

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
Manual override	with detent
Compressed air connection type	Push-in fitting
Compressed air connection output	Ø 8x1
Nominal flow Q _n	600 l/min
Min. working pressure	2 bar
Max. working pressure	8 bar
Electrical connection type	Plug

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

5792615680

Series
490/579/589

2025-12-11

Electrical connection size	ISO 15217, form C
Protection class with connection	IP65
Reverse polarity protection	Protected against polarity reversal
Operational voltage	230 V AC
Operational voltage AC at 50 Hz	230 V
Voltage tolerance AC 50 Hz	-10 % / +15 %
Operational voltage AC at 60 Hz	230 V
Voltage tolerance AC 60 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	18 ms
Typ. switch-off time	16 ms

Blocking principle	End 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 ³
Max. oil content of compressed air	1 mg/m ³
Max. particle size	5 µm

Weight	0.093 kg
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Material

Housing material	Polyamide
Seal material	Acrylonitrile butadiene rubber Polyurethane

Part No.

5792615680

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.

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 the 4000 series solenoid valve, showing front, side, and top views with dimensions in mm.

Front View (Left):

- Overall width: 61 mm
- Overall height: 44.3 mm
- Flange diameter: $\varnothing 42$ mm
- Flange thickness: 3.7 mm
- Coil height: 18.6 mm
- Coil width: 30 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm

Side View (Right):

- Overall width: 41.5 mm
- Overall height: 74.2 mm
- Flange diameter: $\varnothing 42$ mm
- Flange thickness: 3.7 mm
- Coil height: 18.6 mm
- Coil width: 30 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm

Top View (Bottom):

- Overall width: 27.7 mm
- Overall height: 10 mm
- Flange diameter: $\varnothing 42$ mm
- Flange thickness: 3.7 mm
- Coil height: 18.6 mm
- Coil width: 30 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm
- Coil mounting hole diameter: 1.5 mm
- Coil mounting hole spacing: 23 mm
- Coil mounting hole offset: 1.5 mm

Callouts:

- 1) Coil
- 2) Valve body
- 3) Solenoid
- 4) Flange
- 5) Mounting bracket
- 6) Mounting hole
- 7) Mounting hole
- 8) Mounting hole
- 9) Mounting hole

Dimensions:

- 41.5
- 41.1
- 15.5
- 14
- 13
- 12
- 6
- 3.9
- 3.5
- 7
- 14
- 22.3
- 44.3
- 3.7
- $\varnothing 42$
- 18.6
- 1.5
- 23
- 30
- 7
- 2.6
- 15.3
- 35.4
- 5.8
- 43
- 61
- 5
- 20
- 74.2
- 9
- 16.3
- 2
- 15.4
- 28
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

1) Port 1 2) Port 2 3) Port 3, exhaust air must not be throttled 4) Core Ø for M5 5) Manual override 6) Pocket hole 6 mm deep for 3.5 self-tapping screw 7) Mounting space for name plate 8) Coil can be rotated at 180° intervals 9) LED * Air conn. 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