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BEV 2-way ball valves with actuator 230 V AC

NOTE!

The product may only be used if you have fully read and understood these operating instructions. The manual is also available on the AFRISO websites in the Internet.

WARNING!

The BEV ball valve is powered by mains voltage (230 V AC). This voltage can cause serious injury or death.

- Do not allow the valve actuator to come into contact with water.
- Always disconnect the device from the mains power supply before performing any maintenance (switch off the circuit breaker).
- Do not modify or tamper with the valve in any way.
- If you have any concerns about the safe operation of the device, contact your supplier immediately.
- Pay close attention to all warning labels on the device and its packaging.

The BEV ball valve may only be installed, commissioned, and dismantled by trained personnel. Changes and modifications carried out by unauthorised persons may cause danger and are prohibited for safety reasons.

All work on electrical circuits must be carried out by a qualified and authorized electrician.

Risk of scalding by hot medium! Perform all installation and maintenance work after the system has cooled down.

APPLICATION

BEV ball valves are designed for use in central heating or air conditioning water systems as shut-off components. The ball valves are operated via an SPST (Single Pole Single Throw) control signal and can be actuated by any compatible thermostat or switch.

PREDICTABLE INCORRECT APPLICATION

BEV ball valves are not intended for:

- use with the following liquids and gases: a mix of water and glycol with a glycol concentration greater than 50%, water vapour, oil, petrol;
- operation in explosive atmospheres. The occurrence of sparks in such environments may lead to deflagration, fire, or explosion;
- safety-related purposes;
- use in conjunction with products that are directly or indirectly involved in preserving human life or health, or in situations where a malfunction could pose a risk to people, animals, or property.

OPERATION

The BEV 2-way shut-off valve is a normally closed (NC) valve. When connected as shown in Fig. 1, the valve remains closed when voltage is applied to the brown wire only. When voltage is applied to both the brown and black wires, the valve opens. When voltage is removed from the black wire, the valve returns to its initial (closed) position.

The current position of the valve is determined by the orientation of the knob on the actuator (see Fig.2). If the knob is set across the actuator, the valve is closed. If the knob is set along the actuator, the valve is open.

Fig. 1. Electrical diagram

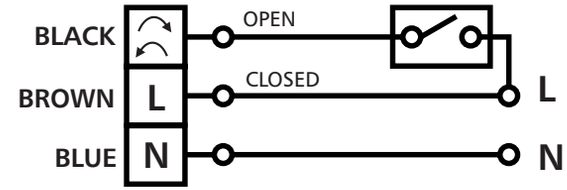
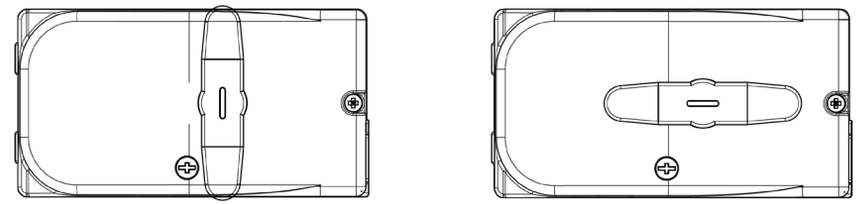


Fig. 2. Knob on the actuator

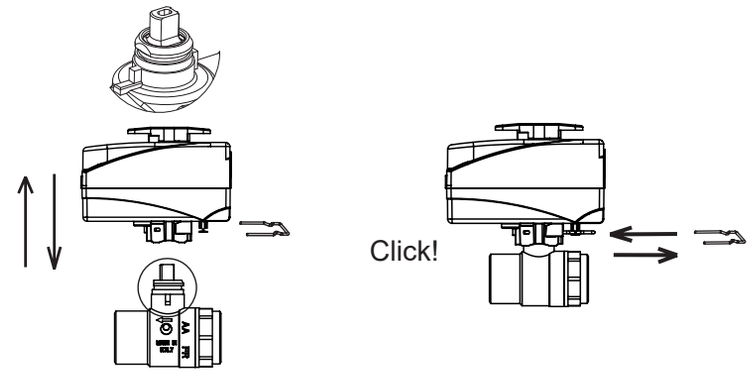


Valve closed | Valve open

Thanks to the innovative design of the actuators, they can rotate the valve ball 360° in both directions. If another position change request is received while the valve is changing position, the actuator does not stop or change the direction of rotation, but continues to rotate the ball in the same direction until the set position is reached. This ensures a quick response to sudden position changes.

If something blocks the ball and the valve is unable to close the flow, the actuator starts rotating the ball in the opposite direction. This allows any dirt that may have blocked the flow to pass through and prevents damage to the actuator. This increases the actuator's service life.

Fig. 3. Mounting of the actuator



TECHNICAL DATA

Parameter / part	Value / material
Connections	Rp½", Rp¾", Rp1"
Kvs	20, 45, 60 m³/h
Differential pressure	max 6 bar
Operating pressure	max 10 bar
Opening/closing time	12 seconds
Valve housing	CW617N brass
Valve ball	CW617N brass
Internal leakage	class A according to EN 12266-1
Medium temperature	2÷110°C (temporarily 150°C)
Ambient temperature	0÷55°C
Glycol concentration	max 50%
Actuator power supply	230 V AC
Capacity	max 9 VA
Housing protection class	IP44
Control signal	SPST
Electrical cable	3 x 0,75 mm², insulated, length 1 m

MOUNTING

Attention! The actuator can only be mounted on the valve in one position due to the shape of the valve stem and the actuator slot (Fig. 3).

Before installing the valve, flush the system thoroughly, paying particular attention to removing any solder residue or pipe-cutting debris. We also recommend using appropriate filters in the system.

BEV ball valves are supplied with an electric actuator already mounted. To avoid damaging the actuator housing, we recommend removing the actuator from the valve before starting installation. To do this, remove the metal locking clip and then lift the actuator (Fig. 3).

Install the valve in the proper position in the system (Fig. 4). After completing all installation work near the valve, place the actuator on the valve and secure it by inserting the metal locking clip.

Make the electrical connections according to the diagram in Fig. 1, using the actuator's factory-supplied cable. Do not open the actuator housing.

Fig. 4. Mounting positions

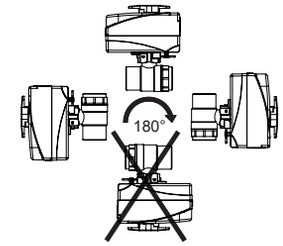
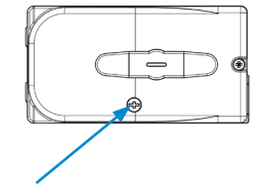


Fig. 5. Manual valve adjustment



Manual override button

OPERATION

BEV ball valves consist of two main components: a valve and an electric actuator. BEV valves allow the valve to be installed in the system without an electric actuator. Once the valve has been installed, the actuator can be mounted at any time. During operation, the actuator can be replaced without draining the medium or stopping the system.

In the event of a power failure, the valve ball will remain in its last position. To operate the valve manually, hold or press and turn the manual override button to the manual position on the actuator (Fig. 5).

The valve can then be operated using the knob. When the power supply is restored, release the manual override button to return the valve to automatic operation.

Thanks to the proper design of the internal components, the valves can withstand high differential pressures and reduce the risk of valve blocking after a long period of inactivity in one position, which ensures their maintenance-free operation.

APPROVALS AND CERTIFICATES

AFRISO Sp. z o.o. hereby declares that the product complies with:

- EMC Directive 2014/31/UE,
- LVD Directive 2014/35/UE,
- RoHS II Directive 2011/65/WE,
- PED Directive 2014/68/UE.

The full text of the EU Declaration of Conformity is available at the following web address: www.afriso.pl.

BEV ball valves have a CE declaration of conformity and a hygienic certificate issued by the National Institute of Public Health (NIH) in Poland.

DECOMMISSIONING, DISPOSAL

1. Dismount the product.
2. Dispose of the product according to local directives and guidelines.

The product is built from recyclable materials. If you have any questions or problems with disposal, please contact the appropriate distributor or manufacturer's point.

WARRANTY

Product guarantee in accordance with the general conditions of sale and delivery.

CUSTOMER SATISFACTION

For AFRISO customer satisfaction is paramount. If you have any questions, suggestions or product problems, please contact us.