



2-way Open/Close Ball Valves DN65...150 Open/Close control in cold and warm water circuits

Applications

For Open/Close cold and warm water circuits in heating and ventilation systems on the water side.



Type overview

Type	kvs [m³/h]	DN []	PN []
R665AO	120	65	16
R680AO	180	80	16
R6100AO	230	100	16
R6125AO	390	125	16
R6150AO	570	150	16

Technical data

Flow medium	Cold and warm water, water with max. 50% volume of glycol		
Temp. of medium	-5...+100°C		
Rated pressure	1600kPa		
Leakage rate	Leakage Rate A, Tight (EN12266-1)		
Pipe connector	Flanged ISO 7005-2		
Differential pressure ΔP_{max}	DN65...125	350kPa (200kPa for low-noise operation)	
	DN150	250kPa	
Close-off pressure ΔP_s	DN65...125	700kPa	
	DN150	400kPa	
Angle of rotation	90°		
Installation position	Upright to horizontal (in relation to the stem)		
Maintenance	Maintenance-free		
Valve Material			
Body	GG25, Polyester coated		
Ball	Stainless steel		
Seat	DN65...125 RPTFE		
	DN150 TFM1600		
Shaft	Stainless steel		
O-ring	EPDM		

Safety notes



- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- 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.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

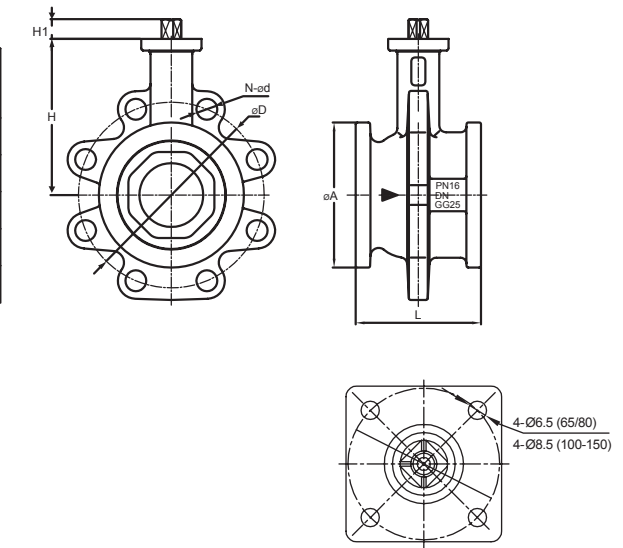
Product features

Mode of Operation The open/close ball valve is adjusted by a rotary actuator. The rotary actuator is connected by an open/close signal. Open the ball valve counterclockwise and close it clockwise.

Dimensions [mm]

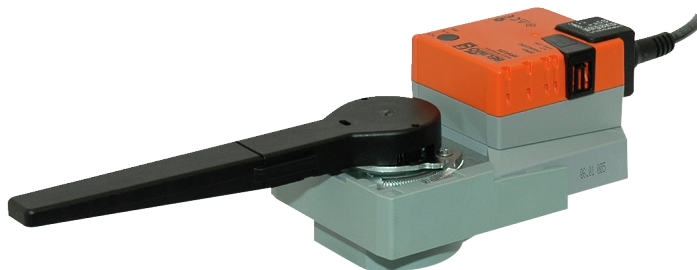
R6..AO 2-way Ball Valve

Valve type	DN		Dimensions[mm]						Weight [kg]
	mm	In	øA	øD	H	H1	L	N-ød	
R665AO	65	2½"	105	145	128.0	12.0	93.0	4-18	4.8
R680AO	80	3"	125	160	134.5	12.0	108.0	8-18	7.2
R6100AO	100	4"	148	180	144.0	15.5	120.0	8-18	10.5
R6125AO	125	5"	174	210	158.0	15.5	142.0	8-18	14
R6150AO	150	6"	204	240	176.5	15.5	170.0	8-22	21



Rotary actuator for rotary valves and butterfly valves

- Torque motor 20 Nm
- Nominal voltage AC 100...240 V
- Control Open/close, 3-point



Picture may differ from product

Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	3 W
	Power consumption in rest position	0.6 W
	Power consumption for wire sizing	7 VA
	Connection supply / control	Cable 1 m, 3x 0.75 mm ²
	Parallel operation	Yes (note the performance data)
Functional data	Torque motor	20 Nm
	Manual override	with push-button, can be locked
	Running time motor	90 s / 90°
	Sound power level, motor	45 dB(A)
	Position indication	Mechanical, integrated, two-section
Safety data	Protection class IEC/EN	II, reinforced insulation
	Protection class UL	II, reinforced insulation
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Housing	UL Enclosure Type 2
	EMC	CE according to 2014/30/EU
	Low voltage directive	CE according to 2014/35/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	UL Approval	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1 The UL marking on the actuator depends on the production site, the device is UL-compliant in any case
	Type of action	Type 1
	Rated impulse voltage supply / control	2.5 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...50°C [-22...122°F]
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free
Mechanical data	Connection flange	F05
	Weight	0.98 kg

Safety notes



- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- 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.
- Caution: Mains voltage!
- 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.
- 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.

Product features

Simple direct mounting	Simple direct mounting on the rotary valve or butterfly valve with mounting flange. The mounting orientation in relation to the fitting can be selected in 90° steps.
Manual override	Manual override with push-button possible (the gear train is disengaged for as long as the button is pressed or remains locked).
Adjustable angle of rotation	Adjustable angle of rotation with mechanical end stops.
High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

Accessories

Electrical accessories	Description	Type
	Auxiliary switch 1x SPDT add-on	S1A
	Auxiliary switch 2x SPDT add-on	S2A
	Feedback potentiometer 140 Ω add-on	P140A
	Feedback potentiometer 1 kΩ add-on	P1000A
	Feedback potentiometer 10 kΩ add-on	P10000A

Electrical installation



Caution: Mains voltage!

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

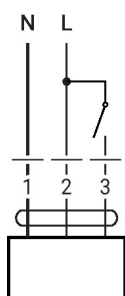
Direction of rotation switch is covered. Factory setting: Direction of rotation Y2.

Wire colours:

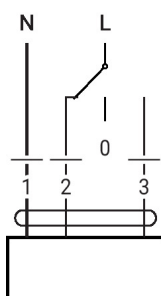
- 1 = blue
- 2 = brown
- 3 = white

Electrical installation

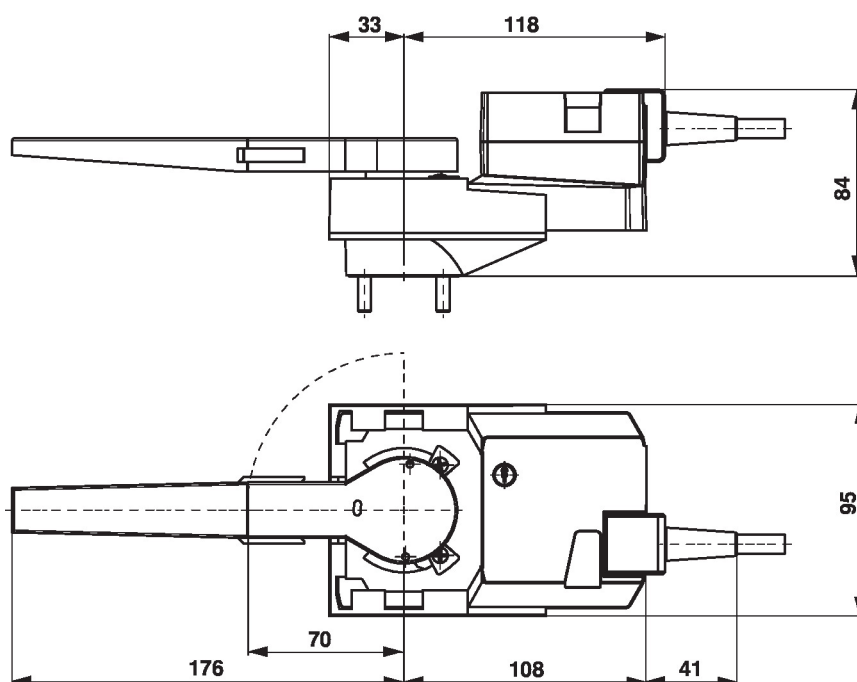
AC 230 V, open/close



AC 230 V, 3-point



1	2	3	
			A - AB = 0%
			A - AB = 100%
			stop
			A - AB = 100%

Dimensions

Further documentation

- The complete product range for water applications
- Data sheets for rotary valves and butterfly valves
- Installation instructions for actuators and/or rotary valves and butterfly valves
- General notes for project planning