

Description of the Valve

Directional control valves direct the flow in various directions (P→A with 2/2 valves and P→A // A→T with 3/2 valves).

Driven by a solenoid, this valve is direct-acting. The solenoid is explosion proof Ex d and the valve can be used as main valve and as pilot valve in hydraulic safety control systems.

Technical Data of the Valve

Working pressure:	350 bar / 690 bar 5.000 psi / 1.0000 psi
Nominal diameter DN3	1/8"
Nominal diameter DN6	1/2"
Flow rate (DN3):	up to 5 l/min
Flow rate (DN6):	up to 15 l/min
Temperature range:	-55°C to +80°C -67°F to +176°F
Recommended filtration:	25µm

Media

Mineral oil, HFA liquids, tap water, water glycol, gaseous, methanol

Characteristics and Operations

The valve is a leakage-free ball valve and can be operated mechanically, with a solenoid or manually in case of an emergency.

The valve cartridge is pressure-balanced and the operating power is low regardless the pressure range.

The valve body and the lever-plate-housing are made of AISI316, 430F, brass or aluminum. All wetted parts are either stainless steel or ceramic.

Options

The valve offers the following options:

- Manual reset / Latch / Detent / Override
- 316L, 430F, aluminum
- Voltage, NO / NC
- Different orifices
- 3/2, 2/2, 4/2
- NBR, FKM, VITON

Type of Protection

BVS 10 ATEX E 019 X
Typ : FEB 106/10 and FEB 106/10 A
ATEX: II 2G Ex d IIC (IIB) T4/T5/T6 Gb

Technical Data of the Solenoid

Nominal voltage:	≤ 250 VDC/VAC 50-60 Hz
Nominal current:	≤ 1.9 A
Leakage power:	≤ 22 W T4 (-55°C to +70°C) ≤ 22 W T4 (-67°F to +158°F) ≤ 16 W T5 (-55°C to +50°C) ≤ 16 W T5 (-67°F to +122°F) ≤ 11 W T6 (-55°C to +60°C) ≤ 11 W T6 (-67°F to +140°F)

Standard leakage power:

DN3 = 13 Watt
DN6 = 20 Watt

Stroke: DN3 / DN6 = 4 mm

Pulse time, min. DN3 = ~200 ms
DN6 = ~145 ms

Current tolerances +/- 10%

Hold voltage level ~30 - 35%

RVCD 100% (ED)

Cable Entry: M20x1,5 (The valve comes with a connected cable already, please specify length)

IP-Protection:
IP66 with a suitable cable entry

Photographic view



Mode of Operation

Switch mode, NC (normally closed)

If the valve is not operated, the lower ball is pushed into the seat by the springforce, the pressurised medium keeps the valve in this position.

Simultaneously, the upper ball is lifted from the valve seat and A to T is opened.

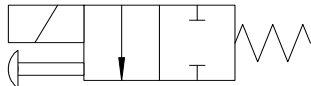
If the valve is operated the lever pushes the upper ball into its seat. Simultaneously, the lower ball is lifted from the seat and the flowpath P to A is opened.

Switch mode, NO (normally open)

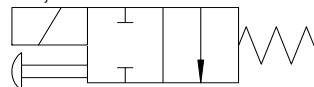
If the valve is not operated the ball is pushed into its upper seat by the spring and the pressurised medium. Through this, P to A is opened.

If the valve is operated, the lever pushes the tappet and both have to overcome the spring force and the working pressure in order to push the ball into its lower seat. This way P is closed and the outlet A via T is depressurised.

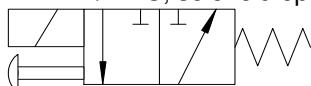
Symbols



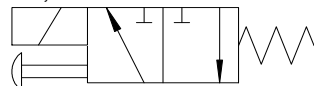
2/2 NO, solenoid operated, manual override



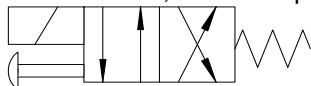
2/2 NC, solenoid operated, manual override



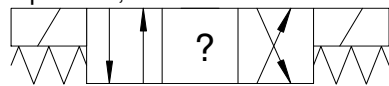
3/2 NO, solenoid operated, manual override



3/2 NC, solenoid operated, manual override



4/2 NO, solenoid operated, manual override



4/3 TBD, double solenoid operated, spring return

Drawing of a DN6

