Operation Manual

Electrically Operated Ball Valve

50650, 50651, 50654

Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!
Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation
If you have suggestions for improvement or have found any irregularities, please contact us.

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If you should find a mistake or wish to make a suggestion for improvement, we look forward to hearing from you.

Send an e-mail to:

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Our postal address is:

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Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**
Keep these operation instructions safe.

DQ320 (50651)

In general

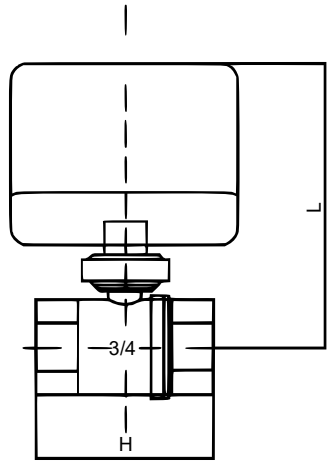
The electrically operated ball valves of the series DQ320 are used for switching on/off the tap water pipes of the heating and air conditioning systems. It consists of a pump casing and an electric servomotor. The servomotor activates the ball valve. It is equipped with alarm contacts, which holds ball valve in end position “wide open” or “completely closed.” The valve body is made of forged brass and nickel-plated.

Technical data

Energy supply	230 V ±10 %, 50/60 Hz
Power consumption (VA)	4
Engine	Synchronized motor
Setting time (s)	15
Length (mm)	70
Pressure (bar)	16
Differential pressure (closed) (bar)	< 6
Differential pressure (leakage free) (bar)	< 4
Connectors (mm)	20 (¾″) internal thread
Liquid	Chilled or hot water, 50 % glycol
Liquid temperature (°C)	2–90
Material	Brass HPb59–1

Dimensions

Type	**Model**	**DN** (mm)
3-way	DQ320	20
Connectors (″)	**Height** (mm)	**Length** (mm)
¾	75	125



DQ220 (50650)/DQ225 (50654)

In general

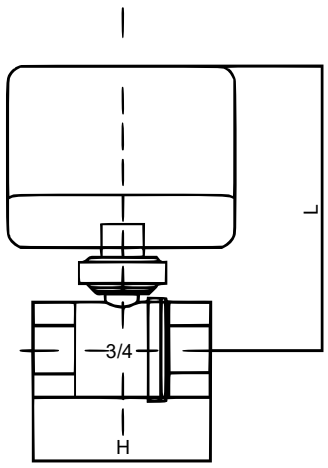
The electrically operated ball valves of the series DQ220 are used for switching on/off the tap water pipes of the heating and air conditioning systems. It consists of a pump casing and an electric servomotor. The servomotor activates the ball valve. It is equipped with alarm contacts, which holds ball valve in end position “wide open” or “completely closed.” The valve body is made of forged brass and nickel-plated.

Technical data

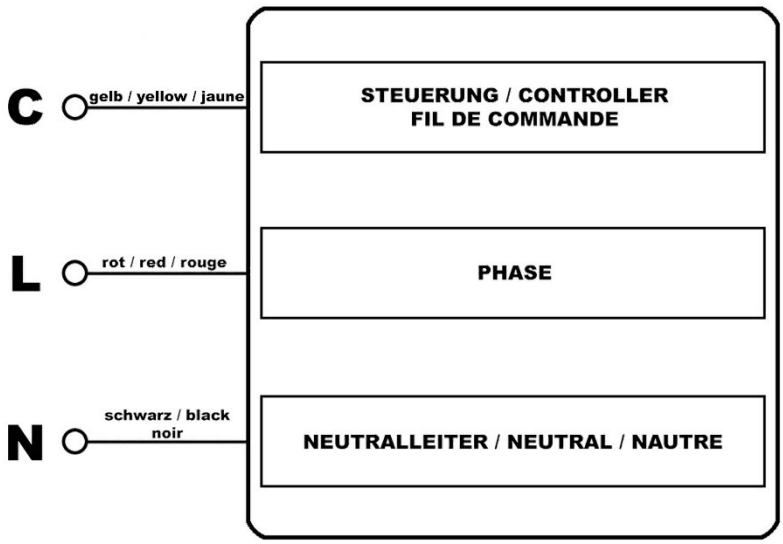
Energy supply	230 V ±10 %, 50/60 Hz
Power consumption (VA)	4
Engine	Synchronized motor
Setting time (s)	15
Length (mm)	70
Pressure (bar)	16
Differential pressure (closed) (bar)	< 6
Differential pressure (leakage free) (bar)	< 4
Connectors (mm)	20 (¾″) internal thread
Liquid	Chilled or hot water, 50 % glycol
Liquid temperature (°C)	2–90
Material	Brass HPb59–1

Dimensions

Type	**Model**	**DN** (mm)
2-way	DQ220 DQ225	20 25
Connectors (″)	**Height** (mm)	**Length** (mm)
¾	64	110
1	70	110



Electrical connection



Assignment of connection cable

Ball valve closed:

Supply lines:
– red = phase (230 V)
– black = neutral wire

Control line:
– yellow = zero potential

Ball valve open:

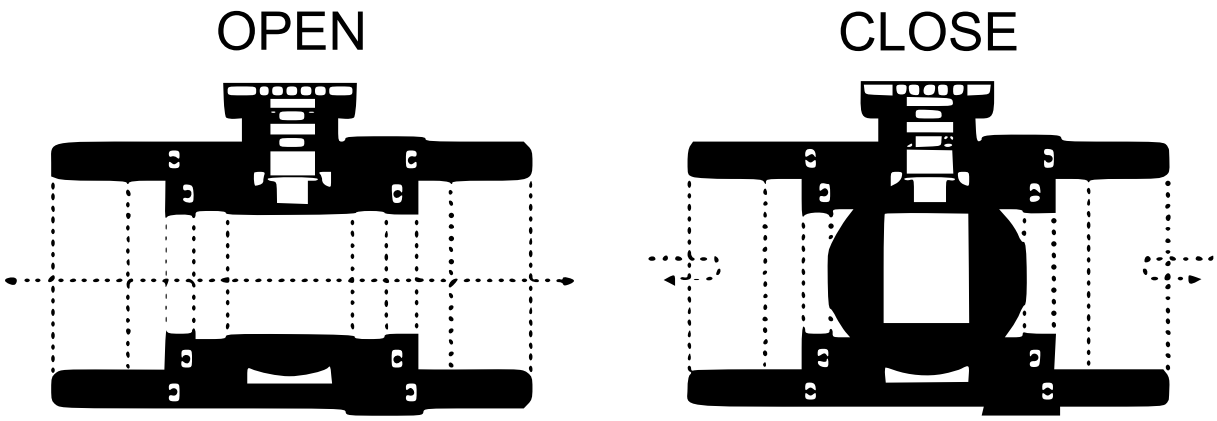
Supply lines:
– red = phase (230 V)
– black = neutral wire

Control line:
– yellow = phase (230 V)

Connection description

For using the valve, the red and the black supply lines must be connected to the mains voltage, here connect the red line/cable with the phase and the black line/cable with the neutral wire. Ball valve position is determined via the yellow control line. If the supply line is connected to the mains voltage, the ball valve changes the position from closed to open, or in the case of the DQ320 valve, it changes the position from “AB–A” to “AB–B.”

Sectional representation



Note:

- The actuator may only be installed horizontally.
- When installing do not tighten the screw so fast
- Use only exact threaded connectors.
- Check if the pipeline and the valve are clean before installing
- The valve and the pipeline can be installed in any direction between vertically and horizontally, but not with the actuator downwards.
- If the pipeline system is heat insulated, make sure that the actuator is located outside the insulation.
- If damaged due to improper installation the warranty ceases to apply.

Troubleshooting

Problem	Reason	Solution
Reverse of “valve open” and “valve closed”	Wrong cable connection	Change cable connections.
Actuator does not function	Wrong connection of the control device (thermostat) or of the cable	Control device (thermostat) or cable must be checked.
	Actuator contains water or engine damaged	Change actuator.
Pipe connection leaks	Threads do not match or screwing is incorrect (threads damaged)	Change valve body.
Valve does not open and close completely	Valve is stuck, sized up, or water quality is poor	Clean pipeline, change valve body.

Disposal regulations

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with the domestic waste.

The company WilTec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).
The logo on the article or on its packaging points out that this article must not be treated as normal household waste but must be disposed to a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this article you protect the environment and the health of your fellow men. Environment and health are threatened by inappropriate disposal.

Material recycling helps reduce the consumption of raw materials.

Additional information on recycling this article can be provided by your local community, municipal waste disposal facilities, or the store where you purchased the article.

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Important notice: