

Modulating, Non Fail-Safe, 24...240 V, NEMA 4X with BACnet





## **Technical data**

Electrical data	Nominal voltage	AC 24240 V / DC 24125 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 090° (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 thoughout 090° rotation
Functional data	Communicative control	BACnet MS/TP Modbus RTU MP-Bus
	Operating range Y	210 V
	Operating range Y note	420 mA
	Input Impedance	100 kΩ for 210 V (0.1 mA), 500 Ω for 420 mA, 1500 Ω for On/Off
	Operating range Y variable	Start point 0.530 V End point 2.532 V
	Options positioning signal	variable (VDC, on/off, floating point)
	Position feedback U	210 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	30120 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	-22122°F [-3050°C]
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Safety data	Storage temperature	-40176°F [-4080°C]		
	Ambient humidity	Max. 100% RH maintenance-free Die cast aluminium and plastic casing		
	Servicing			
Materials	Housing material			
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	valve. The PR Series actuator uses electronically protected against ov supply voltage in the range of AC thermostat to eliminate condensa	D° of rotation and a visual indicator shows the position of the a low power consumption brushless DC motor and is verload. A universal power supply is furnished to connect 24240 V and DC 24125 V. Included is a smart heater with tion. Two auxiliary switches are provided; one set at 10° open Running time is field adjustable from 30120 seconds by using FC) 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	Туре
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Туре
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
Mechanical accessories	Description	Туре
	Hand crank for PR, PKR, PM	ZG-HND PR
Service tools	Description	Туре
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection Service Tool, with ZIP-USB function, for programmable and	ZK4-GEN ZTH US
	communicative Belimo actuators, VAV controller and HVAC performance devices	
Sensors	Description	Туре
	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-5EH 01DT-5EL
		01DT-5EL
	Duct/Immersion sensor Temperature 12" [300 mm] x 0.24" [6 mm] Pt1000	01DT-5EL 01DT-5EN
	Duct/Immersion sensor Temperature 12" [300 mm] x 0.24" [6 mm]	01DT-5EL 01DT-5EN 01DT-5EP



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.

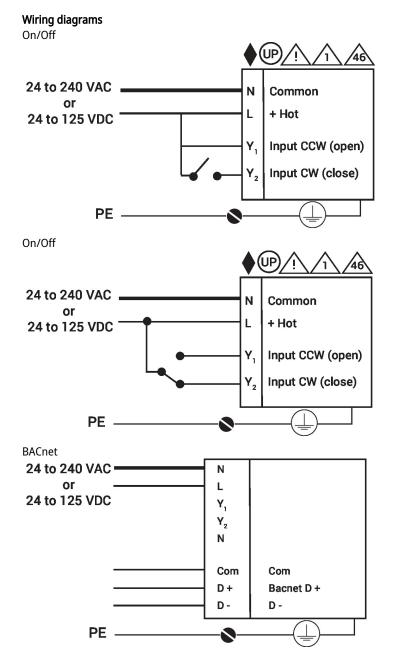
 $\bigwedge$  Provide overload protection and disconnect as required.

Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.

\Lambda 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.





**Technical data sheet** 

