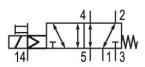
AVENTICS Series 581 - Size 1 Standardized valves

The AVENTICS series 581 complies with the ISO 5599-1 valve standard. Due to the high degree of modularity, the series offers all valve functions, integrated throttle valves, various pilot coils and an extensive range of accessories. Qn = $950 \dots 1400 \text{ l/min}$





Technical data Industry Activation Nominal flow Qn Switching principle Compressed air connection output Min. working pressure Max. working pressure Operational voltage Operational voltage DC Operational voltage AC at 50 Hz Voltage tolerance DC Voltage tolerance AC 50 Hz Manual override Electrical connection type Electrical connection size Actuating control Sealing principle Pilot Standards

Industrial Electrically 1400 l/min 5/2, with spring return Base plate ISO 5599-1 -0.95 bar 16 bar 24 V DC / 42 V AC 24 V 42 V -10% / +10% -10% / +10% without detent Plug EN 175301-803, form A Single Solenoid Soft seal External ISO 5599-1



5/2-directional valve, Series 581, size 1

5811172540

Valve typeSpool valveBlocking principleSingle base plate principleConnection typePlate connectionReturnWith spring returnCompressed air connection inputBase plate ISO 5599-1Compressed air connection pilot exhaustBase plate ISO 5599-1Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 I/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air5 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-on time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialActivative public	Pilot valve width	30x22 mm CNOMO
Connection typePlate connectionReturnWith spring returnCompressed air connection inputBase plate ISO 5599-1Compressed air connection pilot exhaustBase plate ISO 5599-1Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air50 µmMin. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screwswith hexagon socketMounting materialAluminum	Valve type	Spool valve
ReturnWith spring returnCompressed air connection inputBase plate ISO 5599-1Compressed air connection, exhaustBase plate ISO 5599-1Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. medium temperature50 °CMax. medium temperature50 °CMax. medium temperature50 °CMax. notic of compressed air0 mg/m³Max. oil content of compressed air50 µmMin. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screwswith hexagon socketMounting materialAluminum	Blocking principle	Single base plate principle
Compressed air connection inputBase plate ISO 5599-1Compressed air connection, exhaustBase plate ISO 5599-1Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Connection type	Plate connection
Compressed air connection, exhaustBase plate ISO 5599-1Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. joli content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Return	With spring return
Compressed air connection pilot exhaustM5Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMax. notice size50 µmMax. oul content of compressed air0 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-off time28 msMounting screws tightening torque2 NmWeight0.35 kgHousing materialAluminum	Compressed air connection input	Base plate ISO 5599-1
Power consumption DC6.7 WHolding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-oft time28 msMounting screwswith hexagon socketMounting screws tightening torque2 NmWeight0.35 kgHousing materialAluminum	Compressed air connection, exhaust	Base plate ISO 5599-1
Holding power AC 50 Hz7.7 VASwitch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. nedium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Compressed air connection pilot exhaust	M5
Switch-on power AC 50 Hz12 VAFlow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMax. medium temperature50 °CMax. nedium temperature50 °CMax. nedium temperature50 °CMax. nedium temperature50 °CMax. oul content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Power consumption DC	6.7 W
Flow conductance C5.2 l/(s*bar)Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMax. medium temperature50 °CMax. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 μmMin. oil content of compressed air0 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screws tightening torque2 NmWeight0.35 kgHousing materialAluminum	Holding power AC 50 Hz	7.7 VA
Frame sizeISO 1Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Switch-on power AC 50 Hz	12 VA
Min. control pressure3 barMax. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Flow conductance C	5.2 l/(s*bar)
Max. control pressure16 barMin. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature50 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Frame size	ISO 1
Min. ambient temperature-15 °CMax. ambient temperature50 °CMin. medium temperature-15 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Min. control pressure	3 bar
Max. ambient temperature50 °CMin. medium temperature-15 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Max. control pressure	16 bar
Min. medium temperature-15 °CMax. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Min. ambient temperature	-15 °C
Max. medium temperature50 °CMediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time28 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque0.35 kgHousing materialAluminum	Max. ambient temperature	50 °C
MediumCompressed airMax. particle size50 µmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Min. medium temperature	-15 °C
Max. particle size50 μmMin. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Max. medium temperature	50 °C
Min. oil content of compressed air0 mg/m³Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Medium	Compressed air
Max. oil content of compressed air5 mg/m³Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Max. particle size	50 µm
Protection class with connectionIP65Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Min. oil content of compressed air	0 mg/m³
Duty cycle100 %Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Max. oil content of compressed air	5 mg/m³
Typ. switch-on time15 msTyp. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Protection class with connection	IP65
Typ. switch-off time28 msMounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Duty cycle	100 %
Mounting screwswith hexagon socketMounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Typ. switch-on time	15 ms
Mounting screw tightening torque2 NmWeight0.35 kgHousing materialAluminum	Typ. switch-off time	28 ms
Weight0.35 kgHousing materialAluminum	Mounting screws	with hexagon socket
Housing material Aluminum	Mounting screw tightening torque	2 Nm
5	Weight	0.35 kg
Seal material Acrylonitrile butadiene rubber	Housing material	Aluminum
	Seal material	Acrylonitrile butadiene rubber
Part No. 5811172540	Part No.	5811172540





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).

Dimensions

