

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

- Torque motor 1400 in-lb [160 Nm]
- Nominal voltage AC 24...240 V / DC 24...125 V
- Control MFT/programmable
- Position feedback 2...10 V
- 2 x SPDT
- NEMA 4X



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 24...240 V / DC 24...125 V	
	Nominal voltage frequency	50/60 Hz	
	Nominal voltage range	AC 19.2...264 V / DC 19.2...137.5 V	
	Power consumption in operation	20 W	
	Power consumption in rest position	6 W	
	Transformer sizing	with 24 V 20 VA / with 240 V 52 VA	
	Auxiliary switch	2 x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V (II, reinforced insulation), 1 x 10° / 1 x 0...90° (default setting 85°)	
	Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V (II, reinforced insulation)	
	Electrical Connection	Terminal blocks, (PE) Ground-Screw	
	Overload Protection	electronic throughout 0...95° rotation	
Data bus communication	Communicative control	BACnet MS/TP Modbus RTU MP-Bus	
	Functional data	Torque motor	1400 in-lb [160 Nm]
		holding torque	50 Nm
Operating range Y		2...10 V	
Operating range Y note		4...20 mA	
Input impedance		100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for On/Off	
Operating range Y variable		Start point 0.5...30 V End point 2.5...32 V	
Operating modes optional		variable (VDC, on/off, floating point)	
Position feedback U		2...10 V	
Position feedback U note		Max. 0.5 mA	
Position feedback U variable		VDC variable	
Direction of motion motor		reversible with app	
Manual override		7 mm hex crank, supplied	
Angle of rotation		95°	
Running Time (Motor)		35 s / 90°	
Running time motor variable	30...120 s		
Noise level, motor	68 dB(A)		
Position indication	integral pointer		
Safety data	Power source UL	Class 2 Supply	

Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	UL Enclosure Type 4X
	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
	Ambient humidity	Max. 100% RH
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	13 lb [5.9 kg]
Materials	Housing material	Die cast aluminium and plastic casing

Product features

Application PMB series damper actuators are designed to accommodate a mounting bracket and coupler or linkage for remote linkage connection. A visual position indicator shows the actuators position through-out its stroke. For outdoor applications, the installed actuator must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any position including upside down.

Operation The PMB series provides 95° of rotation and a visual indicator shows the position of the damper actuator. The PMB series actuator uses a low power consumption brushless DC motor and is electronically protected against overload. A universal power supply is furnished to connect supply voltage in the range of AC 24...240 V and DC 24...125 V. Included is a smart heater with thermostat to eliminate condensation. Two auxiliary switches are provided; one set at 12.5° open and the other is field adjustable. Running time is field adjustable from 30...120 seconds by using the Near Field Communication (NFC) app and a smart phone.

†Use 60°C/75°C copper wire size range 12...28 AWG, stranded or solid. Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 4000 V. Type of action 1. Control pollution degree 3.

Accessories

Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Type
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Tools	Description	Type
	Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

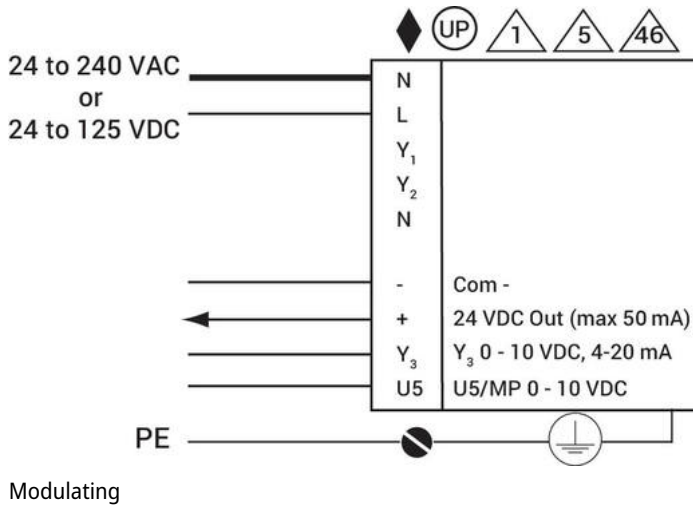
Electrical installation

Meets cULus requirements without the need of an electrical ground connection.

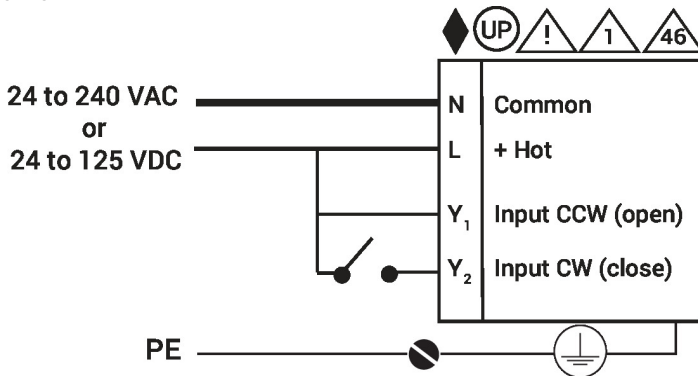
Universal Power Supply (UP) models can be supplied with 24 V up to 240 V.

Disconnect power.

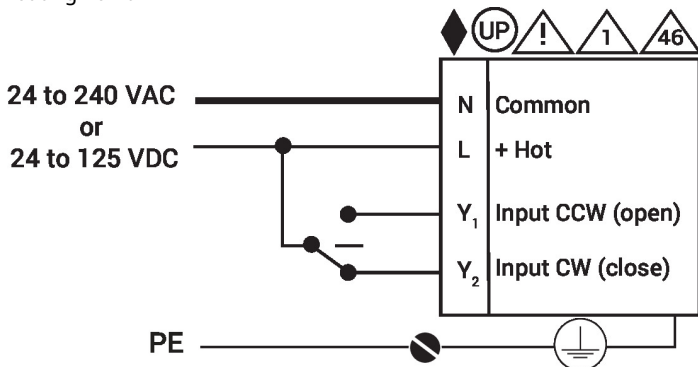
- Provide overload protection and disconnect as required.
- Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- Only connect common to negative (-) leg of control circuits.
- Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- Warning! Live electrical components!**
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



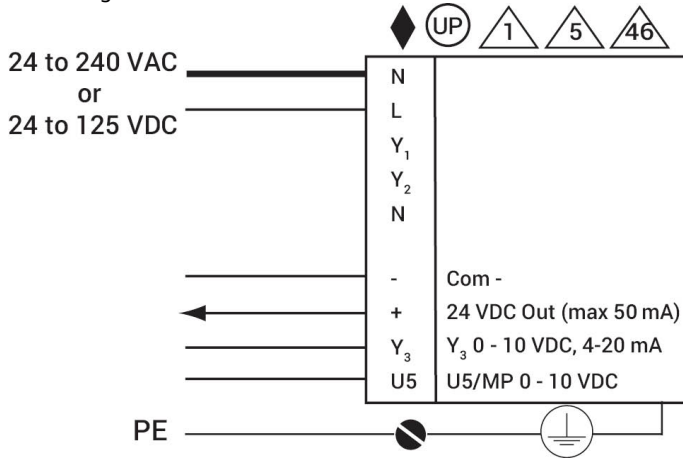
Wiring diagrams
On/Off



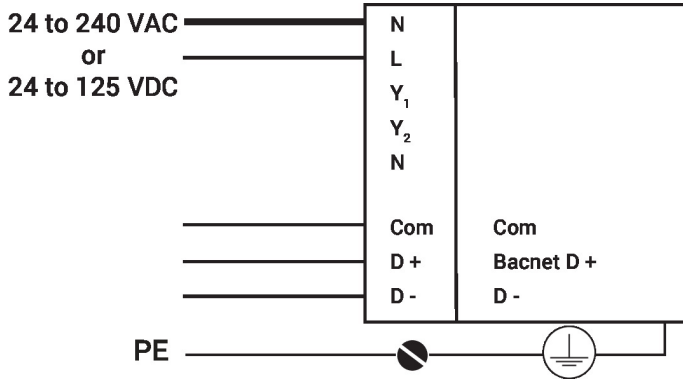
Floating Point



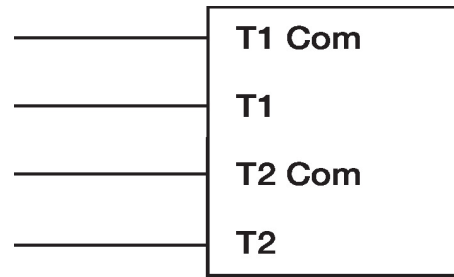
Modulating



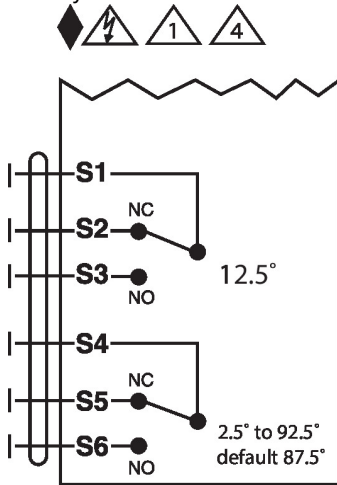
BACnet



Temperature Sensors



Auxiliary Switches



Dimensions

