4) Core Ø for M5 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 \* Air connection module (item IV) mounted onto stacking valve (item II) permits additional air supply from right hand side. End valve (item III) not required.  
I = Inlet valve, II = Stacking valve, III = End valve