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VZK R 2xx-230-1P

Installation and Operation Manual

TWO-WAY ZONE BALL VALVE
VZK R 2xx-230-1P

EN

VZK R 2xx-230-1P

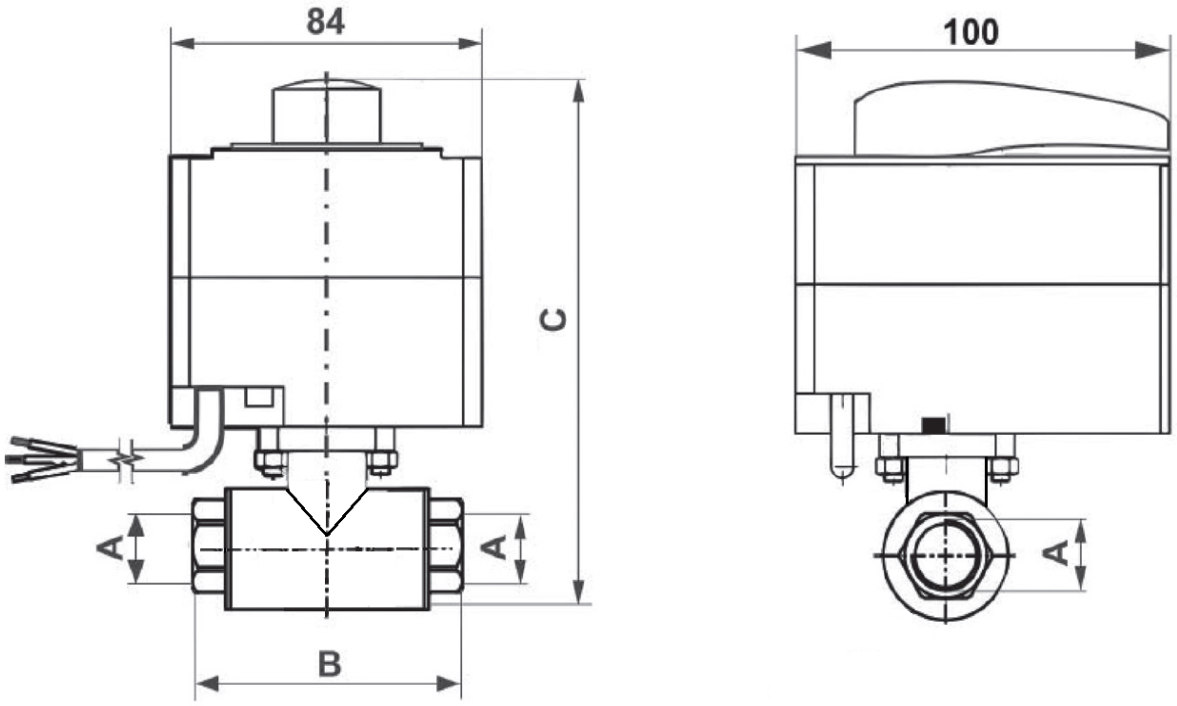
CONTENTS

1. Introduction

A two-way zone valve w. electric actuator (230V, 50Hz), permitting manual control. The valve is suitable for use in heating and solar thermal systems. The actuator is attached to the valve with four M5 nuts (spanner #8) and can be removed without removing the valve. The valve position is indicated by the actuator control lever. Fluid can flow in either direction through the valve.

2. Technical Data

Marking	Code	Nominal diameter DN	Connecting thread A	Dimension B	Dimension C	Opening/closing time [s]	K_{Vs} [m^3/h]	Weight [kg]
VZK R 220-230-1P-60 1/2F	19682	20	2 x G 1/2" F	96	160	60	8.9	1.2
VZK R 220-230-1P-60 3/4F	19677	20	2 x G 3/4" F	96	160	60	18.7	1.2
VZK R 220-230-1P-60 1F	19680	20	2 x G 1" F	96	160	60	20.0	1.2
VZK R 225-230-1P-60 1F	19686	25	2 x G 1" F	104	169	60	31.6	1.5
VZK R 225-230-1P-60 5/4F	19689	25	2 x G 5/4" F	104	169	60	34.3	1.5



Technical Data	
Max. working pressure	10 bar
Max. fluid working temperature	110 °C
Valve open/close time	60 s
Angle of rotation	90°
Ambient working temperature	5 °C to 40 °C
Max. relative humidity	80%, non condensing
Max. pressure difference	10 bar

Electric Data	
Power supply	230 V 50 Hz
Max. power consumption	4 VA
Max. current	17 mA
Torquet	5 Nm
IP rating	IP42
Protection class	II
Power cable cross section	3 x 0.5 mm^2
Power cable length	2 m

Materials	
Valve housing	brass CW617N
Valve spindle	brass CW617N
Valve ball	chrome-plated brass
O-rings	EPDM, FPM
Seal	PTFE
Power cable	PVC

Direction of flow through the valve

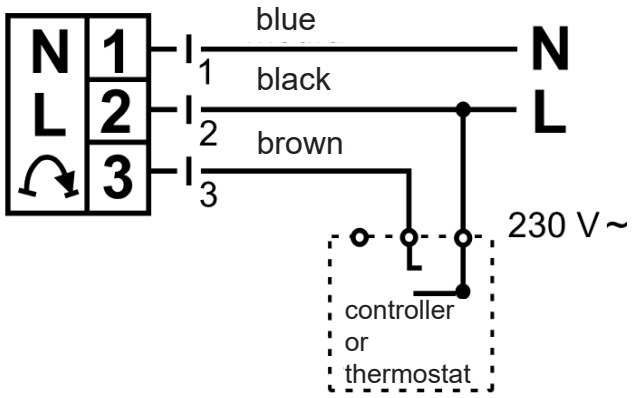
The valve can be operated in either direction.

3. Actuator

3.1. Electrical wiring of the actuator

The actuator is controlled by the switching contact of a controller or a 230V, 50Hz thermostat. A permanent power supply is applied to terminals 1 and 2. The switching live is connected to terminal 3.

Wiring diagram



3.2. Actuator control

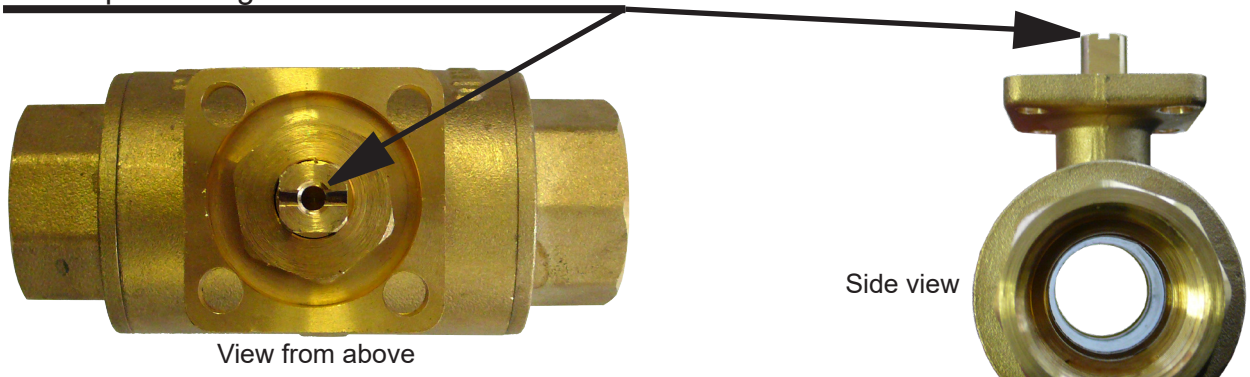
The actuator can be switched between automatic and manual mode. In automatic mode, the direction of rotation of the actuator is indicated by the indicator lights. In manual mode, it is possible to turn the valve using the control lever.
The control lever indicates the valve position through a colour field. The valve is factory set to normally closed (N.C.). The lever point is in the blue field.
When the switching live is applied, the valve starts opening by turning clockwise into the red field. The valve can be also re-configured in such a way that it is normally open (N.O.).

Re-configuring can be done using the following methods:

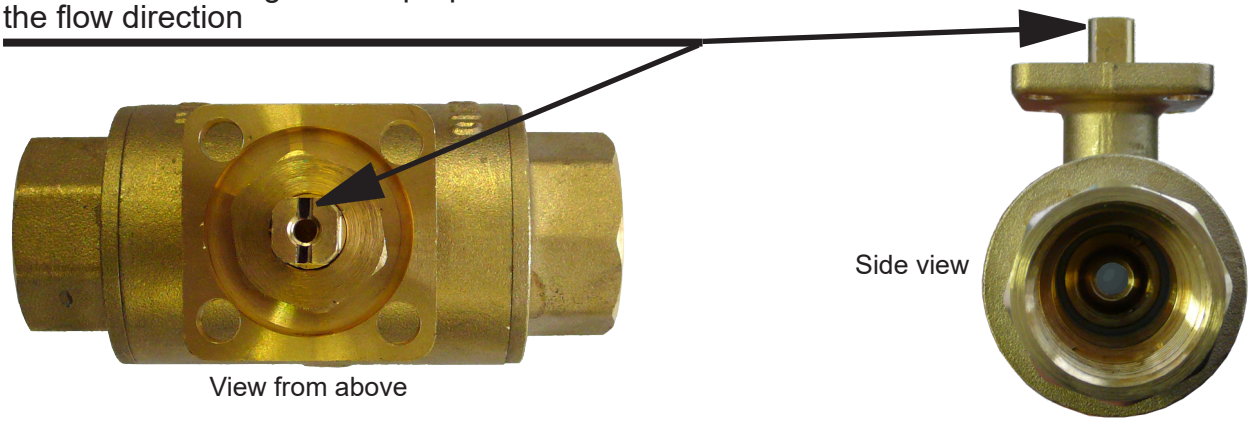
- reversing the actuator direction of rotation, see Chap. 4,
- removing the actuator, turning the valve spindle by 90°, re-fitting the actuator and adjusting the colour label in such a way that in the Closed position the lever tip is in the blue field.

3.3. Valve states

Valve open - the groove is in the flow direction

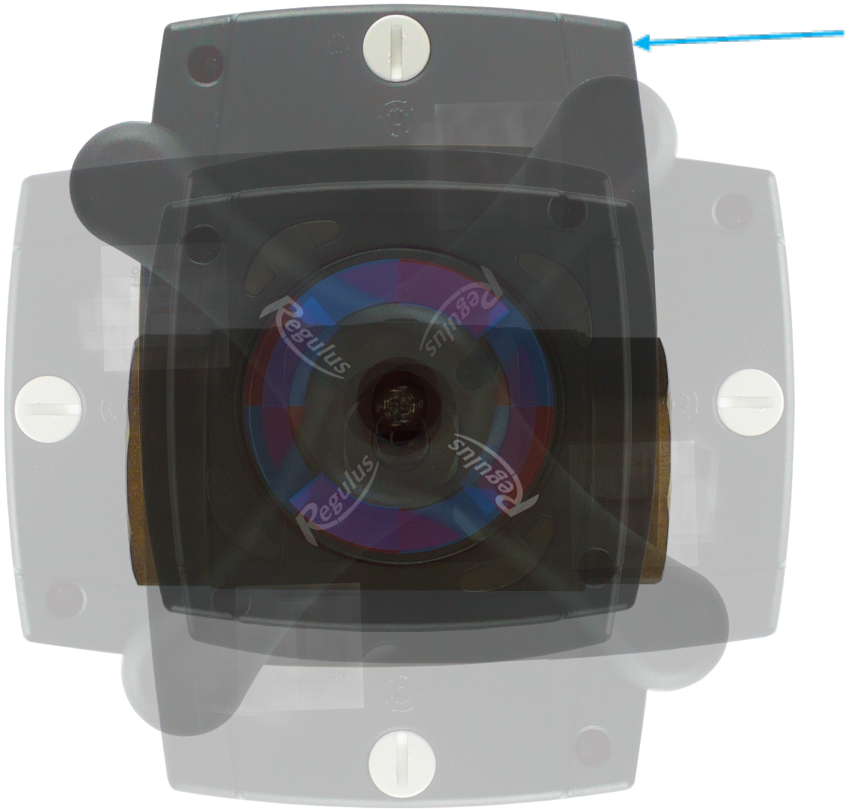


Valve closed - the groove is perpendicular to the flow direction



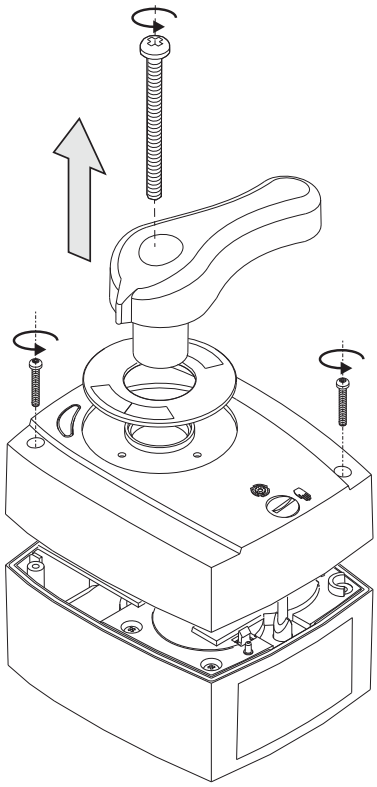
3.4. Actuator location

The default position of the actuator is such that the valve can be installed in the piping without removing the actuator. If required, the actuator can be removed and fitted in a different position (in quarter turns) - see the fig.

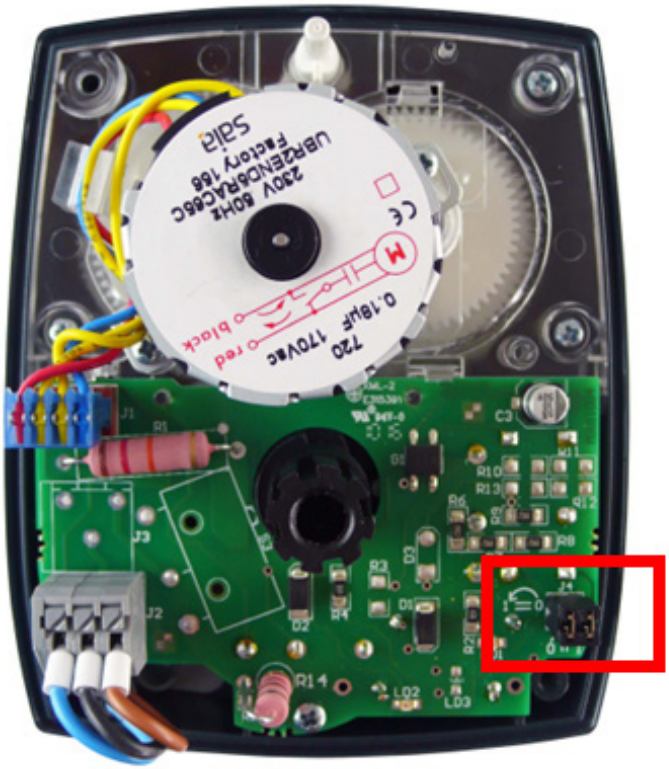


4. Reversing the actuator direction of rotation

In the factory setting, the actuator without control voltage shows the blue field. After the control voltage is applied, the actuator starts turning clockwise and the red field is shown. The jumper is placed vertically.
After the jumper is turned to a horizontal position, the actuator without control voltage will show the red field. After the control voltage is applied, the actuator starts turning anti-clockwise and the blue field is shown.

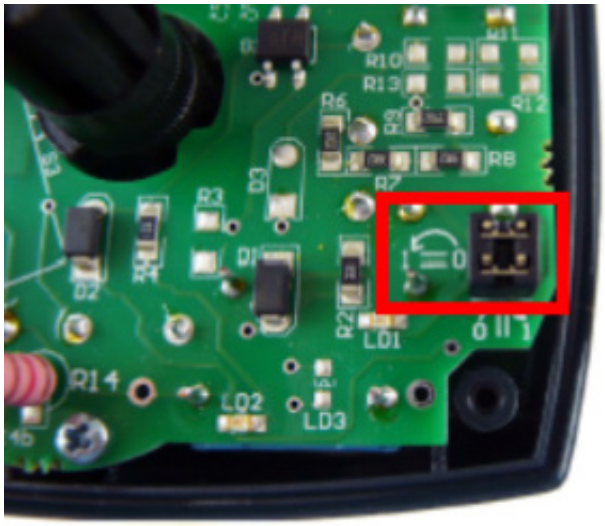


1. Switch off the supply voltage, set the manual control, unscrew and remove the actuator cover.



2. Locate the jumper - see the red marked area in the picture.

3. In the factory setting, the jumper is placed vertically. The actuator turns clockwise.



4. Turning the jumper by 90 deg. to the horizontal position will change the direction of rotation. The actuator now turns anti-clockwise.

Having placed the jumper to the desired position, re-install the actuator cover and switch the actuator to automatic mode.

5. Permitted and Prohibited Positions

WARNING - Important

Installation of the valve in a position where the actuator is located below the valve is prohibited.

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