

5/2-directional valve, Series CD12, Single Air Pilot

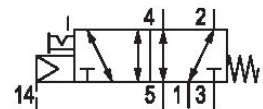
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CD12

2025-12-10

AVENTICS Series CD12 Directional valves

The AVENTICS Series CD consists of various spool valves with an extremely durable die-cast zinc housing. Its electrical, pneumatic, or mechanical actuating controls (roller, lever, pedal, or plunger) make the Series CD ideal for applications in harsh environments.



Technical data

Industry

Activation

Valve type

Switching principle

Sealing principle

Connection type

Manual override

Industrial

Electrically

Spool valve, positive overlapping

5/2, with spring return

Soft seal

Pipe connection

with detent

Compressed air connection type

Standard compressed air connection

Compressed air connection input

Compressed air connection output

Compressed air connection, exhaust

Pilot control exhaust

Compressed air connection pilot input

Compressed air connection pilot exhaust

Internal thread

according to ISO 228-1

G 1/2

G 1/2

G 1/2

with directional pilot air exhaust

G 1/8

M5

Nominal flow Q_n

4100 l/min

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Min. working pressure	-0.95 bar
Max. working pressure	16 bar
Min. control pressure	2 bar
Max. control pressure	10 bar
Electrical connection type	Plug
Electrical connection size	EN 175301-803, form A
Electrical connection number of poles	3-pin
Protection class with connection	IP65
Reverse polarity protection	Protected against polarity reversal
Operational voltage AC at 50 Hz	110 V
Voltage tolerance AC 50 Hz	-20 % / +10 %
Operational voltage AC at 60 Hz	110 V
Voltage tolerance AC 60 Hz	-10 % / +20 %
Pilot	External
Coil width	30 mm
Pilot valve width	30 mm
Compatibility index	52
Holding power AC 50 Hz	4.3 VA
Holding power AC 60 Hz	3.3 VA
Switch-on power AC 50 Hz	6.8 VA
Switch-on power AC 60 Hz	5.7 VA
Duty cycle	100 %
Typ. switch-on time	37 ms
Typ. switch-off time	97 ms
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	50 µm
Weight	1 kg

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Material

Housing material

Aluminum

Polyamide, fiber-glass reinforced

Seal material

Acrylonitrile butadiene rubber

Polyurethane

Part No.

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Technical information

ATEX optional: ATEX version can be produced by combining the basic valve without coil with an ATEX coil. ATEX ID: see ATEX coils catalog page.

*Note: Basic valves feature a maximum working pressure of 16 bar. When combined with standard CNOMO pilots, the maximum working pressure is 10 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 °C less than ambient and medium temperature and may not exceed 3 °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 selector switch, showing three views: front, side, and top. The drawing includes detailed dimensions and callouts for components.

Front View (Left):

- Top connection: G1/8
- Overall height: 59
- Distance between selector positions: 32
- Width: 1.5
- Bottom flange thickness: 8
- Callouts: 5) (selector lever), 6) (top housing)

Side View (Middle):

- Top connection: G1/8
- Overall height: 201.5
- Distance between selector positions: 78 ± 0.2
- Width: 52 ± 0.2
- Callouts: 1) (top housing), 2) (selector lever), 3) (bottom housing), 4) (selector lever), 5) (selector lever), 6) (top housing)

Top View (Right):

- Overall width: 74
- Distance between selector positions: 30
- Width: 4.5
- Callouts: 1) (top housing), 2) (selector lever), 3) (bottom housing), 4) (selector lever), 5) (selector lever), 6) (top housing)

Bottom View (Bottom):

- Overall width: 74
- Distance between selector positions: 30
- Width: 4.5
- Callouts: 1) (top housing), 2) (selector lever), 3) (bottom housing), 4) (selector lever), 5) (selector lever), 6) (top housing)

- 1) Valve plug connector 2) Coil can be rotated at 90° intervals 3) Manual override
4) Port X (only for externally piloted valves) 5) Exhaust port of piston 6) Pilot valve exhaust, M5