

RDAS...-24C

Damper acutators with Modbus RTU communication



A range of damper actuators with Modbus RTU communication, to control air dampers and air throttles. The actuator range includes models with or without spring return. The actuators are part of Regin's ventilation family.

- ✓ Modbus RTU communication
- ✓ Easy installation and configuration
- ✓ Torque range of 5 Nm to 35 Nm
- ✓ Models with or without spring return
- ✓ Manual override

Application

The Regin damper actuators of the RDAS...-24C-series are used in ventilation and air conditioning plants to operate air dampers and air throttles. The actuators can be used for damper areas up to 6 m², depending on torque, and are friction-dependent.

Damper actuators with spring return can also be used in ventilation sections where the actuator must move to the zero position, i.e. emergency position, during power failure.

The damper actuators use Modbus RTU communication and can be a part of a complete ventilation solution together with other products in the Regin ventilation family. Commissioning is made easy when using Regin's controllers and software Application Tool.

Function

All models uses a push button for programming modus addresses. On model RDAS5-24C and RDAS10-24C the push button is placed directly on the damper actuator.

On the rest of the models the push button is placed on the cable.

When the supply voltage is connected and the modbus address is set, the damper actuator moves to a working position corresponding to command from the used controller. The position indication is mechanical and available through communication.

Installation

The mounting bracket (see dimensions) is required for mounting on the damper shaft. The insertion depth for the mounting bracket bolt into the housing must be sufficient and guaranteed.

Damper actuators without spring return can be manually adjusted by pushing the gear train disengagement button. Damper actuator with spring return can be manually adjusted with an Allen key (included in the delivery).

For all models, except RDAS5-24C and RDAS10-24C, the shaft adapter and all other individual parts are not premounted, as the actuator components are put together

HEAD OFFICE SWEDEN

Phone: +46 31 720 02 00

Web: www.regincontrols.com

E-mail: info@regincontrols.com

RDAS...-24C

differently depending on either clockwise or counterclockwise rotation of the damper shaft and damper shaft length. For RDAS5-24C and RDAS10-24C the shaft adapter and other individual parts are premounted.

The actuators are supplied with a prewired connecting and communication cable. All interconnected devices must be connected to the same G0 (see *Wiring*).

Technical data

Mounting	Interior, weather protected
Damper shaft, min. shaft length	20 mm
Damper shaft, shaft hardness	<300 HV
Working angle, rotation	90°
Angle limitation	95°
Cable length	0.9 m
Cable	0.75 mm ²
Ambient humidity	0...95 % RH (non-condensing)
Ambient temperature	-32...55 °C
Storage temperature	-32...70 °C
Protection class	IP54
Control signal	Modbus RTU

Compatibility - damper shaft

Article	Damper shaft, round	Damper shaft, square
RDAS5-24C	8...16 mm alt. 8...10 mm ¹	6...12.8 mm
RDAS7S-24C	6.4...20.5 mm	6.4...13 mm
RDAS10-24C	8...16 mm alt. 8...10 mm ¹	6...12.8 mm
RDAS18S-24C	8...25.6 mm	6...18 mm
RDAS20-24C	8...20.5 mm	8...14.5 mm
RDAS35-24C	8...25.6 mm	6...18 mm

1. with centering element, included with actuator

Communication protocol

Protocol	Modbus RTU
Port type	RS485 ¹
Number of nodes	Max. 32
Address range	1...247 / 255 Default: 255
Transmission formats	1-8-E-1 / 1-8-O-1 / 1-8-N-1 / 1-8-N-2 Default: 1-8-E-1
Baudrates (kBaud)	Auto / 9.6 / 19.6 / 38.4 / 57.6 / 76.8 / 115.2 Default: Auto
Termination	120 Ω electronically switchable Default: Off

1. RDAS5-24C and RDAS10-24C have galvanically separated port types

More information on Modbus RTU communication can be found in the variable list, available on www.regincontrols.com.



This product carries the CE-mark. More information is available at www.regincontrols.com.

Models without spring return

Article	Supply voltage	Power consumption	Running time, rotation	Torque	Max. damper size	Sound power level
RDAS5-24C	24 V AC (20...28 V AC 50/60 Hz)	3 VA (2.5 W)	150s/90°	5 Nm	0.8 m ²	28 dB
RDAS10-24C	24 V AC (20...28 V AC 50/60 Hz)	3 VA (2.5 W)	150s/90°	10 Nm	1.6 m ²	28 dB
RDAS20-24C	24 V AC/DC (20...28 V AC 50/60 Hz / 24...48 V DC)	2.8 VA (1.7 W)	150s/90°	20 Nm	4 m ²	<35 dB
RDAS35-24C	24 V AC (20...28 V AC 50/60 Hz)	8 VA (8 W)	125s/90°	35 Nm	6 m ²	43 dB

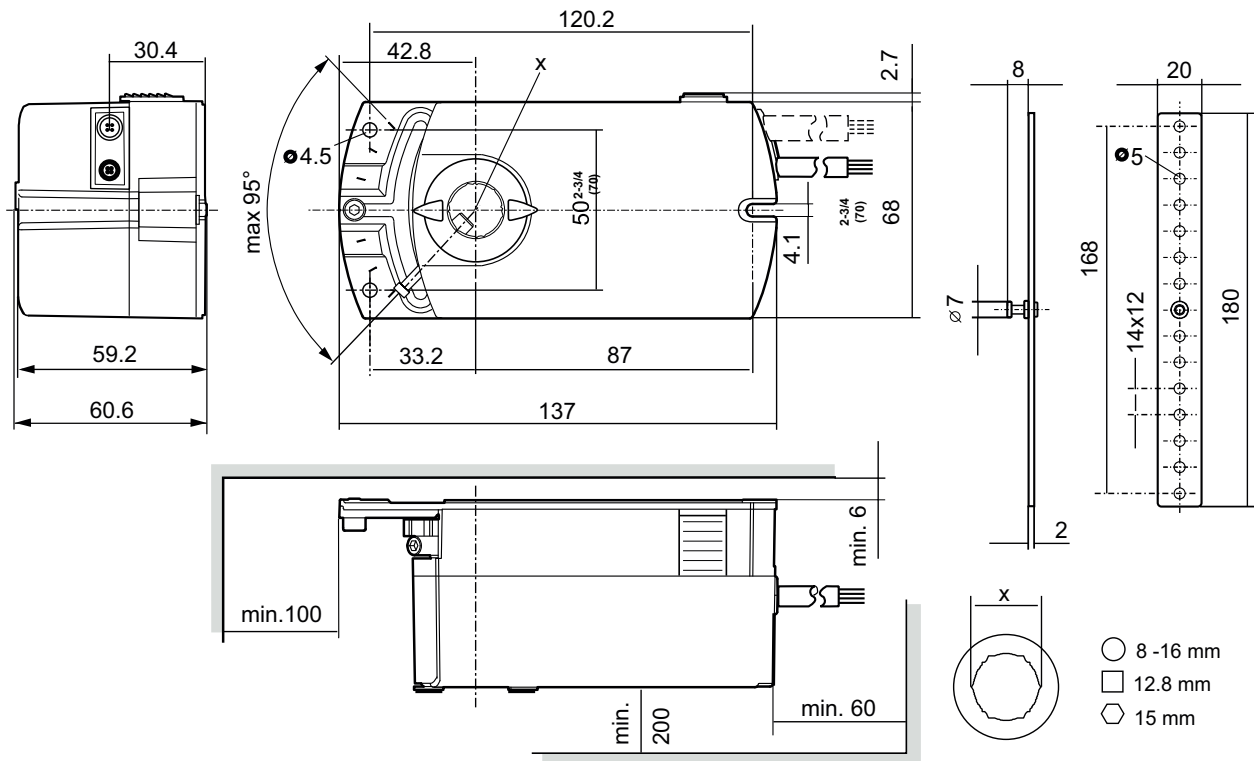
Models with spring return

Article	Supply voltage	Power consumption	Running time, rotation	Torque	Max. damper size	Sound power level, actuator	Sound power level, spring return
RDAS7S-24C	24 V AC/DC (20...28 V AC 50/60 Hz / 24...48 V DC)	AC 5 VA (3.5 W) / DC 3.5 W	90s/90°	7 Nm	1.5 m ²	40 dB(A)	61 dB(A)
RDAS18S-24C	24 V AC/DC (20...28 V AC 50/60 Hz / 24...48 V DC)	AC 7 VA (5 W) / DC 4 W	90s/90°	18 Nm	3 m ²	46 dB(A)	71 dB(A)

Accessories

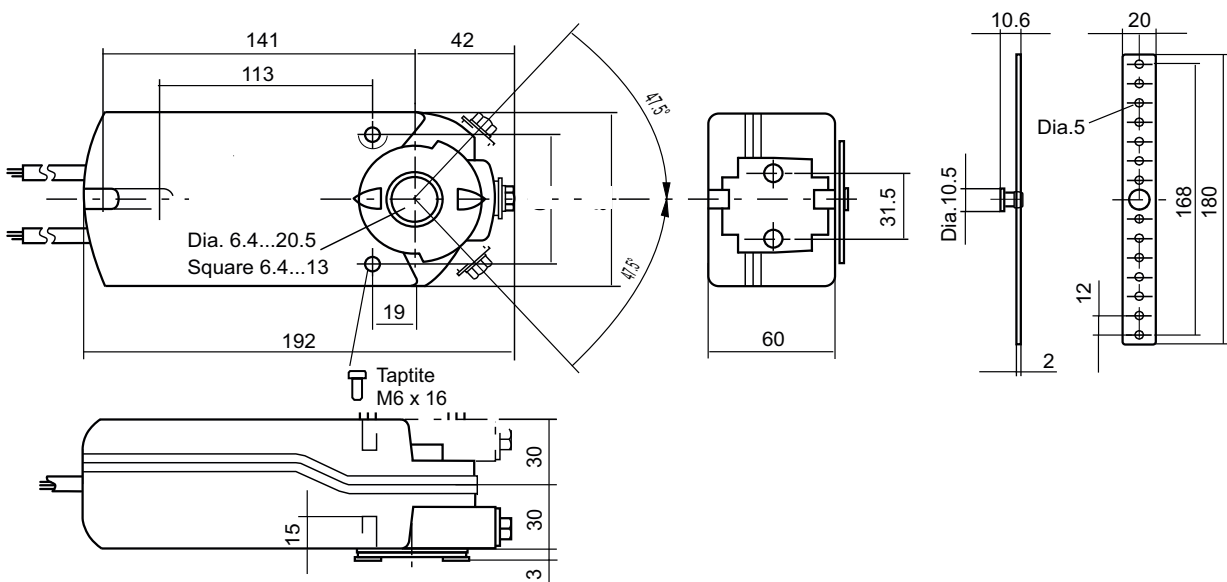
Article	Description
ASK71.14	Rotary/linear set with lever and plate for RDAS20
ASK71.6	Rotary/linear set with lever and plate for RDAS5 and RDAS10
ASK71.9	Damper crank arm for RDAS with torque 5-35 Nm
ASK74.7	Shaft extension for RDAS with torque 7-35 Nm
ASK78.6	Centering insert for RDAS5 and RDAS10, 8x8 mm square profile
ASK78.7	Centering insert for RDAS5 and RDAS10, 10x10 mm square profile

Dimensions RDAS5-24C and RDAS10-24C



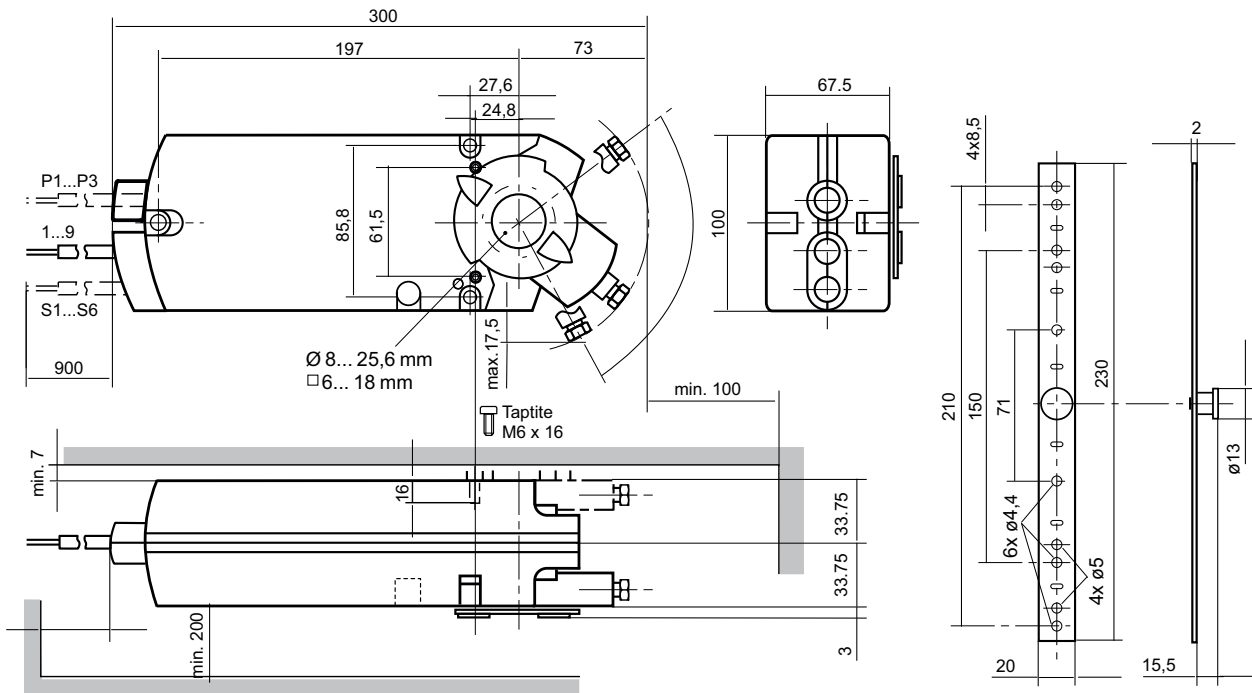
[mm], unless otherwise specified

Dimensions RDAS7S-24C



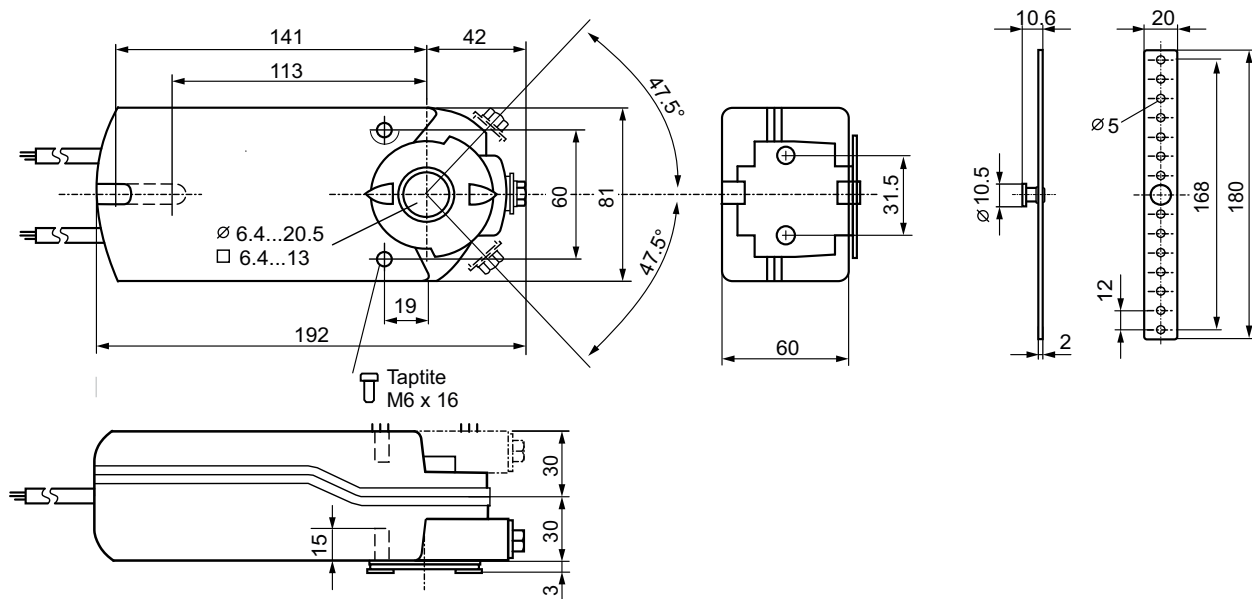
[mm], unless otherwise specified

Dimensions RDAS18S-24C and RDAS35-24C



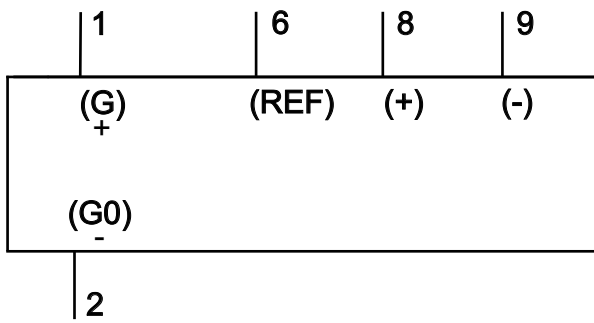
[mm], unless otherwise specified

Dimensions RDAS20-24C



[mm], unless otherwise specified

Wiring



Core desig.	Core colour	Terminal code	Description 5 Nm, 10 Nm and 35 Nm	Description 7 Nm, 18 Nm and 20 Nm
1	red (RD)	G	System voltage AC 24 V	System voltage AC/DC 24 V
2	black (BK)	G0	System neutral AC 24 V	System neutral AC/DC 24 V
6	violet (VT)	REF	Reference (Modbus RTU)	Reference (Modbus RTU)
8	grey (GY)	+	Bus + (Modbus RTU)	Bus + (Modbus RTU)
9	pink (PK)	-	Bus - (Modbus RTU)	Bus - (Modbus RTU)

Documentation

All documentation can be downloaded from www.regincontrols.com.