

CM-150-08 Control Module Installation Instructions

⚠ WARNING! Before attempting installation, disconnect power, verify wire run from chart, and use with ELR-150 power supply only.

Electrical ratings: In: 42V 115mA continuous, 8.75A 1.75s
out: 42V 1.70A continuous, 7.00A 1.75s

1 SELECTING MODE

1.1 Select mode (DIP switch S1).

NOTE: Determines what set of inputs will trigger cards output.

- **Independent mode: S1-A=OFF**
Allows each card to be controlled by its own inputs.
- **Sequence (auto) mode: S1-A=ON**
Card is controlled by inputs from previously mounted card.

2 SELECTING TIME DELAY

2.1 Select time delay (DIP Switch S1).

NOTE: Time delay will hold latch retraction up to four minutes after input is removed.

- **No time delay: S1-SW=OFF and S1-V=OFF**
- **Switched input delay: S1-SW=ON**
Input from TBI-1 and TBI-2 will be held until time delay ends.
- **Voltage input delay: SW-V=ON**
Input from TBI-7 and TBI-8 will be held until time delay ends.
- **To adjust time delay:**
Turn R41 clockwise to increase time delay.
Turn R41 counterclockwise to decrease time delay.

3 WIRING INPUTS

NOTE: Switch or voltage inputs trigger exit device operation. Fire override may be used.

- **Trigger input: Switch**
TBI-1 and TBI-2 can be wired to a switch or relay. A closed contact rated at 12 VDC, .5 AMP min. will retract latches.
- **Trigger input: Voltage**
TBI-7 and TBI-8 can be wired to a voltage source. When 5 to 24 VDC, .1 AMP min. is applied, latches will retract. (note polarity)
- **No fire detection:**
If fire detection is not required, connect TBI-3 and TBI-4 together with a jumper wire.
- **Fire detection override:**
Switch: Connect TBI-3 and TBI-4 to a normally closed contact rated 12 VDC, .5 AMP min. Switch must be closed for exit device operation.
Voltage: Connect TBI-5 and TBI-6 to a 5 to 24 VDC, .1 AMP min. source. Voltage must be present for exit device operation. (note polarity)

4 WIRING OUTPUTS

NOTE: Exit device connections and control relay connections.

- **Exit device:**
Connect TB2-1 and TB2-2 to white wires at exit device.
Connect TB2-3 and TB2-4 to black wires at exit device.
- **Control relay:**
Can be used to activate door operators, rated 30 VDC, 1 AMP max.
Normally open contact: Connect TB2-6 and TB2-7; contact closes when exit device has retracted latches.
Normally closed contact: Connect TB2-6 and TB2-8; contact opens when exit device has retracted latches.

5 INSTALLING CONTROL MODULE

NOTE: Install cards sequentially, starting with slot 1, then slot 2, etc.

- 5.1 Position control module components facing breaker.
- 5.2 Align card edge with socket and firmly insert card until fully seated.

6 REVIEWING INSTALLATION

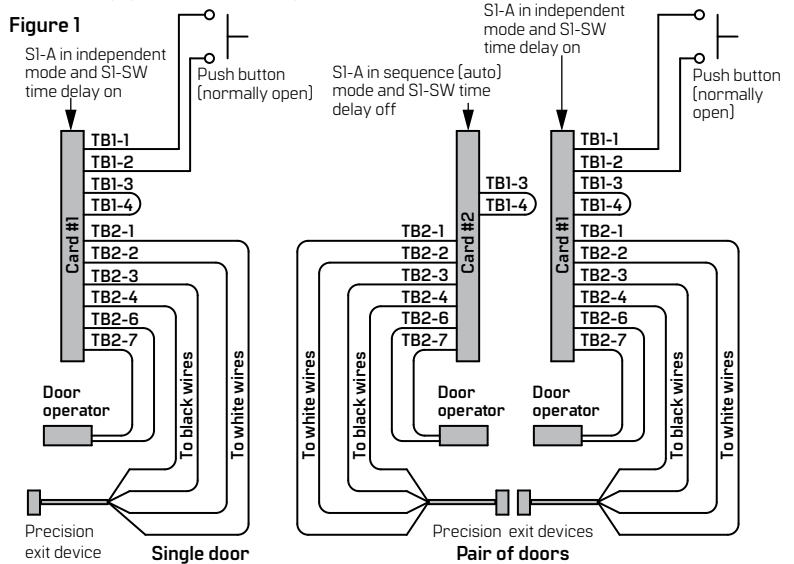
NOTE: Reading should be 4-5 ohms.

- 6.1 Check for shorts, excessive wire runs and open connections.
- 6.2 Ensure power is off and control module is fully wired.
- 6.3 Place probes of an ohmmeter on screw heads of TB2-1 and TB2-2.

SINGLE OR PAIR OF DOORS TYPICAL APPLICATION

Pressing push button retracts latches. When latches have retracted, door operators activate. Door(s) will remain open until time delay on card #1 releases exit device. Shown without fire override and a normally open contact for door operator.

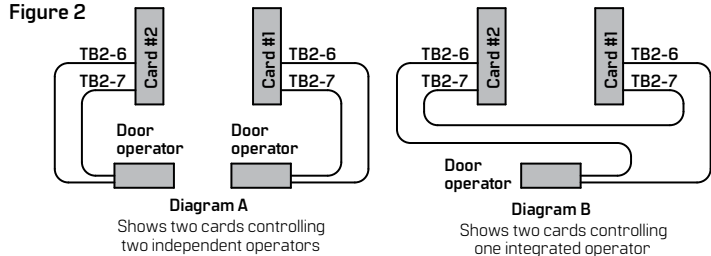
Figure 1



OPERATOR DOOR NOTES

- Check adjustment of vertical rods. They must be adjusted correctly for proper ELR operation. See exit device installation instructions for adjustment procedures.
- For normally open contact, wire door operator to TB2-6 and TB2-7. For normally closed contact, wire door operator to TB2-6 and TB2-8. See door operators installation instructions.
- Use time delay when interfacing with operators.

Figure 2



TROUBLESHOOTING

Door operators are not working:

- Check exit device for proper mechanical operation, vertical rods may need adjusting. See exit device installation instructions for adjustment procedures.
- Check for bad connections going to TB2-3 and TB2-4. Need feedback switch closure from exit device for proper operation.

Control lights:

- D4: Power light - Lights green when the power is available to the control module.
- D3: Fire light - Lights red when ready for input, will flash when in fire override mode.
- D2: Status indicator - Lights green when latches have retracted.
- D1: Status indicator - Lights green as input is received.

Latchbolts are not retracting:

- If D4 is off, check 2 AMP circuit breaker on ELR-150, or check line voltage at power connection. If control module was stressed, it will enter thermal shutdown. Wait for control module to cool down.
- If D3 is flashing, check fire control system for a normally closed contact at T1-3 and TBI-4 or a voltage present at TBI-5 and TBI-6. If no fire override is being used, then connect TBI-3 to TBI-4.
- If D2 never lights, but latches sometimes retract, check exit device for proper mechanical operation. Vertical rods must be adjusted properly. See exit device installation instructions for adjustment procedures.
- If D1 never lights, check trigger input at TBI-1 and TBI-2 for proper operation.
- Check for bad connections from exit device. White wires should be connected to TB2-1 and TB2-2, and black wires connected to TB2-3 and TB2-4. Need feedback switch closure from device for proper operation. Verify that proper gauge of wire is being used for wire run distance. See wire run chart.

Push/pull application:

Exit device latches remain retracted at all times. Pressing push button cycles door operator. When fire alarm removes closed contact, exit device re-latches and push button input is removed from door operator. Shown with a normally open contact for door operator.

SI-A in independent mode and SI-SW time delay on

SI-A in sequence (auto) mode and SI-SW time delay off

SI-A in independent mode and SI-SW time delay on

Figure 3

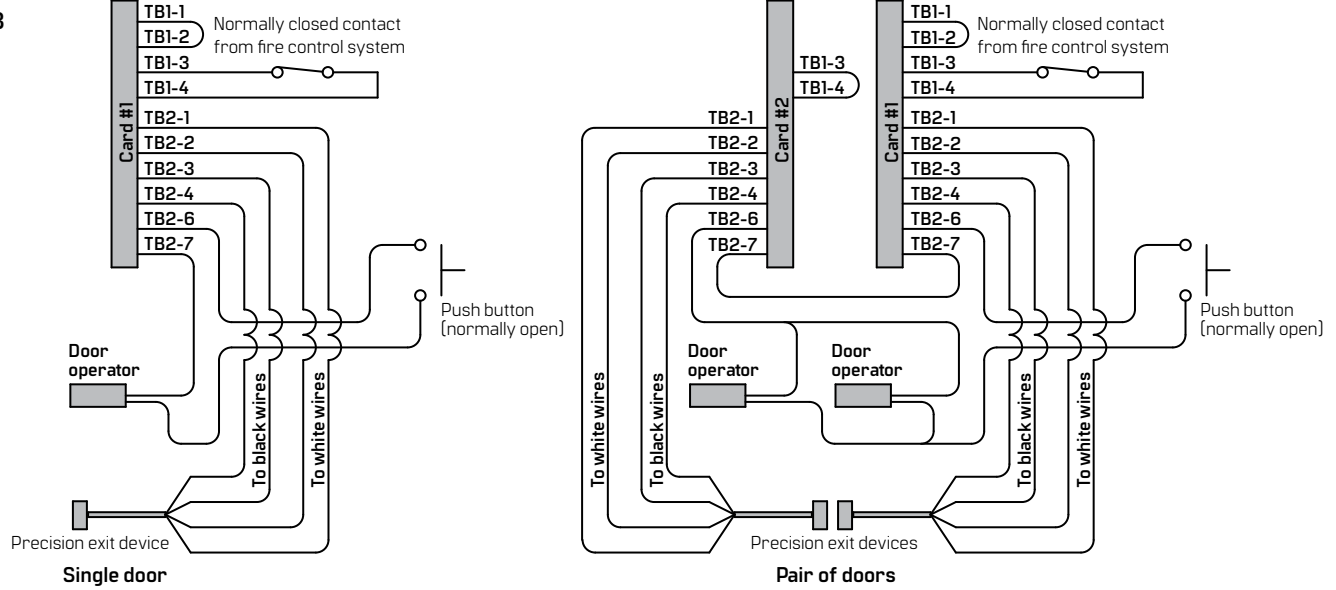


Figure 4

WARNING! Disconnect power before servicing.
NOTE: For use with Precision Listed 2000 Series exit devices only.

LED indicators	
D4	Power indicator: Green when power is present
D3	Fire indicator: Red when waiting for input Flashing when in fire override
D2	Status indicator #2: On - Latches have retracted One blink - Independent mode Double blinks - Sequence (auto) mode
D1	Status indicator #1: On - Input received

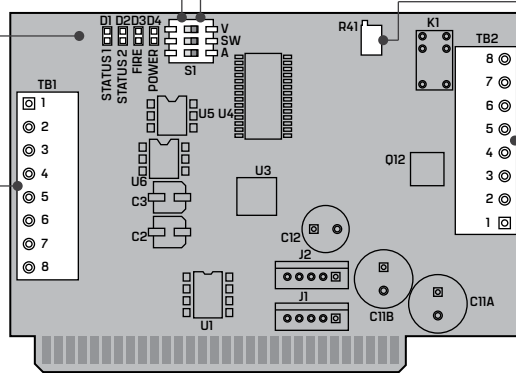
Maximum wire run		
Wire gauge	With 22 gauge power transfer	With 28 gauge power transfer
16	75' [22.86 m]	55' [16.76 m]
14	125' [38.10 m]	75' [22.86 m]
12	200' [60.96 m]	-

Dip switch mode selection	
DIP switch A	Mode
<input type="checkbox"/> A Off	Independent mode: Card is controlled by an input at TB1.
<input type="checkbox"/> A On	Sequence (auto) mode: Card is controlled by previously mounted card.

Dip switch time delay settings	
DIP Switch SW & V	Mode
<input type="checkbox"/> V Off <input type="checkbox"/> SW Off	No delay
<input type="checkbox"/> V Off <input type="checkbox"/> SW On	Switched input delay: Triggered by TB1-1 & TB1-2
<input type="checkbox"/> V On <input type="checkbox"/> SW Off	Voltage input delay: Triggered by TB1-7 & TB1-8

R41 **Clockwise:** Increases time delay
Counterclockwise: Decreases time delay
Up to 4 minutes of time delay available

TB1 inputs	
TB1-1	Trigger input: Switch
TB1-2	
TB1-3	Fire input: Switch*
TB1-4	
TB1-5	+ Fire input: Voltage
TB1-6	
TB1-7	+ Trigger input: Voltage
TB1-8	



TB2 output	
TB2-8	Normally closed
TB2-7	
TB2-6	
TB2-6	Common
TB2-5	Not used
TB2-4	ELR feedback switch: To black wires
TB2-3	Solenoid output: To white wires
TB2-2	
TB2-1	

* If no fire override is needed, jumper TB1-3 with TB1-4.



Document translations available.

Scan for product details and downloads.

Call 1-800-392-5209 or visit

<https://dhwsupport.dormakaba.com/hc/en-us>

for assistance and warranty information.

WARNING! This Manufacturer advises that no lock can provide complete security by itself. This lock may be defeated by forcible or technical means, or evaded by entry elsewhere on the property. No lock can substitute for caution, awareness of your environment, and common sense. Builder's hardware is available in multiple performance grades to suit the application. In order to enhance security and reduce risk, you should consult a qualified locksmith or other security professional.