

# Electric Actuators



Karl Dungs Inc. Actuators are designed to operate dampers, butterfly valves and similar devices. Models are available for a variety of torques from 16 in. lb. to 450 in. lb. and control methods including two-position, position proportioning with slide-wire feedback, potentiometer proportioning and current-to-position proportioning.

All models are UL listed and CSA Certified.



EMA-4..

## EMA-...

- Two position, spring return.

90° & 180° Clockwise rotation when power is applied, actuator returns counter-clockwise to 0° on power interruption.



EMP-4..-1

## EMP-...

- 4..-1 Position Proportioning 100 Ohm Slidewire Feedback.

90° (180° optional with 180° slidewire kit). Rotation when power is applied.



EMP-4..-2

- 4..-2 Potentiometer Slaved Proportioning, 100-1000 Ohm, Slidewire Feedback

90° (180° optional with 180° slidewire kit). Rotation when power is applied.

- 4..-5 Proportioning, 4-20 mA Input; NEMA Type 4

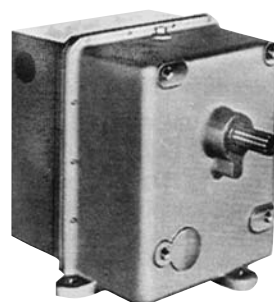
90° (180° optional with 180° slidewire kit). Clockwise rotation (reversible) when power is applied.



EMP-4..-5

- -9... Position Proportioning 100 Ohm Slidewire Feedback.

90° (180° optional with 180° slidewire kit). Rotation when power is applied. Optional 4-20 mA Input with CP 8391-703 (part # 43118-4)



EMP-9...

# Electric Actuators



| Model  | Part No. | Voltage             | Stroke | Timing (sec.) | Torque | Electrical | Includes        |           | Ambient Temp (F) |      |
|--|----------|---------------------|--------|---------------|--------|------------|-----------------|-----------|------------------|------|
|  |          |                     |        |               |        | Amps       | Aux. Switch (3) | Crank Arm | Min.             | Max. |
| <b>Two Position</b>  |          |                     |        |               |        |            |                 |           |                  |      |
| EMA-405-0-0-1  | 43117    | 110-120 VAC @ 60 Hz | 180    | 20            | 16     | 0.40       | No              | Yes       | -40              | +135 |
| EMA-405-1-0-1  | 43117-1  | 110-120 VAC @ 60 Hz | 90     | 10            | 16     | 0.40       | No              | Yes       | -40              | +135 |
| EMA-418  | 43119    | 110-120 VAC @ 60 Hz | 180    | 20            | 60     | 0.90       | No              | Yes       | -40              | +135 |
| EMA-418-2  | 43119-1  | 110-120 VAC @ 60 Hz | 90     | 10            | 60     | 0.90       | No              | Yes       | -40              | +135 |
| <b>Position proportioning with 100 Ohm slidewire feedback</b>                    |          |                     |        |               |        |            |                 |           |                  |      |
| EMP-423-1 (1)  | 43158    | 110-120 VAC @ 60 Hz | 90     | 12            | 60     | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-424-1 (1)  | 43032    | 110-120 VAC @ 60 Hz | 90     | 12 (2)        | 60     | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-453-1 (1)  | 43033    | 110-120 VAC @ 60 Hz | 90     | 40            | 220    | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-454-1 (1)  | 43087    | 110-120 VAC @ 60 Hz | 90     | 40 (2)        | 220    | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-9430   | 43211    | 110-120 VAC @ 60 Hz | 90     | 20            | 550    | 1.80       | Yes             | No (4)    | -40              | +130 |
| EMP-9630   | 43215    | 110-120 VAC @ 60 Hz | 90     | 33            | 1100   | 1.80       | Yes             | No (4)    | -40              | +130 |
| EMP-9830   | 43201    | 110-120 VAC @ 60 Hz | 90     | 57            | 1300   | 1.80       | Yes             | No (4)    | -40              | +130 |
| <b>Potentiometer slaved proportioning with 100 - 1000 Ohm slidewire feedback</b> |          |                     |        |               |        |            |                 |           |                  |      |
| EMP-423-2  | 43158-2  | 110-120 VAC @ 60 Hz | 90     | 12            | 60     | 0.65       | Yes             | Yes       | -30              | +135 |
| EMP-424-2  | 43032-2  | 110-120 VAC @ 60 Hz | 90     | 12 (2)        | 60     | 0.65       | Yes             | Yes       | -30              | +135 |
| EMP-453-2  | 43033-2  | 110-120 VAC @ 60 Hz | 90     | 40            | 220    | 0.65       | Yes             | Yes       | -30              | +135 |
| EMP-454-2  | 43087-2  | 110-120 VAC @ 60 Hz | 90     | 40 (2)        | 220    | 0.65       | Yes             | Yes       | -30              | +135 |
| <b>Proportioning, 4-20 mA input</b>  |          |                     |        |               |        |            |                 |           |                  |      |
| EMP-423-5  | 43158-6  | 110-120 VAC @ 60 Hz | 90     | 12            | 60     | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-424-5  | 43032-6  | 110-120 VAC @ 60 Hz | 90     | 12 (2)        | 60     | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-453-5  | 43033-6  | 110-120 VAC @ 60 Hz | 90     | 40            | 220    | 0.65       | Yes             | Yes       | -40              | +135 |
| EMP-454-5  | 43087-6  | 110-120 VAC @ 60 Hz | 90     | 40 (2)        | 220    | 0.65       | Yes             | Yes       | -40              | +135 |

(1) Can be used a two position if internal slidewire is not connected  
 (2) Timing can be increased (slower rotation) up to approximately ten times this rating by turning a slotted adjustment screw located on the outside of the case.  
 (3) SPDT switch may be set to operate at any point in the stroke (Ratings 120 VAC, 5.8 A inductive 12 A non-inductive.)  
 (4) Requires 3/4 crankarm (Part# 43202)  
 Models suitable for 50 Hz available upon special request

| Model  | Dimension in Inches |          |          |            | Shipping Weigh |
|--|---------------------|----------|----------|------------|----------------|
|  | W                   | L        | H        | Shaft Dia. |                |
| EMA-405-0-0-1<br>EMA-405-1-0-1<br>EMA-418<br>EMA-418-2 | 4                   | 5 5/8    | 5 - 3/4  | 1/2        | 8 .lbs         |
| EMP-423-1<br>EMP-424-1<br>EMP-453-1<br>EMP-454-1       | 4                   | 5 - 3/8  | 7        | 1/2        | 8 .lbs         |
| EMP-423-2<br>EMP-424-2<br>EMP-453-2<br>EMP-454-2       | 4*                  | 5 - 3/8  | 7        | 1/2        | 8 .lbs         |
| EMP-423-5<br>EMP-424-5<br>EMP-453-5<br>EMP-454-5       | 4**                 | 5 - 3/8  | 7        | 1/2        | 8 .lbs         |
| EMP-9430<br>EMP-9630<br>EMP-9830                       | 9 - 1/2             | 10 - 1/2 | 9 - 9/16 | 3/4        | 8 .lbs         |

\* For EMP-2 add 1 1/2" to width to accommodate side box  
 \*\* For EMP-5 add 2" to width to accommodate side box

