

# Electric actuator

Bernard EZ, electrical  
AT 3900

AT 3900 (45-150 Nm)

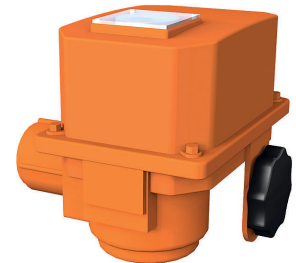
## Internet\_Variants

### Range of application

Weather-proof actuator for on-off maneuvering or positioning of ball valves, butterfly or where a 90° rotation is needed. Torque 45-150 Nm.

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

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



### Quality assurance

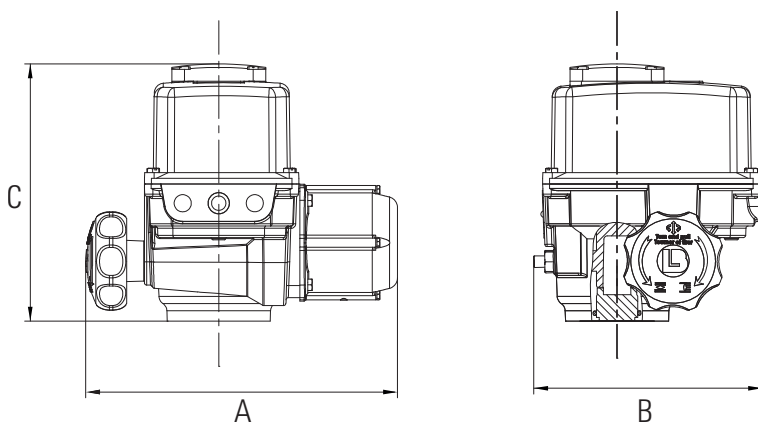
#### CE-Marking

EC Directives 2004/108/EC, 2006 /95/EC and fulfills the 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	Aluminum	Epoxy painted RAL 2010
2	Cover	Aluminum	Epoxy painted RAL 2010
3	Drive shaft	Massive steel	Untreated



### Dimension and weight

Actuator/Fig. no	Standard drive	A	B	C	Weight
3900-4	14*	273	200	225	6
3900-6	14*	319	200	225	7
3900-10	19*	362	200	225	7
3900-15	19*	362	200	225	7

Dimension in mm, weight in kg. \*Possible to get in different sizes.

### Function and design

#### Standard version

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

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The actuator is a compact combination of an electric motor with thermal overload protection and self-locking, permanently lubricated worm gear. Standard with manual emergency operation and position indicator.

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

Design lifetime 20 000 cycles for on/off or 300 000 starts for positioning. Tested according to EN 15714-2 class A and B

## Standard performance

Standard performance	
Motor duty	S4-25% ED. 360 starts/h max
Enclosures	IP67
Temperature	-20°C to +60°C
Anti condensation heater	Yes
Overload protection	Thermostats
Permanently lubricated gear	Yes
Cable entries	2 pcs.M20x1,5 for On/Off, 3 pcs for regulating
End position switches	250V, max 16A
Torque	-
Terminal block	8 connections

## Technical data

Actuator 3900 on/off	Torque Nm			ISO-Connection	230 V AC 50 Hz Ampere			400 V AC 50 Hz Ampere			24 V DC
	Start	Stop	Operating time s/90		Start	Stop	Kw	Start	Stop	Kw	Operating time
4	45	45	6	F05/07	0,5	0,4	0,02	-	-	-	-
6	60	60	6	F05/07	0,9	0,6	0,03	0,5	0,3	0,03	6
10	100	100	6	F05/07	1,7	1,2	0,06	1,1	0,6	0,10	-
10	100	100	35	F05/07	0,9	0,6	0,03	0,5	0,3	0,03	35
15	150	150	25	F05/07	0,9	0,6	0,03	0,5	0,3	0,03	15

## Technical data

Actuator 3900 for positioning	Torque Nm			Operating time (50 Hz) s	ISO-connection	230 V AC 50 Hz Ampere		
	Start	Stop	Operating time s/90			Start	Stop	Kw
10	100	50	35	F05/07	0,6	0,5	0,02	
15	150	75	25	F05/07	0,9	0,6	0,03	

## Dimensioning

Actuator	3900-4		3900-6		3900-10		3900-15	
Valve type	$\Delta p$ , bar							
Ball valve 3 piece AT3502-3552	25	DN	8-40	50	65	80		
Ball valve flanged AT3580-3585	16	DN	15-40	50	65-80	100		
Butterfly valve AT2310-2319	10	DN	50-100	125	150			
Butterfly valve	10	DN	32-80	100			125	

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

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## Accessories and options

On/off is available in two different variants

1. The basic version with electromechanical circuit breaker. A feedback signal (4-20mA) is possible with accessories POT and TAM.
2. With LCD display and push buttons, this includes control with either 4-20 mA or 0-10 V.

For regulatory

- Precision is better than 2%, adjusting the dead band with potentiometer.
- Configurable input, 4-20 mA, 0-20 mA or 0-10 V.
- Output signal is same as input.
- 3 LED lights; Green (open), red (closed), yellow (torque switch or overheating enabled).
- 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, see the manual.
- 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 manual for start-up, storage and maintenance.

## Marking

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

## How to order

Example: 3900-4-3A3A					
AT3900	-4*	3**	A***	3****	A*****
Fig. no.	Size	Operating time	Connection	Voltage	Options
Example: 3900-4-3A3C (Positioning qith 4-20mA or 0-10V signal)					
* 4, 6, 10 or 15 depending on needed torque					
** 3=6 s, 7=25 s, 9=35s, see <b>Technical data</b> for possible time					
*** A=F05/07					
**** 0=24 VDC, 3=230 VAC, 4=3-phase 400 VAC (Size 4 is not available as 400 VAC or 24 VDC)					
***** A=On/Off, B= On/off Logic, C=Positioning D=, E=1000 ohm POT, I=TAM					