limited duty circuit board start-up instructions

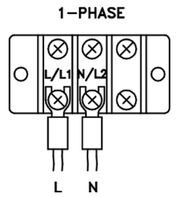
Warning
Compare available power supply voltage to operator nameplate prior to electrical connection. Failure to connect appropriate power supply voltage may cause serious damage to the operator.

Important
Read these instructions prior to making any power connections.

Note
The operator is shipped from the factory in the D1 mode (constant pressure close and constant pressure open). The operator should remain in this mode until all connections and limit switch adjustments are completed.

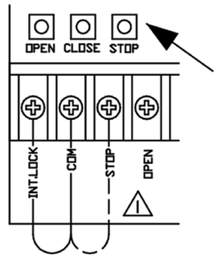
Power Wiring Instructions

Connect primary power supply directly to the separate power terminal strip supplied using any of the 1-1/8" (2.85 cm) diameter holes provided on control box.
Do not connect power supply directly to the circuit board.
Connect single phase power supply 110V or 220V to terminals L (L1) and N (L2) on three-pole power terminal strip.



On Board O/C/S PBS Instructions

On-board Open, Close and Stop buttons are provided directly on the board for installation and troubleshooting purposes. In order to operate unit by on-board Open, Close, Stop buttons, the factory installed jumper (#1) between the COM and STOP terminals on the terminal strip must remain connected.

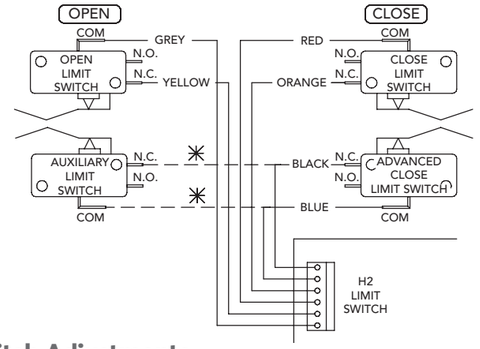


Motor Direction Verification

Make sure the mode of operation is selected to C2. After electrical power connections are made, manually move door to mid-position. Using the on-board buttons press the "Open" button for several seconds and then press the "Stop" button. If door did not move in correct direction (or if limit cams not moving in correct direction towards the open limit switch) see below:

The operators leave the factory with correct motor and limit shaft direction according to standard door installations. However, for special fire door, through wall mounting or other special door applications, the motor direction and limit switch direction may need to be reversed. To reverse the motor rotation, interchange red and yellow wires on the capacitor and interchange the wires on open and close limits. Disconnect the 2 wires from the advanced closed limit switch and re-connect to the auxiliary limit switch provided.

Note: Ensure that when the on-board open button is depressed and the door moves in the correct open direction that activation of the open limit switch stops the door.

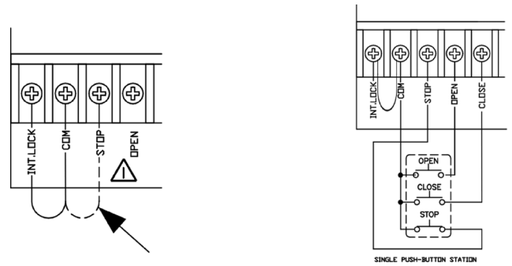


Limit Switch Adjustments

Once the motor rotation and limit cam direction have been verified, adjust the limit cam settings. Refer to operator installation manual for complete limit switch adjustment instructions.

Connection of External O/C/S PBS

Connect O/C/S PBS as shown in diagram.
Note: Jumper #1 must be removed after the external O/C/S PBS has been installed.

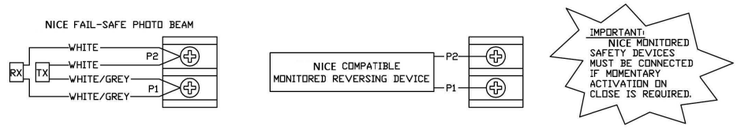


Failsafe Feature

A safety device failsafe feature is built into the logic board. The logic board has provisions to connect one primary monitored safety device as well as 1 or more secondary non-monitored safety device(s).

Primary monitored safety device

Nice monitored failsafe photo beams or Nice compatible monitored failsafe devices must be connected to terminals P1 and P2 as primary monitored safety device.
Primary monitored safety device must be connected if momentary activation on close is required in B2 and TS modes. If it is not connected in B2 and TS modes, door can only be closed by constant pressure on close and if constant pressure is removed before door reaches full close position, door reverses to full open.
Note: Only one monitored failsafe device can be connected to terminals P1 and P2.

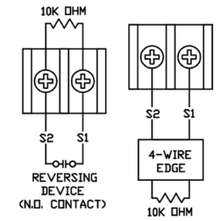


Secondary non-monitored safety device(s)
A standard 2-wire safety edge, non-monitored photo beams or any other non-monitored reversing devices with a N.O contact can be connected to terminals S1 and S2 as secondary non-monitored safety device.
Note: More than one secondary non-monitored safety device can be connected to terminals S1 and S2.

Important: Do not remove the resistor that is factory installed across terminals S1 and S2 unless installing a 4-wire electric edge.

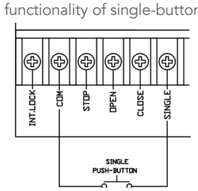
4-wire electric edge

A standard 4-wire electric edge can be connected across S1 and S2 terminals as a secondary safety device. Remove the factory installed resistor across terminals S1 and S2 when using a 4-wire electric edge



Connection Of External Single-Button Device

Connect an external single-button as shown in diagram. Please refer to "Modes of operation" for the functionality of single-button.



Modes Of Operation

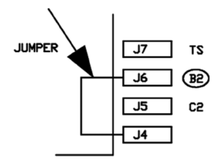
All operators leave the factory with the jumper not connected (D1 mode). Please read all modes of operation and determine which operational mode is desired

D1: (Constant pressure on open and close)

- Open Button: Constant pressure opens the door. Door stops when constant pressure is released. Constant pressure from mid-stop opens the door to full open position.
- Close button: Constant pressure on close. Door will stop when button is released.
- Single button device, single channel transmitter, 3-channel (1,2,3) transmitter and 3-button (O/C/S) radio transmitter: N/A.
- Safety Devices: When door is closing, momentary activation reverses the door.
- Timer to close: N/A

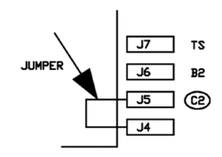
B2: (Momentary on open and close)

- Open Button: Momentary activation opens the door. When door is closing, momentary activation reverses the door (open override).
- Close button: Momentary on close.
- Stop button: Momentary activation stops the door.
- Single button device and external radio control: Open/Close/Reverse
- Safety Devices: When door is closing, momentary activation reverses the door.
- Timer to close: N/A



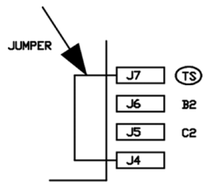
C2 (Momentary open, constant pressure close)

- Open Button: Momentary activation opens the door. When door is closing, momentary activation reverses the door (open override).
- Close button: Constant pressure on close. Door will stop when button is released
- Stop button: Momentary activation stops the door.
- Single button device: open/constant pressure close/stop
- External radio receiver: momentary activation opens the door (cannot close the door).
- Safety Devices: When door is closing, momentary activation reverses the door.
- Timer to close: N/A



TS: (Momentary on open and close, timer to close secure, STOP BUTTON DISABLES TIMER)

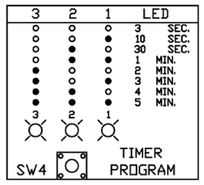
- Open Button: Momentary activation opens the door. When door is closing, momentary activation reverses the door. Momentary contact at full open position re-activates the timer if timer has been disabled previously by stop button .
- Close button: Momentary on close.
- Stop button: If door is opening or closing, momentary activation stops the door. Momentary activation while timer is counting at full open de-activates the timer.
- Single button and external radio: open/reverse/refresh timer.
- Safety Devices: When door is closing, momentary activation reverses the door. Momentary activation when door is at full open refreshes the timer to close.
- Timer to close: Closes the door from full open. Momentary activation of stop button will de-activate the timer. Timer resumes its normal operation upon momentary activation of open push button or once the close cycle is completed.



General Information: Auxiliary device may be installed to edge terminals, open or close button terminals, and single button terminals providing that they are of the NORMALLY OPEN DRY CONTACT TYPE.

Timer to close Setup

Timer to close is enabled only in TS mode of operation. There are 3 LED lights on the board to indicate the timer to close value. Default setting of timer to close is 3 seconds. To modify this value, press "TIMER PROGRAM" button until desired value is reached. The LED status changes when the "TIMER PROGRAM" button is pressed each time. The following chart correlates the LED lights status to the timer to close value.



Status LED

Led	Status	Cause
Fault	ON	- Safety devices not connected or functioning properly - Safety devices are activated.
Power	ON	- 24 VAC power to logic board is ON.

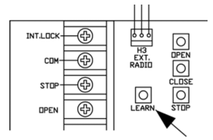
On-board receiver programming

This logic board has an in-built 372 MHz radio receiver and can only be used with Nice single button, 3-button (OPEN/CLOSE/STOP) and 3-channel radio transmitters.
Note: The logic board has an on-board antenna. For best results, this antenna should protrude out the control box.

Programming the on-board radio receiver

Warning: During programming, door operator will activate.
Keep people and objects away from door.

1. Connect power to door operator.
2. Press and release the learn button once. The receiver's LED will turn on.
3. To program a single button transmitter, press the button on the transmitter. The receiver's LED will blink twice indicating a successful programming.
4. Press the button on the transmitter once more to confirm operation of the door operator.
5. To program a 3-channel (1,2,3) transmitter, press any of the 3 buttons on the transmitter. The receiver's LED will blink twice indicating a successful programming. Press the same button on the transmitter to confirm operation of the door operator. This button is now associated with that particular receiver. You can repeat the programming process for the other two buttons to control two other receivers.



6. To program a 3-button (O/C/S) transmitter, press OPEN button on the transmitter. The receiver's LED will blink twice indicating a successful programming. Press the OPEN button on the transmitter to confirm operation of the door operator. OPEN, CLOSE and STOP buttons on the transmitter can be used to open, close and stop the operator respectively.
7. Test range of transmitter. Repositioning antenna may provide greater range.
8. Repeat transmitter programming steps for additional transmitters.

Operation:

1. Press and release the button on Nice transmitter.
2. Receiver LED will light momentarily and door will cycle.

To Erase All Learned Transmitters

1. Press and hold down the LEARN button.
2. After 5 seconds, the LED will blink for 5 seconds.

3. Release the LEARN button during the time LED is blinking.
4. After you released the button, the LED will blink 5 times indicating all transmitters are erased from the receiver's memory.

Replacing Remote Control Batteries

The batteries (lithium, 3V) should produce power for up to 5 years. To replace the battery, open the transmitter by removing the screws on the back of the transmitter. Match the positive and negative terminals of the battery to the positive and negative terminals of the transmitter.
Note: The receiver and transmitter comply with part 15 of the FCC rules with RSS-210 of industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Note: If an external radio-receiver (Nice or other) is used instead of the built-in radio receiver, it is highly recommended to disconnect the co-axial cable from the logic board.
Note: When using any external receiver, the Nice on-board receiver should not be used.