

Technical data sheet

Type WKB2

Membrane solenoid valves

Applications and special features



- Membrane solenoid valve, indirect action (pilot) normally closed, 2 way.
- Absorbed power : 9 W CA/15 W CC.
- Viscosity : max 50cSt
- Ambient temperature : max. +40°C
- Particularly suitable against waterhammer
- Integrated filter to protect the pilot system
- Adjustable closing system : on request
- Optional : manual actuation
- Protection : IP 65 with connector.
- Solenoid valve delivered with standard coil 220/50 Hz ref 5290 or 24V/50Hz ref 5292 or 24VDC ref 5296, and with a connector.

Technical description

| DN | | | 220V/50Hz 9 W | 24V/50Hz 9 W | 24VDC 15 W |
|------|-------|----|------------------|-----------------|---------------|
| | " | mm | | | |
| EPDM | 3/8 | 15 | 149B 6699 | 149B 6706 | 149B 6713 |
| | 1/2 | 15 | 149B 6700 | 149B 6707 | 149B 6714 |
| | 3/4 | 20 | 149B 6701 | 149B 6708 | 149B 6715 |
| | 1 | 25 | 149B 6702 | 149B 6709 | 149B 6716 |
| | 1 1/4 | 32 | 149B 6703 | 149B 6710 | 149B 6717 |
| | 1 1/2 | 40 | 149B 6704 | 149B 6711 | 149B 6718 |
| | 2 | 50 | 149B 6705 | 149B 6712 | 149B 6719 |
| FKM | 3/8 | 15 | 149B 6699V | 149B 6706V | 149B 6713V |
| | 1/2 | 15 | 149B 6700V | 149B 6707V | 149B 6714V |
| | 3/4 | 20 | 149B 6701V | 149B 6708V | 149B 6715V |
| | 1 | 25 | 149B 6702V | 149B 6709V | 149B 6716V |
| | 1 1/4 | 35 | 149B 6703V | 149B 6710V | 149B 6717V |
| | 1 1/2 | 40 | 149B 6704V | 149B 6711V | 149B 6718V |
| | 2 | 50 | 149B 6705V | 149B 6712V | 149B 6719V |

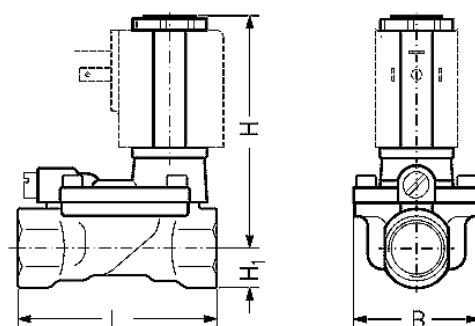
- **Connection** : Female/female, BSP thread
- **Permissible operating pressure PFA - water-** (for supply, distribution and disposal of water) : See table
- **θ** : EPDM Mini. : -30° C
maxi : 100° C
FKM Mini : 0° C
maxi : 100° C
- **Mediums** : EPDM : water,
FKM : oil, air, water (maxi 60° C)
- **Approvals** : EPDM version : **WRAS** - ACS

The technical data listed is for the standard coils.
All our solenoid valves can be delivered, **ON REQUEST**, with different coil voltages.

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Overall dimensions

| Connection FF " | Passage | B mm | H mm | H1 mm | L mm | Weight kg |
|--------------------|---------|---------|---------|----------|---------|--------------|
| 3/8 | 15 | 52 | 94,0 | 15,0 | 80 | 0,96 |
| 1/2 | 15 | 52 | 94,0 | 15,0 | 80 | 0,96 |
| 3/4 | 20 | 58 | 98,0 | 18,0 | 90 | 1,16 |
| 1 | 25 | 70 | 108,0 | 22,0 | 109 | 1,56 |
| 1 1/4 | 32 | 82 | 115,0 | 27,0 | 120 | 2,16 |
| 1 1/2 | 40 | 95 | 124,0 | 32,0 | 130 | 3,36 |
| 2 | 50 | 113 | 130,0 | 37,0 | 162 | 4,46 |



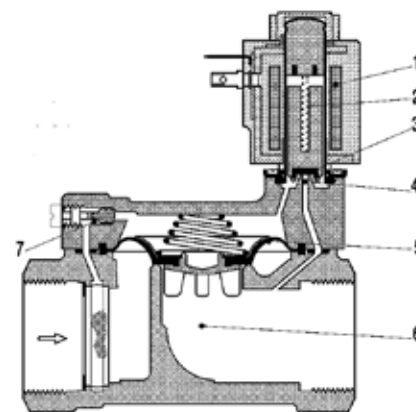
Working principle

Coin voltage disconnected (closed) :

When the voltage is disconnected, the valve plate (3) is pressed down against the pilot orifice (4) by the armature spring (2). The pressure across the diaphragm (5) is built up via the equalising orifice (7). The diaphragm closes the main orifice (6) as soon as the pressure across the diaphragm is equivalent to the inlet pressure. The valve will be closed for as long as the voltage to the coil is disconnected.

Coin voltage connected (open) :

When voltage is applied to the coil (1), the pilote orifice (4) is opened. As the pilote orifice is larger than the equalising orifice (7), the pressure across the diaphragm (5) drops and therefore it is lifted clear of the main orifice (6). The valve is now open for unimpeded flow and will be open for as long as the minimum differential pressure across the valve is maintained, and for as long as there is voltage to the coil.



Spare parts list and materials

| | |
|-----------------|------------------------------------|
| • Valve body | : Brass N° 2.0402 |
| • Armature | : Stainless steel N° 1.4105 |
| • Armature tube | : Stainless steel N° 1.4306 |
| • Spring | : Stainless steel 1.4310 |
| • Valve plate | : EPDM/FKM) |
| • Diaphragm | : EPDM/FKM) according to the type |

Working details

| DN " | Maxi. pressure bar | Differential pressure - bar Coil 9W ca or 15W cc | | | Time to open m/s | Time to close m/s | Kv m3/h | Class |
|---------|-----------------------|---|------|-----|------------------------|-------------------------|---------|---------------------|
| | | Mini | Maxi | | | | | |
| | | | EPDM | FKM | | | | |
| 3/8 | 16 | 0,3 | 16 | 10 | 40 | 350 | 2,5 | 3,3 |
| 1/2 | | 0,3 | | | 40 | 350 | 4 | 3,3 |
| 3/4 | | 0,3 | | | 40 | 1000 | 8 | 3,3 |
| 1 | | 0,3 | | | 300 | 1000 | 11 | 3,3 |
| 1"1/4 | | 0,3 | | | 1000 | 2500 | 18 | 3,3 exceptGaz G1 |
| 1"1/2 | | 0,3 | | | 1500 | 4000 | 24 | 3,3 exceptGaz G1 |
| 2 | | 0,3 | | | 5000 | 10000 | 40 | 3,3 exceptGaz G1 |

* The indicated times concern the medium water - The exact time depends of pressure conditions.

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Socla SAS

365 rue du lieutenant Putier
71530 VIREY LE GRAND
Postal address : BP 10273
71107 CHALON SUR SAONE Cedex

Tel : 33 3 85 97 42 52
Fax : 33 3 85 97 97 42
<http://www.socla.com>
e-mail: commerfr@socla.com