

# AMX24-LON Technical Data Sheet

LonWorks®, Non-Spring Return Actuator, 24 V



Technical Data	
Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	3.5 W
Power consumption in rest position	1.3 W
Transformer sizing	6 VA (class 2 power source)
Shaft Diameter	1/2...1.05" round, centers on 1/2" and 3/4" with insert, 1.05" without insert
Electrical Connection	18 GA plenum cable with 1/2" conduit connector, degree of protection NEMA 2 / IP54, 3 ft [1 m] 10 ft [3 m] and 16ft [5 m]
Overload Protection	electronic throughout 0...95° rotation
Angle of rotation	Max. 95°, adjustable with mechanical stop
Torque motor	180 in-lb [20 Nm]
Direction of motion motor	selectable with switch 0/1
Position indication	Mechanically, 30...65 mm stroke
Manual override	external push button
Running Time (Motor)	150 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2, UL Enclosure Type 2
Housing material	UL94-5VA
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
Noise level, motor	45 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	1.5 lb [0.69 kg]
Communication	LON (FTT-10A)

†Rated Impulse Voltage 800V, Type action 1, Control Pollution Degree 3.

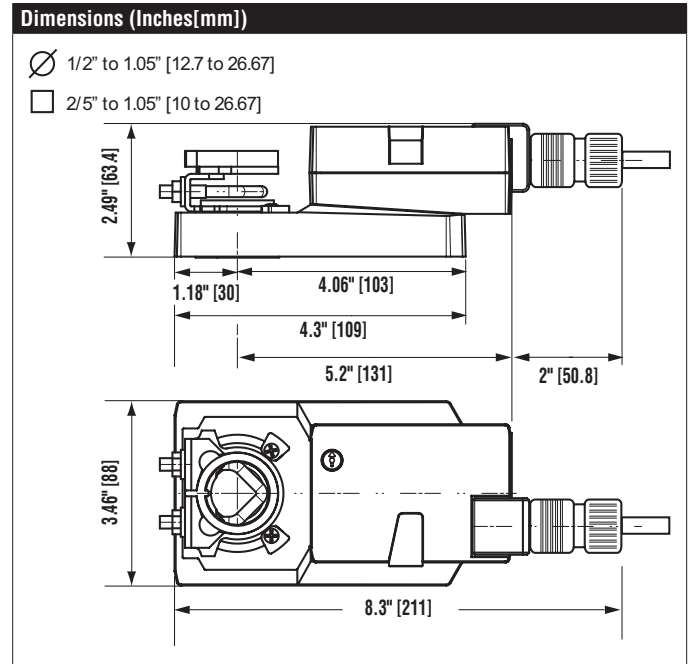
Torque min. 180 in-lb, for control of damper surfaces up to 45 sq. ft.

### Application

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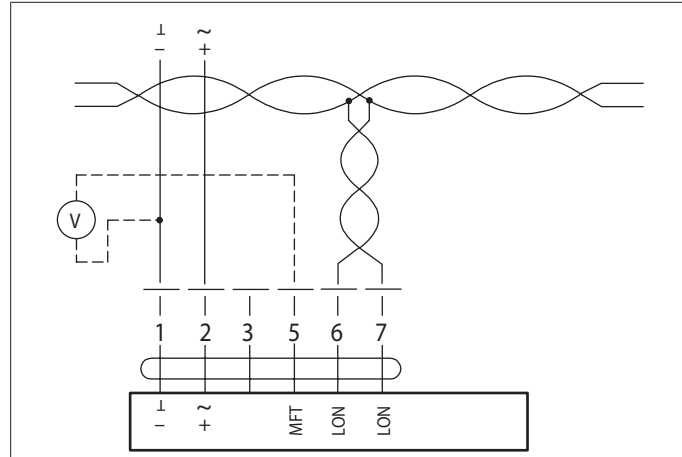
### Operation

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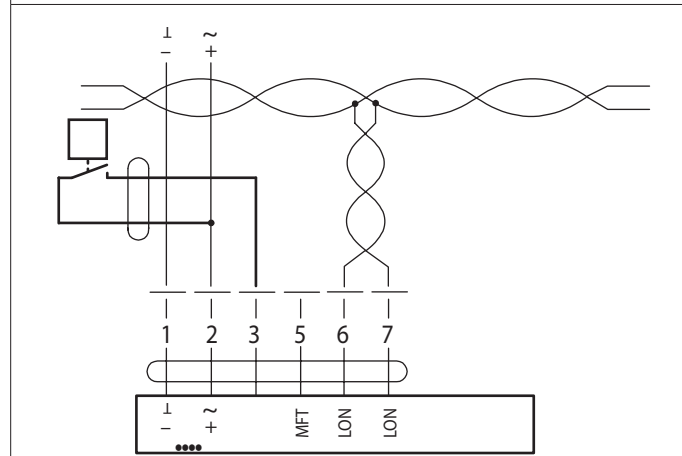


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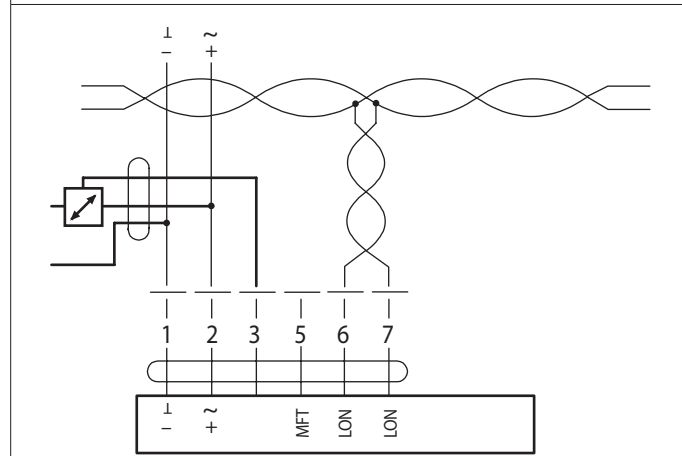
Accessories	
KH8	Damper crank arm
KH10	Damper crank arm
KG8	Ball joint
KG10A	Ball joint
SH8	Push rod for KG6 & KG8 ball joints (36" L, 5/16" diameter).
SH10	Push rod for KG10A ball joint (36" L, 3/8" diameter).
ZG-DC1	Damper clip for damper blade, 3.5" width.
ZG-DC2	Damper clip for damper blade, 6" width.
ZS-100	Weather shield - galvaneal 13x8x6" (LxWxD).
ZS-101	Base plate for ZS-100.
ZS-150	Weather shield - PC w/ foam seal 16x8-3/8x4" (LxWxD).
AV8-25	Shaft extension
TF-P	Anti-rotation bracket TF/NKQ/AM/NM/LM.
ZG-100	Univ. right angle bracket 17"x11-1/8"x6" (HxWxbase).
ZG-101	Univ. right angle bracket 13x11x7-7/16" (HxWxbase).
TOOL-06	8 mm and 10 mm wrench.
Z-SPA	Adapter
PS-100	Low voltage and control signal simulator.
AH-25	Actuator arm
K-AM25	Standard NKQ/AM/NM clamp (1/2" to 1.05").
K-SA	Shaft clamp reversible
ZG-109	Right angle bracket for ZS-260.
ZG-110	Stand-off bracket for ZS-260.
ZG-112	LF right angle bracket 4-1/2x5-1/2x2-1/2" (HxWxD).
ZG-JSA-1	1" diameter jackshaft adaptor (11" L).
ZG-JSA-2	1-5/16" diameter jackshaft adaptor (12" L).
ZG-JSA-3	1.05" diameter jackshaft adaptor (12" L).
ZG-NMA	Mounting kit for linkage operation
ZS-260	Explosion proof housing.
ZS-300	NEMA 4X, 304 stainless steel enclosure.
ZS-300-5	NEMA 4X, 316L stainless steel enclosure.
ZS-300-C1	1/2" shaft adaptor, standard with ZS-300(-5).
ZS-300-C2	3/4" shaft adaptor for ZS-300(-5).
ZS-300-C3	1" shaft adaptor for ZS-300(-5).
Z-SMA	Base plate extension
S1A	Auxiliary switch for damper actuators and rotary actuators
S2A	Auxiliary switch for damper actuators and rotary actuators
P475	Shaft mount, non-Mercury aux. switch for 1/2" dia. shafts.
P475-1	Shaft mount, non-Mercury aux. switch for 1" dia. shafts.
P140A GR	Feedback potentiometer for damper actuators and rotary actuators
P500A GR	Feedback potentiometer for damper actuators and rotary actuators
P1000A GR	Feedback potentiometer for damper actuators and rotary actuators
P2800A GR	Feedback potentiometer for damper actuators and rotary actuators
P5000A GR	Feedback potentiometer for damper actuators and rotary actuators
P10000A GR	Feedback potentiometer for damper actuators and rotary actuators
NSV24 US	Battery back-up module for non-spring return actuators.
NSV-BAT	12V 1.2AH battery (two required for NSV24 US).
ZG-X40	120 to 24 VAC, 40 VA transformer.
TF-CC US	Cable conduit connector, 1/2".
43442-00001	Cable gland (for NEMA 4 models).



Connection without Sensor



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



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

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### 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 from 1/4" to 1/2" diameter. Actuators must provide proportional damper control response to a 2 to 10 VDC or, with the addition of a 500Ω 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 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.

### Wiring Diagrams

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