

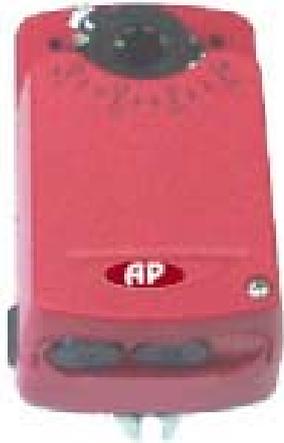


Rotary Damper Actuator

On/Off and Raise/Lower 8,12, 24Nm

RA8
RA12
RA24

Jan.10



CE

RA8,12,24

Features

- 8, 12, 24Nm torque to regulate dampers up to approx 2, 4, 6m²
- Manual Over-Ride by Push-button
- Anti-rotation bracket provided for stability
- 2 adjustable auxiliary switches (SPDT)
- Simple Direct Mounting by Universal Adapter
- Up to 5 actuators can be connected in parallel
- Reversible rotation

Short Description

These non-spring return actuator have 8, 12 and 24Nm running torque in a compact easy-to-install package.

It has a nominal 30, 80 resp. 125s second travel time for 90degree of rotation.

By using the mounting clamp the actuators can be direct couple mounted over the damper shaft

The compact size allows for easy installation where space is limited.

Manual control through buttons available in the housing.

Actuator itself has ability of over-loading protect.

It stops automatically without limit switch

Damper Size

When calculating the torque required to operate dampers, it is essential to take into account all the data supplied by the damper manufacturer concerning cross sectional area, design, mounting and air flow conditions.

The recommended damper size are guide values

Usage

RA on/off damper actuator is a high quality damper actuator for applications in HVAC systems.

Ordering

RA8 24D	Damper Actuator	8Nm	24Vac/dc
RA8 230D	Damper Actuator	8Nm	230Vac
RA12 24D	Damper Actuator	12Nm	24Vac/dc
RA12 230D	Damper Actuator	12Nm	230Vac
RA24 24D	Damper Actuator	24Nm	24Vac/dc
RA24 230D	Damper Actuator	24Nm	230Vac
RA8 24DS2	Damper Actuator	8Nm	24Vac/dc aux.sw
RA8 230DS2	Damper Actuator	8Nm	230Vac aux.sw
RA12 24DS2	Damper Actuator	12Nm	24Vac/dc aux.sw
RA12 230DS2	Damper Actuator	12Nm	230Vac aux.sw
RA24 24DS2	Damper Actuator	24Nm	24Vac/dc aux.sw
RA24 230DS2	Damper Actuator	24Nm	230Vac aux.sw

Technical Data

Power Supply	24Vac/dc +/-10%, 50/60Hz , +/-10% 230Vac, 50/60Hz , +/-10%
Power Consumption	
Operating	3,9W for 24V and 4,8W for 230V
At the end stops	0,4W for 24V and 1,2W for 230V
Wiring Size	6,5VA
Connections	Screw terminals
Control Signal	On/Off or Raise/Lower
Shaft length	Min 50mm
Torque	8, 12 and 24Nm
Protection Class	IP54 with cable glands
Rotation Angle	0-90°
Angle Limiting	5-85° (in 5° step)
Direction of Rotation	Bidirectional L/R switch (right/left)
Auxiliary Switch Rat.	2 x SPDT 3(1,5), @230Vac
Shaft Dimension Dia.	10-20mm round / 10-15mm square
Running Time	30, 80 resp 125 sec
Noise Level	< 45dB (A)
Usage Life	Min. 60.000 open-close operations
Position Indication	Mechanical
Ambient Temperature:	-20...+ 50°C
Ambient Humidity:	5...95%rH non-condensing
Weight	1,26 kg
Maintenance	Maintenance free
Standards	The actuators meet CE requirements



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RA8
RA12

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Technical Overview

The RA8, 12 and 24 range of actuators require 24Vac/dc or 230V supply and can accept either an on/off or floating (raise/lower) control signal input.

They are available in 8, 12 and 24Nm torque rating and can have an auxiliary switches options fitted.

The direction of rotation can be reversed and the angle of mechanical travel can be limited by up to 30 degree from either end.

Installation

1. Ensure that all power is disconnected before carrying out any work on the RA.
2. Maximum cable is 2,5mm², care must be taken not to over tighten terminals.
3. Attach the actuator to the damper spindle, finger tighten the nut on the clamp.
4. Fix the anti-rotation strap to the back of the actuator (bend if required).
5. Move the damper to the closed position.
6. Using the manual override push button, turn the clamp until the actuator is in correct position.
7. Tighten the nut on the clamp.
8. If the damper has no fixed stops of its own, the limit stops may need to be adjusted.

To mechanically limit the angle of rotation, loosen the 2 bolts on the segment required to be limited, and reposition the segment

Re-tighten the 2 bolts

Note, this operation only limits the travel at one end.

If both ends need to be limited, carry out the above operation on the other segment.

9. Fit the cable gland into the back of the actuator
10. Undo the screw on the cover of the actuator and remove the cover.
10. Terminate the cores at the terminal block (see page 3), leaving some slack inside the unit.
11. Replace the lid after the electrical connections have been made.
12. Ensure that the voltage is within the specified tolerances.

Auxiliary Switches

To adjust the auxiliary switches, in this example to 30° and 70°, follow the procedure below.

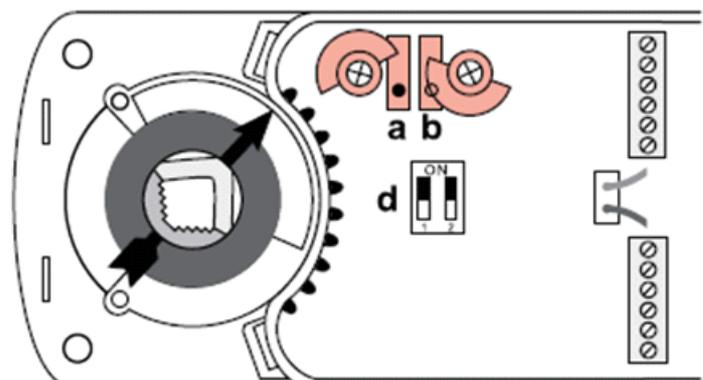
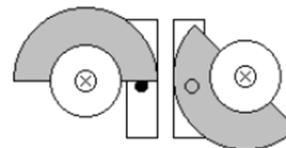
NB: The switches, where fitted, are factory aligned to 10° for **A** and 80° for **B**.

1. To set switch A (see fig.2) press the manual over-ride switch and rotate the adaptor (Fig.1) to the 30° position.
2. Slightly loosen the cross head screw in cam wheel A so that the wheel can be moved by hand.
3. Rotate cam wheel A until the micro switch clicks.
4. Re-tighten the cross head screw in cam wheel A.
5. To set switch B (see fig.2) press the manual override switch and rotate the adaptor (Fig.1) to the 70° position.
6. Slightly loosen the cross head screw in cam wheel B so that the wheel can be moved by hand.
7. Rotate cam wheel B until the micro switch clicks.
8. Re-tighten the cross head screw in cam wheel B.

Fig 1.



Fig 2.





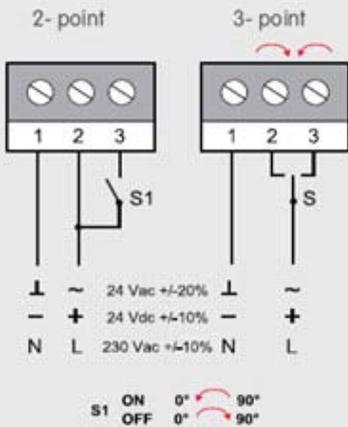
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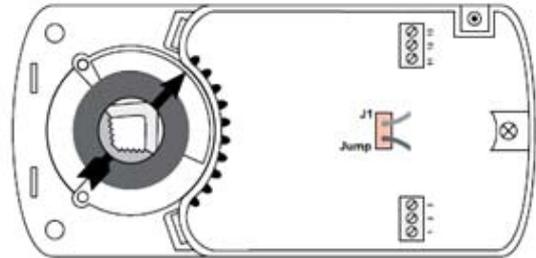
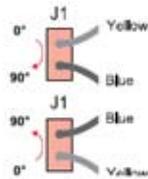
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electrical diagram

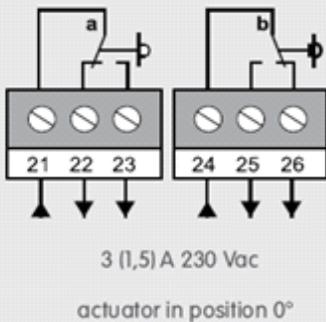


Direction of rotation setting

The direction of rotation can be changed by reversing Jumper J1.

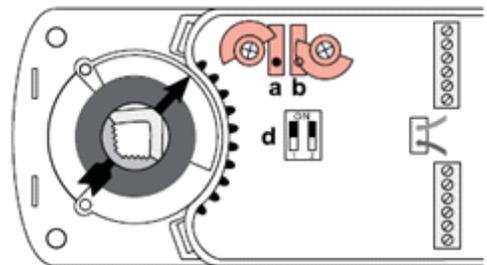


auxiliary switches

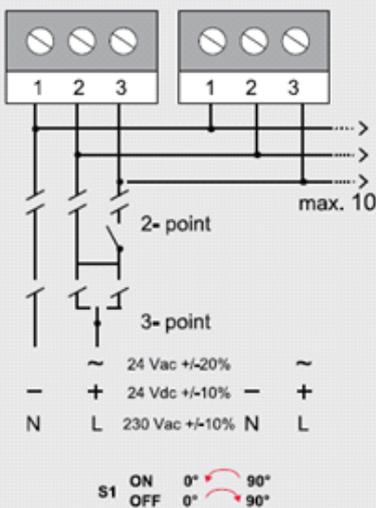


Auxiliary switches setting

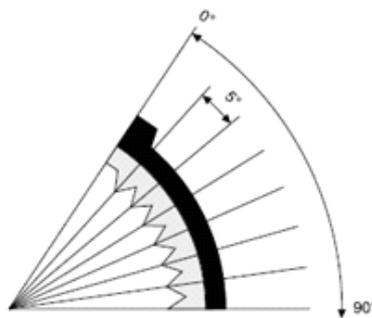
Factory setting:
switch a at 10°
switch b at 80°
The switching position can be changed manually.



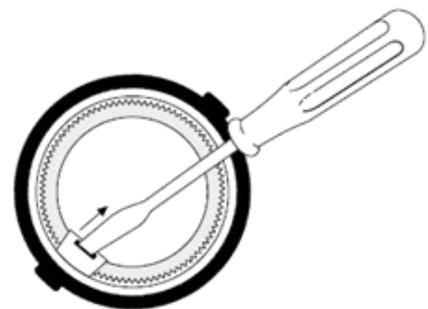
parallel connections



Limitation of rotation angle



Adapter release





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DIMENSIONS (mm)

