

**Technical data sheet** 

CHB24-3-T-100.1

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

- Actuating force motor 125 N [30 lbf]
- Nominal voltage AC/DC 24 V
- Control On/Off, Floating point





5-year warranty





Picture may differ from product

Electrical data	Nominal voltage	AC/DC 24 V	
	Nominal voltage frequency	50/60 Hz	
	Power consumption in operation	0.5 W	
	Power consumption in rest position	0.2 W	
	Transformer sizing	1 VA	
	Electrical Connection	Screw terminal (for 2614 AWG wire)	
	Overload Protection	electronic throughout full stroke	
Functional data	Actuating force motor	125 N [30 lbf]	
	Manual override	disengage with magnet	
	Stroke	4" [100 mm]	
	Running Time (Motor)	380 s / 100 mm	
Safety data	Power source UL	Class 2 Supply	
	Degree of protection NEMA/UL	NEMA 1	
	Housing	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	
	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	-22122°F [-3050°C]	
	Storage temperature	-40176°F [-4080°C]	
Weight	Weight	0.92 lb [0.42 kg]	
	Packaging quantity	Multipack 20 pcs.	
Materials	Housing material	UL94-5VA	

**Footnotes** †Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

# **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.



#### **Product features**

#### 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	Туре	
	Signal simulator, Power supply AC 120 V	PS-100	
	Transformer, AC 120 V to AC 24 V, 40 VA	ZG-X40	
Mechanical accessories	Description	Туре	
	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	
		SH8	
	Rotary support, for linear actuator, for compensation of transverse	Z-DS1	
	forces		
	3/8"-16 shaft clevis for AHK/AH.	Z-KSC	

## **Electrical installation**

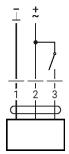
## Wire colors:

1 = black

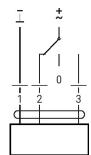
2 = red

3 = white

## AC/DC 24 V, on/off



AC/DC 24 V, 3-point



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<b>~</b> L	<b>→</b>	<u>~_</u>	stop
L			Ā



## **Dimensions**

