

5-year warranty



## Technical data

<b>Electrical data</b>	Nominal voltage	AC/DC 24 V	
	Nominal voltage frequency	50/60 Hz	
	Power consumption in operation	12 W	
	Power consumption in rest position	3 W	
	Transformer sizing	21 VA (class 2 power source)	
	Electrical Connection	Terminal blocks	
	Overload Protection	electronic throughout 0...90° rotation	
<b>Functional data</b>	Torque motor	90 Nm	
	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 (0.1 mA), 500 Ω, 1000 Ω (on/off)	
	Operating range Y variable	Start point	0.5...30 V
		End point	2.5...32 V
	Options positioning signal	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 0/1	
	Direction of motion fail-safe	reversible with switch	
	Manual override	under cover	
	Running Time (Motor)	150 s / 90°	
	Running time motor variable	95...150 s	
	Running time fail-safe	<35 s	
Noise level, motor	45 dB(A)		
Noise level, fail-safe	60 dB(A)		
Position indication	Mechanically, 5...20 mm stroke		
<b>Safety data</b>	Degree of protection IEC/EN	IP66/67	
	Degree of protection NEMA/UL	NEMA 4X	
	Enclosure	UL Enclosure Type 4X	
	Quality Standard	ISO 9001	
	Ambient temperature	-22...122°F [-30...50°C]	
	Ambient temperature note	-40...50°C for actuator with integrated heating	
	Storage temperature	-40...176°F [-40...80°C]	
	Ambient humidity	Max. 100% RH	
	Servicing	maintenance-free	
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing	

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
Service tools	Description	Type
	Connection 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
Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	N4 Heater Add-on 24V (-H)

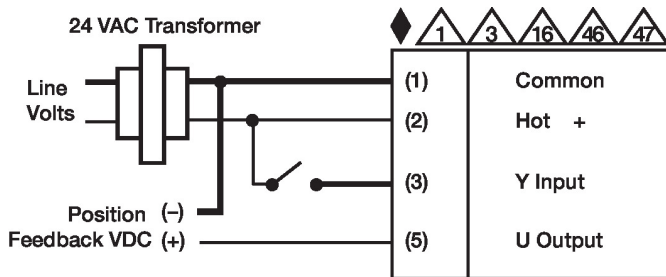
Electrical installation

**✂ INSTALLATION NOTES**

- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by DC 24 V.
- 5** Only connect common to negative (-) leg of control circuits.
- 7** A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 10** For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
- 12** IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 16** Actuators are provided with a numbered screw terminal strip instead of a cable.
- ◆** Meets cULus requirements without the need of an electrical ground connection.
- ⚠ 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

