Aktor R

Motorised Rotary Actuator for Optibal W6 Six-Way Ball Valve

Aktor R with Optibal W6 six-way ball valve
Six-way ball valve not included in the scope of delivery.

The motorised rotary actuator is used to position the Optibal W6 six-way ball valve. The actuator is quiet in operation and has a low power consumption. The rotary movement of the actuator is visible through the position indicator on the rotary knob. Manual override is possible via the rotary knob in a de-energised state with the gearbox disengaged.

The actuator is mounted to the six-way ball valve with a union nut. The electrical connection is made either directly or via a field module to a building management system (BMS).

Functions

- Switching between heating and cooling via on/off control signal
- Limiting the heating and cooling circuit via proportional control signal
- Shutoff
- Display of the current position

Features

+ Modulating or on/off control
+ With position feedback
+ One variant for all Optibal W6

Subject to changes • All rights reserved

Product Details

Technical Data

Operating voltage / Power consumption	24 V AC ±10 %; 6 VA or 24 V DC ±10 %, 2.6 W
Control signal	0...10 V DC or on/off (via 24 V forced control)
Feedback	0...10 V DC (control via 0...10 V)
Connection	Connecting cable 1.5 m long, 5 x 0.25 mm², strain relief on the housing
Rotation angle	90°
Torque	5 Nm
Positioning time	60 seconds
Position indicator	On the rotary knob
Manual override	Via the rotary knob in a de-energised state with the gearbox disengaged
Protection class	III
Protection type	IP54
Housing	Plastic, white and grey
Installation position	Vertically above the six-way ball valve, up to 90° in any direction
Maintenance	Maintenance-free
Weight	0.5 kg
Dimensions	78 x 110 x 133 (W x H x D)
Operating temperature	0 to 55 °C (actuator)
Medium temperature	0 to 90 °C (at the six-way ball valve)

Control and limit voltages

Action	Mode	Limit voltage	Result
Switching in on/off mode	Cooling	0 V	The full flow of the system connections 1 and 3 of the Optibal W6 is switched to the unit connections A and B
	Heating	10 V or 24 V	The full flow of the system connections 2 and 4 of the Optibal W6 is switched to the unit connections A and B
Limitation in modulating mode	Cooling	0...4 V	The system connections 1 and 3 of the Optibal W6 are switched linearly decreasing to the unit connections A and B
	Shutoff	4...6 V	The unit connections A and B of the Optibal W6 are closed
	Heating	6...10 V	The system connections 2 and 4 of the Optibal W6 are switched linearly increasing to the unit connections A and B
Position feedback	—	0...10 V	0 V – Actuator is in 100% cooling position 10 V – Actuator is in 100% heating position

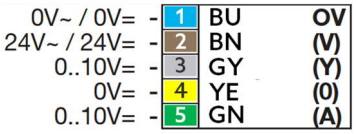
Transport and storage

Temperature range	0...50 °C
Relative air humidity	Max. 85 %
Particles	Store in a dry and dust-protected place
Mechanical influences	Protected from mechanical shock
Weather influences	Do not store outdoors and protect from sunlight
Chemical influences	Do not store together with aggressive media

Subject to changes • All rights reserved

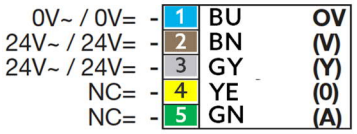
Electrical Connection

Modulating control



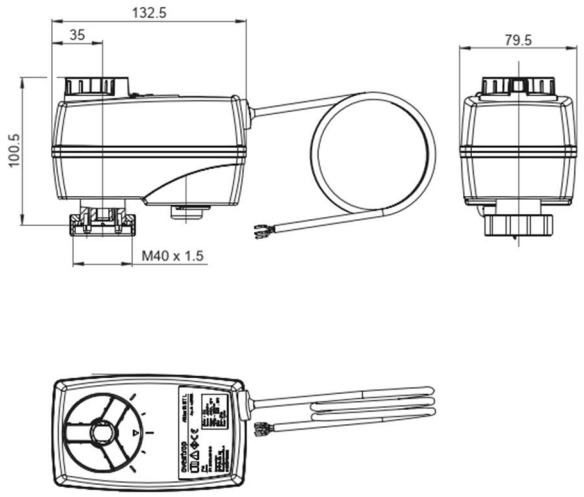
1	BU (blue)	0 V AC/DC	Neutral conductor / Ground
2	BN (brown)	24 V AC/DC	Power supply
3	GY (grey)	0...10V DC	Modulating control signal
4	YE (yellow)	0 V DC	Ground
5	GN (green)	0...10 V DC	Position feedback

On/off control



1	BU (blue)	0 V AC/DC	Neutral conductor / Ground
2	BN (brown)	24 V AC/DC	Power supply
3	GY (grey)	24 V AC/DC	On/off control signal
4	YE (yellow)		Not used
5	GN (green)		Not used

Dimensions



Subject to changes • All rights reserved • © 2022 Oventrop GmbH & Co. KG
EN-12201-1132030-DB-V2308 – February 2023

Oventrop GmbH & Co. KG • Paul-Oventrop-Straße 1 • 59939 Olsberg • Germany
T +49 2962 820 • mail@oventrop.com • www.oventrop.com