

# ACTUATORS AND CONTROLS

## AE Series Actuators

### AE SERIES



Ruggedly built and designed for easy installation, new Apollo® AE Series electric actuators deliver the most standard features and performance in their class. **Now CSA listed all sizes as standard.**

#### FIVE OUTPUT TORQUES, ONE HOUSING

- 200, 400, 600, 800 and 1,000 inch-pounds
- Long Service Life
- Anodized die cast aluminum housing
- Fiberglass reinforced nylon cover resists corrosion
- Nitrile gasket and seals cover all penetration points in housing and cover
- Precision cut and heat treated alloy spur gears
- Permanently lubricated enclosed gear train
- NEMA 4, 4X

#### EASY TO USE

- Two separate 1/2" NPT conduit entrances for easier wiring and signal separation
- 12-position pre-wired terminal strip includes standard connections for remote open/closed position indicators; lots of room for wiring options
- Unrestricted mounting orientation
- Built-in thermal overload protection in all AC motor actuators
- Limit switches have an 11 amp rating at 115 VAC
- High visibility valve position indicator standard on all models

#### MANY STANDARD FEATURES

- Stainless steel push-and-turn manual override shaft, position indicator shaft and female output
- ISO 5211 F07 drive output reduces inventory of mounting kits
- 115 AC & 220 AC models feature a 25% duty cycle below 100°F (24AC — 20% duty cycle below 100°F)
- 12 and 24 DC — all DC voltage models provide 100% duty cycle for 1 hour after which DC motor is reduced to 80% duty cycle.
- Reversible rotation

#### BROAD TEMPERATURE RANGE

- Operates from -40°F (when equipped with 15 watt heater and thermostat) to 150°F

#### AVAILABLE OPTIONS

- Actuators can be ordered with one, two or three additional limit switches
- For low temperatures: actuators can be equipped with a thermostatically controlled heater element
- Motor brake is necessary when mounting actuator to a butterfly valve

#### 4-20MA POSITIONER FEATURES (P - OPTION)

##### Advanced Protection Features

- A) Stall Detection - Motor will not burn out from stalling
- B) Fault Signal
  - Fault LED on DHC-100 front panel
- C) Duty Cycle Protection
  - Allows actuators rated for 25% duty, or more, to be safely modulated
  - Activates prior to tripping of thermal overload protector, which prevents long shut down periods due to tripping thermal overload protector; allows the actuator to continue to move to set-point at a 25% duty cycle speed

##### Performance Features

- A) High Resolution ( $\pm 0.1^\circ$ )
  - 450 points of resolution on a 1/4 turn valve
- B) Dynamic Braking
  - Stops motor before changing actuator direction
  - Stops motor before mechanical brake engages, which reduces break wear
- C) Adaptive Control - Designed to maintain high resolution and accuracy by continuously monitoring and compensating for actuator backlash, motor coast, and load changes to eliminate positioner deadband

#### 4-20MA POSITIONER FEATURES (T - OPTION)

- A) High Resolution Feedback Transmitter
  - Provides voltage or mA output that can be set for any range (0 to 10 VDC in 0.0016 V steps or 0 to 20 mA in 0.0031 mA steps)
- B) Auto/Manual Station (Local Control Unit - LCU)
- C) Polarity Detection