



# ABZ VALVES & CONTROLS

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## Typical Specifications ABZ ELECTRIC ACTUATORS

### 1. General

The electric actuator shall be quarter-turn output with optional travel angles of 120°, 135°, 180°, and 270°, consisting of a reversible high torque motor, self-locking worm gear drive, end of travel limit switches, declutchable handwheel manual override and adjustable end of travel stops, all in a self-contained unit.

### 2. Sizing

The actuator shall be rated to produce an output torque equal to or greater than the maximum required valve torque, plus safety factor, for the process conditions.

### 3. Ambient Temperature

The actuator shall be suitable for normal operation within an ambient temperature range from -22°F to +158°F (-38°C to +70°C).

### 4. Electric Motor

The actuator motor is to be reversible, high stall torque, totally enclosed squirrel cage containing integral automatic resetting thermal overload protection, expressly constructed for valve actuators. Motor insulation shall be class "F".

### 5. Gear Drive

The actuator shall incorporate the use of a self-locking worm gear drive, eliminating the need for a motor brake or other locking mechanisms. The worm shall be rolled steel and the worm gear shall be aluminum bronze. Power train gearing shall be grease lubricated.

### 6. Limit Switches

Cam operated, adjustable, limit switches shall be provided for each direction of travel. Optionally available auxiliary switches shall be capable of being set for operation at any point of travel. Switches shall be S.P.D.T., snap acting, totally enclosed type.

### 7. Torque Switches

All actuators of 1300 in/lbs (ABZ-15) output torque or larger, shall be equipped with open and close torque switches, which will trip in response to a torque overload condition, in either the opening or closing directions of travel. The torque switches are to function at any point of actuator travel, with no auxiliary bypass switches for motor start up required.

### 8. Manual Operation

The actuator shall be supplied as standard with a declutchable handwheel for manual operation on failure of electric power.

### 9. Mechanical Position Stops

The actuator shall be complete with two integral externally adjustable mechanical stops for end of travel adjustment.

### 10. Position Indication

A position indicator is supplied, visible in the actuator cover, to provide continuous indication of valve position.

### 11. Enclosure

The actuator enclosure shall be of cast aluminum construction. The cover is o-ring sealed and is watertight to IEC IP67, NEMA 4 and 6, and is available with optional explosion proof housing to Exd IIB T4 IP67.

