

Basic Non Fail-Safe modulating actuator for controlling dampers in typical commercial HVAC applications.

- Torque motor 9 in-lb [1 Nm]
- Nominal voltage AC/DC 24 V
- Control Modulating
- Position feedback 2...10 V



## Technical data

<b>Electrical data</b>	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 19.2...28.8 V
	Power consumption in operation	1.5 W
	Power consumption in rest position	0.5 W
	Transformer sizing	2.5 VA
	Connection supply / control	Connector Plug (Cable-side connector socket not included in scope of delivery)
	Connection plug	Molex Mini-Fit Jr. 39303045
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	9 in-lb [1 Nm]
	Operating range Y	2...10 V
	Input impedance	100 k $\Omega$
	Position feedback U	2...10 V
	Position feedback U note	Max. 1 mA
	Position accuracy	$\pm 5\%$
	Direction of motion motor	clockwise rotation
	Direction of motion note	Y = 0 V: right end stop, position 0
	Manual override	No
	Angle of rotation	95°, fixed setting
	Running Time (Motor)	22 s / 90°
	Noise level, motor	35 dB(A)
	Mechanical interface	Universal shaft clamp 6...12.7 mm
	Position indication	No
<b>Safety data</b>	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP20
	Degree of protection NEMA/UL	NEMA 1
	Enclosure	UL Enclosure Type 1
	EMC	CE according to 2014/30/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	UL Approval	cURus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1
	Type of action	Type 1
	Rated impulse voltage supply / control	0.8 kV
	Pollution degree	2
	Ambient humidity	Max. 95% RH, non-condensing

**Technical data**

<b>Safety data</b>	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	0.35 lb [0.16 kg]

**Safety notes**


- This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- The device is not designed for applications where chemical influences (gases, fluids) are present or for utilization in corrosive environments in general.
- The device is considered a component and intended for installation in an equipment at the factory. The required protection against accidental contact with live parts must be provided by the damper or system manufacturer.
- Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The plug connections may only be used according to the installation instructions. The Molex plug connection has a mandatory locking mechanism that prevents unintentional disconnection. Operating the locking mechanism and the entire plug connection under voltage is not permitted.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section and design, as well as the installation site and ventilation conditions, must be observed.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

**Product features**

<b>Operating mode</b>	The actuator is connected with a standard control signal of 0...10 V and drives to the position defined by the control signal. Measuring voltage U serves for the electrical display of the damper position 0...100% and as control signal for other actuators.
<b>Simple direct mounting</b>	The actuator is mounted directly on the damper shaft (ø6...12.7 mm) with a universal shaft clamp and then secured with the anti-rotation clip, to prevent it from rotating. The anti-rotation clip Z-ARCM is not included in the scope of delivery.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.
<b>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Hidden synchronisation</b>	If the actuator drives to the lower end stop during ongoing operation, it performs a synchronization of the control signal at DC 2 V. This ensures that the signal range also corresponds to the effective functional range in ongoing operation. The bottom end stop is actively approached as soon as the control signal is <DC 2.1 V. The actuator drives to the new specified position as soon as the control signal is once again >DC 2.3 V.

**Parts included**

End stop clip

Accessories

Mechanical accessories	Description	Type
	Anti-rotation clip, Multipack 20 pcs.	Z-ARCM
	End stop clip, Multipack 20 pcs.	Z-ESCM
	Protective covering, Multipack 20 pcs.	Z-PCUM

Electrical installation



Supply from isolating transformer.

Parallel connection of other actuators possible. Observe the performance data.

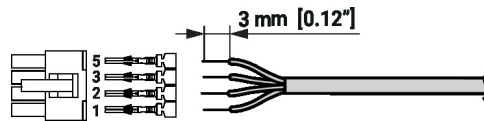
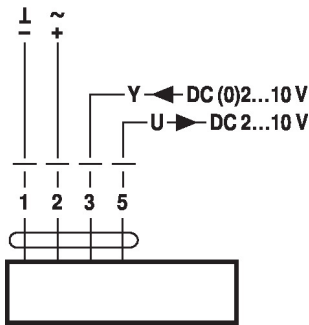
Cable-side connector socket is not included in scope of delivery

The plug connections may only be used according to the installation instructions. The Molex plug connection has a mandatory locking mechanism that prevents unintentional disconnection. Operating the locking mechanism and the entire plug connection under voltage is not permitted.

Wiring diagrams

AC/DC 24 V, modulating

Molex PN 39014040 / 39000039 (0.5...1.0 mm<sup>2</sup>)



Dimensions

Stem length

	Min. 32
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Clamping range

6...12.7	6 / 8 / 10	6...12.7

