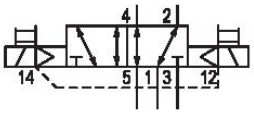
5/2-directional valve, Series 502

R502A2B10M11BF1

AVENTICS Series 502 Directional Control Valves

The AVENTICS Series 502 is a line of general purpose automation valves designed for directional control and piloting applications requiring higher flow rates; less power consumption; and exceptionally easy on-site installation, configuration, and modification. The compact (18 mm), modular 502 Series is ideally suited for automotive and tire, food and beverage, pharmaceutical, and packaging machinery applications. The valve has the flexibility of meeting the ISO 15407-2 standard while maintaining its high-flow characteristics. In addition, no other valve in its class offers such a broad range of pressure regulator, pressure shut-off, and exhaust flow control accessories.

- Modular design permits easy configuration and modification
- Sub-base mounted valve is well suited for in-panel valve piloting applications
- High flow rate, compact size, and optional mounting plate enable efficient use of cabinet space
- Compatible with AVENTICS Series G3 and 580 electronic fieldbus platforms
- 580 CHARM node is compatible with DeltaV distributed control system with electronic marshalling



Technical data

Industry	Industrial
Activation	Electrically
Valve type	Spool valve, positive overlapping
Switching principle	5/2, with spring/air spring return
Actuating control	Single Solenoid
Sealing principle	Soft seal
Connection type	Plate connection
Manual override	with detent
Pilot control exhaust	with directional pilot air exhaust
Nominal flow Qn	630 l/min
Min. working pressure	2 bar

Max. working pressure	8 bar
Min. control pressure	3 bar
Max. control pressure	8 bar
Protection class with connection	IP65
Protective circuit	TVS diode
Reverse polarity protection	Protected against polarity reversal
Operational voltage	24 V DC
Voltage tolerance DC	-15 % / +10 %
Pilot	External
LED status display	Yellow
Power consumption DC	1.1 W
Duty cycle	100 %
Typ. switch-on time	17 ms
Typ. switch-off time	38 ms
Blocking principle	Single base plate principle, can be assembled into blocks
Can be assembled into blocks	Can be assembled into blocks
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/m³
Max. oil content of compressed air	5 mg/m³
Max. particle size	50 µm
Mounting screws	with hexagon socket
Mounting screw tightening torque	2 Nm
Weight	0.153 kg

Material

Housing material	Die cast zinc
Seal material	Nitrile butadiene rubber Polyurethane
Material front plate	Polyamide

Material end plate	Polyamide
Part No.	R502A2B10M11BF1

Technical information

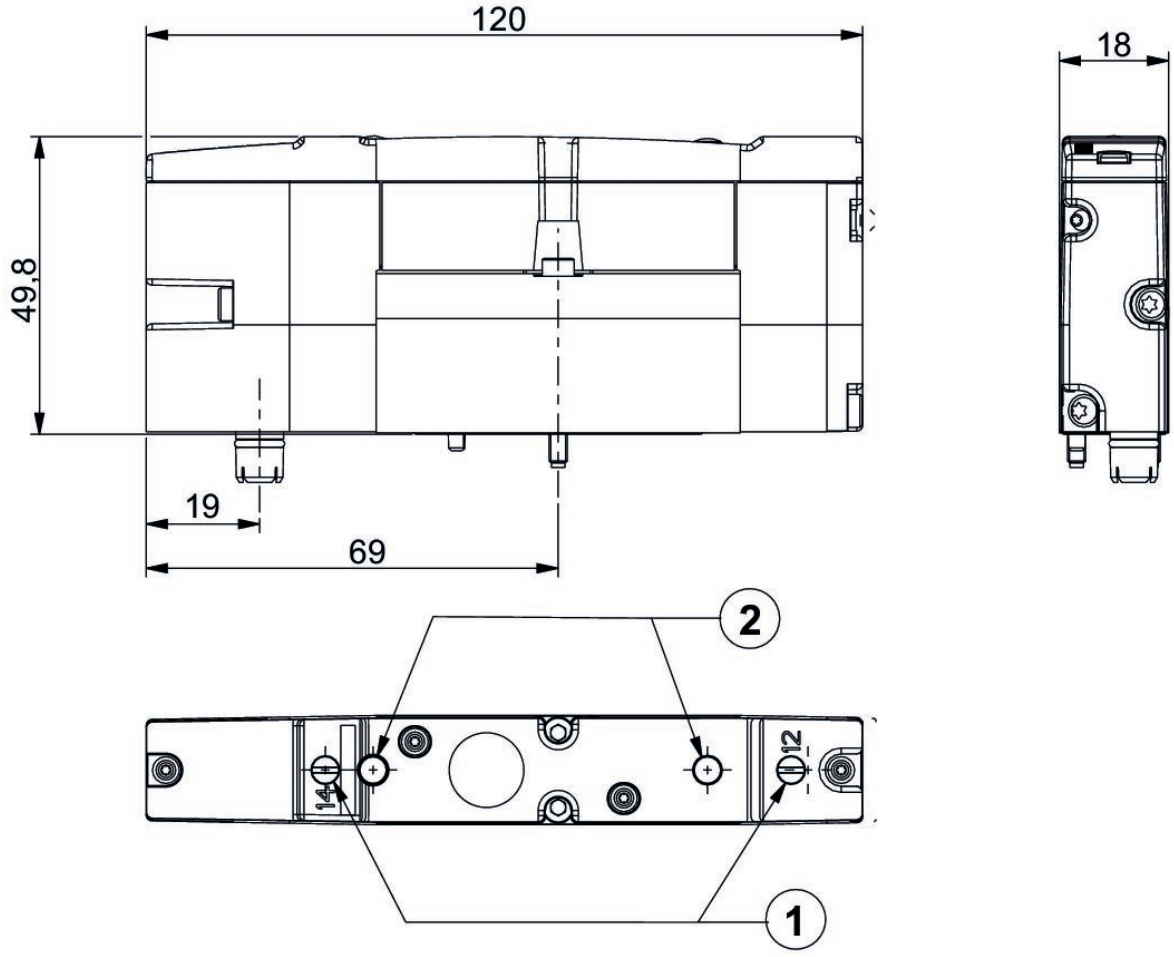
At operating voltage 24 V DC, power consumption for coil (cold) = 1.3 W , coil (hot) = 1.1 W

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.

Dimensions



1) Manual override
2) LED

Accessories overview