

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

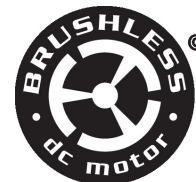
- Torque motor 1400 in-lb [160 Nm]
- Nominal voltage AC 24...240 V / DC 24...125 V
- Control MFT/programmable
- Position feedback 2...10 V
- 2x SPDT
- NEMA 4X



Picture may differ from product



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	2x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V (II, reinforced insulation), 1x 10° / 1x 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

Technical data

Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	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

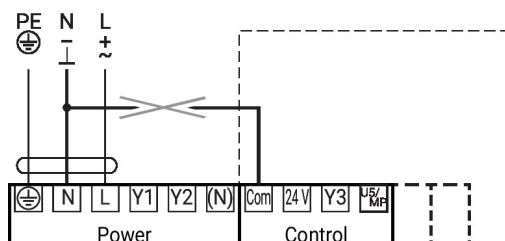
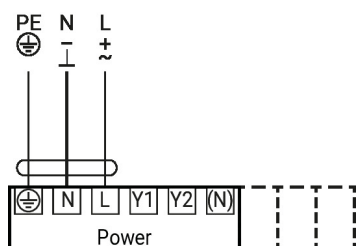
- Application** PMB series damper actuators are designed to accommodate a mounting bracket and coupler or linkage for remote linkage connection. A visual position indicator shows the actuators position through-out its stroke. For outdoor applications, the installed actuator must be mounted with the actuator 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 impluse Voltage 4000 V. Type of action 1. Control pollution degree 3.

Accessories

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

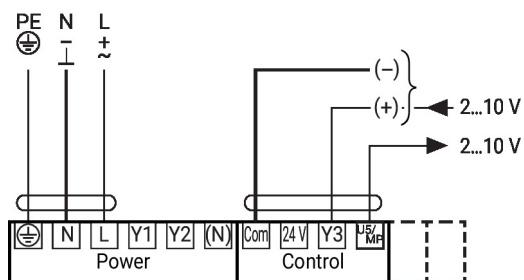
Electrical installation

AC 24...240 V / DC 24...125 V

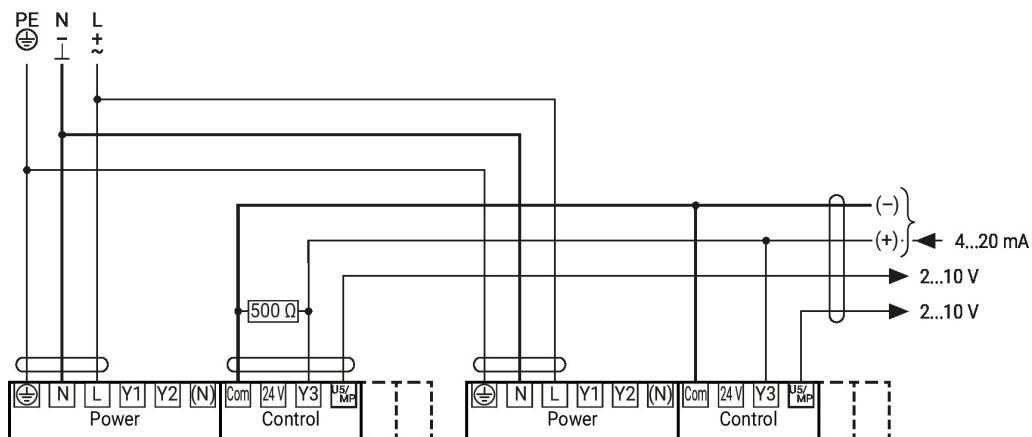


Power supply must not be connected to the signal terminals!

Modulating control

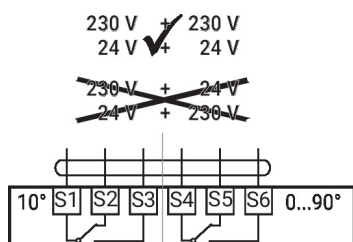


Parallel circuit 4...20 mA



Setpoint 2...10 V

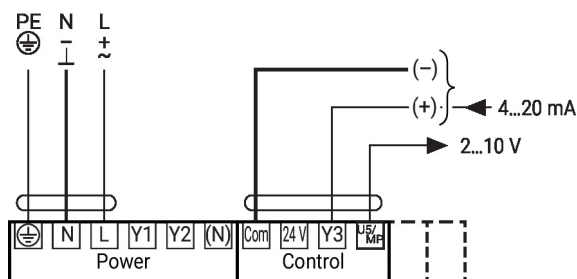
Auxiliary switch



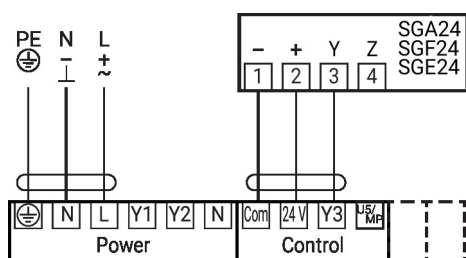
Further electrical installations

Functions with specific parameters (configuration necessary)

Control 4...20 mA



Positioner SG..

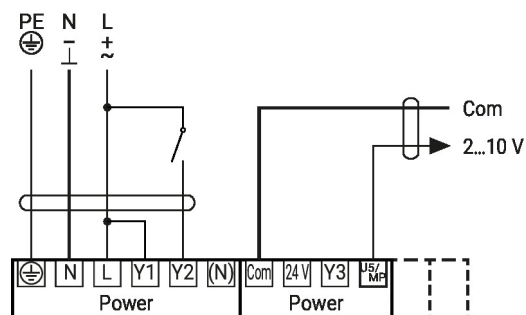
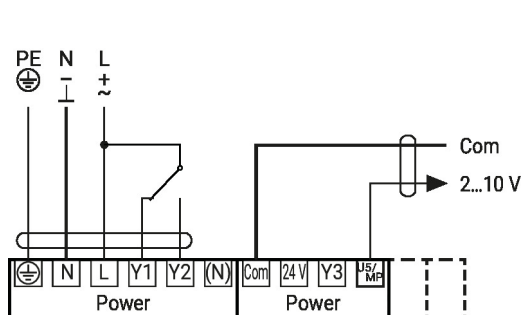

Note

Maximum output power «DC 24 V out» 1.2 W @ 50 mA!

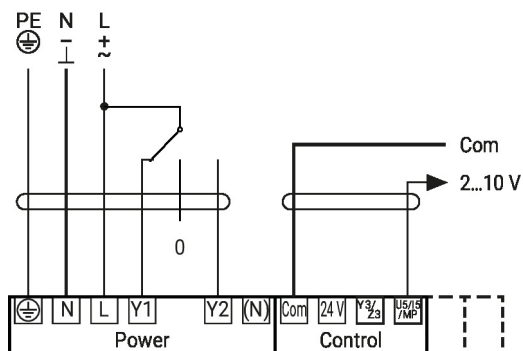
A separate isolating transformer must be used for higher performance!

Functions with specific parameters (NFC)

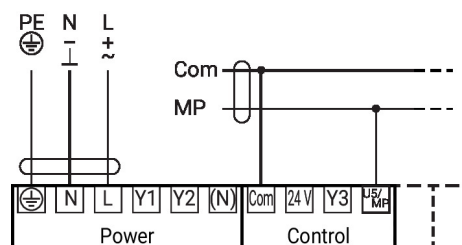
Control on/off



Control 3-point



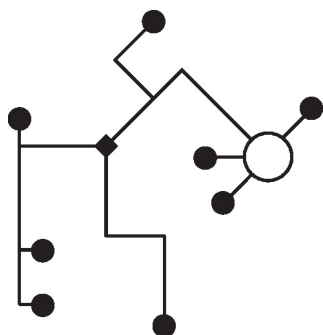
Connection on the MP-Bus



Further electrical installations

Functions with specific parameters (NFC)

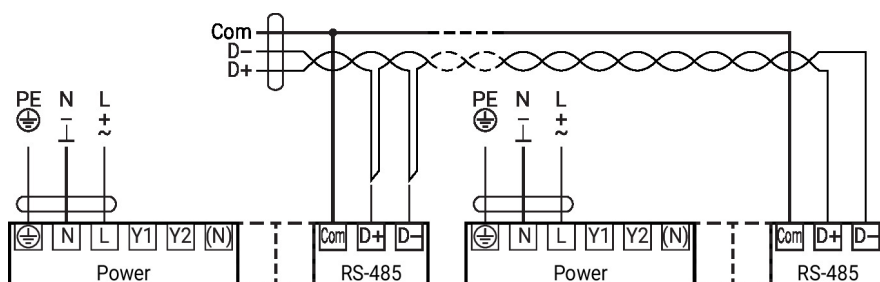
MP-Bus Network topology



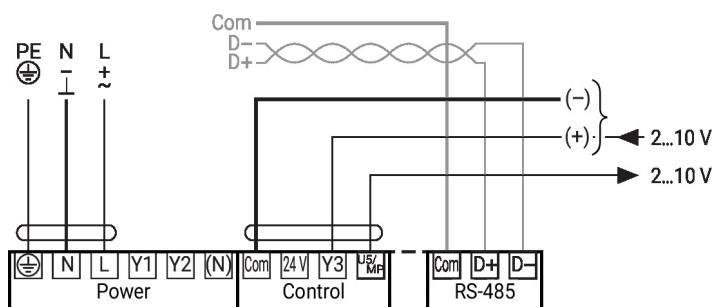
There are no restrictions for the network topology (star, ring, tree or mixed forms are permitted).
Supply and communication in one and the same 3-wire cable

- no shielding or twisting necessary
- no terminating resistors required

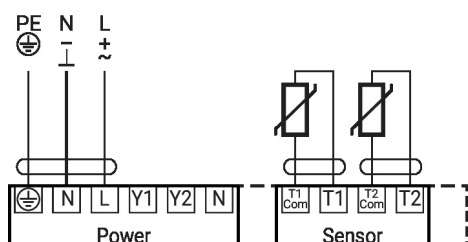
Connection BACnet MS/TP / Modbus RTU



Connection BACnet MS/TP / Modbus RTU with analogue setpoint (hybrid mode)



Connection of passive sensors (BACnet MS/TP / Modbus RTU)



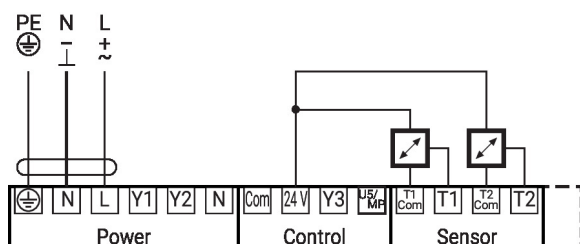
1)	2)
500 Ω...2 kΩ	+/-1%
2 kΩ...10 kΩ	+/-2%
10 kΩ...55 kΩ	+/-6%

1) Resistance range
2) Tolerance measured value
Compensation of the measured value is recommended
- Suitable for Ni1000 and Pt1000
- Suitable Belimo types 01DT-..

Further electrical installations

Functions with specific parameters (NFC)

Connection of active sensors (BACnet MS/TP / Modbus RTU)



Possible input voltage range:

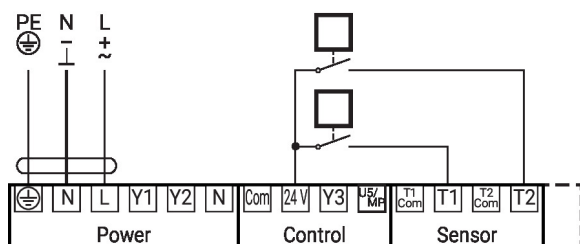
0...10 V

Resolution 5 mV

To capture for example:

- Active temperature sensors
- Flow sensors
- Pressure / differential pressure sensors

Switching contact connection (BACnet MS/TP / Modbus RTU)



Switching contact requirements:

The switching contact must be able to switch a current of 16 mA at 24 V accurately.

To capture for example:

- Flow monitors
- Operation / malfunction messages of chillers

Dimensions

