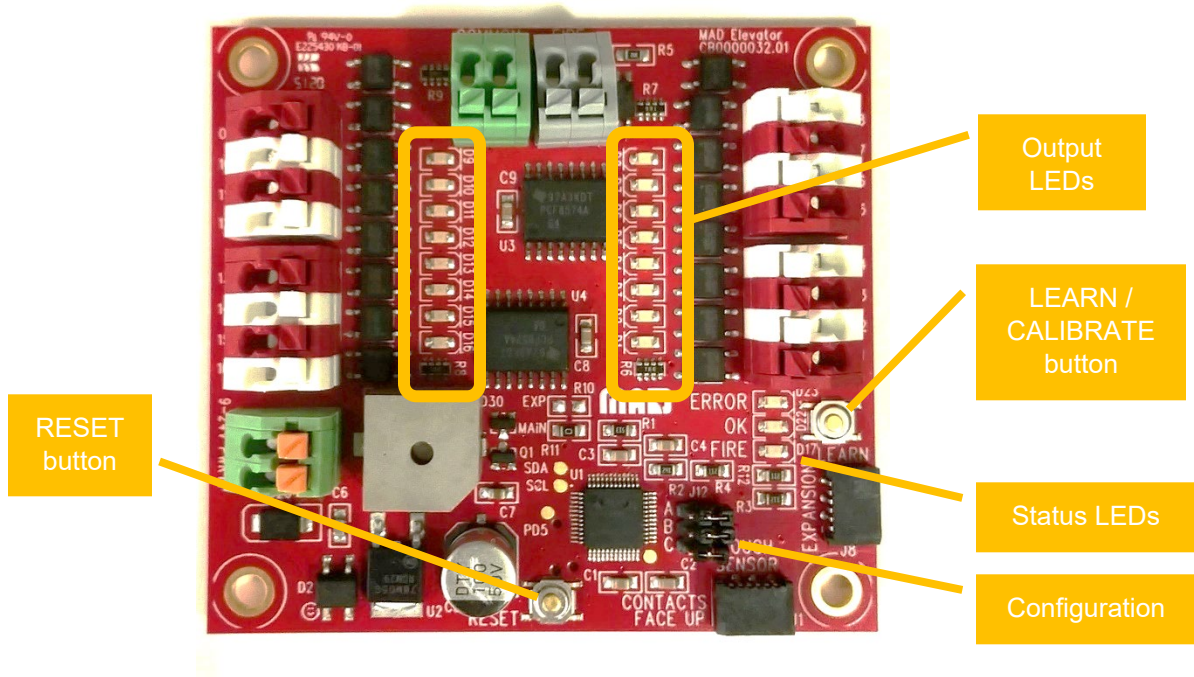




PHANTOM Touchless Sensor - Troubleshooting

For assistance, please reach out to our Technical Support Team at: (647) 925-4520 or support@madelevator.com

If you are having difficulties with the Phantom Touchless sensor, please review the information below to troubleshoot the issue.



Expected Behaviour

If the sensor is working as expected, you should see:

- Red ERROR LED off, with a brief flash every 30 seconds
- Green OK LED blinking once per second
- Orange FIRE LED off

When the sensor detects a touch in a calibrated location, the associated output LED (orange) will light.

When the sensor detects a touch in a non-calibrated location, the red ERROR LED will flash briefly (100ms).

Configurable Options

The 3 configuration jumpers (marked A, B, C) allow you to customize how the sensor behaves. The factory default settings are to have all the jumpers removed (i.e. attached to one pin only). The functions you can configure are:

BEEP ON/OFF (C)

If the jumper is **installed** across the pins, the unit will not beep when a touch is detected at a calibrated location.

If the jumper is **removed** (or on one pin only), the unit will beep when touch is detected at a calibrated location.

Regardless of the jumper setting, the unit never beeps when a non-calibrated location is touched, and the unit always beeps if the activation mode is set to activate on release.

TOUCH ZONE SIZE (B)

If the jumper is **installed** across the pins, the unit will be set for large buttons. If the jumper is **removed** (or on one pin only), the unit will be set for regular buttons.

Large buttons: A touch is accepted if it is within $\pm 27.5\text{mm}$ of a calibrated location.

Regular buttons: A touch is accepted if it is within $\pm 17.5\text{mm}$ of a calibrated location.

ACTIVATION MODE (A)

If the jumper is **installed** across the pins, the unit will be in *Activate on Release* mode:

1. Play a low beep when a finger is detected at a calibrated location
2. Wait for the finger to be removed
3. If the finger is removed (from the same location, within 1 second), it will play a high beep and close the button contact for 500ms
4. In this mode, only one touch event can be tracked at a time.

If the jumper is **removed** (or on one pin only), the unit will be in *Activate on Press* mode:

1. Close contacts upon detecting a finger. A low-high chime is played.
2. Hold them closed as long as the finger is present
3. Open contacts upon removing the finger
4. In this mode, two independent touches can be tracked at a time (i.e. two passengers could be pushing buttons concurrently).

LEDs

During initialization/startup, or after pressing RESET, the LEDs behave as follows.

|=Solid On -=Flashing |=Off

ERROR	OK	State/Condition
		Startup, waiting for sensor to be detected & initialized
	-	Sensor configured OK, but unit has not been calibrated
	-	Sensor configured OK, calibration valid, ready to use
	or	The unit is in calibration mode, awaiting completion of calibration

After initialization/startup, the ERROR LED works as follows:

If the ERROR LED flashes once (one 100ms flash), this indicates that an uncalibrated location was touched.

If the ERROR LED flashes twice (two 100ms flashes), this indicates that a touch was detected but the object was too large to be a finger (e.g. an elbow or forearm was pressed into the touch zone).

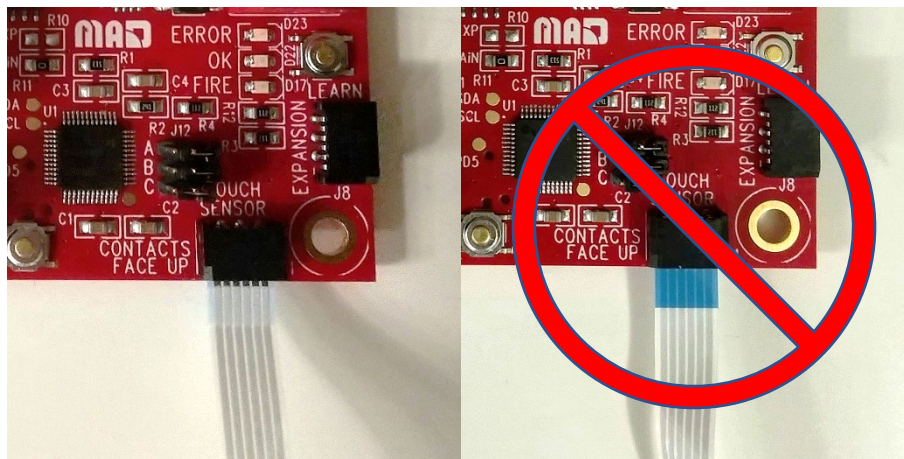
If the ERROR LED flashes once (one 100ms flash) during a press while in *Activate on Release* mode, this indicates that the finger was moved while down (i.e. the button on which the finger was released does not match the button on which the finger was pressed) .

If the ERROR LED blinks briefly once every 30 seconds while the sensor is idle, this is normal. This indicates that the sensor is being checked and reconfigured.

If the ERROR LED stays lit red, that indicates a communication error with the sensor during the above check. The LED stays lit and the unit continuously attempts to re-establish communication with the sensor.

If you are experiencing a solid ERROR LED, please check that the cable to the sensor is inserted correctly, and ensure that the cable is not damaged, cut, or shorting out against any nearby metalwork.

Also please check that there are no objects in the field of view of the sensor during startup. This may cause the sensor to malfunction and fail to initialize.



Fire Service Mode

If a 24V AC or DC voltage is present at the FIRE terminals, then the unit is in fire service mode. It will not close any contacts while in this mode.

The green OK LED will remain on continuously. The orange FIRE LED will remain on continuously. If any touches are detected, the orange FIRE LED will blink briefly.

Upon removal of the voltage at the FIRE terminals, the unit will resume normal operation after a delay of approximately 1.5 seconds.

Calibration

Pressing the LEARN or CALIBRATE button will cause the unit to enter calibration mode. The green OK LED will be either on or off (not flashing), and the red error LED will be off.

In this mode, you teach the sensor where each valid touch position is located. Up to 32 locations may be stored.

The unit assigns these locations sequentially to the output contacts on the board. The first location you touch is assigned to output 1, the second to output 2, and so on. If you have less than 32 locations, you may stop when you press the last location.

Each time you touch, the corresponding output LED flashes. No beep will sound.

If you touch an already-programmed location, the unit will do nothing. There will be no LED flash, nothing is stored for that touch event, and programming continues on when the unit receives the next valid touch.

The calibration data is not stored to memory until you press the LEARN or CALIBRATE button at the end of the sequence. You will hear a series of 3 ascending tones when the data has been stored.

It is important to touch the locations as accurately as possible. It is suggested to use a finger-sized non-reflective object (e.g. the capped end of a black Sharpie marker) for best accuracy.

If you wish to cancel calibration (and retain the prior calibration data stored in memory without overwriting it), just press RESET to exit calibration mode.

The unit appears to work but the elevator does not register the call

Confirm that the wiring is 24V AC/DC. The unit is not rated for 120V or 240V operation.

Confirm that the COMMON terminal is wired.

Confirm that the relay contacts are not damaged. The unit uses solid-state relays rated for 100mA maximum per contact, and the relays have maximum 30W contact resistance. Excessive current will damage the relay, causing it to be stuck open or stuck closed. If you put the unit in its default mode of operation (*Activate on Press*), you should be able to hold your finger on a touch location while measuring the continuity of the contacts; the contact will stay closed as long as your finger is present.

The unit does not activate when touched

Please try the following steps **in order** and record the results in case you require technical support. Please don't reset or power-cycle the unit until you have completed all of the steps.

1. Is there a reflective object directly in front of the sensor? It will not work if it is facing a mirrored surface.
2. Is the red ERROR LED on continuously? This indicates a communication problem with the sensor. Check the wiring for damage or loose connections. If you have one, try connecting a different sensor temporarily as a quick test to confirm the sensor/wiring is not at fault.
3. If the ERROR LED is off, then check to see if the unit detects touch anywhere. You should see the ERROR LED blink if you touch any non-calibrated location in the sensor's field of view.
4. Is the green OK LED blinking? If all LEDs are off, check that the board has power (9-24V AC or DC). If the green LED is doing anything other than blinking once per second, make note of what you see.
5. Does the unit respond if you press the LEARN / CALIBRATE button? If so, does it notice touches in calibration mode? You may try reprogramming the touch locations, or press RESET to exit and retain the prior calibration.
6. Does the unit resume functioning if you press RESET? Please don't press RESET until you've done the above steps first.
7. If RESET does not restore operation, does a power-cycle restore functionality?

For further assistance, please contact MAD Elevator at (647) 925-4520 or support@madelevator.com.