5/2-Way Spool Valve with Namur Interface

Type 450
Type 550 Ex
Type 650 Ex



Advantages/Benefits

- **Namur interface - G 1/4**
- **When de-energized, pressure port connected to outlet 2 outlet 4 exhausted.**
- **High flow rate**
- **Long service life**
- **Applications with lubricated or unlubricated air**
- **Lockable manual override standard**
- **No “stick-slip-effect”**
- **EEx ib IIC T6 (Type 550)**
  EEx ed IIC T5 (Type 650)

Design/Function

The Type 450 is a high-quality spool valve, combining the advantages of elastomeric and metal-to-metal sealed valves.

The valve has a long and reliable service life on lubricated and unlubricated air. The self-cleaning action on the seal makes it insensitive to dirt particles in compressed air.

There is no stiction with intermittent use.

Due to the low power consumption, the epoxy-encapsulated solenoid can be controlled via a PLC. All of the solenoid actuators are available in wide-band voltage ranges, with combined 50 and 60Hz operation for AC versions.

Applications

- Pneumatic control
- Cylinder control in machine engineering
- Actuated valve control
- Safety interlocks

bürkert
Easy Fluid Control Systems

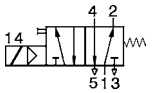
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Technical Data

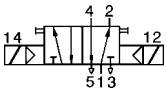
Circuit Function

H 5/2-way valve,
when de-energized, pressure port 1 connected to outlet 2, outlet 4 exhausted.



Spring return

5/2-way valve,
when de-energized, pressure port 1 connected to outlet 2, outlet 4 exhausted.



Impulse valve

Body Materials

Aluminium,
Internal parts aluminium and stainless steel

Specifications

Orifice	6 mm
Flow	750 l/min.

Operating Data (Valve)

Seal Materials / Fluids Handled / Temp.-Range

POM/ NBR	lubricated or unlubricated air	-10 to +70 °C[1)]

[1)] for Types 550 and 650: to +60 °C
For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

Max. ambient temperature	Type 450:	+55 °C
	Type 550,650:	+40 °C

Port connection: Namur sub-base - G 1/4

Operating Data (Actuator)

Operating voltages

Type 450	24-28, 230-250 V/ 50, 60 Hz
Type 550	24 V/=
Type 650	24, 110, 220, 240 V/UC (universal current)

Note for Type 650: A bridge rectifier has been incorporated in the solenoid system, which makes it suitable for both AC and DC operation. (Universal current to DIN 40700).

Voltage tolerance: ±10 %

Power consumption	Type 450:	2,5 to 4 Watt
	Type 650:	5 Watt

Duty cycle: 100% continuously rated

Rating with cable plug, cable or junction box: IP 65

Installation / Accessories

Installation: as required

Electrical connection

Type 450, 550	• cable plug for 6-7 mm ø cable (supplied as standard)
Type 650	• moulded-in cable H05RN-F3 G, 3 x 0,75 mm², length 3 m, with tension relieving cable gland • junction box without safety fuse

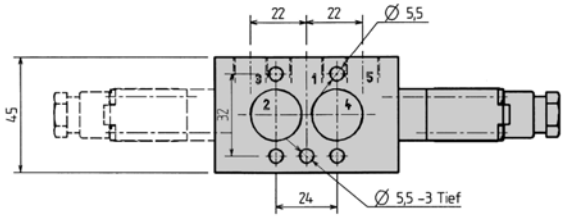
Safety fuse: A safety fuse with a medium response time and rated according to the nominal current should be incorporated in the circuit.

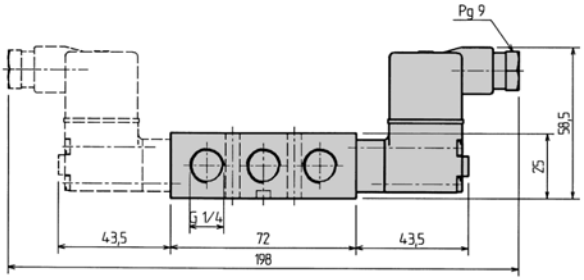
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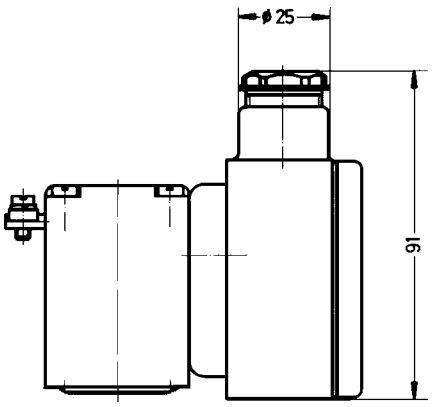
Dimensions in mm

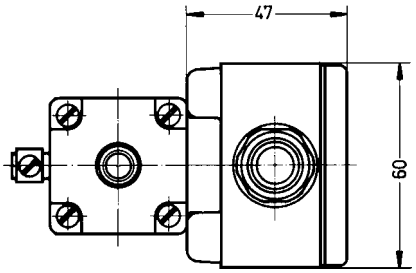
Version with M5 Mounting screws



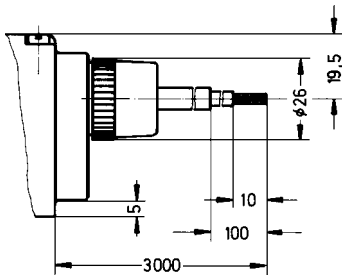


Ex-version with junction box





With moulded-in cable



Note

The solenoid systems of the Types 550 and 650 are mounted vertically to the spool valve body.

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Type 650 ⟨Ex⟩

Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Air QNn [l/min]	Port Connection	Pressure Range [bar]	Approval PTB.-No. Type 550: Ex-87.B.2023 Type 650: Ex-89.C.1034	Weight [kg]	Voltage/ Frequency [V/Hz]	Order-No.
H [1]	6,0	750	Namur	2-8	- Type 450	0,32	024-30/=	031 455 L
					- Type 450	0,32	24-28/50,60	031 456 M
					- Type 450	0,32	230-250/50,60	031 458 X
H [1]	6,0	750	Namur	2-8	Ex ed Type 650	0,62	024/UC	031 649 E
					Ex ed Type 650	0,62	024/UC	031 688 N [3]
					Ex ed Type 650	0,62	110/UC	031 650 B
					Ex ed Type 650	0,62	110/UC	031 489 P [3]
					Ex ed Type 650	0,62	220/UC	031 651 Y
					Ex ed Type 650	0,62	220/UC	031 490 L [3]
					Ex ed Type 650	0,62	240/UC	031 652 Z
H [1]	6,0	750	Namur	2-7	Ex ib Type 550	0,32	24/=	031 614 K
H [2]	6,0	750	Namur	2-7	Ex ed Type 650	0,62	24/UC	031 484 A
							110/UC	031 485 B
							220/UC	031 593 F
							220/UC	031 486 C [3]

[1] With spring return, [2] Impulse operated, [3] With junction box without safety fuse

Accessories

Code	Order-No.
Rubber blanking gasket for 3/2-way Version (for conversion from 5/2- to 3/2-way)	015 411 G

Accessories for Type 650

Safety Fuses	[mA]	Order-No.
24 V	400	007 073 Z
110 V	100	007 068 C
220/240 V	63	007 067 T

Electrical Accessories for Type 550

Code / Specification Version	Explosion Group	Max. Safety Values Voltage [V]	Max. Safety Values Current [mA]	Nominal Voltage [V]	Nom. Curr. [mA]	Polarity	Approval No.	Order-No.
Safety barrier Coil version	IIC	28	110	24	40	negative polarity	Ex-78/2007X	006 562 X
						positive polarity	Ex-78/2007X	006 700 N
Installation accessory for barrier								007 152 V