



## **RE Industrial Electronic Actuator General Specifications**

All industrial electric/electronic actuators used for valve applications and air damper control shall incorporate adjustable current limiting as a means of protecting the actuator for over-torque situations. Actuators shall be available from 150 in-lbs to 10,200 in-lbs with these features.

### **Voltage Offering**

All actuators must be capable of accepting 24 VAC or VDC power and 120 or 220 VAC with the addition of a transformer.

### **Duty Cycle**

All actuators shall be rated for 100% duty cycle regardless of application.

### **Motor Protection**

All actuators shall have adjustable current limiting accurate to 1%. Thermal overloads or torque switches shall not be acceptable. The current limiting feature must activate a light upon exceeding the current limit set to allow for easy field diagnostics. The actuator must also have a separate light that stays latched (ON) until power is reset to provide diagnostics for intermittent over-torque situations. An optional solid-state relay (electrically isolated) rated for a minimum of 130 mA from 9 to 130 VAC or VDC shall be available as an option for critical applications where remote indication of the exceeded current limit is required.

### **Speed Control**

All actuators shall have field adjustable speed control as a standard feature.

### **Operating Temperature - Ambient**

Actuators shall be designed for temperatures ranging from -40°F to 150°F (-40°C to 65°C). For temperatures below 32°F (0°C), outdoor applications, high humidity or wet locations the actuators shall be supplied with an electric heater and thermostat.

### **Signal Range/Acceptance**

For On/Off (two-position) or tri-state control, the actuator shall be capable of accepting a wide signal input range of 9 to 130 VAC or VDC without the need for special add on isolation modules.

### **Signal and Power Isolation**

All actuators shall have optically isolated signal inputs so that power and signal do not have to come from the same source to control the actuator. Signal inputs shall not be polarity sensitive.

### **Braking**

All actuators shall have a solid state braking system, which works with or without power, (rated to 1-1/4 times the torque rating of the actuator). Electro-Mechanical brakes or clutches shall not be acceptable.

### **Manual Override**

All units shall be equipped with a manual override which will allow the actuator to be rotated in the clockwise or counter-clockwise direction. Optional solid cast aluminum override handwheels shall be available. Spoked handwheels shall not be acceptable due to safety issues.

### **Enclosure**

The actuator housing shall be a high strength aluminum casting with an exterior grade polyurethane enamel coating for excellent wear, corrosion, impact and UV resistance. All actuators shall be NEMA 4/4X type minimum. All cover fasteners shall be stainless steel. All actuators shall have a position indicator with the angle of rotation clearly marked. All actuators used in outdoor applications shall have white covers to lessen the solar heat load.



**Mounting**

All actuators shall have interchangeable female output drive shafts to allow for direct mounting and easy mounting for a wide variety of applications.

**Conduit Entry**

All units shall have two conduit entries. One shall be used for signal and one for power.

**Gear Train**

All gearing shall be high strength and heat-treated with permanent lubrication. All cluster gears shall be single piece design. Two gears pressed together to form a single cluster shall not be acceptable.

**Actuators with Modulating Control**

All modulating actuators shall have control circuitry capable of a minimum of 180 points of discrete control in 90 degrees of movement. All internal feedback potentiometers shall be direct mounted to the output shaft. Gear driven potentiometers shall not be acceptable.

**Input Signals**

The actuator shall be capable of accepting 4-20 mA with 250 Ohms impedance, 0-10 VDC or 2-10 VDC signals. Input signal isolation shall be provided to isolate the input signal from the actuator power so that the signal and power can come from different sources, without the need for exterior isolation modules. Modulating circuitry shall come standard with 4-20 mA and 0-10 VDC feedback circuits and not require additional modules.

**Limit Switches**

All limit switches shall be independently activated by adjustable cams, one for each direction. An individual light must be provided for each direction of rotation. A separate limit switch and cam shall be provided for customer use rated for 125/250 VAC 10 Amp, 1/3 H.P.

**Agency Certification**

Entire actuator must be UL508 Listed or certified to CSA C22.2 No. 14-M91. Actuators that only have their motors or individual components recognized are not acceptable.