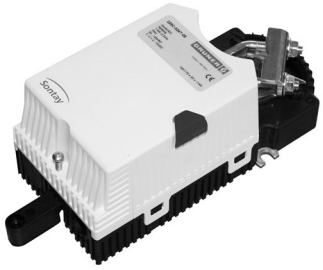
Sontay®
Four Elms Road - Edenbridge
Kent - TN8 6AB - UK

VA-05
5Nm On/Off, R/L & Modulating Damper Actuators

Issue Number 7.1
13/10/2021



Features and Benefits

- Maintenance-free
- Position indication
- Reversible rotation
- Mechanically set rotation limits
- Manual override

Technical Overview

The VA-05 range of actuators require either a 24Vac/dc or 230Vac supply depending on version ordered. They are available to accept either an on/off/floating (raise/lower) or modulating control signal input. They also have auxiliary switches options.

The direction of rotation can be reversed by a simple selector switch. The actuator is overload-proof, and requires no limit switches and automatically stops when the end stop is reached.

Product Codes

VA-05A-24	24Vac/dc 5Nm on/off or Floating actuator
VA-05A-24S	24Vac/dc 5Nm on/off or Floating actuator with auxiliary switches
VA-05A-230	230Vac 5Nm on/off or Floating actuator
VA-05A-230S	230Vac 5Nm on/off or Floating actuator with auxiliary switches
VA-05M-24	24Vac/dc 5Nm Modulating actuator

Specification

Power supply:	
VA-05x-24	24Vac (50/60Hz) 24Vdc ±20%
VA-05x-230	85-265Vac (230V nominal)
Max. power consumption:	
VA-05A-24	1W
VA-05M-24	1.5W
VA-05A-230	1.5W
Connection	Terminals 0.5 to 1.5mm²
Angle of rotation	95° Max.
Running time	60 to 120s @ 90°
Damper coupling:	
Square	8-12mm
Round	8-16mm
Damper size	Up to approx. 1m²
Protection	IP42
Aux. switch rating	SPDT 5(2.5)A @250Vac
Service life	>60000 cycles (0°-95°-0°)
Ambient:	
Temperature	-30 to +50°C
RH	5 to 95% RH
Protection class	
VA-05x-24	III
VA-05x-230	II
Conformity	CE
Country of origin	Germany
Conformity*	EMC, LVD, CE & UKCA Marked
Conformity	EMC, CE & UKCA Marked

* Actuators with auxiliary switches only

WEEE Directive:

At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household waste.
Do not burn.

Tel: +44 (0)1732 861200 - E-mail: sales@sontay.com - Web: www.sontay.com

Installation

1. Ensure that all power is disconnected before carrying out any work on the damper actuator.
2. Attach the actuator to the damper spindle, finger tighten the nuts on the V-clamp.
3. Fix the anti-rotation device to the back of the actuator. This is supplied connected to the back of the housing, to release simply buckle.
4. Move the damper to the closed position. Using the manual override push button, turn the clamp until the actuator is in the correct position and tighten the V-clamp.
5. If the damper has no fixed stops of its own, the angle of rotation / working range can be adjusted mechanically by re-positioning the adjustable stops.
6. Undo the screw on the cover of the actuator, lift up the cover and terminate the cores at the terminal block, leaving some slack inside the unit. Use the supplied cable pull-relief around the cable and press until it snaps in, and then insert the pull-relief into the input slot in the housing.
7. Ensure that the voltage is within the specified tolerances and replace the lid after the electrical connections have been made.

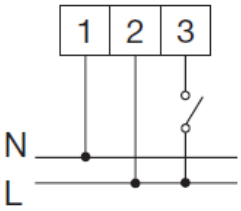
Operating Modes & Connections

2-Point.
Through connecting the power supply to terminals 1 and 2 and the direction of rotation switch on position “R” moves the actuator to position 1. Is also terminals 1, 2 and 3 connected to the power supply the actuator is moving to position 0.

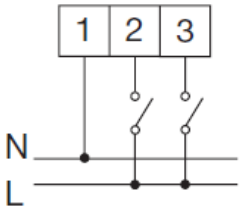
3-point.
Through connecting the power supply to terminals 1 and 2 and the direction of rotation switch on position “R” moves the actuator to position 1. If the power supply is interrupted the actuator maintains its current position. Is also terminals 1 and 3 connected to the power supply the actuator is moving in direction 0.

Modulating.
Through connecting the power supply to terminals 1 and 2 and a reference signal (Y) to terminal 3 of 0(2)…10Vdc, moves the actuator to its specified position. The actual damper position 0…100% is a feedback signal (U) terminal 4 for example to share the signal with other actuators.

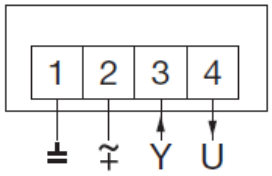
2-Point



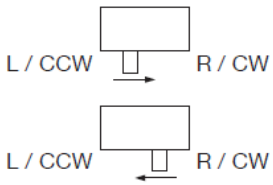
3-Point



Modulating



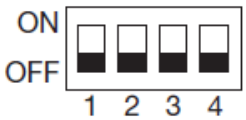
Rotary direction switch (2 & 3-point types)



	L / CCW	R / CW
2-Point		
CW (0 to 90°)	1, 2 + 3	1, 2
CCW (90 to 0°)	1, 2	1, 2 + 3
3-Point		
CW (0 to 90°)	1, 3	1, 2
CCW (90 to 0°)	1, 2	1, 3

Operating Modes & Connections (continued)

Rotary direction and signal type dip switches (modulating types)



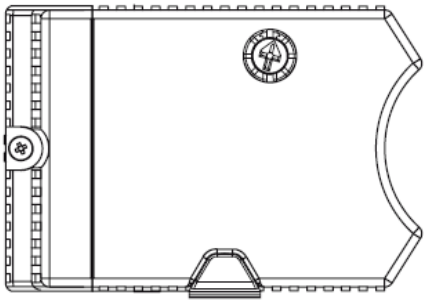
All switches are set to OFF by factory default.

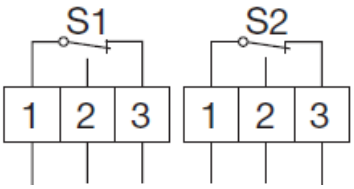
	1	2	3	4
Direction of rotation				
CW (0 to 90°)			OFF	
CCW (90 to 0°)			ON	
Control signal Y				
2 to 10Vdc	OFF	OFF		
0 to 10Vdc	ON	OFF		
4-20mA	OFF	ON		
0 to 20mA	ON	ON		
Teach in of range of angle				
Active				ON
Inactive				OFF

Teach-in of range of angle >30°
Example, cable length
1. Actuator stand by
2. Adjusting mechanical end stops
3. Switch ON DIP 4
4. Actuator starts teach-in process of range of angle (60...120 s)
5. Turn OFF DIP 4
6. Y now corresponds to the teached-in angle

Adjustment of auxiliary switches

The scale at the adjusting knob corresponds to a percentage graduation, related to 0° - 90°.

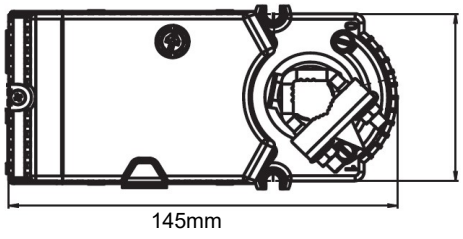


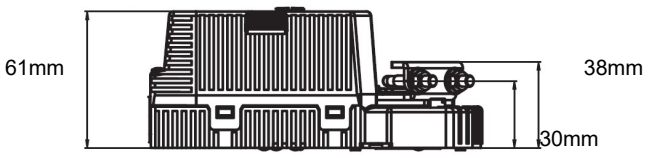


1) End stop is set to “0“: Switch off the motor and choose the requested switching position by turning the knob to the right, i.e. “2“ = 20%.

2) End stop is set to “1“: Switch off the motor and choose the requested switching position by turning the knob to the left, i.e. “8“ = 20%.

Dimensions





Tel: +44 (0)1732 861200 - E-mail: sales@sontay.com - Web: www.sontay.com