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

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

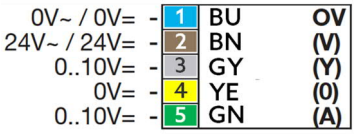
Action	Mode	Limit voltage	Result
Switching in on/off mode	Cooling	0 V	The full flow of the system connections 1 and 3 of the Optibal W6 is switched to the unit connections A and B
	Heating	10 V or 24 V	The full flow of the system connections 2 and 4 of the Optibal W6 is switched to the unit connections 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

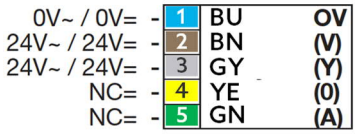
Electrical Connection

Modulating control



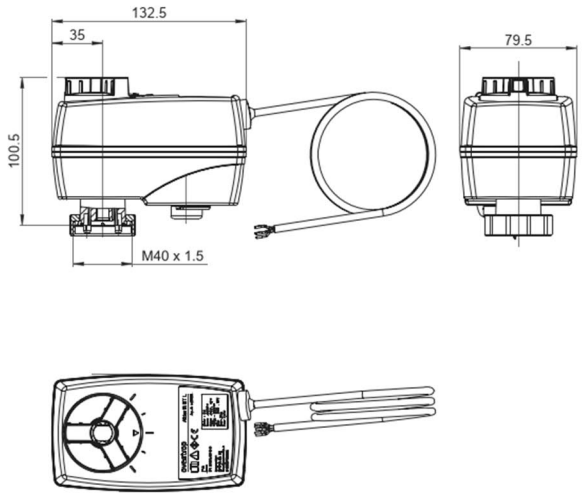
1	BU (blue)	0 V AC/DC	Neutral conductor / Ground
2	BN (brown)	24 V AC/DC	Power supply
3	GY (grey)	0...10V DC	Modulating control signal
4	YE (yellow)	0 V DC	Ground
5	GN (green)	0...10 V DC	Position feedback

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



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