



UL-508
Listed

Series 94 Electric Actuators

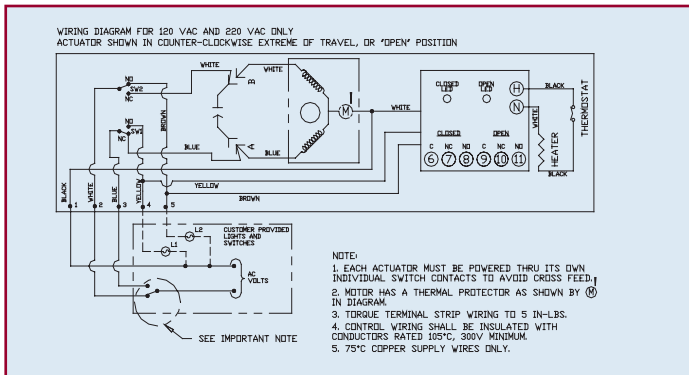
Standard Features (Sizes 1-1/2" - 4")

- Brushless, capacitor-run motors (AC models)
- Integral thermal overload protection with auto-reset (AC models)
- Permanently lubricated gear train
- High duty cycle motor for high cycle applications
- Corrosion-proof/weatherproof rated Type 4X engineered resin housing with stainless steel trim
- ISO mounting
- Two 1/2" NPT conduit ports prevent interference between control and power signals
- Compact design
- Declutchable manual override
- Standard travel stop limit switches can simultaneously be used for indicator lights
- Visible position indicator
- Captivated SS hex head slotted cover screws

Options

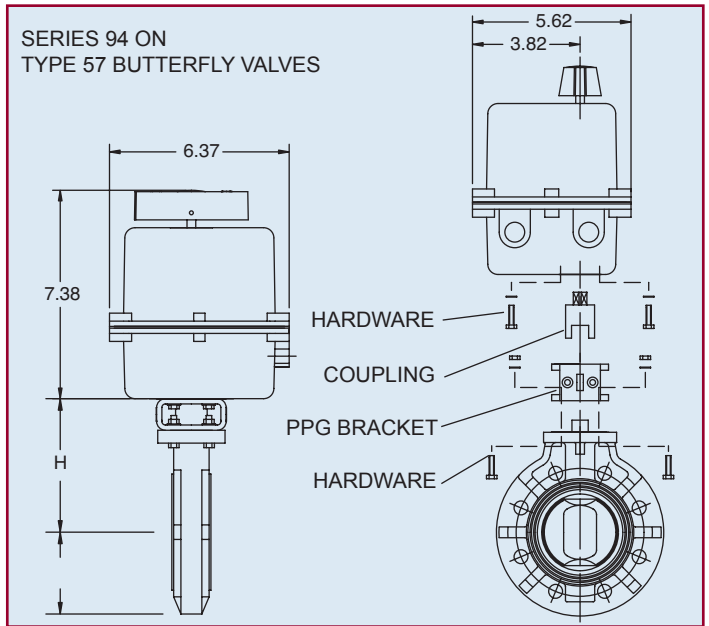
- Fail safe battery pack
- Extra limit switches
- Heater and thermostat (to -40° F)
- RHM module (consists of 2-SPDT 8A relays/dry contacts) and heater and thermostat] (see page 73)
- Feedback potentiometer
- Positioner: 4-20 mA or 0-10 VDC input
- 4-20 mA output position transmitter
- Voltages: 220 VAC, 24 VAC, 12 VAC, 24 VDC, 12 VDC
- Mechanical brake eliminates seating oscillation

AC Wiring (For 120 VAC and 220 VAC only)



Specifications

Motor Type: Reversing, 1/4 turn, single phase
Sizes: A94, B94 for sizes 1/2" - 3" butterfly valves
Torque: 150 to 300 in-lbs.
Voltage: 120 VAC, 50/60 Hz
Amp Draw: For A94: .50 Amps
 For B94: .80 Amps
Max Ambient Temp: 150° F
Switches: Two single pole, double throw (15 Amp rating)



Engineering Data

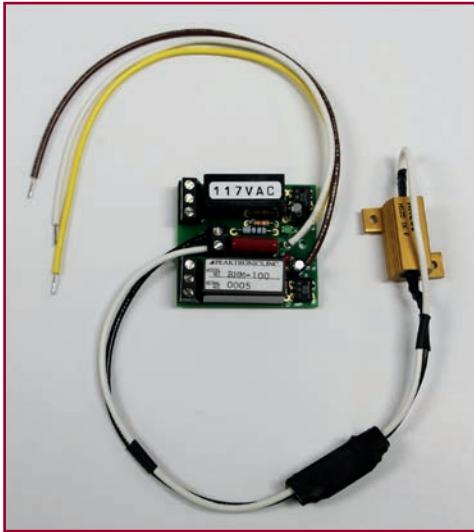
Actuator Model	Torque (in-lbs.)	Duty Cycle	Cycle Time* (sec)	Weight (lbs.)	Amp Draw					
					120 VAC	220 VAC	24 VAC	12 VAC	24 VDC	12 VDC
A94	150	100	5	3.5	0.5	0.4	4.0	2.0	4.0	2.0
B94	300	75	5	3.5	0.8	0.6	4.0	2.0	4.0	2.0

*Cycle times are approximate.
 Duty cycle shown for ambient temperature. (73° F)

Dimensions (in.)

NOMINAL SIZE		MODEL	H	H1
INCHES	mm			
1-1/2	40	A94	5.51	2.95
2	50	A94	5.75	3.27
2-1/2	65	B94	6.18	3.66
3	80	B94	6.46	3.94
4	100	B94	7.16	4.53

- NOTE TO WIRING DIAGRAM:**
1. EACH ACTUATOR MUST BE POWERED THROUGH ITS OWN INDIVIDUAL SWITCH CONTACTS TO AVOID CROSS FEED.
 2. WIRING AS SHOWN IS FOR A94 AND B94 MODELS.
 3. MOTOR HAS A THERMAL PROTECTOR AS SHOWN BY (M) IN DIAGRAM. (120 AND 220 VAC MODEL).
 4. IF 120 & 220 VAC MODELS ARE PLC DRIVEN, OUTPUT CONTACTS OF PLC SHOULD BE RATED AT A MINIMUM OF 1.5 TIMES REQUIRED INPUT VOLTAGE OF ACTUATOR.



Specifications

Standard Operating Voltage: 120Vac
 Optional Voltages: 220Vac, 12Vac, 24Vac,
 12Vdc, 24Vdc
 Operating Current: 42mA @ 120Vac
 39mA @ 220Vac
 89mA @ 12Vac
 43mA @ 24Vac
 37mA @ 12Vdc
 23mA @ 24Vdc

Relay Outputs (Form C): 8A
 Operating Temperature: -40 to 85 C

Approved for UL508 & UL1203 Actuators

Series 92/Series 94 Optional RHM (Relay Heater Module)

The RHM (Relay Heater Module) is a means of powering an optional heater and thermostat without requiring an additional constant power source or wiring. These modules also provide open and close Form C dry contacts that replace auxiliary switches. A 2-pin terminal block provides wiring connection of the heater and thermostat, while two 3-pin terminal blocks provide easy connection to the relays by the user.

When the actuator is powered to open, the motor runs until the open limit switch is tripped, then sends power to the RHM open connection. At that time power is provided to the heater and thermostat, the open relay coil, and to the on board red LED. This provides contact closure at the end of the open cycle and confirms that power is provided to the heater and thermostat.

When the actuator is powered to close, the motor runs until the close limit switch is tripped, then sends power to the RHM close connection. At that time power is provided to the heater and thermostat, the close relay coil, and to the on board green LED. This provides contact closure at the end of the close cycle and confirms that power is provided to the heater and thermostat.

*Power must be maintained at the end of travel for power to be applied to Heater and Thermostat. Also note that no power is provided to Heater and Thermostat when the actuator is in mid travel.

AC Wiring (For 120 VAC and 220 VAC only)

