BELIMO

Technical data sheet LHB24-3-T-100

On/Off, Floating Point, Non-Spring Return, Linear Stroke, 24 V, Linear force min. 34 lbf for control of damper surfaces up to 11 sq ft.

5-year warranty

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	1.5 W
	Power consumption in rest position	0.5 W
	Transformer sizing	3 VA (class 2 power source)
	Electrical Connection	Screw terminal (for 26 to 14 GA wire)
	Overload Protection	electronic throughout full stroke
Functional data	Actuating force motor	35 lbf [150 N]
	Input Impedance	600 Ω
	Direction of motion motor	reversible with switch
	Manual override	external push button
	Stroke	4" [100 mm]
	Running Time (Motor)	150 s 100 mm
	Running time motor note	constant, independent of load
	Noise level, motor	35 dB(A)
Safety data	Degree of protection IEC/EN	IP20
	Degree of protection NEMA/UL	NEMA 1 UL Enclosure Type 1
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	max. 95% r.H., non-condensing
	Servicing	maintenance-free
Weight	Weight	1.2 lb [0.50 kg]
Materials	Housing material	UL94-5VA

Product features

Application For on/off and floating point control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications.

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 actuator provides 4" [100 mm] of linear stroke. The stroke of the gear rack can be adjusted on both sides in increments of 0.8 in [20 mm] by means of the mechanical end stops. 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 actuators use a sensorless 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.

Typical specification

Floating point, on/off control damper actuators shall be electronic type, with integrated linear stroking arm. Actuators shall have brushless DC motor technology and be protected from overload at all positions of linear stroke. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cUL 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
Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
Battery backup system, for non-spring return models	NSV24 US
Signal Siumlator, Power supply AC 230 V	PS-100
Transformer, AC 120 V to AC 24 V, 40 VA	ZG-X40

Mechanical accessories

Description	Type
Ball joint suitable for damper crank arm KH8 / KH10	KG10A
Ball joint suitable for damper crank arm KH8	KG6
Ball joint suitable for damper crank arm KH8	KG8
Push rod for KG6 & KG8 ball joints (36" L, 5/16" diameter).	SH8
Rotary support, for linear actuator, for compensation of transverse forces	Z-DS1
3/8"-16 shaft clevis for AHK/AH.	Z-KSC
Bracket for AHK/AH/LH linear actuators.	ZG-119

Electrical installation

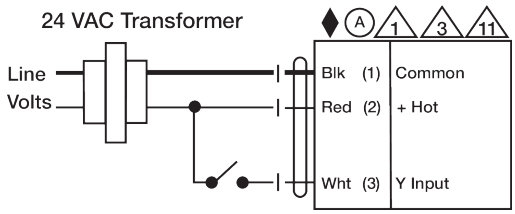
Ⓐ Actuators with appliance cables are numbered.

△1 Provide overload protection and disconnect as required.

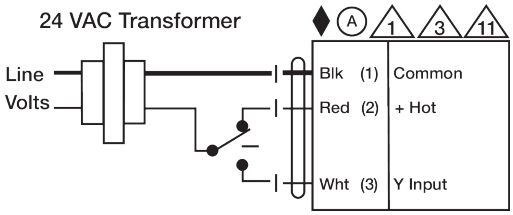
△3 Actuators may also be powered by 24 VDC.

△6 Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.

△11 Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

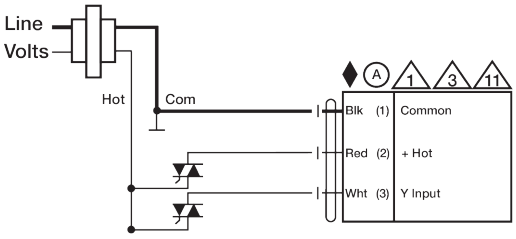


On/Off



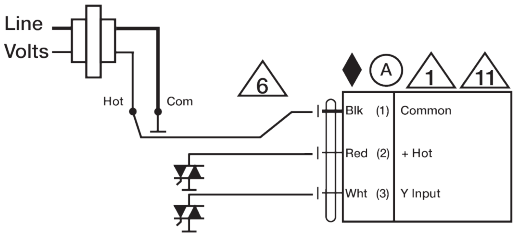
Floating Point

24 VAC Transformer



Floating Point - Triac Source

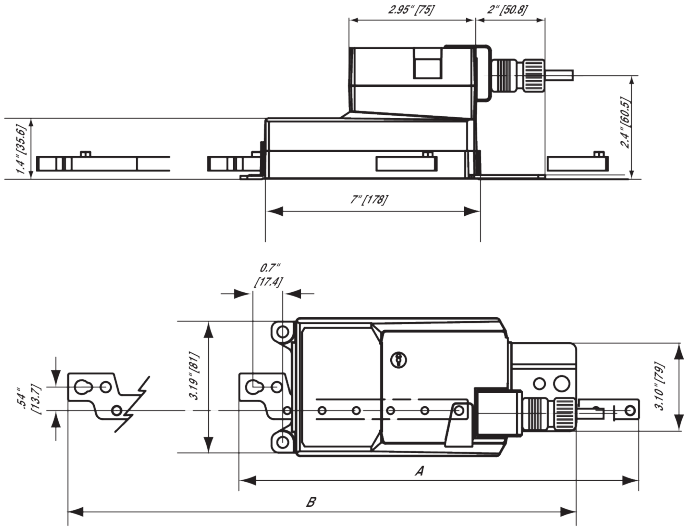
24 VAC Transformer



Floating Point - Triac Sink

Dimensions

Dimensional drawings



Stroke	A	B
4" [100]	9.2" [233.5]	8" [294.7]