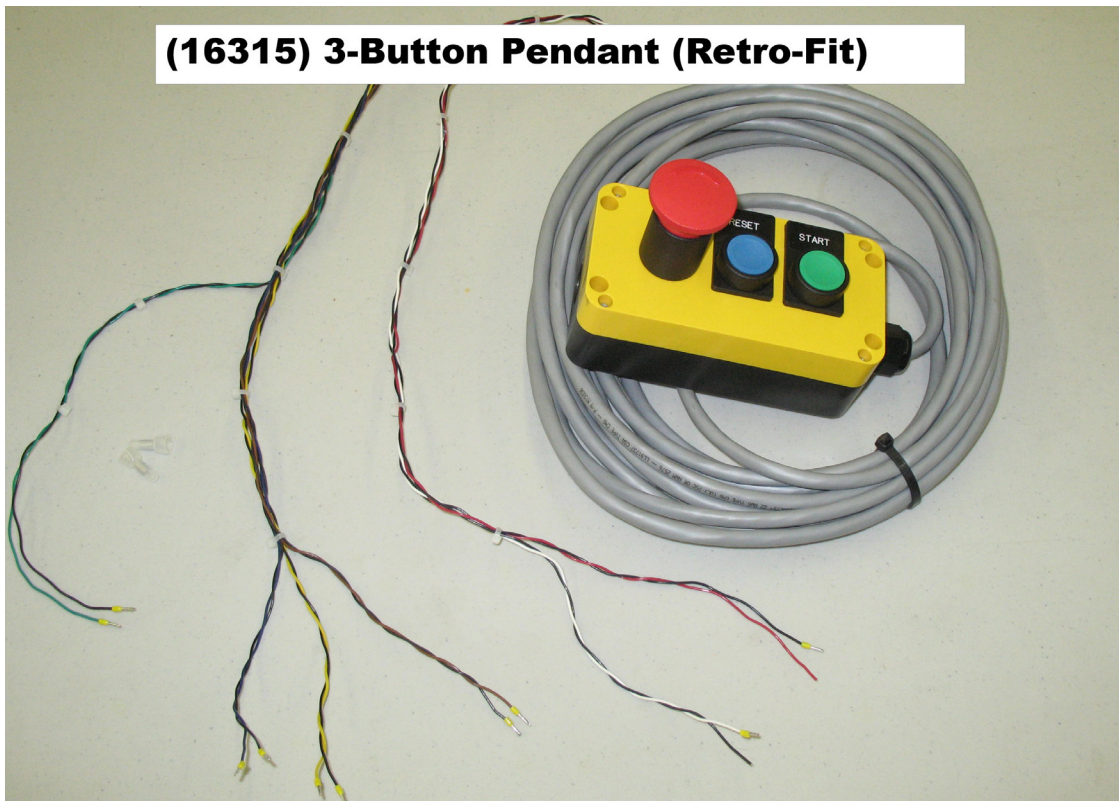


## 3-Button Pendant Retrofit for PRT/PRSalpha





## Introduction

The 3-Button Pendant can be added to PRS/PRT alpha ShopBot tools and can be placed in a convenient location to allow ready access to the Start, Reset and E-Stop. The buttons on this pendant work in addition to the existing Start, Reset and E-Stop. The 30ft cord allows the operator to carry it to virtually any location around the table or it can be mounted near the computer controlling the ShopBot. Only alpha models can use this retrofit.



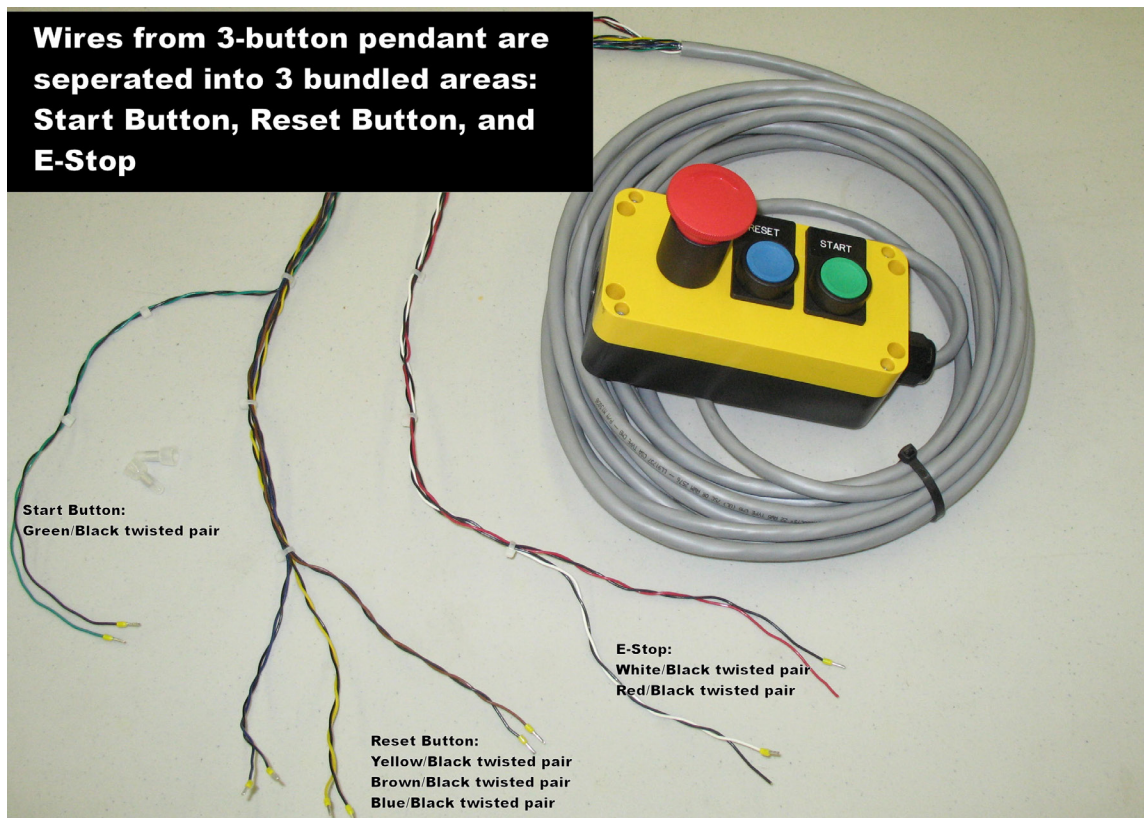
### **WARNING: ELECTRIC SHOCK CAN KILL**

**Use extreme caution when working near live electrical circuits. Dangerous voltages exist inside the control box that can cause serious injury or death. Always use safe practices and good judgment.**

## Installation

The 3-button pendant can only be wired into alpha control boxes produced prior to February 2008. The pendant has six twisted pairs of colored wires (12 total) that will be used to wire in the device. These twisted pairs will be bundled for three areas:

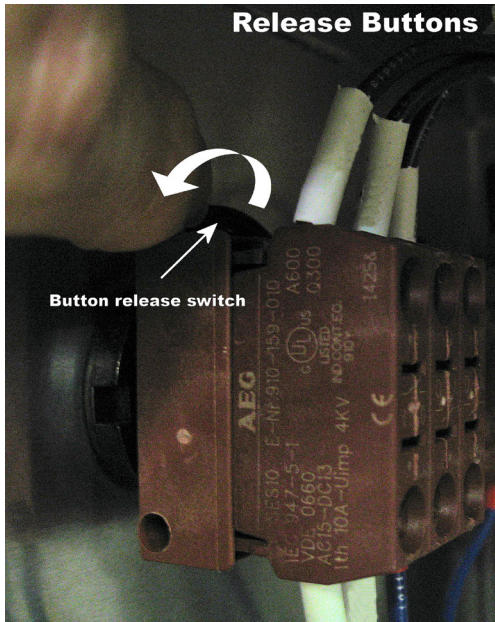
Start Button	Reset Button	E-Stop
Green/Black twisted pair	Yellow/Black twisted pair	White/Black twisted pair
	Brown/Black twisted pair	Red/Black twisted pair
	Blue/Black twisted pair	





Make sure all power has been disconnected going into the ShopBot control box and to the spindle/router.

## Removing the Existing Reset and Start Button Switch Housings



Open the control box door. Find the switch housings for the Reset and Start buttons in the upper left corner of the box. These have a snap-in connector that is released by moving the release switch towards the front of the box.

With the release switch depressed to the front, the switch housing will pull out toward the interior of the control box. Remove both the Reset (front of box) and Start (back of box) button switch housings.

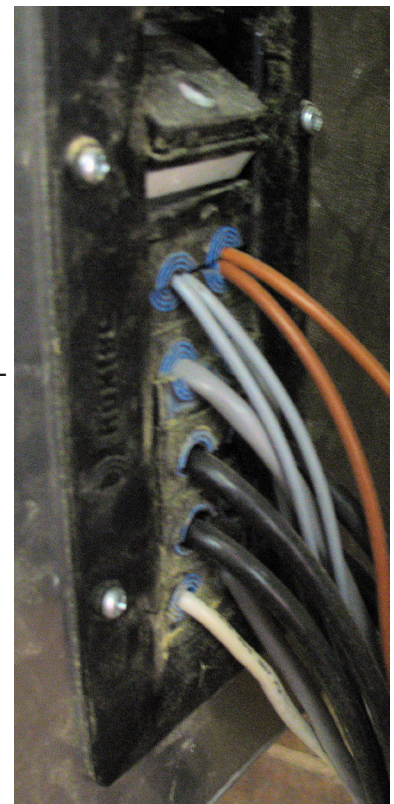
## Routing the Cable from the Pendant into the Control Box

On the right side of the control box is the Roxtec cable management system. Use a screw driver in the upper hole of the Roxtec system to rotate the block upward to release the cam tension of the block.

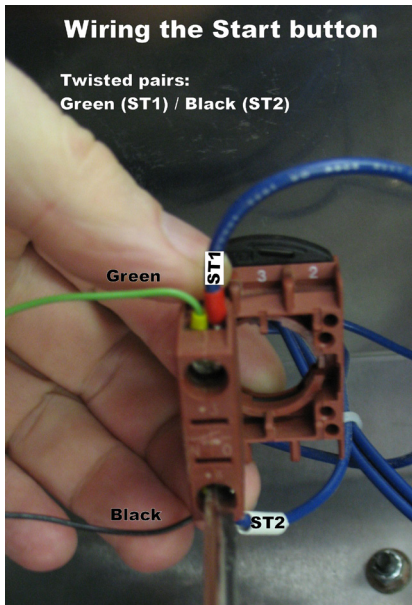
Route the 3-button pendant cable into the control box. Leave the Roxtec system open until everything has been wired in.

## Connecting Wires from the Pendant

It is often not necessary to remove the preexisting wires from the Start and Reset buttons. If it is necessary to remove them, be careful not to lose the white labeling tags that mark these wires.



## Wiring into Existing Start Button



Locate the Green / Black twisted pair from the 3-button pendant and Start button (closest to back of control box).

Loosen the terminal on the top of the button. Insert the Green wire from the Green/Black twisted pair into the terminal along with the green wire. Tighten securely.

Loosen the terminal on the bottom of the button. Insert the Black wire from Green/Black twisted pair into the terminal along with the ST2 wire. Tighten securely.

Refer to wiring diagram on last page if necessary.

## Wiring into Existing Reset Button

Locate Yellow/Black twisted pair, Brown/Black twisted pair, and Blue/Black twisted pair from the 3-button pendant and Reset button (closest to front of control box).

Loosen terminal on the top left of the button. Insert Yellow wire from the Yellow/Black twisted pair into the terminal along with RX2. Tighten securely.

Loosen terminal on the bottom left of the button. Insert Black wire from Yellow/Black twisted pair into terminal along with RX1. Tighten securely.

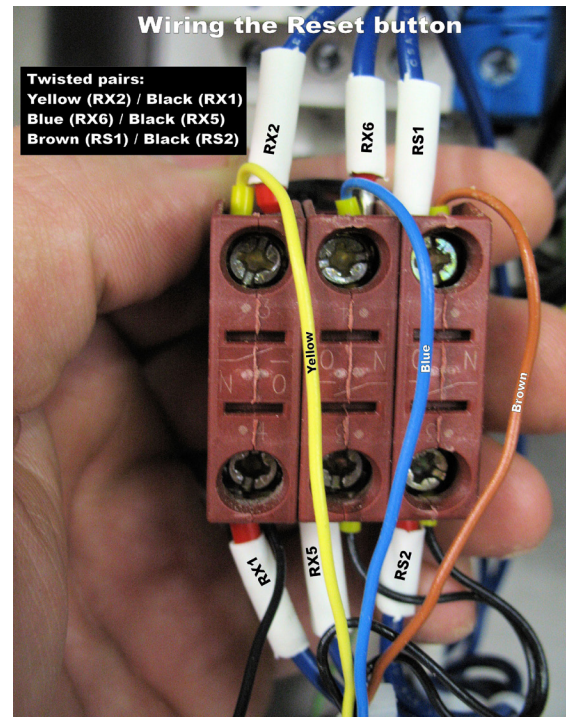
Loosen terminal in the top middle of the button. Insert Blue wire from Blue/Black twisted pair into terminal along with RX6. Tighten securely.

Loosen terminal in the bottom middle of the button. Insert Black wire from Blue/Black twisted pair into terminal along with RX5. Tighten securely.

Loosen terminal on the top right of the button. Insert Brown wire from Brown/Black twisted pair into terminal along with RS1. Tighten securely.

Loosen terminal on the bottom right of the button. Insert Black wire from Brown/Black twisted pair into terminal along with RS2. Tighten securely.

Refer to wiring diagram on last page if necessary.





## Wiring into the existing E-Stop

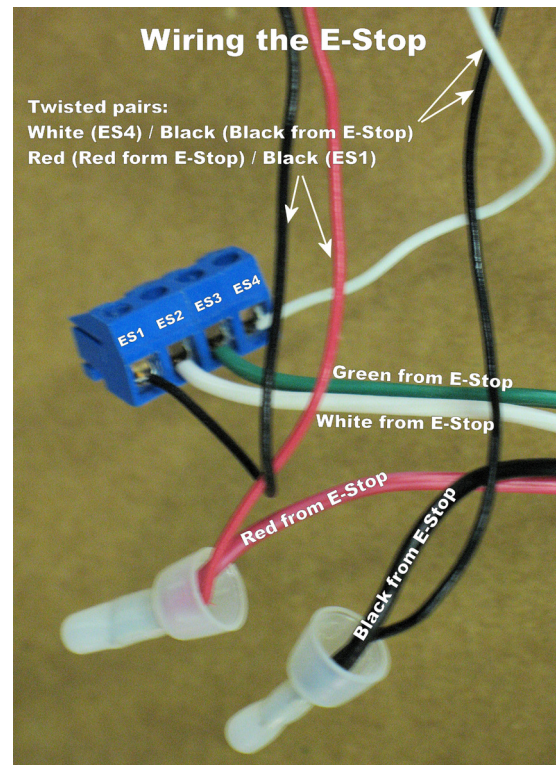
Locate White/Black twisted pair and Red/Black twisted pair from the 3-button pendant and the blue E-Stop terminal block which is found on the control board.

Remove the Blue E-Stop terminal block from the control board. Orient the wires from the E-Stop so that the White wire is in the 2nd terminal from the left (ES2) and the Green wire is in the 3rd terminal from the left (ES3). Remove the Red and Black wires from the terminal block.

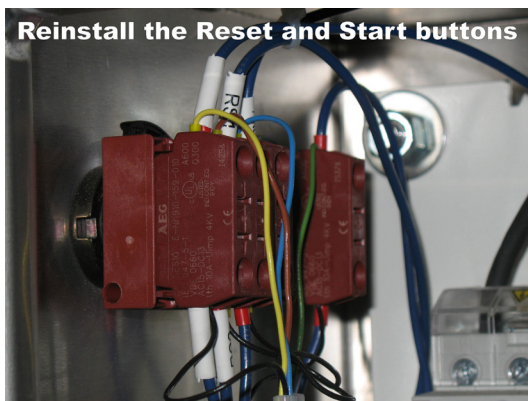
Place the Black wire from the 3-Button pendant Red/Black twisted pair into the 1st terminal on the left (ES1). Place the White wire from the 3-Button pendant White/Black twisted pair in to the last terminal from the left (ES4).

Crimp together the remaining Red wires and then the Black wires.

Refer to wiring diagram on last page if necessary.

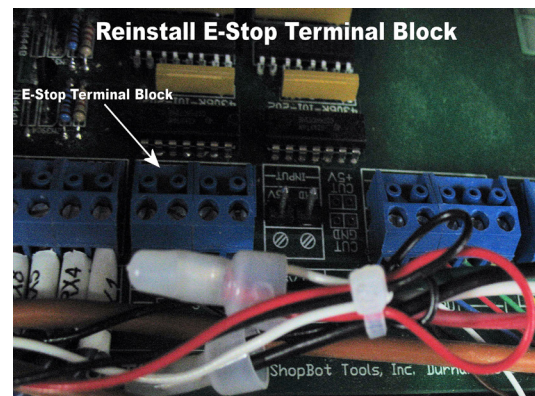


## Reinstalling Existing Buttons and E-Stop



Reinstall the Reset and Start buttons in the upper left corner of the ShopBot control box.

Reinstall the E-Stop's blue terminal block back onto the control board.



## Securing the Cabling

Make sure that there is adequate amount of slack left inside the control box for the 3-button pendant. This will mean that no connection is under any strain; use wire ties if needed. Secure the cable from the 3-button pendant in the Roxtech cable management system (See Routing the Cable). Using a screw driver in the upper hole of this system, rotate the block downward to apply pressure on the spacers.

## Testing the 3-Button Pendant

Test the newly installed 3-button pendant, existing buttons, and E-Stop to ensure all connections are working properly.

### Test the buttons on the new pendant

- Close the control box and reconnect the power to the control box and spindle/router.
- Turn on the switch on the front face of the control box.
- Press the Reset button on the pendant and listen for the contactors in the control box to engage.
- Type K (Keypad) in the ShopBot control software and turn on output #1. Press the Start button on the pendant. The spindle should come on.
- Hit the E-Stop on the 3-button pendant. This should disengage power to the control box.
- If any of these procedures failed, recheck the wiring diagram.

### Test the existing buttons

- Close the control box and reconnect the power to the control box and spindle/router.
- Turn on the switch on the front face of the control box.
- Press the Reset button on the side of the control box and listen for the contactors inside to engage.
- Type K (Keypad) in the ShopBot control software and turn on output #1. Press the Start button on the side of the control box. The spindle should come on.
- Hit the E-Stop, which should disengage power to the control box.
- If any of these procedures failed, recheck the wiring diagram.

