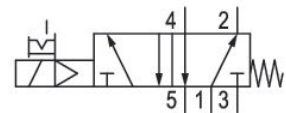


AVENTICS Series 490/579/589 Directional Control Valves

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	5/2, with spring return
Sealing principle	Soft seal
Connection type	Pipe connection
Manual override	with detent
Compressed air connection type	Push-in fitting
Compressed air connection input	Ø 1/4"
Compressed air connection output	Ø 1/4"
Compressed air connection, exhaust	5/16"
Min. working pressure	3 bar
Max. working pressure	8 bar
Electrical connection type	Plug

5/2-directional valve, Series 589

5894705780

Series
490/579/589

2026-02-03

Electrical connection size	ISO 15217, form C
Protection class with connection	IP65
Reverse polarity protection	Protected against polarity reversal
Operational voltage	230 V AC
Voltage tolerance AC 50 Hz	-10 % / +15 %

Pilot	Internal
Coil width	20 mm
LED status display	Red
Holding power AC 50 Hz	2.5 VA
Holding power AC 60 Hz	2.2 VA
Switch-on power AC 50 Hz	3.4 VA
Switch-on power AC 60 Hz	3 VA

Duty cycle	100 %
Typ. switch-on time	27 ms
Typ. switch-off time	28 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 ³
Max. oil content of compressed air	1 mg/m ³
Max. particle size	5 µm

Weight	0.133 kg
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Material

Housing material	Polyamide
Seal material	Acrylonitrile butadiene rubber Polyurethane

Part No.	5894705780
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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 4-way valve with 12 views. The drawing includes a top view (1), a front view (2), a side view (3), a rear view (4), a top view of the handle (5), a side view of the handle (6), a front view of the handle (7), a rear view of the handle (8), a top view of the valve body (9), a side view of the valve body (10), a front view of the valve body (11), and a rear view of the valve body (12). Dimensions are given in millimeters. The drawing is oriented with the X-axis pointing upwards.

Key dimensions and features:

- Top View (1):** Overall width 1.83, height 0.06, and a central feature labeled 1).
- Front View (2):** Overall width 1.55, height 1.10, and a central feature labeled 2).
- Side View (3):** Overall width 1.27, height 0.60, and a central feature labeled 3).
- Rear View (4):** Overall width 1.27, height 0.60, and a central feature labeled 4).
- Top View of Handle (5):** Overall width 1.09, height 1.60, and a central feature labeled 5).
- Side View of Handle (6):** Overall width 1.61, height 1.74, and a central feature labeled 6).
- Front View of Handle (7):** Overall width 1.83, height 0.06, and a central feature labeled 7).
- Rear View of Handle (8):** Overall width 1.55, height 1.10, and a central feature labeled 8).
- Top View of Valve Body (9):** Overall width 1.70, height 2.64, and a central feature labeled 9).
- Side View of Valve Body (10):** Overall width 1.40, height 0.23, and a central feature labeled 10).
- Front View of Valve Body (11):** Overall width 1.40, height 0.23, and a central feature labeled 11).
- Rear View of Valve Body (12):** Overall width 1.40, height 0.23, and a central feature labeled 12).

1) port 1 2) port 2 3) port 3 4) port 4 5) port 5 6) manual override 7) core Ø for M 5 8) exhaust air must not be throttled 9) pocket hole 6 mm deep for 3.5 self-tapping screw 10) mounting space for name plate 11) coil can be rotated at 180° intervals

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Technical drawing of a 4-way valve with 12 dimensions and 11 callouts. The drawing includes a top view, a side view, and a front view. The top view shows a square body with four ports. The side view shows the valve's profile with a handle. The front view shows the valve's face with four ports. Dimensions are given in millimeters. Callouts 1 through 11 point to specific features of the valve.

Dimensions:

- Top view: 46,4 (width), 1,5 (port offset), 4,1 (port offset), 27,7 (port offset), 7,3 (port offset), 17,3 (port offset), 30,5 (port offset), 40,5 (port offset).
- Side view: 41,5 (total width), 41,1 (port offset), 15,5 (port offset), 14 (port offset), 12 (port offset), 13 (port offset), 6 (port offset), 3,9 (port offset), 3,5 (port offset), 10) (port offset), 14 (port offset), 44,3 (port offset), 22,3 (port offset), 5,8 (port offset), 43 (port offset), 67 (port offset).
- Front view: 74,2 (total height), 20 (port offset), 11) (port offset), 3) (port offset), 5) (port offset), 4) (port offset), 9,2 (port offset), 16,3 (port offset), 32,4 (port offset), 39,5 (port offset), 28 (port offset), 15,4 (port offset), 2 (port offset), 5) (port offset), 4) (port offset), 9,2 (port offset), 16,3 (port offset), 32,4 (port offset), 39,5 (port offset), 28 (port offset), 15,4 (port offset), 2 (port offset).

Callouts:

- 1) Port 1
- 2) Port 2
- 3) Port 3
- 4) Port 4
- 5) Port 5
- 6) Port 6
- 7) Port 7
- 8) Port 8
- 9) Port 9
- 10) Port 10
- 11) Port 11

1) port 1 2) port 2 3) port 3 4) port 4 5) port 5 6) manual override 7) core Ø for M 5 8) exhaust air must not be throttled 9) pocket hole 6 mm deep for 3.5 self-tapping screw 10) mounting space for name plate 11) coil can be rotated at 180° intervals