

Electric actuators type EA15

Small & Light



Product description

The electric actuator type EA15 is ideally suited for harsh conditions working in open/ close mode. A wide range of standard features can be found already in the basic version.

Function

This electric actuator is used to operate valves with a pivoting movement from 90° to 180°. The actuator can be installed on any common valves with an ISO 5211 interface.

With the "fail-safe return unit" accessory the actuator will drive in a safe position upon power loss.

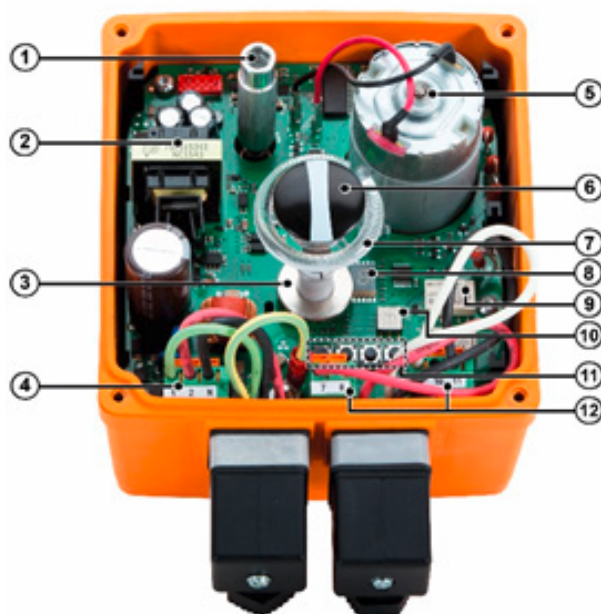
Applications

- Chemical Process Industry
- Water Treatment
- Refrigeration/Cooling

Benefits/features

- Position feedback via relays (OPEN/CLOSE)
- Adjustable heating element to prevent condensation
- Optical position indicator with LED status monitoring
- 7-segment error display
- Integrated emergency manual override with magnetic lock
- Robust PP-GF housing with very good chemical resistance
- Long service life due to robust design and superior electronics
- Flexible configuration thanks to modular concept
- Easy handling
- Can be used anywhere thanks to universal power supply and standard interfaces

Technical data



Nr.	Beschreibung
1	Shaft for emergency manual override hand crank
2	Power supply unit with contact-protection installed at 230 V version & 24V
3	Digital position detection
4	Control for OPEN/CLOSE
5	DC motor
6	Optical position indicator
7	Light tube for LED status feedback
8	7-segment error display
9	Position feedback via relays for OPEN/CLOSE
10	Heating element (temperature threshold regulator)
11	Buttons for end position adjustment
12	Signal output "ready-to-operate"

Connection options for DIN plugs (Standard types only) & Cable glands (Standard & cUL types)

Specifications

Combinations	EA15	2-way ball valve type 546 to DN50
		3-way ball valve type 543 up to DN50
Power supply voltage	100 – 230 VAC 50/60 Hz	
	24 VDC or VAC 50/60 Hz	
Supply voltage tolerance	-10%...+15%	
Protection class	IP 65 (IP67) ¹⁾ per EN 60529	
	Designed for wet & dry locations (NEC), designed for indoor use (UV light may cause discoloration)	
Contamination level	Operation: Pollution Level 3	
	Commissioning (open cover): Only in controlled environments of pollution level 2	
Overload protection	Current/time-dependent (resetting)	
Overvoltage category	II	
Ambient temperature	-10 °C to +50 °C (14°F to +122°F)	
Allowable humidity	Max. 90 % relative humidity, non-condensing	
Max. installation alti-tude	2000m above sea level (AMSL)	
Housing material	PP-GF for very good chemical resistance	
Rotation angle	Max 355°, adjusted to 90°	
ISO interface	F05	
Tested Cycles (@20°C and Mdn)	50'000	
Weight	1,85 kg	

¹⁾ When used with cable glands and vertical installation.

Power input max.	45 VA
Nominal current (calculated)	0.3A at 100V
	0.13A at 230V
	1.5A at 24V
Rated torque Mdn. (peak)	10 (25) Nm
Duty cycle @ 25 °C / 15 min	40%
Cycle time s/90° at Mdn.	5 s
Actuating angle	Max. 355°, set to 90°
Feedback Relay Type; Switching Capacity	Bi-stable change-over contacts; max. 2A @ 30V DC
Fuse	Internal: SMD fuse, 2A, not replaceable Req. external breakers on all live wires: Rated Current: max. 16A, Trip Curve: C Standards Compliance: cUL489, CSA C22.2 No. 5.1, IEC 60947-2
Electric connection	Standard types: DIN-Plug & cable glands cUL certified types: Cable glands only Connection cable: AWG 18-16, UL/cUL AWM 4486 min. 125°C 1000V, outside diameter 8-13mm (cable glands), 4-9mm (DIN-connectors)

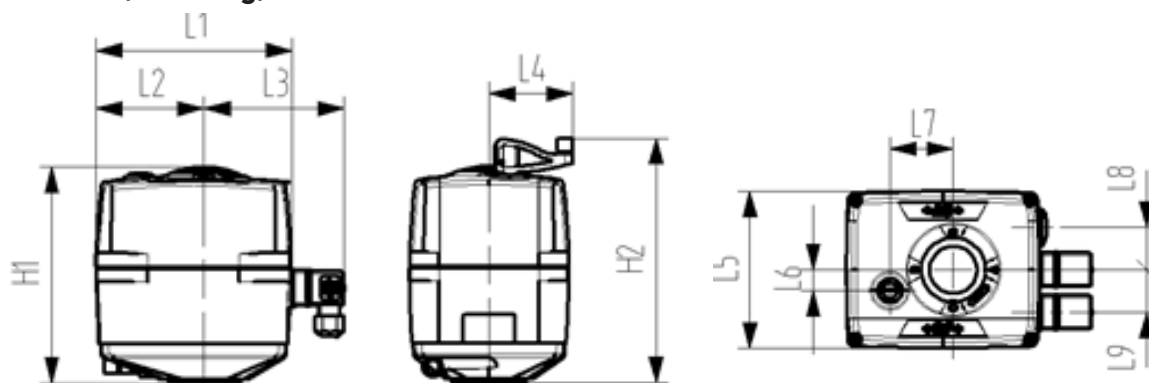
Options

Electric ball valves Type 127

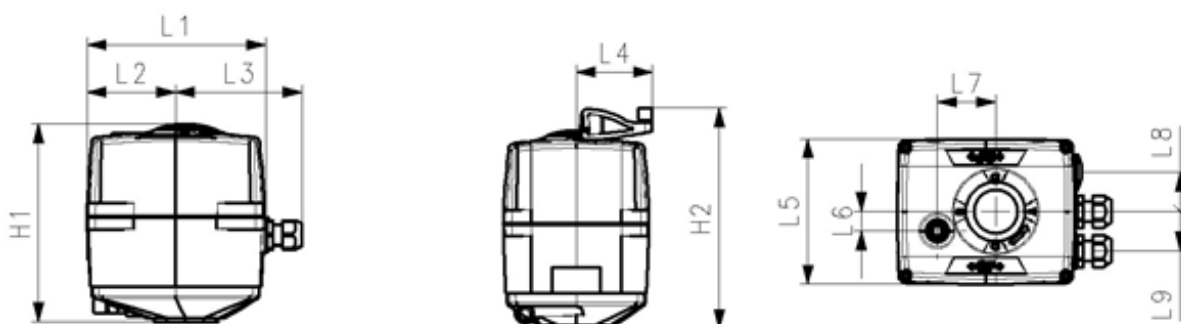
Type 127 ball valves are based on the type 546 ball valve and the EA15 (DN10 – DN50) electric actuator. The 127 series is designed for applications with special process requirements.

Dimensions

Standard (DIN-Plug)



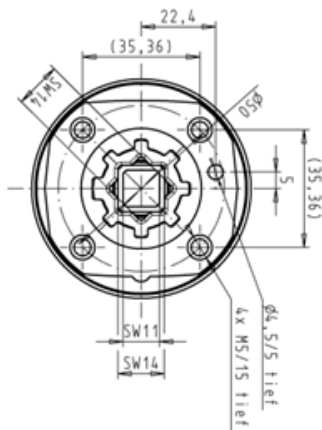
cUL-marked (Cable gland)



EA	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	H1 (mm)	H2 (mm)
EA15	150	83 (78)*	108	64	122	16	49	33	33	167	189

*cUL-marked actuators

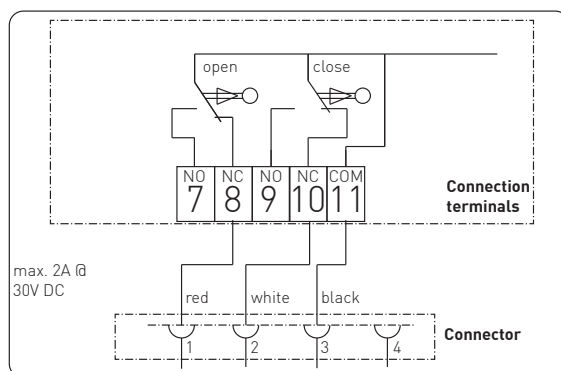
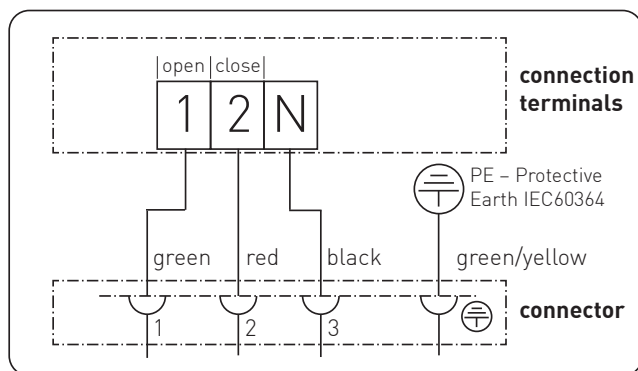
Valve interface



Connection diagram for standard version (cUL types: direct wiring through cable glands only)

Actuator activation

Feedback signals; max. 2A @ 30VDC



Optical Position Indicator

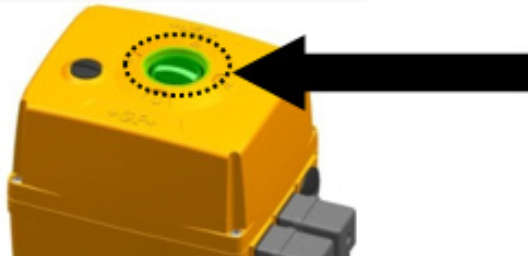
The position indicator shows the valve position. The valve positions can be read on the fitted cover. When the cover is fitted, the following image can be seen (Example ball valve):

2-Way

Image of position indicator in valve position 1	<p>Diagram of the 2-Way valve position indicator. It shows a circular indicator with a vertical bar. The bar is labeled A at the bottom and B at the top. The left side is labeled C and the right side is labeled D. A blue arrow indicates the rotation from A to B.</p>
Valve function	<p>3D model of a 2-Way valve. A blue highlight is shown on the handle, indicating the valve position.</p>
Actuating angle	0° - 90°
Valve position 1	A – B (OPEN), see image
Valve position 2	C – D (CLOSE)

LED status feedback

The LED status feedback shows the valve positions and the current status of the actuator. The following table shows the color assignment of the LED:

	Color	Meaning
	Red	OPEN
	Green	CLOSED
	Flashes white	Actuator moves
	Flashes yellow	Error
	Flashes blue	Adjustment mode
	Turquoise	Adjustment run / operation of color inversion

If the plant standard requires an inversion of the color assignment, the customer can adjust this afterwards.

Accessories

Failsafe return unit (only available for non-cUL certified actuators): Battery incorporated into the housing for moving to a safe position in case of power outage (open or closed). Optional available, PCB for use with external 24V DC Power supply.

Order codes

Type	Voltage	Code	Electrical connection
EA15	100-230V AC	198153180	DIN-plug / cable gland
EA15	24V AC/DC	198153181	DIN-plug / cable Gland
EA15 cUL marked*	100-230V AC	198153200	Cable gland only
EA15 cUL marked*	24V AC/DC	198153201	Cable gland only

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