

EA Series Actuators

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- **Two Position Actuators**
- **Spring Return Model EA12**
- **Non Spring Return Model EA31**



Introduction

Both gear driven crank shaft, and hydraulic powered axial shaft actuators are available from Barber-Colman. The hardened steel crank shaft is driven through a train of precision hobbed gears; the axial shaft actuator utilizes a hydraulic gear pump. Each actuator is driven by a Barber-Colman shaded pole motor that is completely submerged in oil and sealed in an aluminum case to assure long life and minimum maintenance. The gear train of the crank actuator is also sealed in oil.

Working in conjunction with proportional primary controllers, these power units are ideal for proportional regulation of valves and dampers.

EA12 & EA31

Model EA12 is a spring return actuator for two position operation of damper, valve or other equipment that requires return to normal position upon power interruption.

EA31 is a non-spring return actuator for two position operation that does not require return to normal position after power interruption. The following models are CSA approved:

EA12-00000-000-0-00

EA31-00000-000-0-00

Ordering Information

MODEL **E** **A** - **0** **0** - **0** **0** **0** - **0** - **0** **0**
 Field No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Fields 1, 2. MODEL SERIES

Fields 3, 4. BASE MODEL

	Travel Limit	Time (Seconds)	Torque (Lb./in.)
12 - 170°		20	60
31 - 180°		30	220

Fields 5, 6. RESERVED

Fields 7, 8. OPTIONS

- 00 - None
- 01 - Two auxiliary SPDT switches (EA31 only)
- 02 - Four auxiliary SPDT switches (EA31 only)
- 08 - One auxiliary SPDT switch (EA12 only)

Field 9. MOTOR VOLTAGE/FREQUENCY

- 0 - 120 Vdc/60 Hz
- 3 - 240 Vdc/60 Hz
- 5 - 24 Vdc/60 Hz

Fields 10 through 15. RESERVED

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EA12 Specifications

Control Action:	Two wire.
Connections:	Coded screw terminals.
Input (Watts):	70 running, 25 holding.
Shaft Rotation:	Clockwise 170° when power is applied.
Rated Torque:	60 lb/in (6.8 N-m).
No Load Timing @ 75°F (24°C):	20 (spring return timing with full load opposing spring approximately 60 seconds).
Auxiliary Switch:	2 FLA (full load amps), 12 LRA (locked rotor amps) @ 240/120 Vac; 1 FLA, 6 LRA @ 240 Vac. SPDT makes or breaks circuit at powered end of stroke.
Spring Return:	Counter clockwise to original position when de-energized.
Ambient Temperature Limits:	-40 to 136°F (-40 to 58°C).
Humidity:	5 to 95% rh, non-condensing.
Case:	Die cast aluminum with two 1/2" conduit openings.
Mounting:	Output shaft horizontal. Allow 6" (152 mm) clearance above wiring compartment.
Dimensions:	5-3/4" H x 5-3/8" W x 6-9/16" D (146 mm x 137 mm x 167 mm).

EA31 Specifications

Control Action:	Three wire, SPDT snap acting switch provided by thermostat, pressure switch or relay.
Connections:	Coded screw terminals.
Shaft Rotation:	Unidirectional clockwise 180°.
Auxiliary Switch:	Adjustable SPDT is standard. Factory set to make or break at mid stroke.
Ambient Temperature Limits:	-40 to 136°F (-40 to 58°C)
Humidity:	5 to 95% rh, non-condensing.
Case:	Die cast aluminum with two 1/2" conduit knockouts on each side.
Mounting:	Damper – any position. Valve – upright with actuator above centerline of valve body. Allow 6" (152 mm) clearance above wiring compartment.
Dimensions:	7" H x 5-3/8" W x 6-5/16" D (178 mm x 137 mm x 160 mm).