# R. C. Tronics Incorporated

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RCT-00946 TWO WIRE MOTOR REVERSING Saturday, June 10, 2023

The controller operates a standard two-wire direct current motor, which provides bi-directional control and terminates motor rotation via door open and close limit switch inputs, both normally open and normally closed contacts to battery negative.

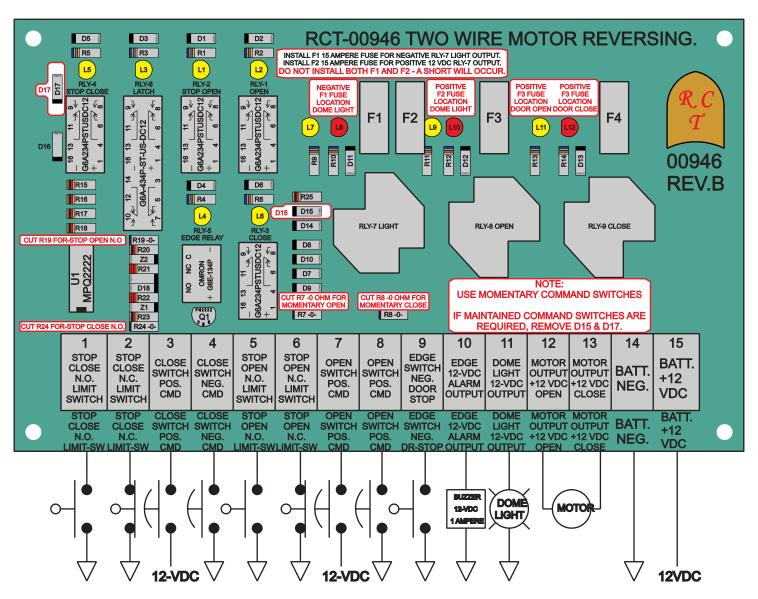
Entry door open and close commands inputs via switch inputs are accomplished with separate positive or negative inputs.

The control incorporates an edge switch input which will terminate door movement when door is opening and when closing door will reverse door to re-open. An alarm output will become active when the edge limit switch is activated.

The control has a dome light output which operates when the door comes from, door is closed limit switch.

The control has three power relays, dome light, door open and door close. Each relay operates with 12 vdc, rated thirty-ampere.

Red led depicts open fuse and amber led shows energized power relay.



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The control has a dome light output which operates when the door comes from, door is closed limit switch.

The control has three power relays, dome light, door open and door close. Each relay operates with 12 vdc, rated thirty-ampere.

Red led depicts open fuse and amber led shows energized power relay.

Four fuses protect door open-close relay, motor outputs.

Dome light relay may output either a positive or negative. Fuse 1 is the negative and fuse 2 is the positive.

**Note:** Only one fuse may be inserted for the output. **INSTALLING BOTH WILL CREATE A DIRECT SHORT.** 

"DOOR OPEN SWITCH" and "DOOR CLOSE SWITCH", have separate positive and negative terminal inputs.

**NOTE A:** To use, "DOOR IS OPEN LIMIT SWITCH N.O.", Remove resistor R19.

NOTE B: To use, "DOOR IS CLOSED LIMIT SWITCH N.O.", Remove resistor R24.

**NOTE C:** The control is shipped from the factory with resistors R19 & R24 installed.

**NOTE D:** Failure to remove R19 or R24 will render control, inoperable.

The control has an, "EDGE SWITCH INPUT", which is a negative input.

**NOTE A:** Edge switch is only functional during door open-close motion.

**NOTE B:** If Edge switch is triggered while, closing, door will re-open.

**NOTE C:** If Edge switch is triggered while, opening, door will stop movement.

**NOTE D:** If Edge switch is triggered while closing, you must operate, "DOOR OPEN SWITCH", for normal system operation.

**NOTE E:** If Edge switch is triggered while opening, you must operate, "DOOR CLOSE SWITCH", for normal system operation.

The control provides an, "ALARM OUTPUT", and becomes active when, edge switch is triggered, rated 12 vdc @ 1 ampere.

The control has three power relays, "DOME LIGHT", "DOOR OPEN", and "DOOR CLOSE". RLY-7, RLY-8 and RLY-9 respectively.

**NOTE A:** Each power relay is protected with fifteen ampere fuses.

**NOTE B:** Dome light relay has two fuses F4-Negative and F3 Positive, which provides either a negative F4, relay output or F3 positive output.

**Note:** Only one fuse may be inserted for the output. **INSTALLING BOTH WILL CREATE A DIRECT SHORT.** 

**NOTE C:** Door open RLY-8, fuse F2, fifteen ampere @ 12 vdc.

**NOTE D:** Door close RLY-9, fuse F1, fifteen ampere @ 12 vdc.

**NOTE E:** Red led depicts, open fuse. (Replace affected fuse).

**NOTE F:** Amber led depicts, relay is energized.

The control is shipped from the factory for, momentary-latching, door open-door close inputs. Momentary switch closure will latch the outputs. Removal of input will permit completion or door cycle.

If it is required to maintain door open-close switch, input, then cut resistor R8. Door open-close movement will terminate until door open-close switch is re-activated.

**NOTE:** Use momentary command switches, "Stop Open and Stop Close. If maintained are required remove latching diodes, D15 and D17.

# RCT-00946 TERMINAL ASSIGNMENTS

#### STOP CLOSE N.O. LIMIT SWITCH / TERNIMAL #1

Door is closed limit switch. Door must close to connect to battery negative.

#### STOP CLOSE N.C. LIMIT SWITCH / TERNIMAL #2

Door is closed limit switch. Door must close to connect to battery negative.

#### **CLOSE SWITCH COMMAND / TERMINAL #3**

Command door close, positive input 12 vdc.

# **CLOSE SWITCH COMMAND / TERMINAL #4**

Command door close, negative input.

#### STOP OPEN N.O. LIMIT SWITCH / TERMINAL #5

Door is open limit switch. Door must close to connect to battery negative.

#### STOP OPEN N.O. LIMIT SWITCH / TERMINAL #6

Door is open limit switch. Door must close to connect to battery negative.

#### **OPEN SWITCH COMMAND / TERMINAL #7**

Command door open, positive input 12 vdc.

# **OPEN SWITCH COMMAND / TERMINAL #8**

Command door open, negative input.

#### **EDGE SWITCH DOOR STOP-REVERSE COMMAND / TERMINAL #9**

Command: Motor stop if opening, motor reverse if closing to battery negative.

# **EDGE TRIGGERED ALARM / TERMINAL #10**

Output, edge switch is triggered, during door opening or closing, 12 vdc @ 1 ampere.

# DOME LIGHT 12 VDC OUTPUT / TERMINAL #11

Active when door moves off of, door is closed limit switch.

#### MOTOR OUTPUT 12 VDC OPEN / TERMINAL #12

12 vdc @ 15 amperes during opening.

#### MOTOR OUTPUT 12 VDC CLOSE / TERMINAL #13

12 vdc @ 15 amperes during closing.

#### **BATTERY NEGATIVE / TERMINAL #14**

Maximum Supply Thirty Amperes. Size Conductor as To Total Connected Load.

#### **BATTERY POSITIVE / TERMINAL #15**

Maximum Supply 12 vdc Thirty Amperes. Size Conductor as To Total Connected Load.