

# CR-TEC Engineering

Automated Valve Solutions

ELECTRIC ACTUATOR MANUAL

**COMPACT**

## CR SERIES ELECTRIC

CR10, CR20, CR40 Series, Open/Close Type

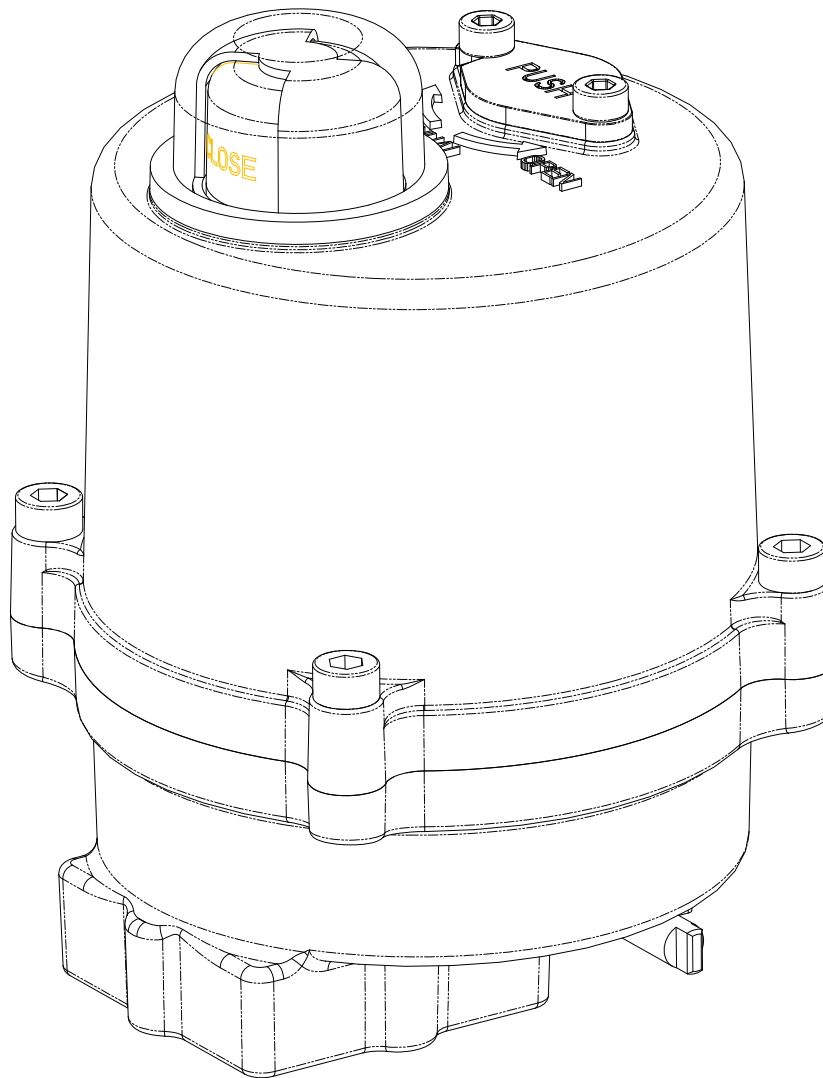
**70%**  
Duty Rating

**IP67**  
Enclosure

**NEMA**  
**4**

**CSA**  
**& UL**

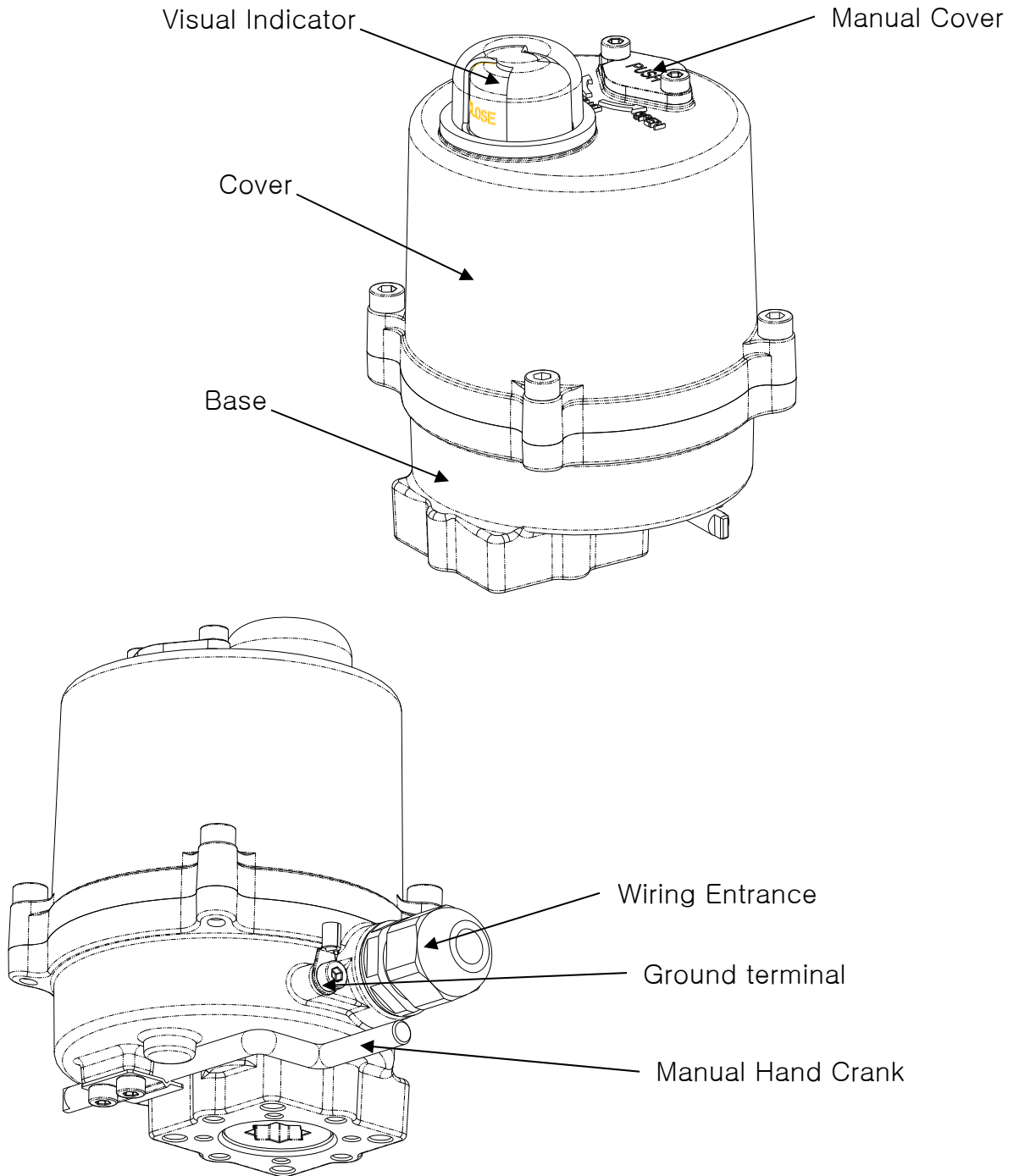
CSA C22.2 No. 14:2013  
UL 508:1999/R:2013-10



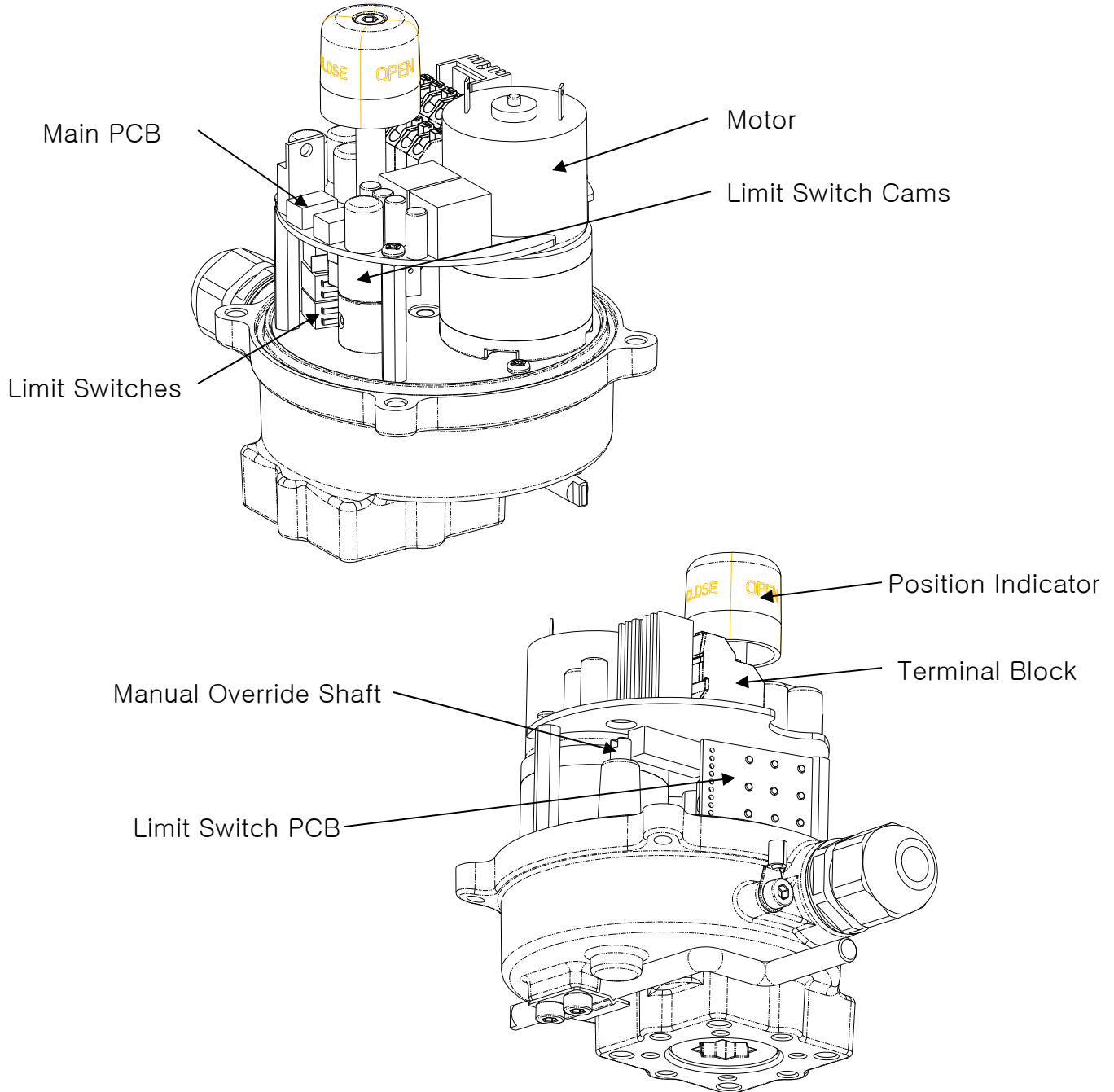
# Structure

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## EXTERNAL VIEW



# INTERNAL VIEW



# Actuator Installation

## Valve Mounting

The actuator complies with ISO-5211 standardized mounting dimensions. The base has three bolt circles of 36 mm, 42 mm and 50 mm, known as F03, F04 and F05 respectively. Bolt holes for the 36 mm and 42 mm bolt circles are M5, and the 50 mm bolt circle uses M6 bolts.

A 14 mm female star drive will fit 14 mm square valve shafts. The 14 mm star drive can be reduced for 11 mm or 9 mm valve shafts using optional standard part conversion sleeves available

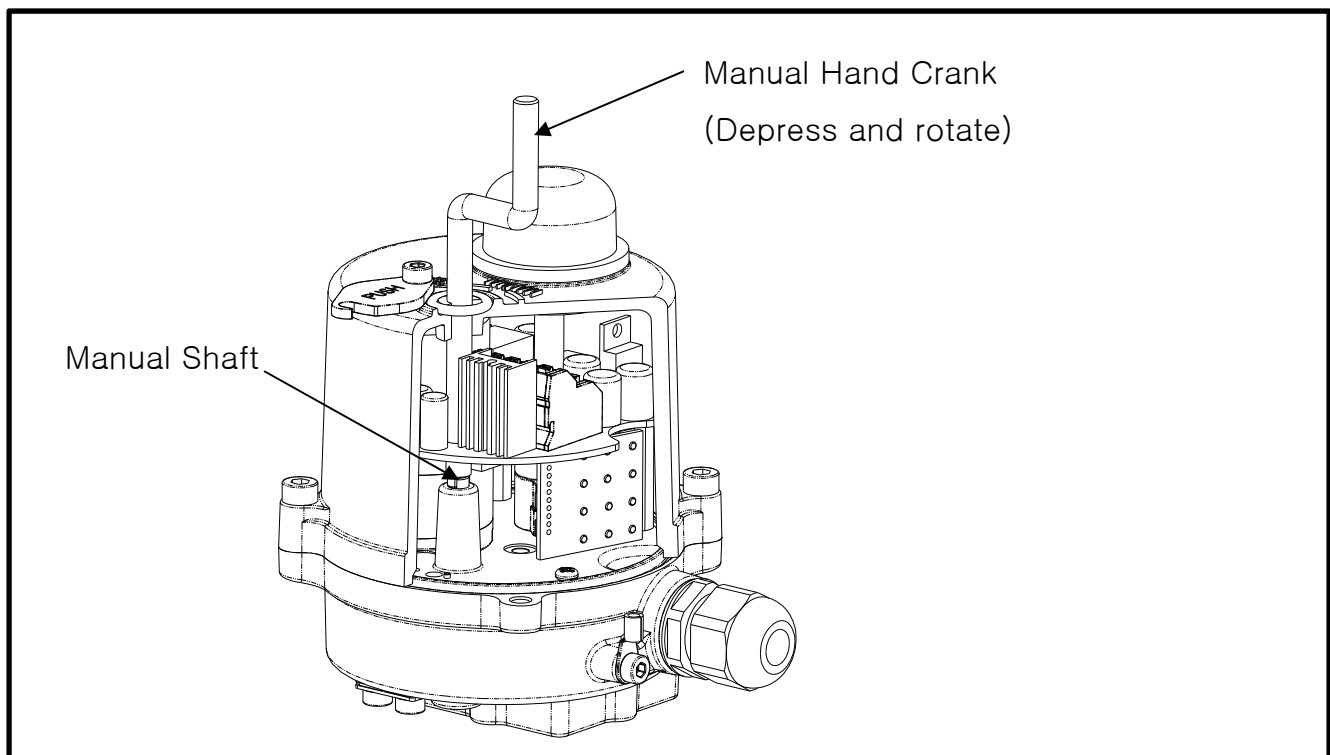
Part numbers are as follows:

- PSA 14 / 11
- PSA 14 / 9

## Manual Operation

The actuator is equipped with a separate hand crank to provide manual operation.

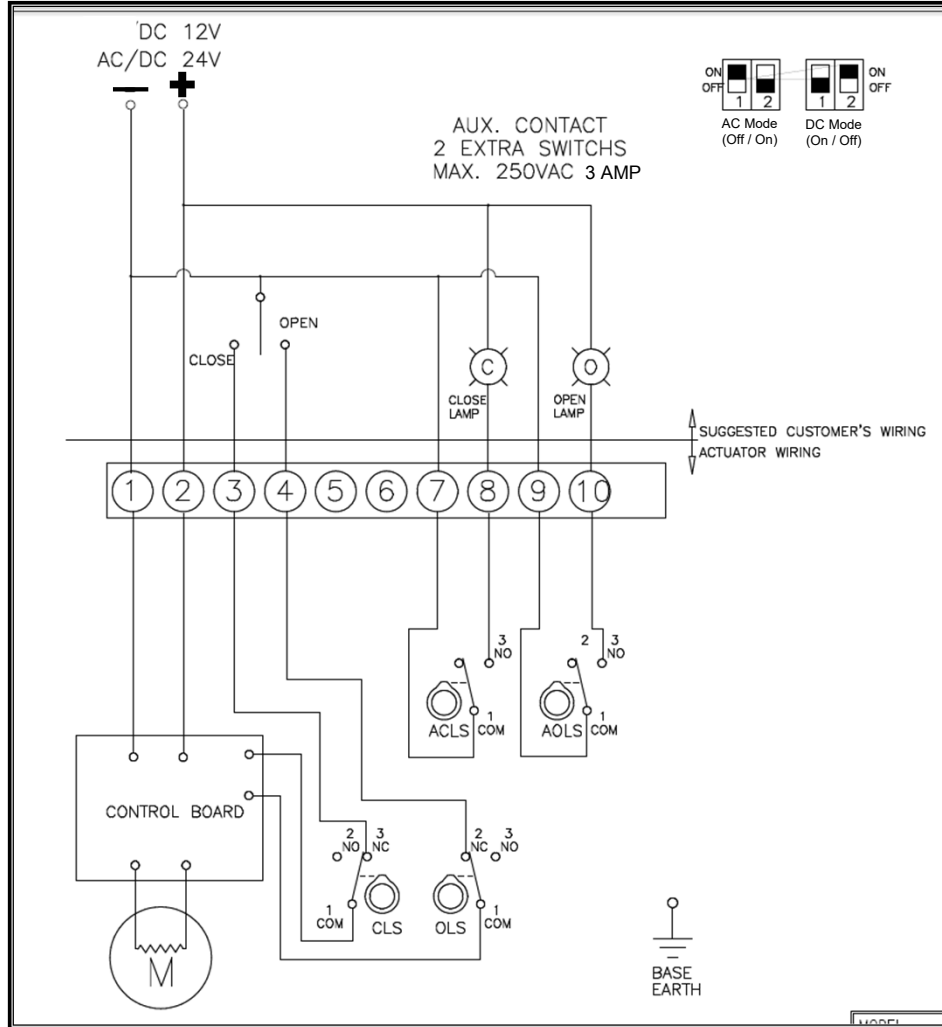
1. Disconnect Power
2. Remove the hand crank from the stowed location at the base of the actuator.
3. Loosen the cover plate on top of the actuator housing with a 3 mm hex wrench.
4. Insert the hand crank vertically, and then push down to de-clutch the actuator.
5. Rotate Open or Close as needed.



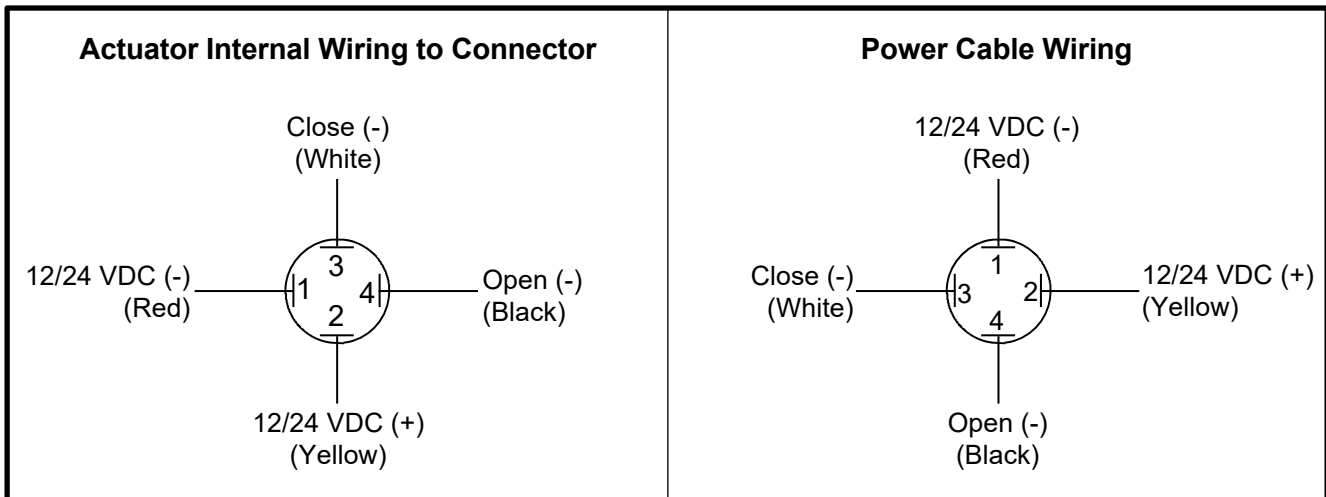
Manual Operation

# Electric Wiring 12 VDC, 24 VDC or 24 VAC

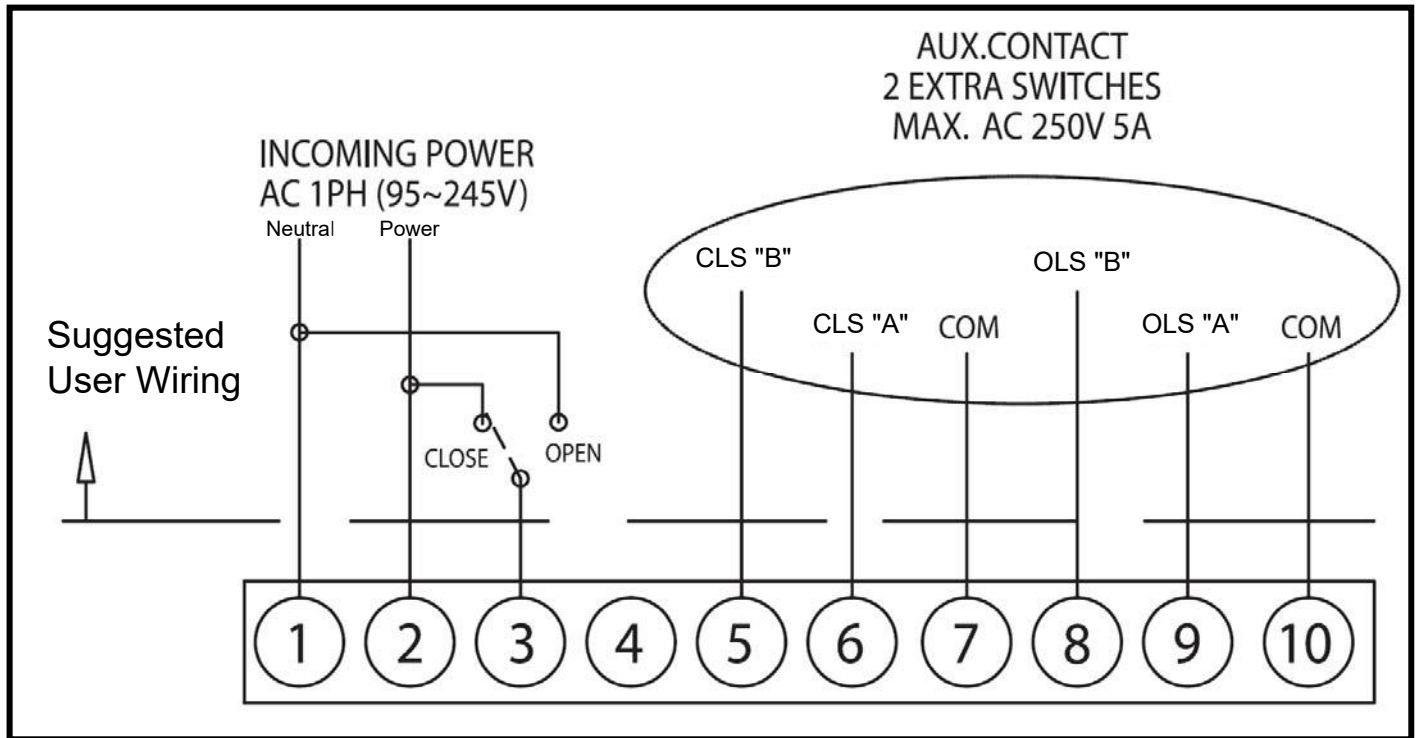
**Note:**  
USE LIGHT GAUGE WIRES INTO TERMINAL BLOCK  
16 Gauge or smaller recommended.



## OPTIONAL 4-Pin Connector Wiring - 12 VDC, 24 VDC, & 24 VAC



# Electric Wiring 95-240 VAC



Terminals 1 – 3  
PRIMARY POWER

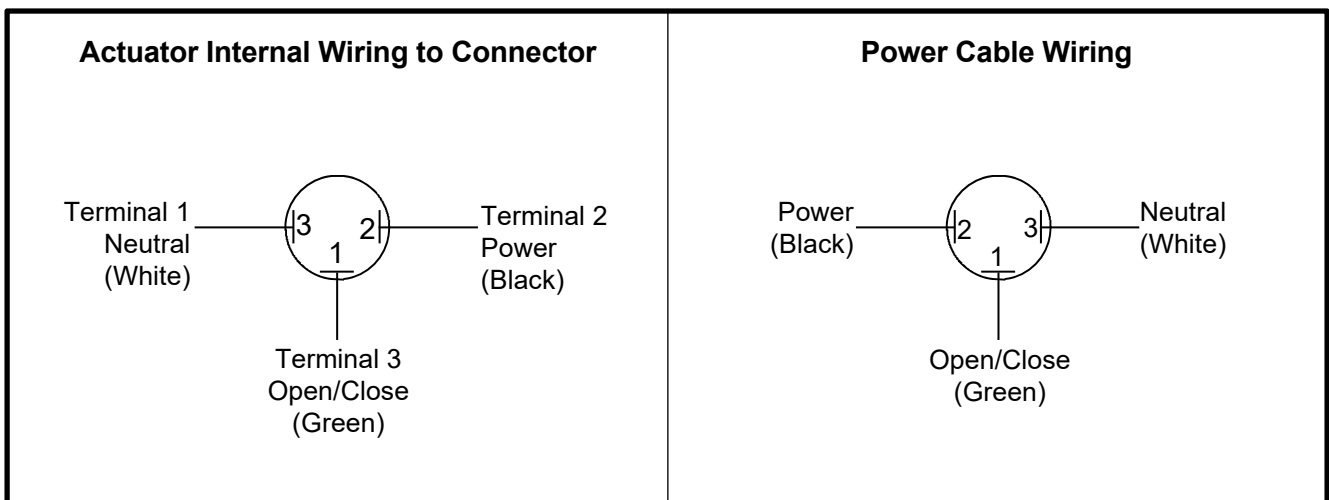
Terminals 5 - 10  
LIMIT SWITCH WIRING

**NOTE:** USE LIGHT GAUGE WIRES INTO TERMINAL BLOCK- 16 GAUGE OR SMALLER RECOMMENDED

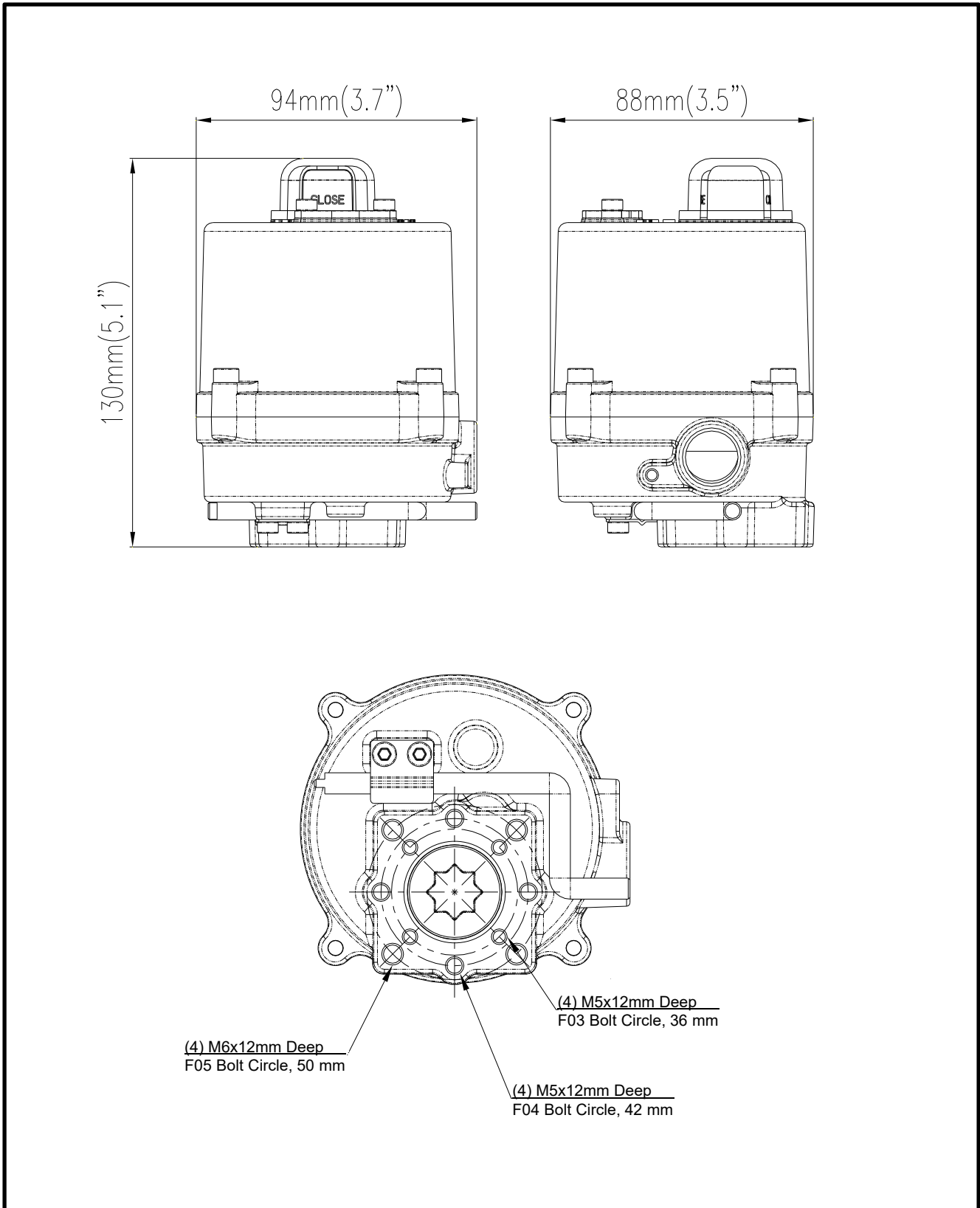
**Limit Switch Notes:**

- Terminal 5/CLS "B" - Normally CLOSED
- Terminal 6/CLS "A" - Normally OPEN
- Terminal 8/OLS "B" - Normally CLOSED
- Terminal 9/OLS "A" - Normally OPEN

## OPTIONAL 3-Pin Connector Wiring - 95-240 VAC

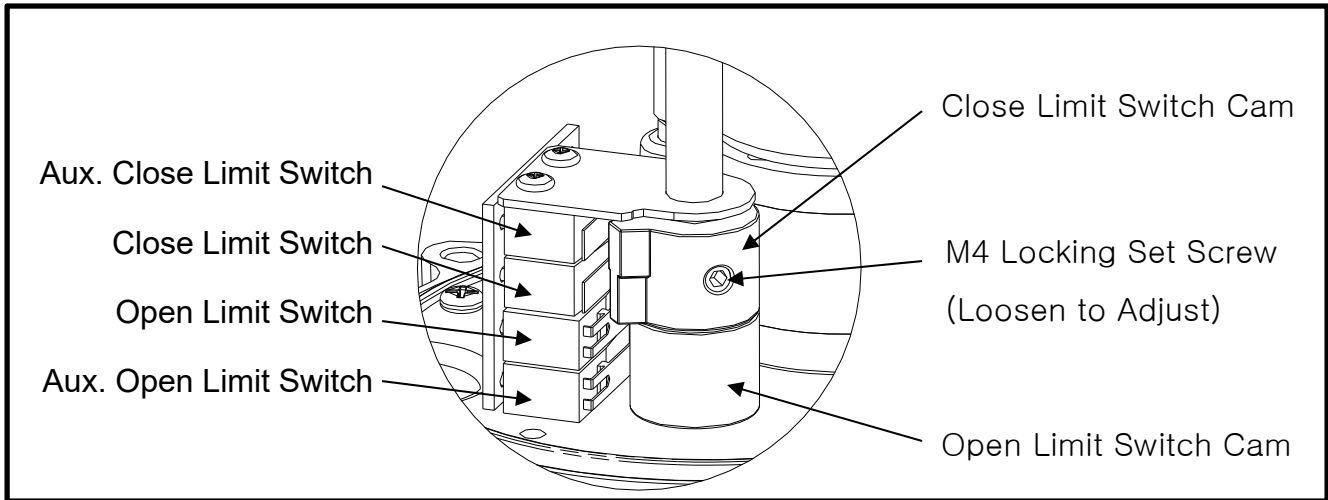


# Dimensions



## LIMIT SWITCH SETTING

Limit switches and cams are factory set for 0° to 90° rotation.  
Fine adjustments are possible by loosening and rotating the cams.



Limit Switches and Cams

## CR-TEC Compact Actuator Part Numbers

CR-TEC Compact Actuator Part Numbers							
Actuator Part Number	Power Voltage	Maximum Torque lb-in	Maximum Power Consumption Watts	Running Current Amps	Maximum Current Amps	Duty Cycle %	Cycle Time Seconds
<b>STANDARD STOCK PART NUMBERS</b>							
CR40.X0A.R00	95 to 245 VAC	354 lb-in	6 Watts	50 mA	75 mA	70%	7
CR40.X0B.R00	24 VDC / VAC		6 Watts	200 mA	375 mA		7
CR40.X0C.R00	12 VDC		6 Watts	400 mA	750 mA		7
<b>AVAILABLE ON REQUEST PART NUMBERS</b>							
CR20.X0A.R00	95 to 245 VAC	177 lb-in	6 Watts	50 mA	75 mA	70%	4
CR20.X0B.R00	24 VDC / VAC		6 Watts	200 mA	375 mA		4
CR20.X0C.R00	12 VDC		6 Watts	400 mA	750 mA		4
<b>AVAILABLE ON REQUEST PART NUMBERS</b>							
CR10.X0A.R00	95 to 245 VAC	89 lb-in	6 Watts	50 mA	75 mA	70%	3
CR10.X0B.R00	24 VDC / VAC		6 Watts	200 mA	375 mA		3
CR10.X0C.R00	12 VDC		6 Watts	400 mA	750 mA		3
<i>Contact Us for More Compact Actuator Options, Including Larger Torque Values and Explosion Proof ATEX Certification</i>							