

# Electric actuator

Bernard EZ, electrical  
AT 3902

AT 3902 (1000-10000 Nm)

## Internet\_Variants

### Range of application

Weather-proof actuator for On/Off maneuvering or positioning of ball valves butterfly or where a 90° rotation is needed. Torque 1000 to 10 000 Nm.

### UEC.11 Actuator for valve , electric, two-position without spring return

Actuator Bernard Electrical AT 3900 for 90° maneuvering of ball valves, butterfly and where a 90° rotation is needed.

### Quality assurance

#### CE-Marking

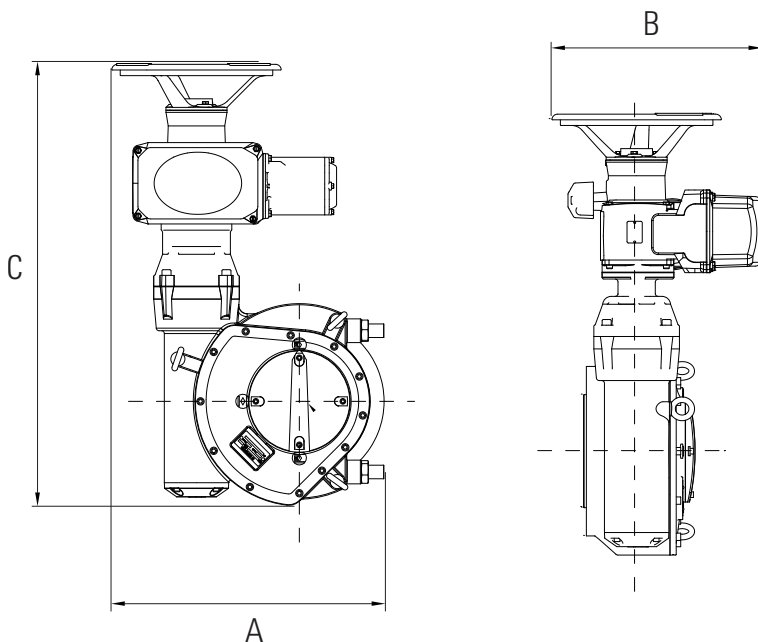
EC Directives 2004/108/EC, 2006/95/EC and complies with EN 61000-6-4, EN 61000-6-2, EN 60034-1 and EN 60529.

IP 67 rated .



## Material Specification

	Detail	Material	Surface treatment
1	Body	Aluminium	Epoxy painted RAL 2010
2	Cover	Aluminium	Epoxy painted RAL 2010
3	Drive shaft	Steel	



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## Dimension and weight

Actuator/ Fig no	Max stem square	A	B	C	Weight
3902-100	36	425	364	521	47
3902-250	46	462	364	664	64
3902-400	50	462	364	664	67
3902-1000	55	482	369	780	92

Dimension in mm, weight in kg.

## Function and design

### Standard version

Reversible actuator in two sizes, for 0-90° movement, adjustable through a combination of cams, mechanical end stop and/or torque switch.

The actuator is a compact combination of an electric motor with thermal protection and a self-locking worm gear. As standard with a hand wheel and position indicator.

The actuator mounting dimensions in relation to the fittings are according to ISO 5211.

Design lifetime 10 000 cycles for On/Off or 200 000 starts for positioning. Tested according to EN 15714-2 class A and B

## Standard performance

Standardutförande	
Motor duty	S4-25% ED. 360 starter/h max
Enclosures	IP67
Temperature	-20°C to +60°C
Anti condensation heater	Yes
Thermal overload protection	Thermostat
Permanently lubricated gear	Gear
Cable entries	2 st.M20x1,5
End switches	250V, max 16A
Torque switches	Yes
Terminal block	8 connections

## Technical data

Actuator 3902 on/off	Torque Nm		Operating time (50 Hz) s	ISO-connection	230 V AC 50 Hz Ampere			400 V AC 50 Hz Ampere		
	Start	Stop			Start	Stop	kW	Start	Stop	kW
100	1000	1000	30	F12	3,5	2,5	0,2	1,2	0,6	0,1
250	2500	2500	70	F16	9,0	4,0	0,4	1,2	0,6	0,1
400	4000	4000	125	F16	9,0	4,0	0,4	1,2	0,6	0,1
1000	1000	1000	210	F25	11	3,5	0,4	2,8	0,7	0,14

Rätten till ändringar utan förregående meddelande förbehålls.  
Armatec ansvarar inte för eventuella tryckfel eller misstänksänd.  
Dokumentet får kopieras endast i sin helhet.

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## Technical data

Actuator 3902 for positioning	Torque Nm		Operating time (50 Hz) s	ISO-connection	230 V AC 50 Hz Ampere		
	Start	Stop			Start	Stop	kW
100	1000	500	30	F12	3,5	2,5	0,2
250	2500	1200	70	F16	9,0	4,0	0,4
400	4000	2000	125	F16	9,0	4,0	0,4
1000	-	-	-	-	-	-	-

## Dimensioning

Actuator			3902-100	3902-250	3902-400	3902-1000
Valve type	$\Delta p$ , bar					
Butterfly valve AT 2310-2319	10	DN	400-450	500-700	800-900	900-1200
Butterfly valve AT 3580-3585	16	DN		250-300		
Ball valve AT 3590, 3591	25	DN		150-200	250-300	300-400

## Accessories and options

For On/off

Potentiometer or 4-20 mA transmitter (TAM) for positioning feed-back.

Mounting kits and stem extension.

For positioning

Precision is better than 2%, adjustment of dead band with a potentiometer.

Configurable input signal, 4-20 mA, 0-20 mA or 0-10 V.

Output is same as input.

2 SPDT contacts, 250 VAC-16A / 48 VDC-2, 5A.

3 LED lights; Green (open), red (close), yellow (torque switch or thermal heating activated)

Mounting kit and stem extension.

## Installation

**During all work with the actuator the power MUST be disconnected.**

- The actuator must be connected as per the wiring diagram.
- Each actuator must be powered by an individual switch or relay contact, minimum 16A, to prevent cross-feed between the actuators.
- At outdoor installation, the actuator should be protected by a roof or cap.
- Installation with the motor downwards should be avoided.
- Turn the valve with the control unit's hand wheel to centre position. See indication on top of the device.
- Always connect the heater.
- Check that the actuator turns the valve in the desired direction.
- The correct limit switch (open or closed) shall break the motor current.
- Cable entries must comply at least to the lowest protection class of devices.

See the separate sheet for start-up, storage and maintenance.

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## Marking

Article number, manufacturer, serial number, voltage and current.  
Wiring diagram is placed by the motor at delivery.

## How to order

Example: 3902-250-8B3A					
AT3902	-250*	12**	E***	4****	A*****
Fig. no.	Size	Operating time	Connection	Voltage	Options
Example: 3902-250-12E3C (Positioning with 4-20mA or 0-10V Control signal)					
* 100, 250, 400 or 1000 depending on needed torque					
** 8=30 s, 12=70 s, 15=125 s, 18=210 s					
*** C=F12, D=F14, E=F16, F=F25					
**** 3=230 VAC, 4=400 VAC					
***** A=On/Off, B= On/off Logic, C=Positioning D=, E=1000 ohm POT, I=TAM					