

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

- Torque motor 9 in-lb [1 Nm]
- Nominal voltage AC/DC 24 V
- Control On/Off, Floating point



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 W
	Power consumption in rest position	0.5 W
	Transformer sizing	2 VA
	Connection supply / control	Connector Plug (Cable-side connector socket not included in scope of delivery)
	Connection plug	Molex Mini-Fit Jr. 39303035
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	9 in-lb [1 Nm]
	Direction of motion motor	counter-clockwise rotation
	Manual override	No
	Angle of rotation	0...287.5°
	Angle of rotation note	adjustable with mechanical stop With one end stop clip Z-ESCM: 315° Without limitation: endless
	Running Time (Motor)	22 s / 90°
	Noise level, motor	35 dB(A)
	Mechanical interface	Form fit 8x8 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
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	0.2 lb [0.09 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 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, the design, the installation situation and the 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

- Simple direct mounting** The actuator with its hollow shaft is mounted in a form-fit manner directly on the damper shaft 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.
- Adjustable angle of rotation** Adjustable angle of rotation with mechanical end stops.
- High functional reliability** The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
- Restriction 3-point controller**
  - For applications with 3-point open-loop control, a minimum pulse length of 1 sec. is recommended to increase position accuracy.
  - For applications with 3-point closed-loop control, a pulse length of 0.5 sec. is possible to reduce oscillation.

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

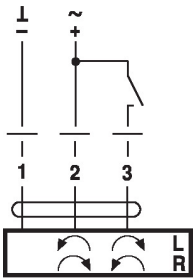
Electrical installation



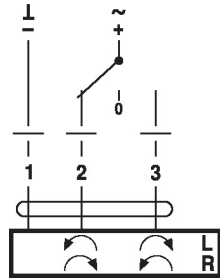
- Supply from isolating transformer.**
- Parallel connection of other actuators possible. Observe the performance data.**
- Cable-side connector socket is not included in scope of delivery**
- The plug connections may only be used according to the installation instructions. The Molex plug connection 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**

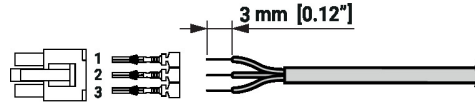
AC/DC 24 V, on/off



AC/DC 24 V, floating point



Molex PN 39014030 / 39000039 (0.5...1.0 mm<sup>2</sup>)



**Dimensions**

**Stem length**

