

# 5/3-directional valve, Series CD12, double solenoid

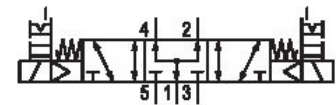
R412000221

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

Valve function

Sealing principle

Connection type

Manual override

Industrial

Electrically

Spool valve, positive overlapping

5/3, pressurized center

Pressurized Center

Soft seal

Pipe connection

with detent

without 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 exhaust

Internal thread

according to ISO 228-1

G 1/2

G 1/2

G 1/2

with directional pilot air exhaust

M5

Nominal flow Q<sub>n</sub> 1 to 2

4100 l/min

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|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Nominal flow Qn 2 to 3                | 3800 l/min                          |
| Min. working pressure                 | 3 bar                               |
| Max. working pressure                 | 10 bar                              |
| Min. control pressure                 | 3 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                               |
| Connector standard                    | EN 175301-803:2006                  |
| 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            | -20 % / +10 %                       |
| Operational voltage AC at 60 Hz       | 230 V                               |
| Voltage tolerance AC 60 Hz            | -10 % / +20 %                       |
| Pilot                                 | Internal                            |
| Coil width                            | 30 mm                               |
| Pilot valve width                     | 30 mm                               |
| Compatibility index                   | 52                                  |
| Holding power AC 50 Hz                | 4.4 VA                              |
| Holding power AC 60 Hz                | 3.5 VA                              |
| Switch-on power AC 50 Hz              | 6.9 VA                              |
| Switch-on power AC 60 Hz              | 6.2 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 <sup>3</sup>                 |
| Max. oil content of compressed air    | 1 mg/m <sup>3</sup>                 |
| Max. particle size                    | 50 µm                               |

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Weight 1.3 kg

## Material

|                  |                                                |
|------------------|------------------------------------------------|
| Housing material | Aluminum<br>Polyamide, fiber-glass reinforced  |
| Seal material    | Acrylonitrile butadiene rubber<br>Polyurethane |

Part No. R412000221

## 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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## Dimensions



- 1) Valve plug connector 2) Coil can be rotated at 90° intervals 3) Manual override  
4) Port X, side 14 5) Port X, side 12 6) Port without function 7) Pilot valve exhaust, M5