

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

- Torque motor 45 in-lb [5 Nm]
- Nominal voltage AC/DC 24 V
- Control Modulating, Communicative, Hybrid
- Position feedback



5-year warranty



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 21.6...28.8 V
	Power consumption in operation	2.5 W
	Power consumption in rest position	1.2 W
	Transformer sizing	5 VA
	Electrical Connection	18 GA plenum cable with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54, 1 m 3 m and 5 m
	Overload Protection	electronic throughout 0...95° rotation
Data bus communication	Communicative control	LON (FTT-10A)
Functional data	Torque motor	45 in-lb [5 Nm]
	Position feedback U note	Max. 0.5 mA
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	150 s / 90°
	Noise level, motor	35 dB(A)
Position indication	Mechanical, 30...65 mm stroke	
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	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	
Weight	Weight	1.1 lb [0.50 kg]
Materials	Housing material	UL94-5VA

Footnotes LonWorks and LonMARK© 2007-2009 LonMark International

Product features

Application Direct coupled actuators for direct link to LonWorks network. Actuators are easily installed by direct shaft mounting on air dampers in ventilation and air conditioning systems. Actuator can be controlled by any compatible LON controller or automation system. For proportional modulation of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer’s specifications. The actuator is mounted directly to a damper shaft from 1/4” up to 5/8” in diameter by means of its universal clamp. Shafts up to 3/4” diameter can be accommodated by an accessory clamp.

Operation The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The anti-rotation strap supplied with the actuator will prevent lateral movement.

The LMX24-LON series provides 95° of rotation and a visual indicator indicates position of the actuator. When reaching the damper or actuator end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LMX24-LON actuators use a brushless DC motor, which is controlled by an Application Specific Integrated Circuit (ASIC). The ASIC monitors and controls the actuator’s rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

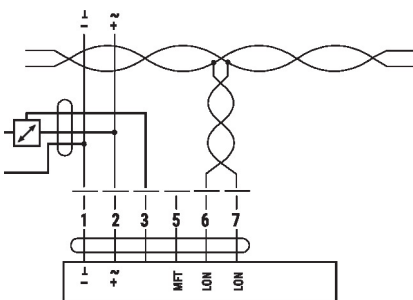
Add-on auxiliary switches or feedback potentiometers are easily fastened directly onto the actuator body for signaling and switching functions.

Typical specification Proportional control damper actuators shall be electronic direct-coupled type, which require no crank arm and linkage and be capable of direct mounting to a shaft up to 3/4” diameter. Actuators must provide proportional damper control in response to a 2 to 10 VDC or, with the addition of a 500 Ω resistor, a 4 to 20 mA control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Accessories

Electrical accessories	Description	Type
	Auxiliary switch 2x SPDT add-on	S2A

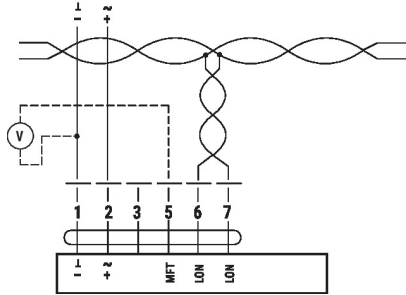
Electrical installation



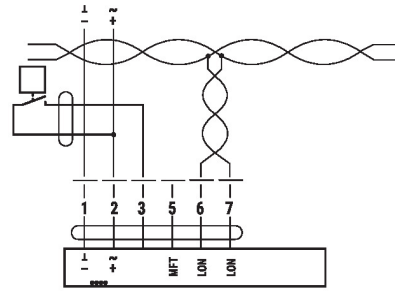
Connection with Active Sensor, e.g. 0...10 V @ 0...50°C

Wiring diagrams

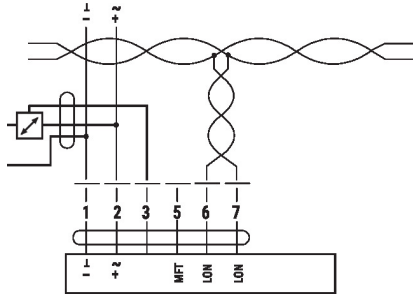
Connection without Sensor



Connection with Switching Contact, e.g. p-monitor



Connection with Active Sensor, e.g. 0...10 V @ 0...50°C



Dimensions

∅ 1/4" to 3/4" [6 to 20]

□ 5/16" to 3/4" [8 to 26]

