Compact Solenoid Valve with Sub-base Connection

Type 313

3/2-Way, direct-acting

Advantages/Benefits

- **Sub-base connection for manifold mounting**
- **When de-energized, outlet port pressurized**
- **Body material: brass**
- **Short response time**
- **Available with manual override depending on version**
- **Compact design**

Design/Function

The valve Type 313 is available in circuit function D (normally-open).

When the coil is de-energized, the pressure port is connected to the outlet. When the valve is energized, the solenoid power of the armature closes the pressure port. The service port is connected to the vent port.

The valves can be mounted individually or up to a max. of eight onto one manifold. Mounting of several valves next to each other requires a reduction of the duty cycle or use of lower wattage coils.

The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

Applications

- Neutral gases and liquids
- Operation of cylinders and rotary actuators
- Ventilation and exhausting of pipes and tanks
- Activation and switching of gases and liquids

bürkert
Easy Fluid Control Systems

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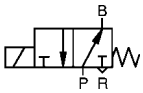
Technical Data

Circuit Function

D 3/2-way valve,
when de-energized, outlet B pressurized



Body Material

Brass
valve internals 1.4105, 1.4571

Specifications

Orifice DN [mm]	Kv-Value Water [m³/h]	QNn-Value Air [1)] [l/min]	Pressure Range [2)] [bar]	Weight [kg]
2,0	0,09	100	0-10	0,30
2,5	0,10	110	0- 6	0,30

[1)] Measured with 6 bar upstream pressure and 1 bar pressure drop across the valve at +20 °C, [2)] Also suitable for vacuum.

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

Operating Data (Valve)

Seal Materials/Fluids Handled/Temp.- Range

NBR Neutral fluids, e.g. compressed air, water hydraulic oil, oils and fats without additives, town gas -10 to +90 °C

FPM Hot air, oxygen, per-solutions, hot oils, oils with additives -10 to +100 °C

CR Coolants, cooling agents, ammonia -10 to +90 °C

For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

Max. ambient temperature	+55 °C
Max. viscosity	21 mm²/s
Port connection	sub-base
Response times opening	AC: 10-15 ms, DC: 15-20 ms
closing	AC: 15-20 ms, DC: 18-22 ms

Times measured at outlet B from switching on until pressure rise to 90 % / pressure drops to 10 % at a max. working pressure of 6 bar.

Operating Data (Actuator)

Operating voltages	24, 110, 230 V/ 50 Hz, 24 V/ 50-60 Hz, 24 V/ 60 Hz, 24V/=
Voltage tolerance	±10 %
Power consumption	AC 21 VA (inrush) 12 VA/ 8 W (hold) DC 8 W
Duty cycle	100 % continuously, 60 % intermittent operation, 30 min. with manifold mounting
Cycling rate	approx. 1200 c.p.m.
Rating with cable plug	IP 65

Installation / Accessories

Installation	as required, but preferably with solenoid system upright
Electrical connection	Cable plug for 7 mm ø cable (supplied as standard)

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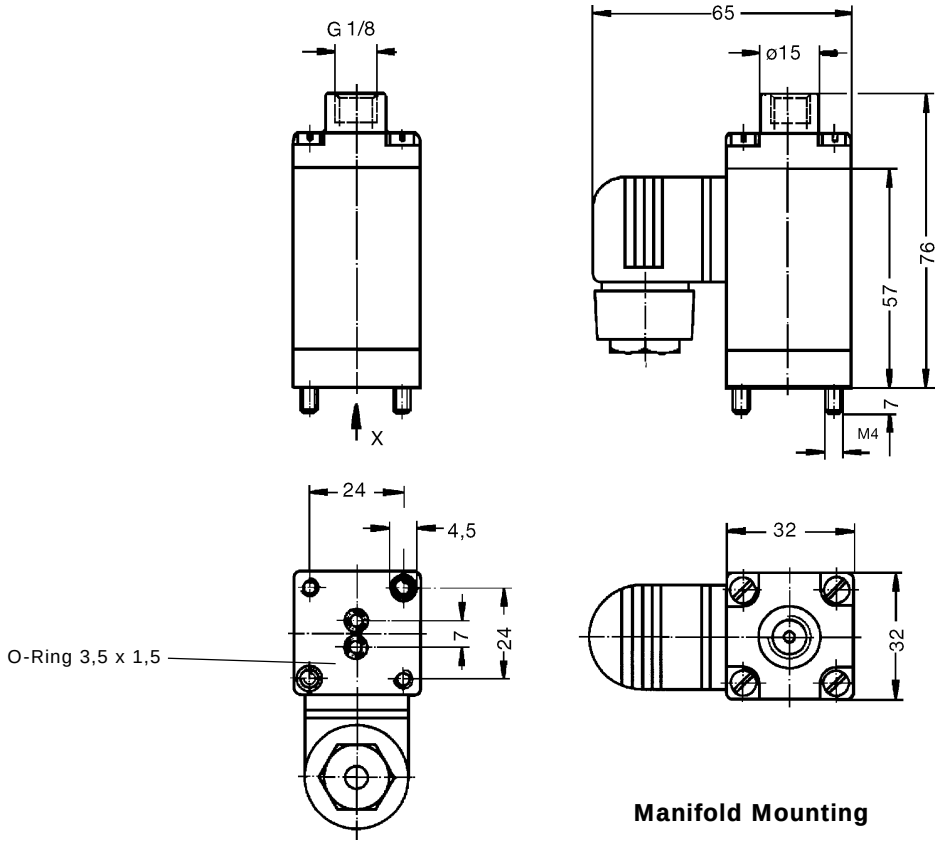
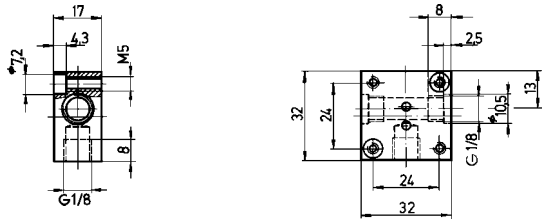
Dimensions in mm

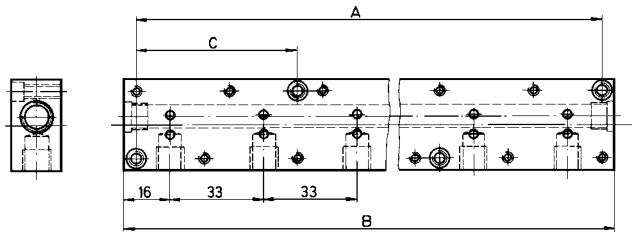


View X

Single Manifold



Multiple Manifold



Manifold	2val.	3val.	4val.	5val.	6val.	8val.
Hole spacing A	57	90	123	156	189	255
Overall lenght B	65	98	131	164	197	263
Hole spacing C	-	-	-	57	57	57

Manifold Mounting

The valves can be mounted on single or multiple manifolds.
The manifolds for 1 to 6 valves have a common pressure inlet and individual outlet for each valve. The 3/2-way solenoid valve Type 312 (circuit function C) can be mounted together with Type 313 on manifolds.
Manifolds may be coupled together using special push-fit O-ring nipples for linking the pressure inlets P.
Manifolds joined together in this way should be securely mounted.

Manifolds		Order-No.
Single manifold		005 020 W
Multiple manifold	2valves	005 023 M
	3valves	005 286 S
	4valves	005 287 T
	5valves	005 035 R
	6valves	005 038 U
	8valves	005 386 W

Accessories	Order-No.
Connector nipples with O-rings (for 10,5 mm Ø)	005 040 A
Blanking plug with sealing ring, G 1/8 005 041 X	

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Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Water Kv-Value [m³/h]	Flow Rate air [1] QNn [l/min]	Port Connection	Pressure Range [2] [bar]	Body Material	Seal Material	Weight [kg]	Voltage/ Frequency [V/Hz]	Order-No.
D	2,0	0,09	100	Sub-base	0-10	Brass	NBR	0,3	024/50	057 532 K [3]
									024/50	052 016 L
									024/50	051 890 Z [4]
									024/50-60	048 660 W [3]
									024/60	085 957 J [4]
									024/=	045 318 G [3]
									024/=	052 402 V
									024/=	052 425 K [4]
									230/50	050 155 E [4]
							FPM	0,3	024/50	061 929 V [4]
									024/=	061 616 T
									110/50	025 456 P [4]
									230/50	053 257 B
									230/50	062 698 F [4]
	2,5	0,10	110	Sub-base	0- 6	Brass	NBR	0,3	024/=	052 536 J

[1] Measured with 6 bar upstream pressure and 1 bar pressure drop across the valve at +20 °C, [2] also suitable for vacuum, [3] without cable plug, [4] with manual override.