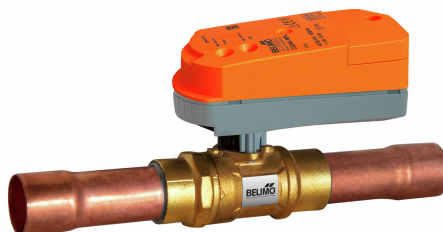


Characterised control valve

- 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
X8016M.1159A	1.2	16-16 mm	50
X8016M.2159A	4.8	16-16 mm	50
X8022M.3259A	8	22-22 mm	50
X8028M.1A59A	1.2	28-28 mm	50
X8028M.2A59A	4.8	28-28 mm	50
X8035M.2A59A	4.8	35-35 mm	50
X8042M.3B59A	8	42-42 mm	50

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 21.6...28.8 V
	Power consumption in operation	0.7 W
	Power consumption in rest position	0.6 W
	Power consumption for wire sizing	1.5 VA
	Connection supply / control	Cable 1 m, 4x 0.34 mm²
Data bus communication	Communicative control	BACnet MS/TP (factory setting) Modbus RTU
	Number of nodes	BACnet / Modbus see interface description
Functional data	Running time motor	75 s / 90°
	Sound power level motor	35 dB(A) dB(A)
	Fluid	HFC, HFO
	Fluid temperature	-20...70°C [-4...158°F]
	Fluid temperature note	with ZCQ-E 70...120°C [158...248°F]
	Differential pressure Δpmax	3500 kPa
	Flow characteristic	equal percentage (VDI/VDE 2173)
	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 actuator (clicked out)
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP40

Technical data

Safety data	EMC	CE according to 2014/30/EU
	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	2
	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...60°C [-22...140°F]
	Ambient temperature note	Without radiation
	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 in case that no (sea) water, snow, ice, insolation or aggressive gases interfere directly with the device and that it is ensured that the ambient conditions remain within the thresholds according to the data sheet at any time.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- 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.
- 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.

Electrical installation


The wiring of the line for BACnet MS/TP / Modbus RTU is to be carried out in accordance with applicable RS-485 regulations.

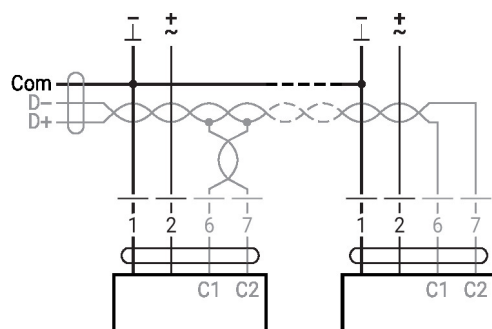
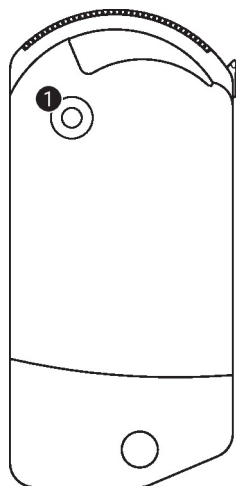
Modbus / BACnet: Supply and communication are not galvanically isolated. COM and ground of the devices must be connected to each other.

Wire colours:

1 = black
2 = red
6 = pink
7 = grey

Functions:

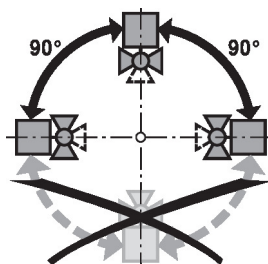
C1 = D- (wire 6)
C2 = D+ (wire 7)

BACnet MS/TP / Modbus RTU

Operating controls and indicators

1 LED display yellow

Off: No power supply or malfunction
On: In operation
Flickering: BACnet / Modbus communication active

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.

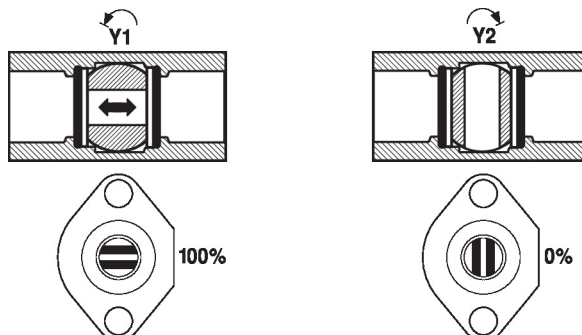


Installation notes

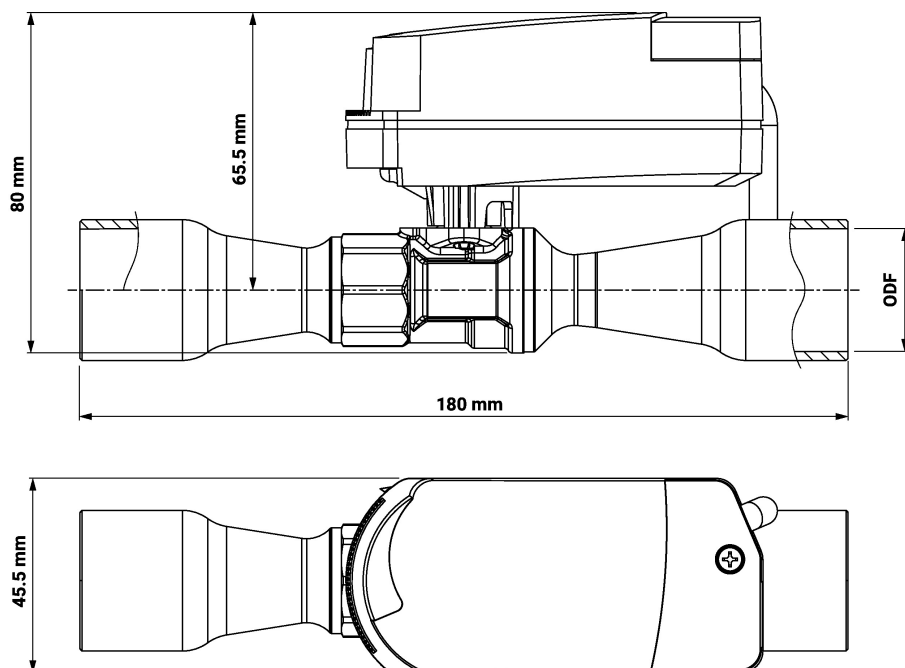
Servicing Ball valves and rotary actuators are maintenance-free.

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.


General notes

Valve selection The Bereva sizing software is going to be updated with these valve models. In the meantime, the Bereva support team is available to help size them.

Dimensions


Type	L [mm]	ODF	Weight
X8016M.1159A	180	16-16 mm	0.45 kg
X8016M.2159A	180	16-16 mm	0.47 kg
X8022M.3259A	190	22-22 mm	0.56 kg
X8028M.1A59A	180	28-28 mm	0.65 kg
X8028M.2A59A	180	28-28 mm	0.67 kg
X8035M.2A59A	190	35-35 mm	0.76 kg
X8042M.3B59A	180	42-42 mm	0.85 kg