

Internet_Variants

Range of application

Weather-proof actuator for on-off actuation or control of ball valves, butterfly or where a 90° rotation is required. Torque 15, 30 or 70 Nm.

UEC.11 Valve actuator, electric, two-position without spring return

Actuator Bernard Electrical AT 3940 for 90°. Maneuvering of ball-, butterfly- or where a 90° rotation is required.



Quality assurance

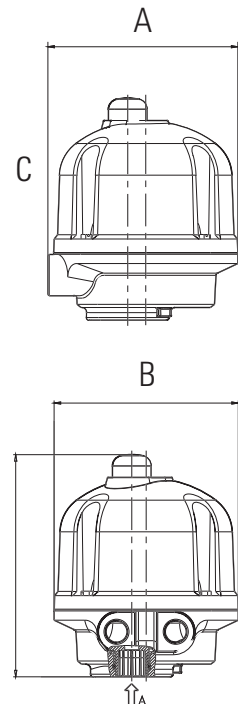
CE-Marking

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 68 rated.

Material specification

	Detail	Material	Surface treatment
1	Body	Aluminum	
2	Cope	Aluminum	Epoxy-painted RAL 1014, C3 acc. to ISO 12944
3	Drive shaft	Solid steel	<u>Untreated</u>



Dimension and weight

Actuator/Fig. no	Standard drive shaft	A	B	C	Weight
3940-1	14x14, 11x11, 9x9	150	145	175	2,5
3940-3	14x14, 11x11, 9x9	150	145	175	2,5
3940-7	22x22, 17x17, 14x14, 11x11	150	145	175	3,5

Dimension in mm, weight in kg.

Function and design

Standard version

Reversible actuator in four sizes, for 0-90° rotation, adjustable through a combi-

nation of cams, mechanical end stop and/or torque switch.

The acuator is a compact combination of an electric motor with a 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 modulating (positioning). Tested according to EN 15714-2 class A and B

Standard performance

Standard performance	
Motor duty	S4-30% ED. 120 starter/h max
Enclosures	IP68
Temperature	-20°C to +60°C
Anti condensation heater	Yes
Overload protection	Thermostats
Permanently lubricated gear	Gear
Cable entries	2 st.M20x1,5
End position switches	250VAC-5A, / 48VDC-2, 5A
Torque	No

Technical data

Actuator 3940	Torque Nm	Operating time (s)	ISO-Connection	Drive shaft	230 VAC 50 Hz		24VDC			
					Start (A)	Stop (A)	k W	Start (A)	Stop (A)	k W
			ISO5211	Square in mm						
1	15	45	13	F03/04/05	14, 11, 9	0,4	0,02	0,8	0,3	0,02
3	30	60	15	F03/04/05	14, 11, 9	0,6	0,03	0,8	0,3	0,02
7	70	100	15	F05/07	22, 17, 14, 11	1,2	0,06	1	0,4	0,02

Dimensioning

Acuator		3940-1	3940-3	3940-7
Valve type	Δp , bar			
Ball valve 3-piece AT3502-3552	25	DN 10-25	32-40	50
Ball valve AT3533S/3534S	25	DN 15-25	32-40	50-80
Ball valve flanged AT3582-3585	16	DN 15-20	25-40	50-65
Butterfly valve AT2310-2319	16	DN		50-150

Accessories and options

AT3940 is available in three different variants

1. On/off with electromechanical circuit breaker.
2. On/off with a feedback signal 4-20 mA.
3. Regulating with control signal 4-20 mA in and out.

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.
- 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 then 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

AT3940	-1, 3, 7*	- POS or PT*	* * * * *
<p>Fig. no. Example: 3940-7-POS (Regulating, 70 Nm, with control signal 4-20mA)</p> <p>* 1, 3 or 7 depending on the required torque 15, 30 or 70 Nm</p> <p>* * Options (POS = Positions 4-20mA, PT = Feedback signal 4-20mA)</p>	Size	O p e r a t i o n g t i m e	C o n n e c t i o n