

5/2-directional valve, Series TC15

0820058201

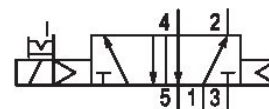
Series

TC15

2024-05-06

AVENTICS Series TC15 Directional valves

The AVENTICS Series TC08/TC15 includes a wide range of spool valves with housings made of high-performance polymers with robust and flexible metal inserts. It is designed for flow rate performances from 800 to 1500 l/min. These directional valves are easy to assemble, making them ideal for applications requiring the highest efficiency in limited spaces.



Technical data

Industry

Activation

Note

Valve type

Actuating control

Sealing principle

Connection type

Manual override

Industrial

Electrically

Operating voltage 24 V DC

Spool valve, positive overlapping

Single Solenoid

Soft seal

Pipe connection

with detent

Compressed air connection input

G 1/4

Compressed air connection output

G 1/4

Compressed air connection, exhaust

G 1/4

Nominal flow Q_n

1500 l/min

Flow conductance b

0.33

Flow conductance C

6.8 l/(s*bar)

Min. working pressure

2.5 bar

Max. working pressure

10 bar

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Min. control pressure	2.5 bar
Max. control pressure	10 bar
Electrical connection type	Plug
Electrical connection size	M8
Electrical connection number of poles	4-pin
Connector standard	DIN EN 60947-5-2
Protection class acc. to DIN EN 61140	Class III
Protection class with connection	IP65
Operational voltage	24 V DC
Operational voltage DC	24 V
Voltage tolerance DC	-10% / +10%
Pilot	Internal
Coil width	15.6 mm
Pilot valve width	15 mm
LED status display	Yellow
Power consumption DC	2.2 W
Nominal resistance	280 Ω
Duty cycle	100 %
Typ. switch-on time	21 ms
Typ. switch-off time	22 ms
Min. ambient temperature	-10 °C
Max. ambient temperature	50 °C
Min. medium temperature	-10 °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	5 μm
Mounting on manifold strip	P-strip
Mounting screw tightening torque	2.5 Nm
Weight	0.235 kg

Material

Housing material	Polyamide fiber-glass reinforced
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Seal material	Acrylonitrile butadiene rubber Hydrogenated nitrile butadiene rubber
Material threaded bushing	Brass Die cast zinc
Material front plate	Polyamide fiber-glass reinforced

Part No. 0820058201

Technical information

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.

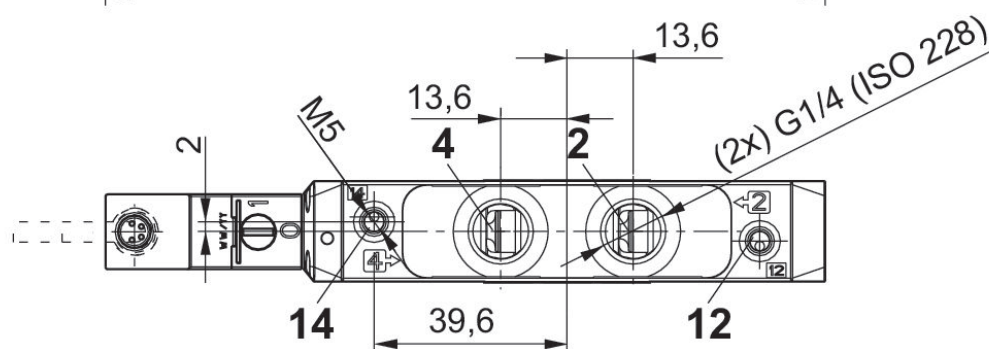
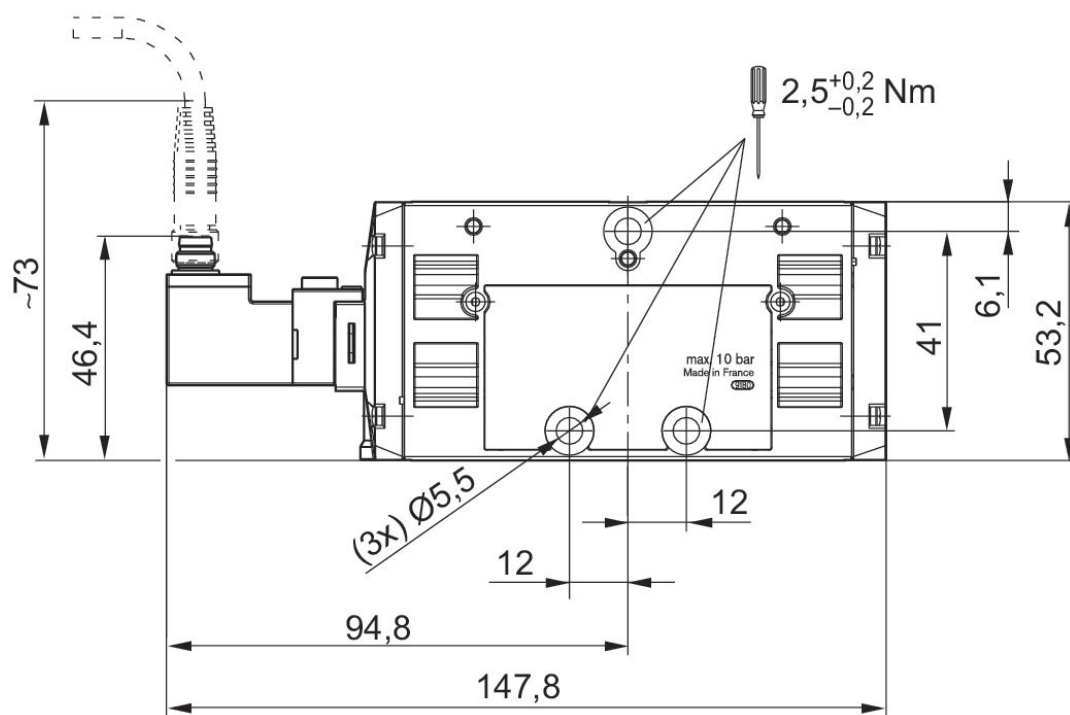
The oil content of compressed air must remain constant during the life cycle.

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 the 3-Port 1/2" (ISO 228) adapter. The drawing shows a side view of the adapter with three ports. The ports are labeled 1, 2, and 3. The adapter has a total length of 48 mm (24 mm + 24 mm) and a diameter of 21 mm. The ports are spaced 24 mm apart. The adapter is labeled with the part number 84 and the thread specification (3x) G1/4 (ISO 228). The drawing also shows a detail of the port thread, labeled 82.



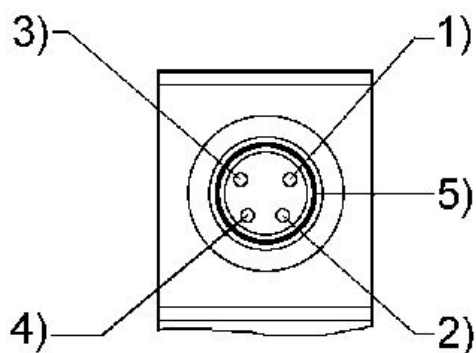
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PIN assignment and cable colors for
valve plug connectors



PIN assignment: 1) PIN not assigned 2) PIN not assigned 3) 0 V 4) 24 V 5)
LED Cable colors 1) Brown 2) White 3) Blue 4) Black