TouchFree Standard Button Installation Guide

The Novax TouchFree Standard Button enables pedestrians to activate a button request with a simple hand-wave. The 3D TouchFree™ Gesture Recognition Sensors detects Hand Waving motion in three dimensions (Axis). Once the button is activated, the Red LED will momentarily light up supported by an audible tone.

Application Note: for Custom Control Systems (for example, **Solar RRFB Pedestrian Crossing systems**) an adapter may be required to interface the button for proper operation. Please contact Novax support at 1.866.977.4277

Installation Steps:

1. Take the existing 2 Push Button Wires and attach to the back of TouchFree Button's Philip-Screws terminal. Terminal connections are **Non-Polarized**.

   - Compatible with:
     - NEMA Relay interfaces
       - 12 – 25VAC $_{rms}$
     - Caltrans 242 / 242L /244 DC Isolator
       - 18 - 36VDC
     - NEMA TS2-BIU specific interfaces– follow **Recommended Wiring** on page 2

2. Use the 4 Capscrew (Security Screws) provided to secure the TouchFree Button on either New or Existing round base.

   - 4 Security Screws included with the Button Hex Skt Hd, SS, 8-32 x 5/8
   - TouchFree Button can be Retrofitted to all Standard Round Push Button Bases

3. Wave Hand across the Button (Left – Right, Up – Down or any Direction) from **1 to 15cm** (0.5 to 6 inches) to Activate a Pedestrian Request.
   - The Button's top Red LED will Blink-On once and play a Double-Tone to confirm activation.
   - **To Activate 3-sec Long Press pedestrian request** – Pedestrian must place their hand in-front of the Sensors (within 3cm) for 3sec. The Button's top RED LED will Blink-On three times and play Triple-Tone to confirm Long Press activation**.**

ATTENTION

Do not connect TouchFree Button directly to any voltage source. This may damage the unit.

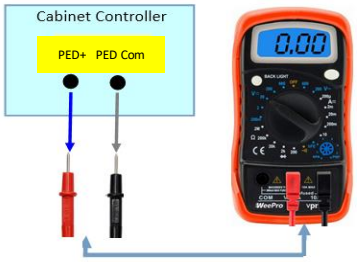
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

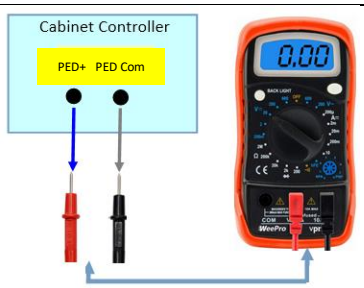
Product Features	Bluetooth	**Compliant with Bluetooth v5.1 and BLE specification**
Touch-Free Sensor	Detection Range	Default Max (detection) Setting: 15cm (6 inches). Minimum distance 1cm (~0.5")
	Detection type	3D Touch-Free Gesture Recognition[1], and Steady Presence at 1 – 4 CM
	Detection Materials	Detects all skin types, fabrics, of all colors
Mechanical	Dimensions for Retro Replacement Product	3.20-inch diameter by 0.625 depth (without Terminal Block) Depth with Terminal Block is 1.032inches
Environmental Range	Operating Temperature	-35°C to +74°C (-31°F to +165°F)
Electrical Specification	Voltage Range	Supply voltage from the Pedestrian Isolator will be 14- 36VDC or 12 - 25VAC (per 1 Button)
		Maximum of 2 TouchFree Buttons for each Pedestrian Isolator Channel (without extra pullup resister)
Power Consumption	Watts	72mW (+/- 10%)
NEMA Standards	NEMA TS2-2003 Temperature and Humidity, Mechanical Shock and Vibration, Transient Voltage Protection	
Caltran Standards	Caltrans TEES2009 Temperature and Humidity	

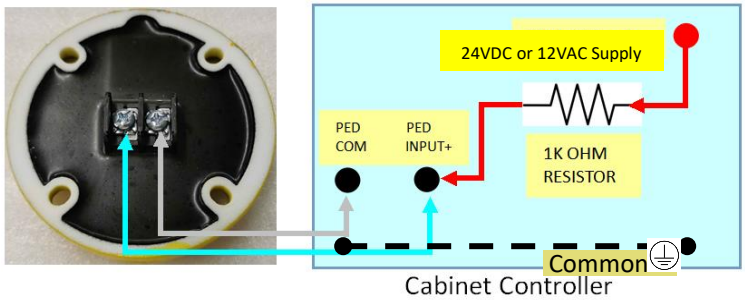
1. 3D Touch-Free detects actual hand waving movement in three dimensions.

Installation Support

Please contact Novax support at 1.866.977.4277

Condition 1	Action	
• TouchFree Button Not turning On and/or • No audio or LED feedback from TouchFree Button with Hand-Wave	• Measure the voltage across Terminal while TouchFree Button is **Not Connected**. Voltage on wires need to be between • (18 < Voltage < 36V**DC**) +/-10% (12 < voltage < 25V**AC**) +/-10% • If Voltage is less than minimum - **See Recommended Wiring below**	

Condition 2	Action	
• One TouchFree Button Work • Two TouchFree Buttons not working. • Both TouchFree Buttons not turning On • Both TouchFree Buttons not activating with Hand-Wave	• Measure the Current across Cabinet Push Button Wires (TouchFree Button is **Not Connected)** **Using mA meter DM.** Current on wires need to be between • (18mA DC < Current < 36mA **DC**)+/-10% • (12mA AC < Current < 210 mA **AC**)+/-10% • If Current is less than 6mA – **See Recommend Wiring below**	

Recommended Wiring	
• Wire a **1K Ohm Resistor** between the Cabinet PED Power Source to PED Input+ (24V DC or 12VAC for BIU) • Two TouchFree Buttons can be connected in parallel to the same PED INPUT + • The Cabinet PED source will increase both the voltage and current supply to the Touch-Free Button (s)	

Bench Testing	
• Connect the TouchFree Button to a DC Power Supply (18 – 36VDC) with **1K Ohm Resistor.** • The TouchFree Button will be operational 3-4sec after Power ON. • Wave Hand across the 2 Sensors – The Top LED will blink Red and play a 'Beep-bop' sound