

LED lighting / Motion control system – aisle case control

11/10/09 Rev C

The following instructions will detail how to install the motion sensor system to a line-up of Zero Zone cases. The motion control system is used to turn the lights off and on inside the case as needed. This system will save energy and increase the life of the LED lights. There is one control per line-up, and the lighting in one line-up all turns off and on as a group. The case lights turn on when a person enters the store aisle, then shut off after a period of time after the person has left the range of the sensor.

Sensor installation

There will be one sensor located at each end of the aisle. When a customer approaches the cases from either end of the aisle, the lights inside the case will turn on.



Picture 1. A power pack with a cable attached.



Picture 2. The back of the sensor showing the dip switches.



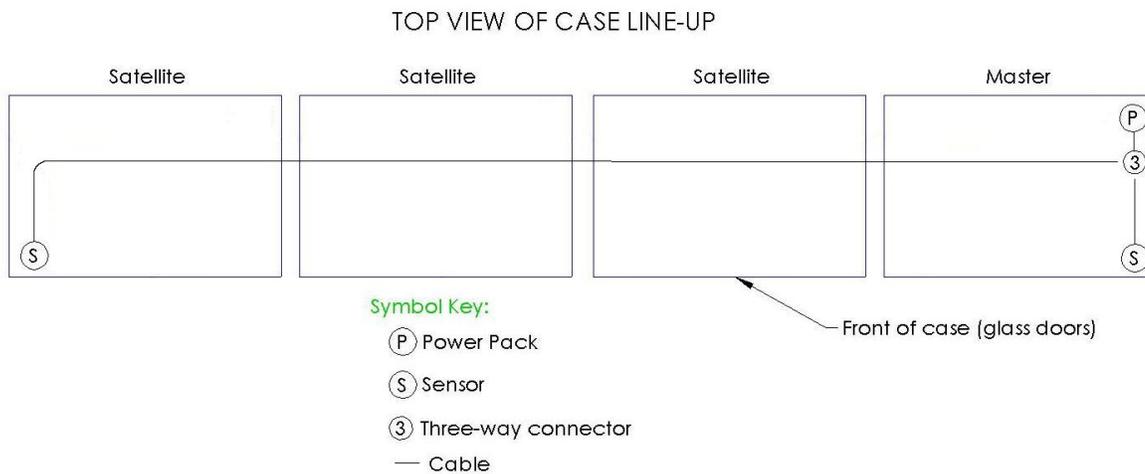
Picture 3. A sensor and bracket shown ready to install .



Picture 4. The sensor shown mounted on the case.

1. Begin with the right-most case of the line-up, known as the Master case. Locate the power pack, which is positioned on top of the ceiling at the back right of the case. The power pack is plugged into a 4x4 electrical box.

2. Install one end of the 1 foot cable into the connector on the power pack, the other end into one of the supplied 3-way connectors. (The cables plug in similar to a telephone jack.)
3. Consult picture 5 of this document for the layout of the cables on top of the case. Note that a 100 foot cable is used to run from one end of the case line-up to the other. We always supply 100 foot cables regardless of the number of cases connected so there might be extra length on shorter line-ups. Just coil the leftover cable neatly on the top of the ceiling.
4. Attach the sensor to the top of the case. The sensor has a built-in mounting bracket and should be installed in the front corners of the case using the screws provided.



Picture 5. This picture shows a top down view of a sample case line-up. The master case is on the right with three satellite cases attached (Any number of satellite cases may be attached).

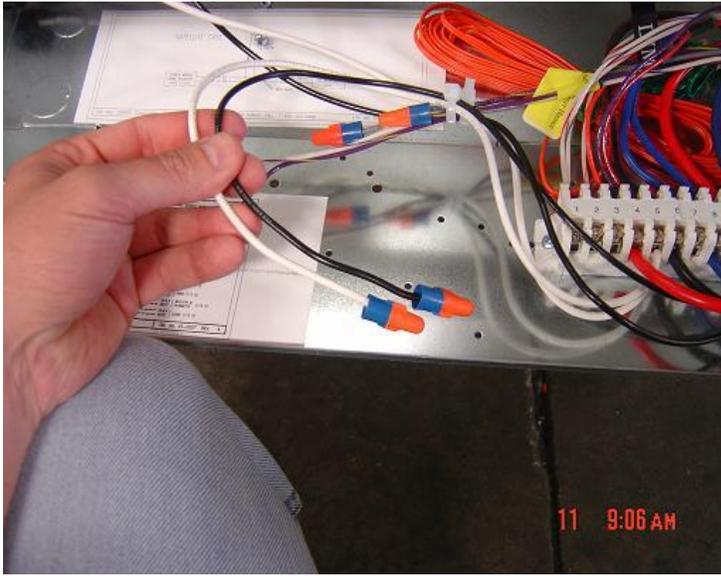
Wiring installation

The lighting has been prewired to ease installation. Each case powers its own set of lights through a relay, but control wiring runs the length of each lineup. Through this control wire, power to the *coil* of each relay is daisy chained to the rest of the cases in the lineup. When the Master case [the case that has the power pack installed] turns on, the rest of the lights in the line up turn on.

1. Open the electrical box of the master case. Locate the extra pair of 6-8" wires (with wire nuts); these are used to send power to the coil of the lighting relay of the adjacent case.
2. Move to the next case in the line-up. Unwind the lighting wires and bring them to the master case, routing them neatly in the raceway provided. Cut and strip the wires to length, then attach them to the pigtail wires provided in the master case using the supplied wire nuts.

Note that *this* case also has 6-8" pigtail wires provided. These wires are to power the lighting of the *next* adjacent case.

3. Continue to move down the line-up, uncoiling the long set of wires and routing them to the adjacent case. This connects the coils of the lighting relays into a parallel circuit. When the lights of the control case turn on, the rest of the lights in the line-up will turn on too.



Picture 6. Light wiring in the case, showing the pigtail wires.

Sensor adjustments

The light level and time delay adjustments are pre-set at the factory but should be verified. Adjustments are made on the back of each sensor by setting a series of dip switches. The switches can be accessed by removing a small cover on the back of the sensor.

Light level adjustment should be turned to “max”. The time delay should be set to 8 minutes. This combination results in the dip switch to be set at on-off-off-on. If changes are necessary, use a pen or similar object to push the switch to the correct position. The range of the sensor is about 20 feet.

Note: There may be an optional on/off switch located on top of the sensor control box. This is an override switch for the lighting control system. In normal operation the switch should be in the OFF position. Moving the switch to the ON position will cause power to be sent to the lights uninterrupted, bypassing the motion control system.