



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	20 W
	Power consumption in rest position	6 W
	Transformer sizing	20 VA @ AC/DC 24 V (class 2 power source), 23 VA @ AC/DC 120 V, 52 VA @ AC 230 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, 1 x 10° / 1 x 0...90° (default setting 85°)
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic throughout 0...90° rotation
	Functional data	Communicative control
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
Options positioning signal		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		90°
Running Time (Motor)		35 s / 90°
Running time motor variable		30...120 s
Noise level, motor		68 dB(A)
Position indication		integral pointer
Passive sensor inputs		2x (Pt1000, Ni1000, NTC10k2)
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 temperature	-22...122°F [-30...50°C]	

Safety data	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Materials	Housing material	Die cast aluminium and plastic casing

Product features

- Application** PR Series valve actuators are designed with an integrated linkage and visual position indicators. For outdoor applications, the installed valve must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any location including directly under the valve.
- Operation** The PR series actuator provides 90° of rotation and a visual indicator shows the position of the valve. The PR 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 10° 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

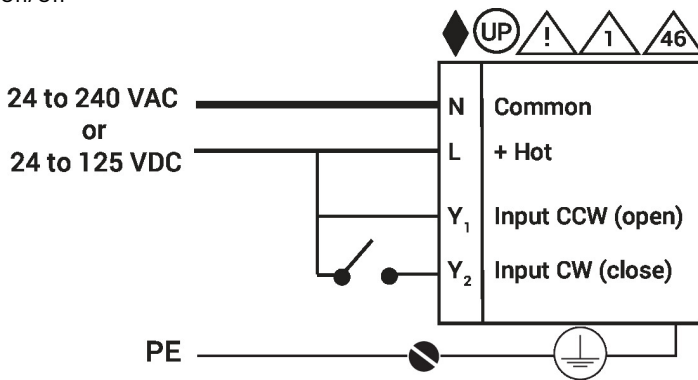
Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Type
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Mechanical accessories	Description	Type
	Hand crank for PR, PKR, PM	ZG-HND PR
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
Sensors	Description	Type
	Duct/Immersion sensor Temperature 6" [150 mm] x 0.24" [6 mm] Pt1000	01DT-5BN
	Duct/Immersion sensor Temperature 2" [50 mm] x 0.24" [6 mm] Pt1000	01DT-5BH
	Duct/Immersion sensor Temperature 4" [100 mm] x 0.24" [6 mm] Pt1000	01DT-5BL
	Duct/Immersion sensor Temperature 8" [200 mm] x 0.24" [6 mm] Pt1000	01DT-5BP
	Duct/Immersion sensor Temperature 18" [450 mm] x 0.24" [6 mm] Pt1000	01DT-5BT
		01DT-5EH
		01DT-5EL
		01DT-5EN
		01DT-5EP
	Duct/Immersion sensor Temperature 12" [300 mm] x 0.24" [6 mm] Pt1000	01DT-5BR
		01DT-5ER
		01DT-5ET

Electrical installation

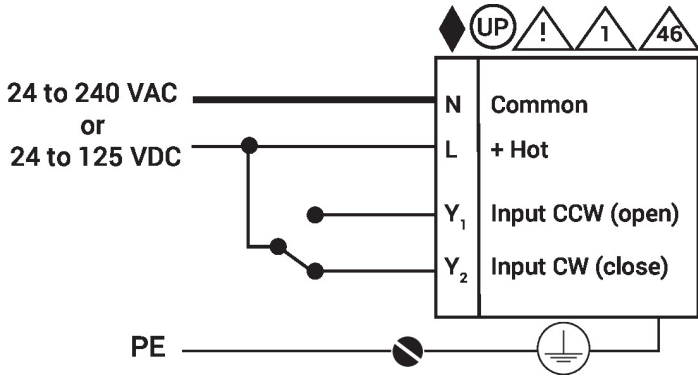
- ◆ Meets cULus requirements without the need of an electrical ground connection.
- Ⓢ UP Universal Power Supply (UP) models can be supplied with 24 V up to 240 V.
- ⚡ Disconnect power.
- ⚠ 1 Provide overload protection and disconnect as required.
- ⚠ 4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- ⚠ 5 Only connect common to negative (-) leg of control circuits.
- ⚠ 46 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

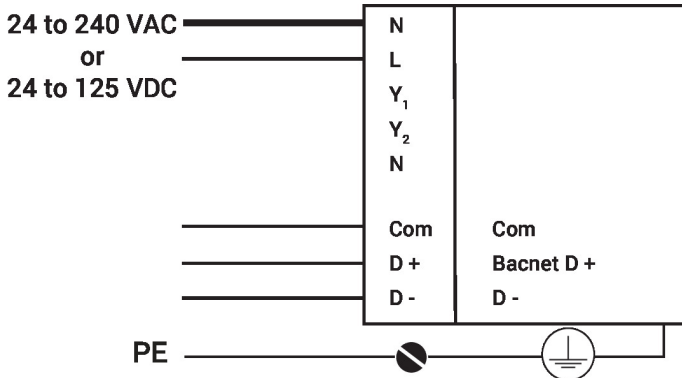
On/Off



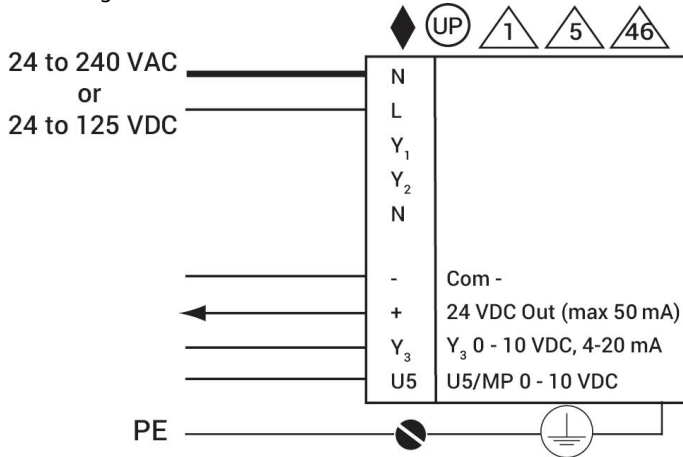
On/Off



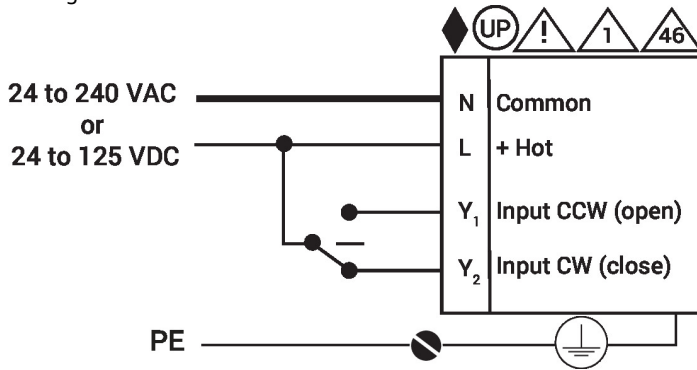
BACnet



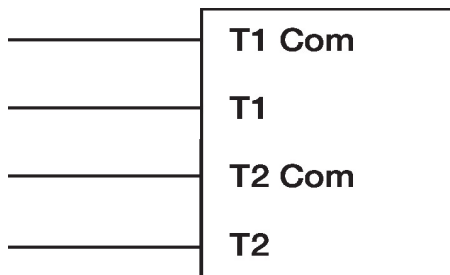
Modulating



Floating Point



Temperature Sensors



Auxiliary Switches

