

MFT/programmable, Spring return, 24 V



5-year warranty



Picture may differ from product

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
Nominal voltage frequency	50/60 Hz	
Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V	
Power consumption in operation	7.5 W	
Power consumption in rest position	3 W	
Transformer sizing	10 VA	
Auxiliary switch	2x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, 1x 10% / 1x 11...90%	
Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V	
Electrical Connection	(2) 18 AWG appliance cables, 1 m, with 1/2" NPT conduit connectors	
Overload Protection	electronic throughout 0...95° rotation	
Functional data	Operating range Y	2...10 V
Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)	
Input impedance	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM, On/Off and Floating point	
Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V	
Operating modes optional	variable (VDC, PWM, 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	selectable with switch	
Direction of motion fail-safe	reversible with cw/ccw mounting	
Manual override	5 mm hex crank (3/16" Allen), supplied	
Angle of rotation	90°	
Running Time (Motor)	150 s / 90°	
Running time motor variable	70...220 s	
Running time fail-safe	<20 s @ 68°F [20°C]	
Sound power level, motor	45 dB(A)	
Sound power level, fail-safe	62 dB(A)	
Adaptation Setting Range	off (default)	
Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%	
Position indication	Mechanical	

Technical data

Safety data	Power source UL	Class 2 Supply
	Degree of protection NEMA/UL	NEMA 2
	Housing	UL Enclosure Type 2
	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
	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	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	5.4 lb [2.4 kg]
Materials	Housing material	Galvanized steel and plastic housing

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

Accessories

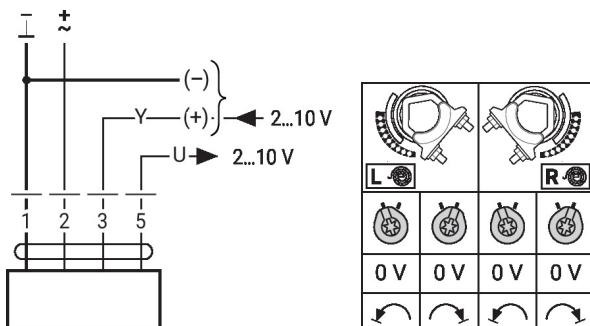
Tools	Description	Type
	Connecting cable 10 ft [3 m], A: RJ11 6/4 LINK.10, B: 3-pin Weidmüller and supply connection	ZK4-GEN
Electrical accessories	Service tool, with ZIP-USB function, for configurable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
	Service tool, 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

Wire colors:

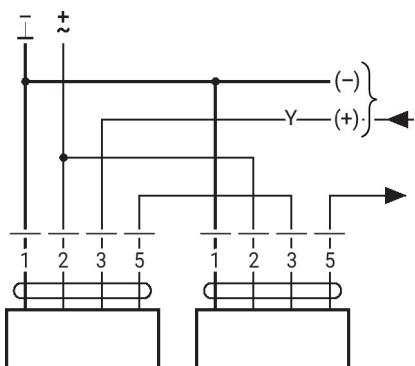
- 1 = black
- 2 = red
- 3 = white
- 5 = orange

AC/DC 24 V, modulating



Electrical installation

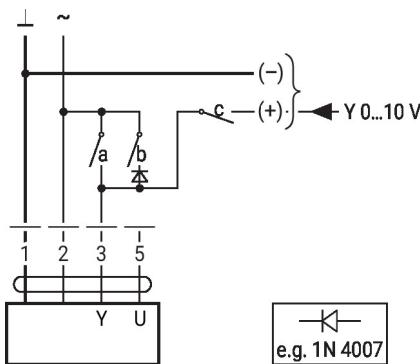
Wiring diagram piggy-back operation (mechanically coupled actuators)



Max. 2 actuators in primary/secondary operation
 Primary/secondary operation is permitted only on one fixed shaft or on two mechanically coupled shafts
 The programming of the primary actuator is adopted by the secondary actuator

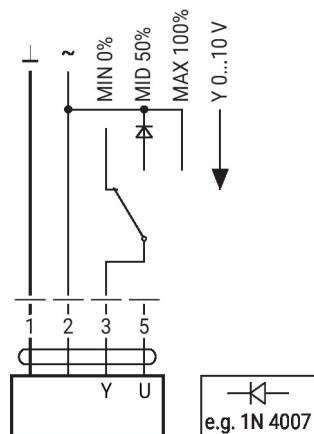
Further electrical installations**Functions with basic values (conventional mode)**

Override control with AC 24 V with relay contacts



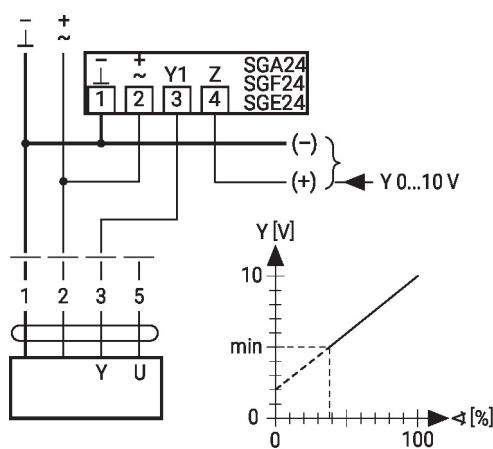
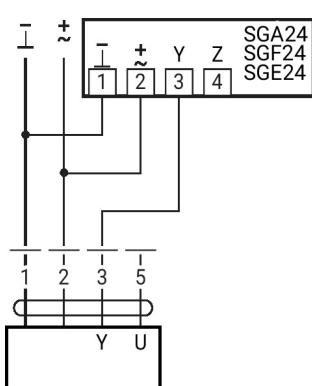
1	2	a	b	c	
—	—	—	—	—	0 %
—	—	—	—	—	ZS 50%
—	—	—	—	—	100 %
—	—	—	—	—	Y

Override control with AC 24 V with rotary switch



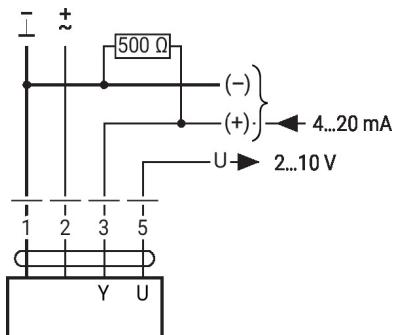
Control remotely 0...100% with positioner SG..

Minimum limit with positioner SG..

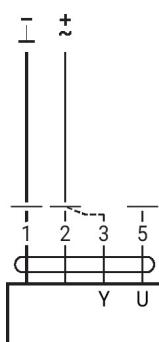


Further electrical installations**Functions with basic values (conventional mode)**

Control with 4...20 mA via external resistor

**Caution:**

The operating range must be set to DC 2...10 V.
 The 500 Ohm resistor converts the 4...20 mA current signal to a voltage signal DC 2...10 V.

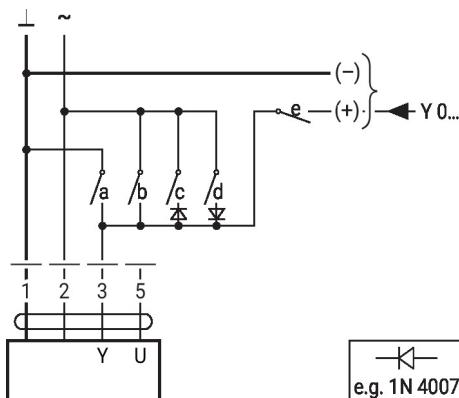
Functional check**Procedure**

1. Connect 24 V to connections 1 and 2
2. Disconnect connection 3:
 - With direction of rotation 0: Actuator rotates to the left
 - With direction of rotation 1: Actuator rotates to the right
3. Short-circuit connections 2 and 3:
 - Actuator runs in opposite direction

Functions with specific parameters (configuration necessary)

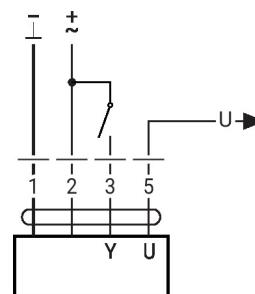
Override control and limiting with AC 24 V with relay contacts

Control on/off



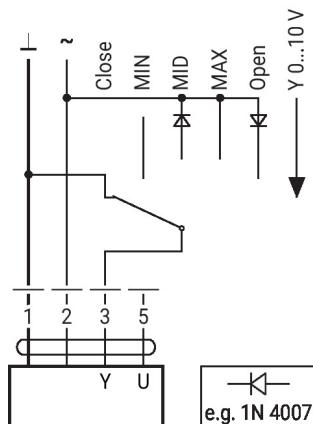
1	2	a	b	c	d	e	
o -	o -	o -	o -	o -	o -	o -	Close
o -	o -	o -	o -	o -	o -	o -	MIN
o -	o -	o -	o -	o -	o -	o -	ZS
o -	o -	o -	o -	o -	o -	o -	MAX
o -	o -	o -	o -	o -	o -	o -	Open
o -	o -	o -	o -	o -	o -	o -	Y

e.g. 1N 4007



Further electrical installations**Functions with specific parameters (configuration necessary)**

Override control and limiting with AC 24 V with rotary switch

**Caution:**

The "Close" function is only guaranteed if the start point of the operating range is defined as min. 0.5 V.

Control 3-point with AC 24 V

