

## Butterfly Valve with Lug types

- Disc 304 stainless steel
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- Completely assembled and tested, ready for installation



Picture may differ from product



5-year warranty

## Type overview

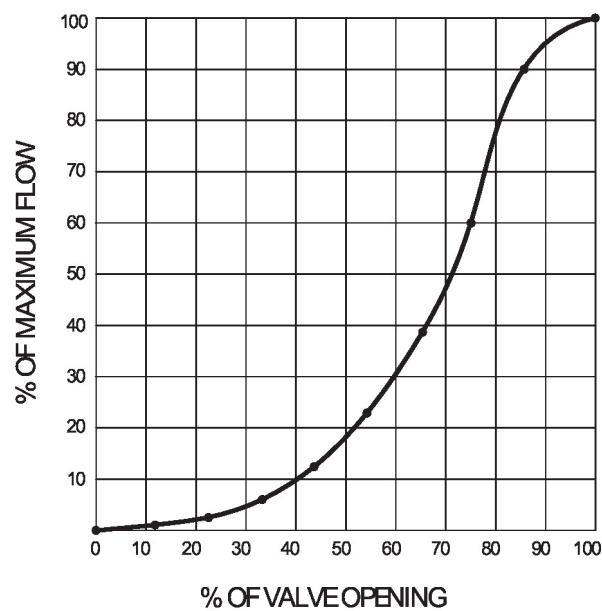
Type	DN
F665HD	2 1/2" [65]

## Technical data

Functional data	Valve size [mm]	2.5" [65]
Fluid	chilled or hot water, up to 60% glycol	
Fluid Temp Range (water)	-22...250°F [-30...120°C]	
Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP	
Close-off pressure Δps	200 psi	
Flow characteristic	modified equal percentage	
Leakage rate	0% leakage, leakage rateA	
Pipe connection	Flange for use with ASME/ANSI class 125/150	
Servicing	maintenance-free	
Flow Pattern	2-way	
Controllable flow range	90° rotation	
Cv	196	
Maximum Velocity	12 FPS	
Lug threads	5/8-11 UNC	
Materials	Valve body	Ductile cast iron ASTM A536
	Body finish	epoxy powder coating (blue RAL 5002)
	Stem	416 stainless steel
	Stem seal	EPDM (lubricated)
	Seat	EPDM
	Bearing	RPTFE
	Disc	304 stainless steel
Suitable actuators	Non Fail-Safe	ARB(X) GRB(X)
	Spring	AFRB(X)

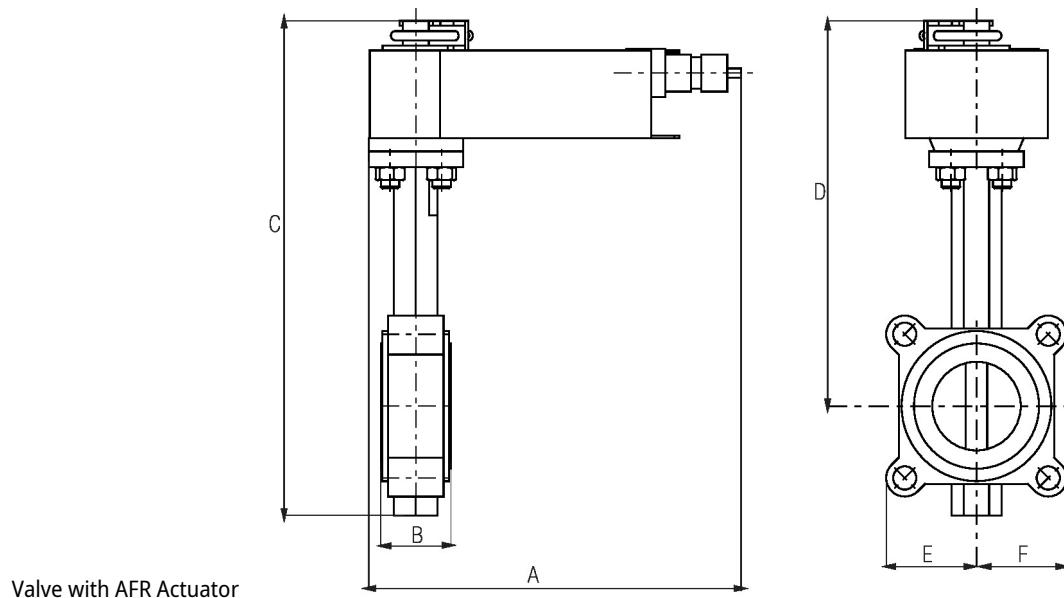
## Product features

## Flow/Mounting details

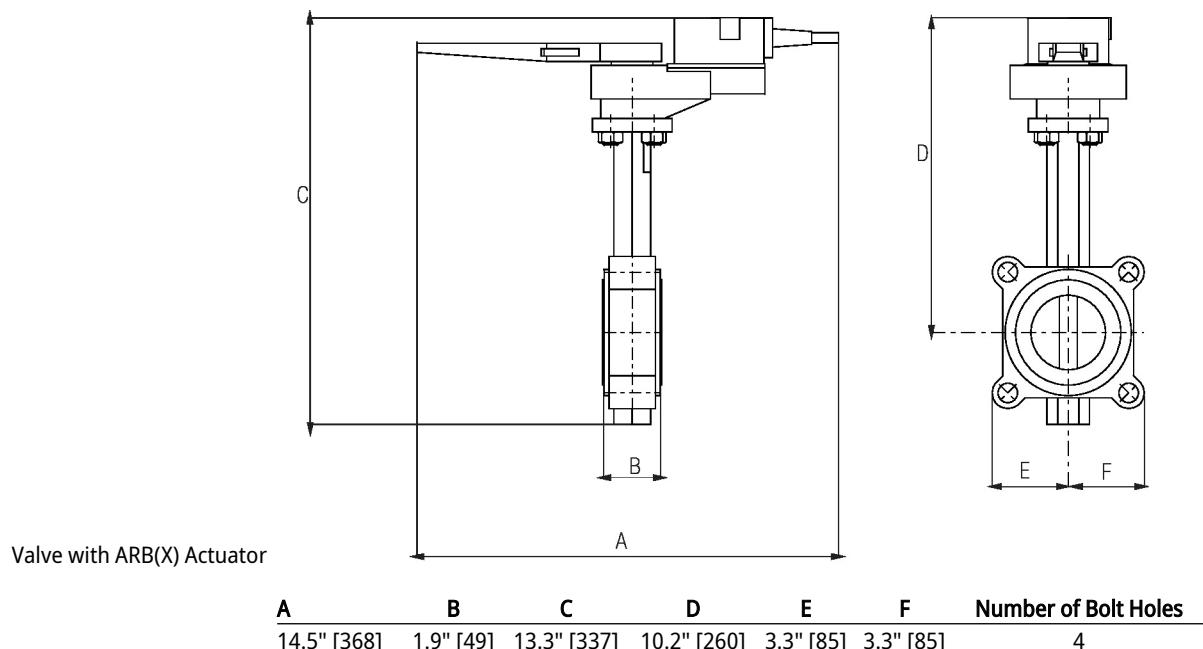
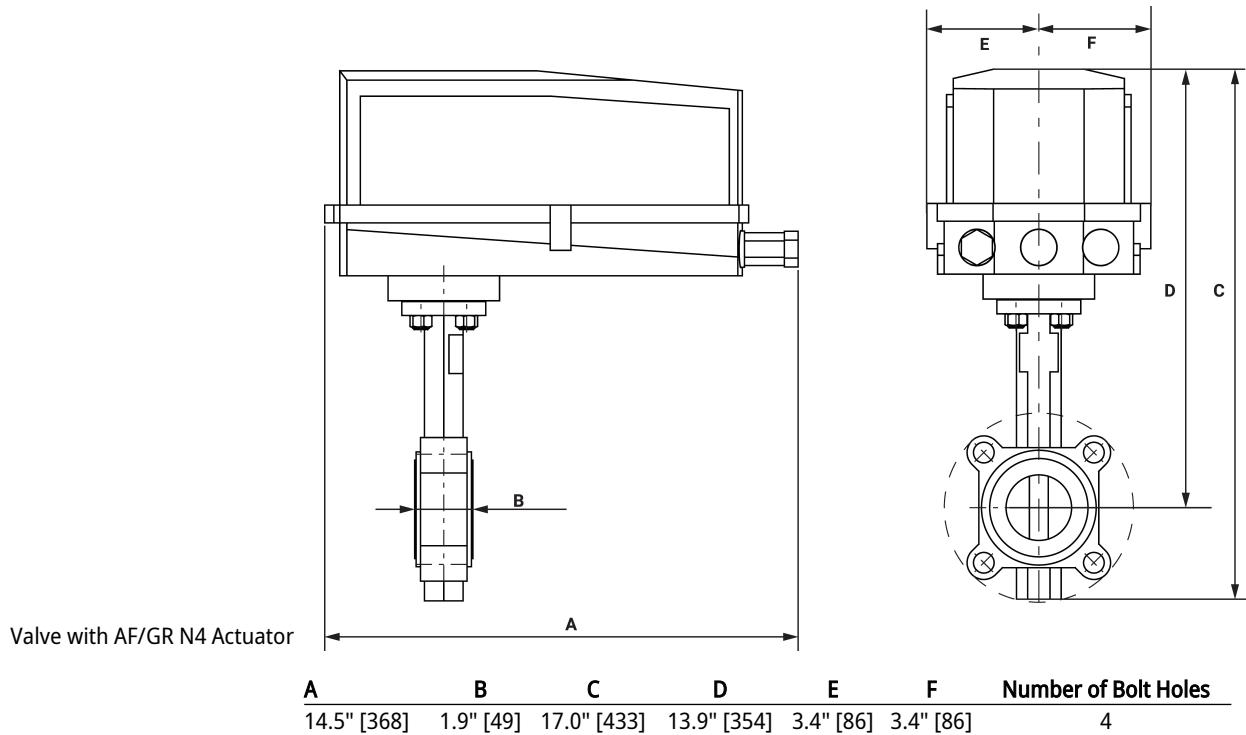


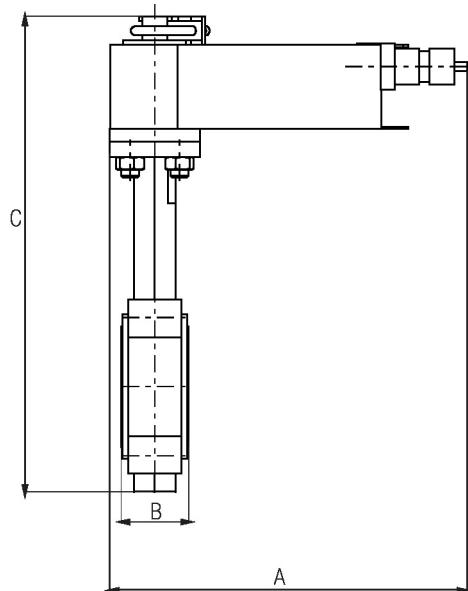
## Dimensions

Type	DN	Weight
F665HD	2 1/2" [65]	22 lb [10 kg]

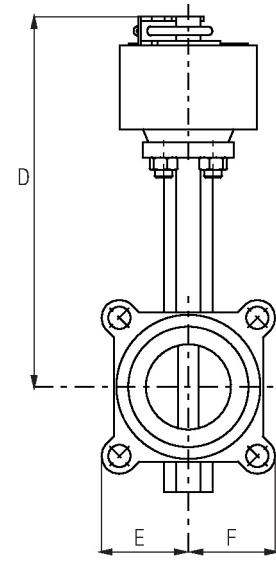


A	B	C	D	E	F	Number of Bolt Holes
10.1" [257]	1.9" [49]	13.1" [333]	10.1" [256]	3.3" [85]	3.3" [85]	4

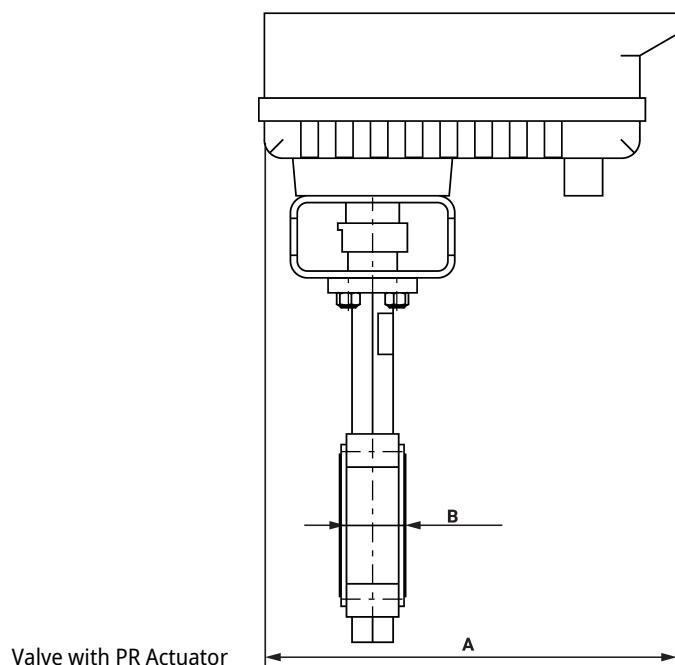




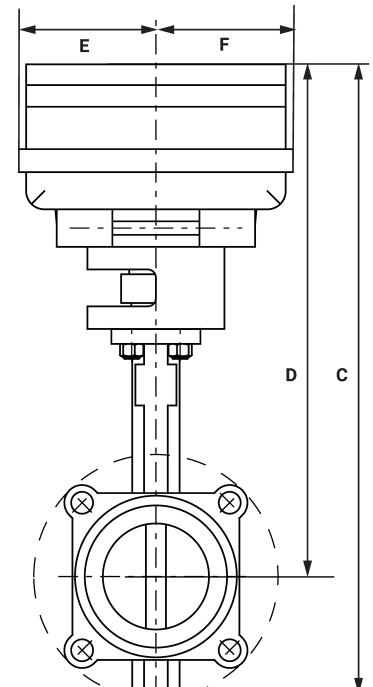
Valve with AFX24-MFT(-S) Actuator



A	B	C	D	E	F	Number of Bolt Holes
10.1" [257]	1.9" [49]	16.0" [406]	12.9" [328]	3.3" [85]	3.3" [85]	4

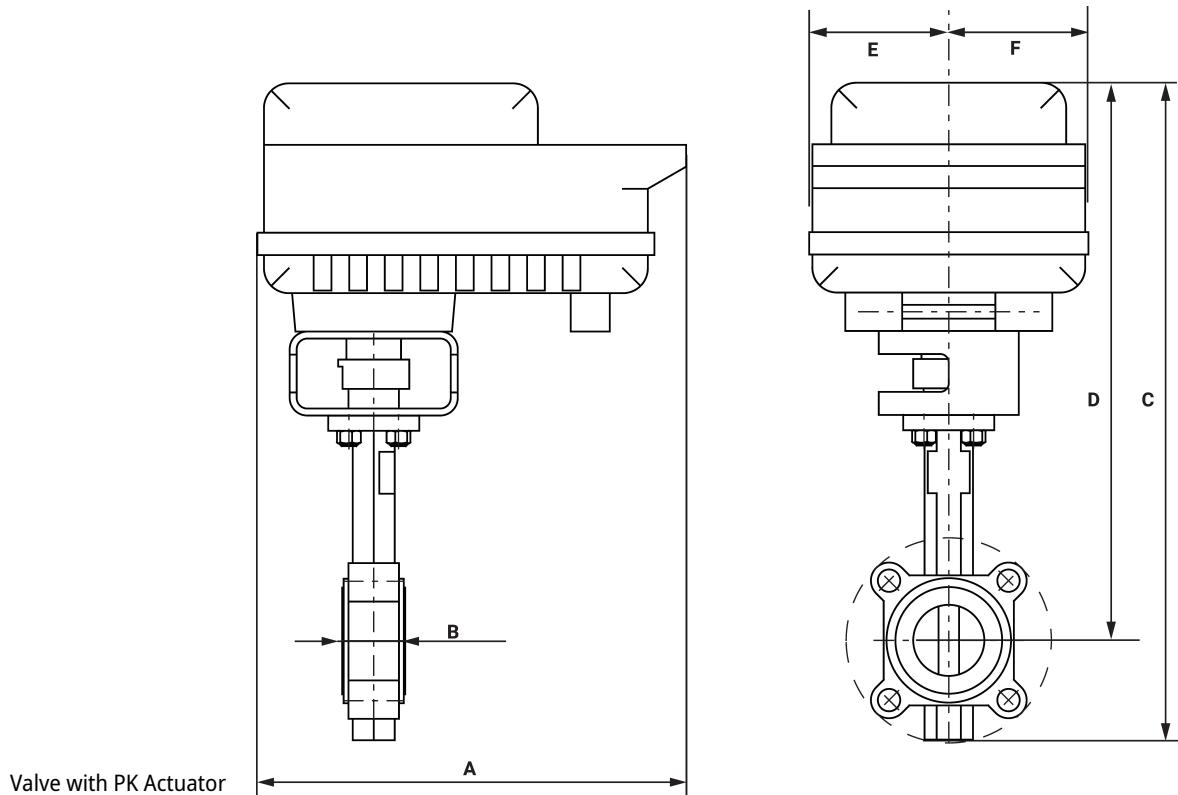


Valve with PR Actuator

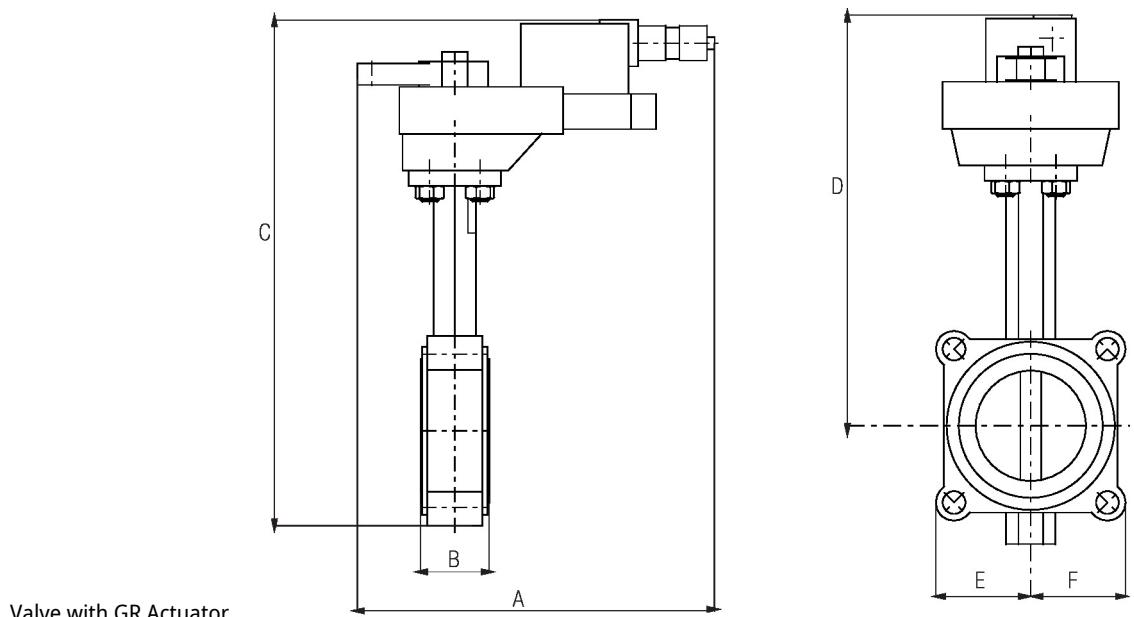


A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	1.9" [49]	17.6" [448]	14.5" [368]	3.9" [100]	3.9" [100]	4

## Dimensions



A	B	C	D	E	F	Number of Bolt Holes
12.0" [304]	1.9" [49]	19.3" [490]	16.2" [411]	3.9" [100]	3.9" [100]	4



A	B	C	D	E	F	Number of Bolt Holes
9.3" [236]	1.9" [49]	13.7" [347]	10.8" [274]	2.4" [62]	2.4" [62]	4

On/Off, Floating point, Non fail-safe, 24...240 V



5-year warranty



## Technical data

<b>Electrical data</b>	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	23 W
	Power consumption in rest position	7.5 W
	Transformer sizing	with 24 V 23 VA / with 240 V 55 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...90° rotation
<b>Functional data</b>	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
<b>Safety data</b>	Power source UL	Class 2 Supply
	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]
	Servicing	maintenance-free
<b>Weight</b>	Weight	13 lb [6.0 kg]
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing

## Safety notes



- For maintenance work, the correct valve position must be set via the control signal. Additionally, the actuator must be disconnected from the power source. The hand crank and manual override shall not be used as a safety measure to maintain the valve position.

## 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

Mechanical accessories	Description	Type
Hand crank for PR, PKR, PM		ZG-HND PR
RetroFIT+ valve bracket		UFLKP014
For Belimo Butterfly Valve with PR and PKR Series Actuators		

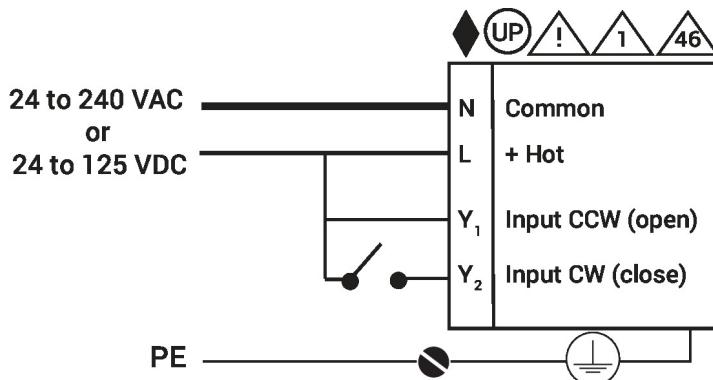
## Electrical installation

- ◆ Meets cULus requirements without the need of an electrical ground connection.
- UP Universal Power Supply (UP) models can be supplied with AC 24...240 V, or DC 24...125 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.
- ▲ 6 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.

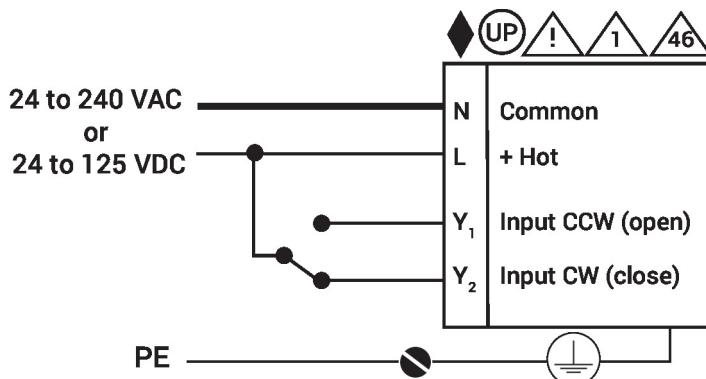
## Electrical installation

## Wiring diagrams

On/Off

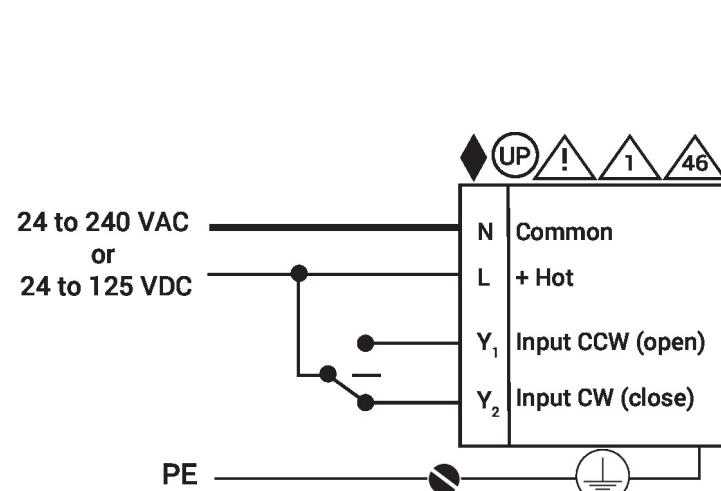
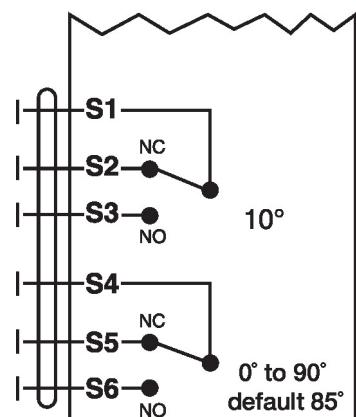


On/Off



Floating Point

Auxiliary Switches

## Dimensions

