### Series 94

# Protek Battery Pack



The Quarter Master Protek Failsafe electric actuator features a rechargeable battery pack a built-in trickle charger, a low battery indicator, and an auxiliary limit switch that is calibrated with the fail position. The battery pack is installed inside of the actuator housing, so a separate enclosure to house the battery in not required.

When power is received from the primary power source, it is directed to the actuator motor and switches for normal cycling of the actuator. When the primary power source is interrupted, the battery pack is then connected to the motor and switches, and powers the actuator to the failsafe position. In this failsafe position, the auxiliary limit switch is tripped, and can be wired to an alarm. Once the primary power source is restored, the battery pack is disconnected and normal operation resumes.

#### **Standard Features**

- Compact design: Rechargeable battery pack is installed inside of actuator housing
- Battery indicator: "Low battery charge" indicator light is installed in one of the conduit entries for visual status of battery charge
- Trickle charger: Standard unit is equipped with built-in, automatic trickle charger to maintain full charge to battery pack
- Remote-local switch: Located inside of housing facilitates start-up and maintenance
- Fail position: Calibrated for fail open or fail close
- Extended duty cycle: 75 percent duty cycle motor
- Gear train: Permanently lubricated
- Enclosure: Weatherproof rated Type 4X
- Corrosion resistant enclosure: Zytel FR50 engineered resin with stainless steel trim
- ISO mounting
- Conduit: one 1/2" FNPT conduit entry
- Position indication: Highly visible position indicator for positive position of valve
- Declutchable manual override: Push down on handle and rotate in appropriate direction
- Manual override to be used ONLY when there is no supply power and no battery power
- Limit switches: Unit is standard with two end of travel limit switches, and one auxiliary limit switch that is calibrated with the fail position
- Corrosion resistant mounting: Mounting is with PPG bracket, stainless steel coupling, and stainless steel fasteners
- Output torque: Series 94 actuators have an output torque range from 150 in/lbs. to 300 in/lbs.

#### **Engineering Specifications**

Size: A94, B94

Torque: 150 in./lbs. - 300 in./lbs. Voltage: 120 VAC, 1-phase, 50/60Hz

Amp Draw: 0.2A – 4.0A depending on supply voltage Conduit Entry: one 1/2" FNPT

Maximum Ambient Temperature: 150° F

Switches: three SPDT, 11 Amp rated. two for end of travel, one auxiliary calibrated with fail position.

Cycle Time per 90 degree: 5 seconds.

### **Options**

- Voltages
- Heater and thermostat
- Feedback potentiometer

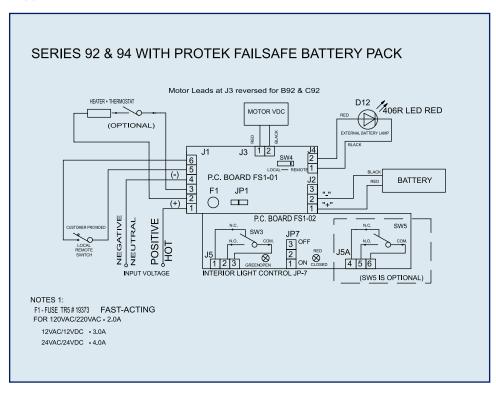
<sup>\*</sup>Cycle times are approximate

## Protek Battery Pack

### Cycle Time and Wiring Diagram

| Size | 120<br>VAC  |               | 230<br>VAC  |               | 24<br>VAC   |               | 12<br>VAC   |               | 24<br>VCC   |               | 12<br>VDC   |               | Cycle Time<br>90° |
|------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------------|
|      | Amp<br>Draw | Duty<br>Cycle | (SEC)             |
| A94  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 5                 |
| B94  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 5                 |
| S92  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 15                |
| A92  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 15                |
| B92  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 25                |
| C92  | 0.4         | 75%           | 0.2         | 75%           | 4.0         | 75%           | 2.0         | 75%           | 3.3         | 75%           | 2.0         | 75%           | 25                |

<sup>\*</sup>Cycle times are approximate.



With constant power to terminal #'s 1 & 4 (J1) and the dry contact switch is made, the valve will open. When the dry contact switch is not made, the valve will close. This task is completed via the supply power and does not affect the battery pack. When the supply power is interrupted, the valve will travel via battery pack power to its predetermined fail position.