

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

5894705370

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	110 V AC
Operational voltage AC at 50 Hz	110 V
Voltage tolerance AC 50 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	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.	5894705370
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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 4/3-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 main body with dimensions 1.09, 0.16, 0.29, 0.68, 1.2, and 1.60. Callout 5) points to the top of the valve.

Side View (Middle): Shows the side profile with dimensions 1.61, 0.61, 0.55, 0.47, 0.51, 0.24, 0.15, 0.13, 1.74, 0.87, 0.55, 1.40, 0.20, 0.60, 0.23, 1.70, 2.64, 3.26, 0.14, and 0.06. Callout 10) points to the side of the valve.

Top View (Bottom): Shows the top of the valve with dimensions 1.83, 0.06, 0.78, 0.36, 0.64, 1.27, 1.55, 0.60, and 1.10. Callouts 1), 2), 3), 4), 5), 6), 7), 8), 9), 10), 11), and 12) point to various features.

Dimensions:

- Front View: 1.09, 0.16, 0.29, 0.68, 1.2, 1.60
- Side View: 1.61, 0.61, 0.55, 0.47, 0.51, 0.24, 0.15, 0.13, 1.74, 0.87, 0.55, 1.40, 0.20, 0.60, 0.23, 1.70, 2.64, 3.26, 0.14, 0.06
- Top View: 1.83, 0.06, 0.78, 0.36, 0.64, 1.27, 1.55, 0.60, 1.10

Callouts:

- 1) Port 1
- 2) Port 2
- 3) Port 3
- 4) Port 4
- 5) Top of valve
- 6) Port 1 (top view)
- 7) Port 2 (top view)
- 8) Port 3 (top view)
- 9) Port 4 (top view)
- 10) Side of valve
- 11) Solenoid coil
- 12) Solenoid coil (top view)

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

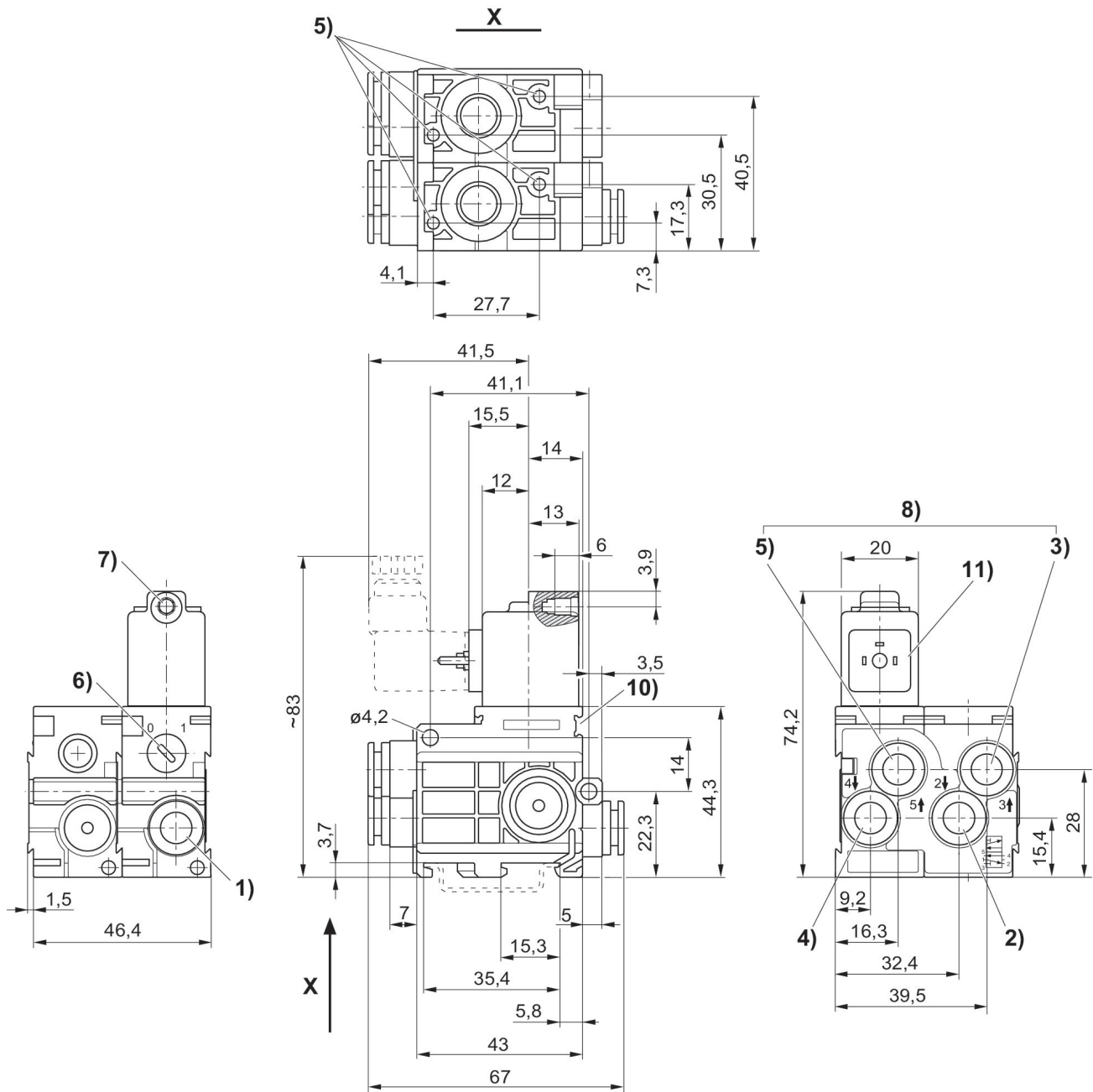
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Dimensions



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