

5/2-directional valve, Series 740, double solenoid

R432016654

Series 740

2025-10-20

AVENTICS Series 740 Directional valves

The AVENTICS Series 740/840 feature directional valves with soft, abrasion-free diaphragm technology. The simple, reliable and robust design is suitable for all air qualities and ensures high repeatability and unsurpassed service life. Due to its high resilience, the corrosion-resistant polyamide housing is also suited for dusty and damp environments.



Technical data

Industry	Industrial
Activation	Electrically
Valve type	Diaphragm poppet valve
Switching principle	5/2, double solenoid
Actuating control	Double Solenoid
Sealing principle	Soft seal
Connection type	Pipe connection
Manual override	with detent
Compressed air connection type	Internal thread plug-in with tube nut
Compressed air connection input	5/16" (Ø 8)
Compressed air connection output	5/16" (Ø 8)
Compressed air connection, exhaust	M14x1
Nominal flow Q _n	700 l/min
Min. working pressure	1.5 bar
Max. working pressure	10 bar

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Electrical connection type	Plug
Electrical connection size	EN 175301-803, form A
Connector standard	EN 175301-803:2006
Protection class with connection	IP65
Reverse polarity protection	Protected against polarity reversal
Operational voltage	24 V DC
Operational voltage AC at 50 Hz	24 V
Voltage tolerance AC 50 Hz	-20 % / +10 %
Voltage tolerance AC 60 Hz	-10 % / +20 %

Pilot	Internal
Coil width	30 mm
Compatibility index	52

Duty cycle	100 %
Typ. switch-on time	40 ms

Blocking principle	Single base plate principle Plate principle
Can be assembled into blocks	Can be assembled into blocks
Valve plug connector	Without valve plug connector
Throttle	with throttle
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	5 mg/m ³
Max. particle size	50 µm

Mounting on manifold strip	PRS strip
Weight	0.505 kg

Material

Housing material	Polyoxymethylene
Seal material	Acrylonitrile butadiene rubber

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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.

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>).

Technical drawings of the AVENTICS V740 valve assembly, showing front, top, and side views with dimensions in inches.

Front View (Left): Shows the main body with dimensions: 2.48 (total height), 0.85 (port spacing), 0.85 (port spacing), 0.86 (port spacing), 0.04 (port diameter), and 0.04 (port diameter).

Top View (Middle): Shows the top of the assembly with dimensions: 7.36 (total width), 0.47 (port spacing), 1.48 (port spacing), 0.47 (port spacing), 1.22 (port spacing), 0.59 (port spacing), 1.61 (total width), 0.20 (port spacing), 0.51 (port spacing), 2.13 (port spacing), 1.48 (port spacing), 0.31 (port spacing), 0.22 (port spacing), and 0.22 (port spacing). The text "AVENTICS V740" is visible on the top surface.

Side View (Right): Shows the side of the assembly with dimensions: 2 (port diameter), 4 (port diameter), 5 (port diameter), 12 (port spacing), 12 (port spacing), 23 (port spacing), 23 (port spacing), 6 (port diameter), 35 (total width), and 2 (port diameter).

- 1) Gland fitting M16x1.5
- 2) M5 internal thread accessible under cap
- 3) Valve plug connector can be rotated at 90° intervals
- 4) Coil can be plugged at 45° intervals

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5) Flow control screw for exhausts 5 (R) and 3 (S)
6) Manual override and position indicator