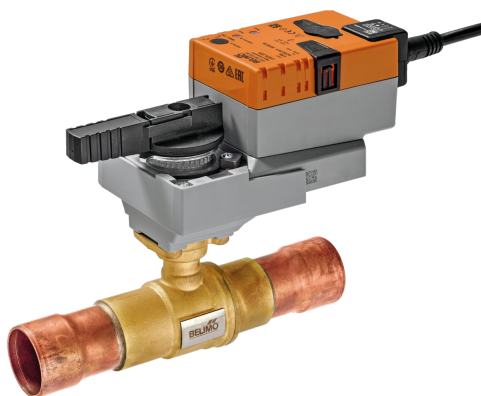


Characterised control valve

- Suitable for HFC and HFO refrigerants
- Tight-closing
- For refrigerant flow control



Picture may differ from product

Type Overview

Type	Kvs [m³/h]	ODF	PN
X8035M.4322A	15.5	35-35 mm	45
X8042M.5322A	21	42-42 mm	45
X8054M.6322A	43	54-54 mm	45

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 19.2...28.8 V
	Power consumption in operation	13 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	23 VA
	Inrush current (Imax)	20.0 A @ 5 ms
	Connection supply / control	Cable 3 m, 4x 0.75 mm²
	Parallel operation	Yes (note the performance data)
Functional data	Operating range Y	0.5...10 V
	Input impedance	100 kΩ
	Position feedback U	0.5...10 V
	Position feedback U note	Max. 0.5 mA
	Running time motor	9 s / 90°
	Sound power level motor	45 dB(A)
	Fluid	HFC, HFO
	Fluid temperature	-20...90°C [-4...194°F]
	Differential pressure Δpmax	3200 kPa
	Flow setting	See installation instruction
	Leakage rate	air-bubble tight, leakage rate A (EN 12266-1)
	Angle of rotation note	Adjustable Operating range 15...90°
	Pipe connection	Internal soldering sleeve ODF
	Installation orientation	upright to horizontal (in relation to the spindle)
	Servicing	maintenance-free
	Manual override	with push-button, can be locked
	Adaptation setting range	manual (automatic on first power-up)
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP54
	EMC	CE according to 2014/30/EU

Technical data

Safety data	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Type of action	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	3
	Compatible refrigerants	R1234ze, R134a, R404A, R407C, R407H, R410A, R417A, R427A, R448A, R449A, R450A, R507A, R452A, R513A, R1234yf, R32, R452B, R454A, R454B, R454C, R455A
	Flammable refrigerants	The product is not to be considered a source of ignition when used together with A2L classified refrigerants and is compliant with clauses 22.116 and 22.117 from IEC 60335-2-40. Compliance with clause 22.117 has been checked by measuring the appropriate surface temperatures during the tests of IEC 60335-2-40, clauses 11.
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Ambient temperature note	Caution: 40...50°C [104...122°F] utilisation possible only under certain restrictions. Please contact your supplier.
	Storage temperature	-40...80°C [-40...176°F]
Materials	Valve body	Brass CW617N
	Closing element	Stainless steel AISI 316L
	Spindle	Stainless steel AISI 316L or chrome-plated brass
	Spindle seal	HNBR O-ring

Safety notes



- This device has been designed for use in refrigeration application, stationary heating, ventilation and air conditioning systems and must not be used outside the specified field of application, especially in aircraft, any other airborne means of transport or explosive atmosphere.
- Outdoor application: Only possible if no (sea) water, snow, ice, sunlight or aggressive gases act directly on the device and if it is ensured that the ambient conditions remain within the limit values specified in the data sheet at all times.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The switch for changing the direction of rotation may only be operated by authorised specialists. The direction of rotation must not in particular be reversed in a frost protection circuit.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- Cables must not be removed from the device.
- Self adaptation is necessary when the system is commissioned and after each adjustment of the angle of rotation (press the adaptation push-button once).
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.
- The valve has been designed for use in stationary electrical heat pumps, air-conditioning systems and dehumidifiers and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- The suitability of these products for applications in which flammable refrigerants are used must be checked by the user for each individual application. Any application is the sole responsibility of the user.
- The valve does not contain any parts that can be replaced or repaired by the user.
- The valve may not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

- Operating mode** The ball valve is adjusted by a rotary actuator.
The ball valve is opened in a counterclockwise direction and closed in a clockwise direction.
- Home position** The first time the supply voltage is switched on, i.e. at the time of commissioning, the actuator carries out an adaptation, which is when the operating range and position feedback adjust themselves to the mechanical setting range.
The detection of the mechanical end stops enables a gentle approach to the end positions, thus protecting the actuator mechanics.
The actuator then moves into the position defined by the control signal.
Factory setting: Y2 (counter-clockwise rotation).
- Adaptation and synchronisation** An adaptation can be triggered manually by pressing the "Adaptation" button. Both mechanical end stops are detected during the adaptation (entire setting range). Automatic synchronisation after pressing the manual override button is configured. The synchronisation is in the home position (0%).
The actuator then moves into the position defined by the control signal.

Electrical installation



Supply from isolating transformer.

Parallel connection of other actuators possible. Observe the performance data.

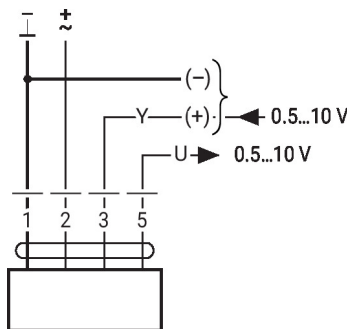
Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

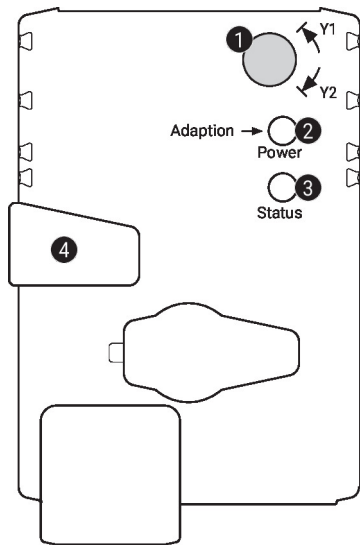
When several actuators are connected in parallel, the maximum signal cable length must be divided by the number of actuators.

Wire colours:

- 1 = black
- 2 = red
- 3 = white
- 5 = orange

AC/DC 24 V, modulating



Operating controls and indicators

1 Direction of rotation switch

Switch over: Direction of rotation changes

2 Push-button and LED display green

Off: No power supply or malfunction

On: In operation

Press button: Triggers angle of rotation adaptation, followed by standard mode

3 Push-button and LED display yellow

Off: Standard mode

On: Adaptation or synchronisation process active

Press button: No function

4 Manual override button

Press button: Gear train disengages, motor stops, manual override possible

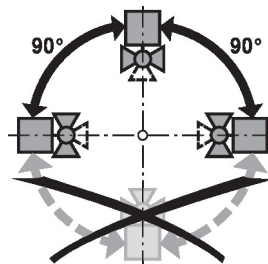
Release button: Gear train engages, standard mode

Check power supply connection

2 Off and **3** On Possible wiring error in power supply

Installation notes
Permissible installation orientation

The ball valve can be installed upright to horizontal. The ball valve may not be installed in a hanging position, i.e. with the spindle pointing downwards.

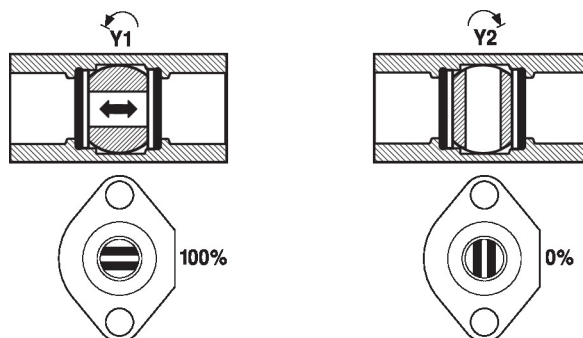

Servicing

Ball valves and rotary actuators are maintenance-free.

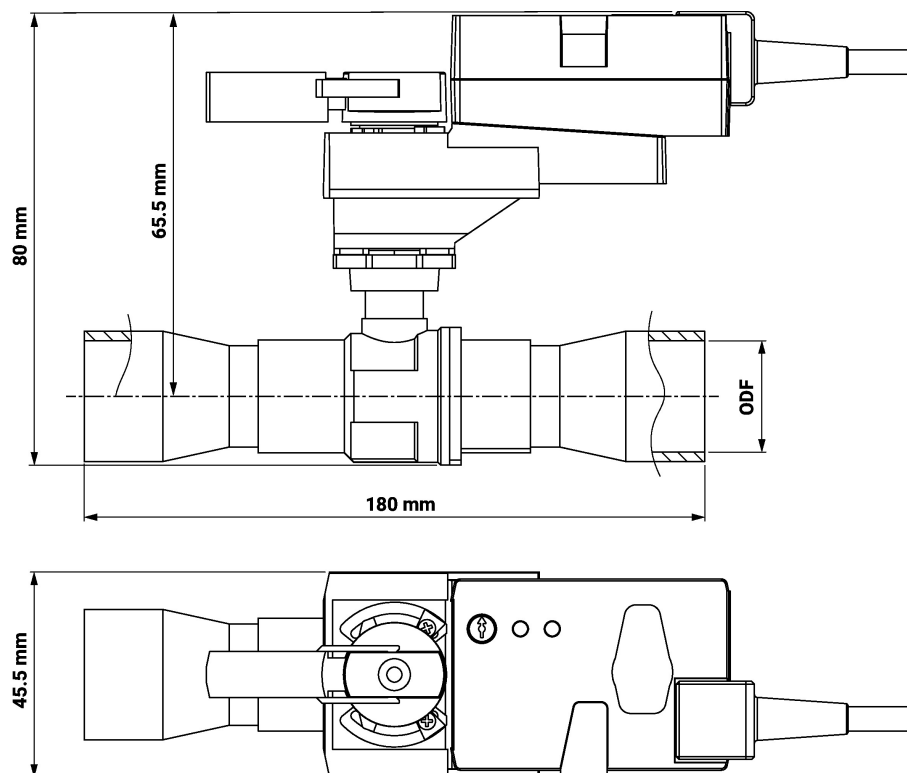
Before any service work on the control element is carried out, it is essential to isolate the rotary actuator from the power supply (by unplugging the electrical cable if necessary). The operating conditions of the refrigerant circuit and its components must be observed.

Flow direction

Direction of flow in both directions possible.



Dimensions



Type	ODF	Weight
X8035M.4322A	35-35 mm	1.87 kg
X8042M.5322A	42-42 mm	1.9 kg
X8054M.6322A	54-54 mm	1.94 kg