



Instructions For Installation, Operation and Maintenance RCE Electric Actuators with Engineered Resin Housing

Instruction Sheet No. RCE - M2

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Description

Remote Control Series RCE reversing electric actuators feature capacitor run motors and permanently lubricated gear train. Standard units can provide up to 300 in. - lbs of output torque.

The Series RCE models feature Nema-4X, enclosure as a standard and is available in 115VAC, 220VAC, 12VDC, 24VDC, 12VAC, 24VAC voltages.

Standard models are equipped with integral thermal overload protection (AC models) with automatic reset, independently adjustable limit switches and declutchable manual override with position indication, Zytel FR-50 glass reinforced housing with stainless steel trim and ISO bolt circle.

Installation

- A. To gain access to terminal strip it is necessary to remove manual override handle (Part #34) by loosening slotted set screw (Part #35). Remove 2 cover screws, the remaining 6 cover screws are packaged inside the actuator.
- B. Install conduit fitting (1/2" NPT) to actuator base.
Note: Proper conduit fitting must be used to maintain enclosure rating (weatherproof) Nema 4X.
- C. Make electrical connections to terminal strip as shown on wiring schematic located inside the cover (per various electrical codes there is a green screw on the actuator base plate for grounding purposes). All units are completely calibrated prior to shipment. No internal adjustments should be required.
- D. Replace actuator cover, and gasket if removed. Install 8 cap screws supplied and tighten securely. Unit is now ready for operation.

E. Manual Override Operation

(Part #34) push down on override handle and rotate within labeled limits as indicated by arrows.

To re-engage simply rotate actuator shaft until handle moves up and re-engages.

Setting Limit Switches

Open Travel Limit Switch (Top Switch Part #14) using declutchable manual override, move the valve into a full open position, loosen set screws on top cam (Part #21) and rotate cam into limit switch arm until a click is heard, this designates the switch circuit has opened and defines a full open position. Tighten 2 set screws (Part #22) on cam.

Closed Limit Switch (Bottom Switch Part #14) using declutchable manual override, move the valve to a full closed position, loosen set screws on bottom cam (Part #21) and rotate cam into limit switch arm until a click is heard, this designates the switch circuit has opened and defines a full closed position. Tighten 2 set screws (Part #22) on cam.

Maintenance

The Series RCE are manufactured with factory lubricated grease, in the gear case. In most cases, this lubricant should never have to be replenished, however if deemed necessary, please consult the factory.

CAUTION: Before any maintenance is performed and to prevent ignition of hazardous atmospheres, and reduce the chance of electrical shock, NEVER remove actuator cover while circuits are live.

Spare Parts

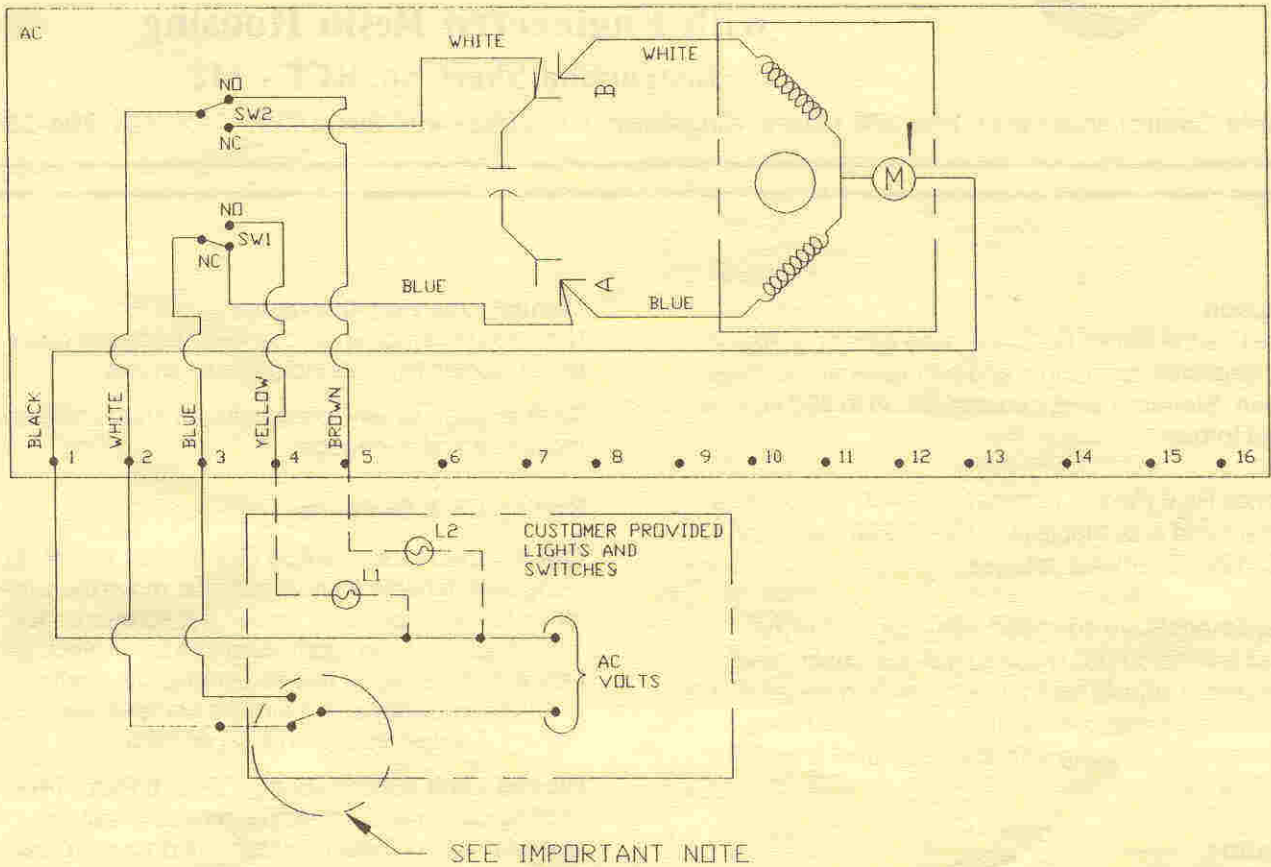
The following should be kept on hand as spare parts.

- 1 Limit Switch (Part #24)
- 1 Capacitor (Part #13A or #13B)

Please specify model and voltage when ordering.

Wiring Diagram for 115 VAC and 220 VAC Only

ACTUATOR SHOWN IN COUNTER-CLOCKWISE EXTREME OF TRAVEL, OR "OPEN" POSITION.



Notes:

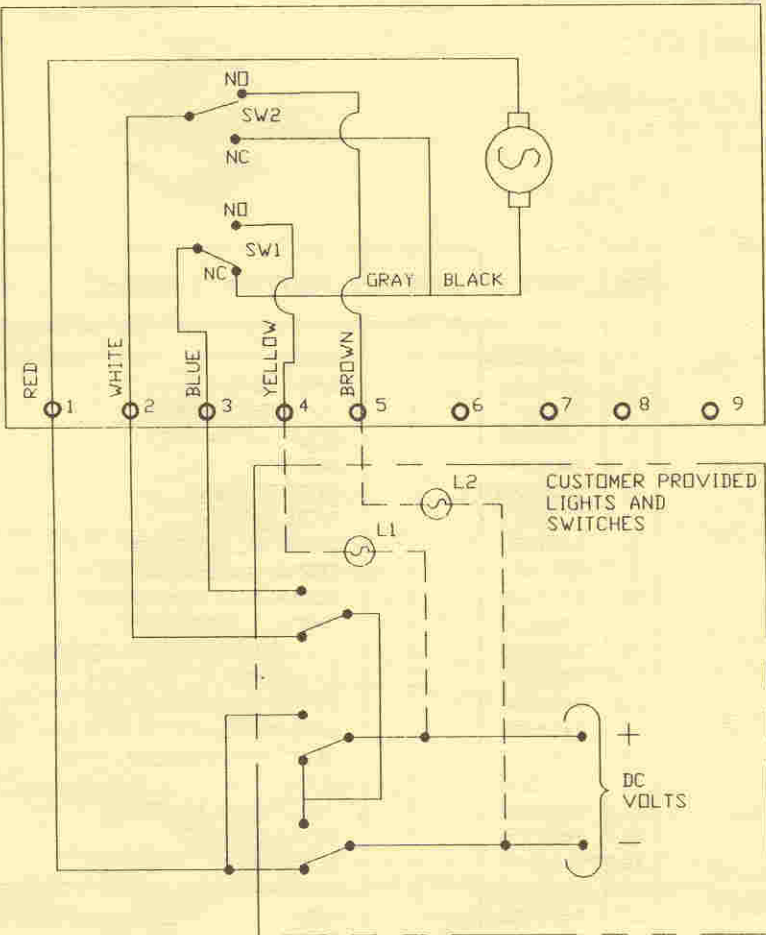
1. EACH ACTUATOR MUST BE POWERED THRU ITS OWN INDIVIDUAL SWITCH CONTACTS TO AVOID CROSS FEED.
2. MOTOR HAS A THERMAL PROTECTOR AS SHOWN BY (M) IN DIAGRAM.

Electrical Requirements

MODEL	TORQUE IN-LBS	115 VAC		220 VAC		12VDC		24 VDC		12 VAC		24 VAC		CYCLE TIME/90° (SEC)	WEIGHT LBS
		AMP DRAW	DUTY CYCLE	AMP DRAW	DUTY CYCLE	AMP DRAW	DUTY CYCLE	AMP DRAW	DUTY CYCLE	AMP DRAW	DUTY CYCLE	AMP DRAW	DUTY CYCLE		
RCE-15	150	1.3	75%	.8	75%	2.0	75%	4.0	75%	2.0	75%	4.0	75%	5.0	3.5
RCE-30	300	1.3	75%	.8	75%	2.0	75%	4.0	75%	2.0	75%	4.0	75%	5.0	3.5

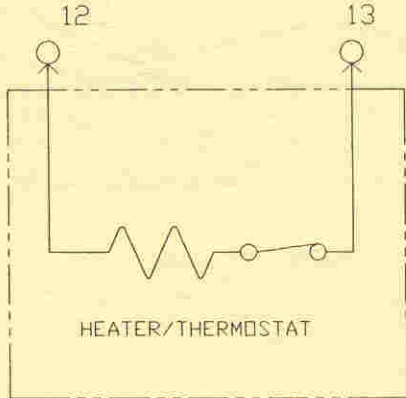
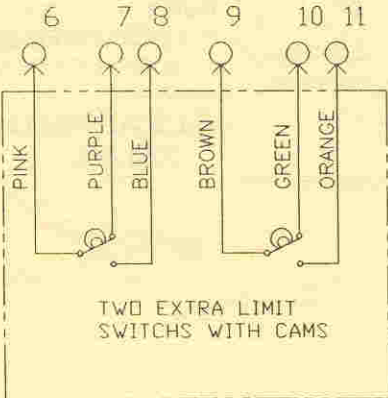
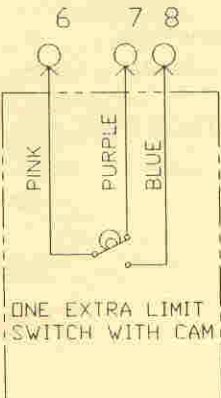
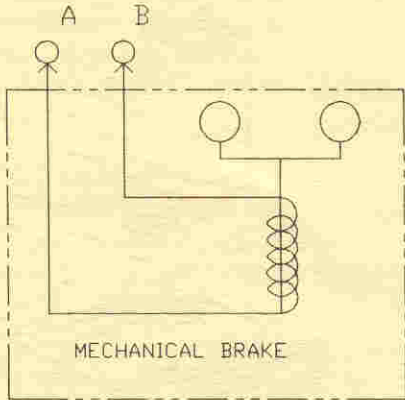
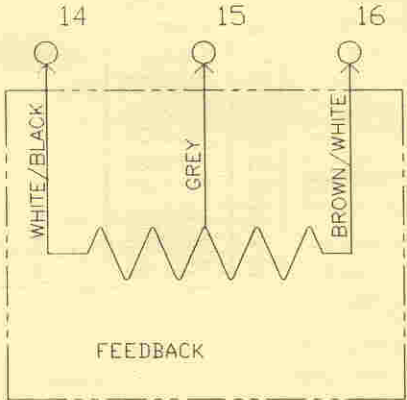
DC Wiring

ACTUATOR SHOWN IN COUNTER-CLOCKWISE EXTREME OF TRAVEL, OR "OPEN" POSITION.

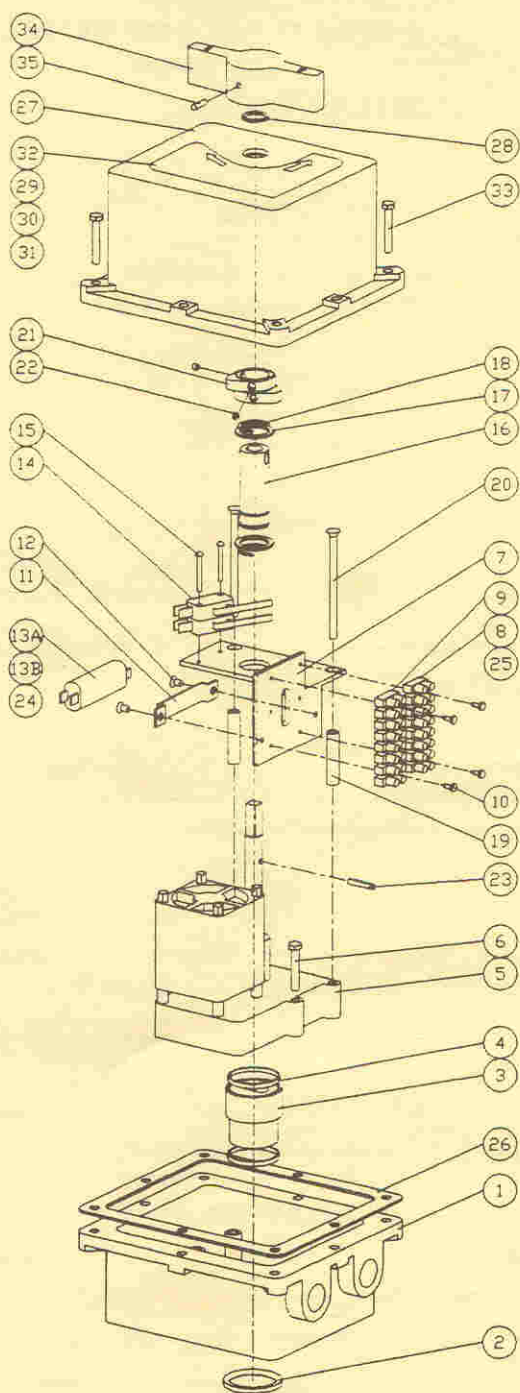


1 2 3
 - + - = OPEN
 + - - = CLOSE

Optional Wiring



Parts List & Materials of Construction



ITEM	PART #.	QTY	DESCRIPTION
1	7403002	1	BASE
2	7403000	1	BASE SEAL
3	7403017	1	OUTPUT COUPLING
4	7403005	2	COUPLING GASKET
5	7403004	1	MOTOR
6	7403022	2	MOTOR SCREW
7	7403011	1	BASE PLATE
8	7401420	1	TERMINAL BLOCK 1-8
9	7401425	1	TERMINAL BLOCK 9-16
10	7401600	4	TERMINAL BLOCK SCREW
11	7401520	1	CAPACITOR BRACKET
12	7401680	2	CAPACITOR BRACKET SCREW
13A	7402004	1	6.7 mFD CAPACITOR- A94
13B	7403008	1	7.6 mFD CAPACITOR- A94
14	7401460	2	LIMIT SWITCH
15	7401620	2	LIMIT SWITCH SCREW
16	7403016	1	OUTER SHAFT
17	7403006	2	OUTER SHAFT GASKET
18	7403009	2	RETAINING RING
19	7403018	2	STANDOFF
20	7403014	2	BASE PLATE SCREW
21	7401480	2	CAM
22	7401740	4	CAM SCREW
23	7403010	1	PIN
24	7403023	1	2PC HARNESS
25	7403015	1	4PC HARNESS
26	7403007	1	BASE GASKET
27	7403001	1	COVER
28	7403020	1	COVER SEAL
29	7403019	1	WIRE DIAGRAM LABEL
30	7403025	1	OPTION LABEL
31	7403030	1	QM II LABEL
32	7403040	1	OVERRIDE LABEL
33	7403032	8	COVER SCREW
34	7403003	1	HANDLE
35	7401700	1	HANDLE SCREW

Notes:

1. LOCATE ITEM 29 & 30 ON INSIDE SURFACES OF COVER (ITEM 27).
2. LOCATE ITEM 31 ON OUTSIDE BACK SURFACE