

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



Picture may differ from product

Technical data

Electrical data	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)
Functional data	Torque motor	9 in-lb [1 Nm]
	Operating range Y	2...10 V
	Input impedance	100 kΩ
	Position feedback U	2...10 V
	Position feedback U note	Max. 1 mA
	Position accuracy	±5%
	Direction of motion motor	counter-clockwise rotation (ccw)
	Direction of motion note	Y = 0 V: left 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
Safety data	Protection class IEC/EN	III, Safety Extra-Low Voltage (SELV)
	Degree of protection IEC/EN	IP20
	Degree of protection NEMA/UL	NEMA 1
	Housing	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]

Technical data

Safety data	Servicing	maintenance-free
Weight	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

Operating mode	The actuator is controlled with a standard control signal of DC 0...10 V (note the operating range) and moves to the position defined by the control signal. Measuring voltage U is used for the electrical display of the damper position 0...100% and as the control signal for other actuators.
Simple direct mounting	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.
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.
Hidden synchronization	If the actuator moves to the lower end stop during ongoing operation, then it will perform 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 positioning signal is <DC 2.1 V. The actuator moves to the new specified position as soon as the control signal is once again >DC 2.3 V.

Parts included

End stop clip

Accessories

Electrical accessories	Description	Type
	Connecting cable 3 ft [1 m] for UM.. / UH.., Multipack 20 pcs.	Z-C24UM
	Connecting cable 3 ft [1 m] for UM.. / UH.., Multipack 20 pcs.	Z-C24UM-SR
Mechanical accessories	Description	Type
	Protective covering, Multipack 20 pcs.	Z-PCUM

Accessories

Description	Type
Anti-rotation clip, Multipack 20 pcs.	Z-ARCM
Position indicator, Multipack 20 pcs.	Z-PICM
End stop clip, Multipack 20 pcs.	Z-ESCM
Gear train disengagement magnet, Multipack 20 pcs.	Z-MA

Electrical installation



Supply from isolating transformer.

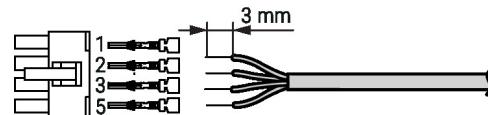
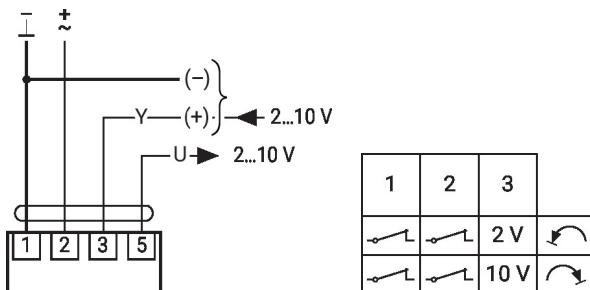
Parallel connection of other actuators possible. Observe the performance data.

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

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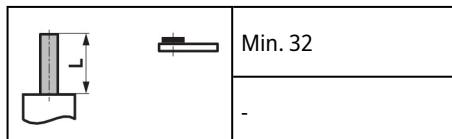
AC/DC 24 V, modulating

Molex PN 39014040 / 39000039 (0.5...1.0 mm²)



Dimensions

Stem length



Clamping range

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

