

# SmartWalk™ XM-S

Solar Crosswalk Motion Sensor

INSTALLATION INSTRUCTIONS

## Section 1

### General Description

The SmartWalk XM-S is the first solar powered microwave sensor specifically designed to monitor the curbside lane of a crosswalk for pedestrian occupancy and provide an extension of the pedestrian clearance timer. As the crosswalk timing sequence is about to end, if the SmartWalk XM-S still detects pedestrians in its target area, it can enable the control timer to extend the Flashing "WALK" time giving slower moving pedestrians additional time to exit the crosswalk.

## Section 2

### Installation

The SmartWalk XM-S easily mounts to existing poles at a recommended height of 10–12 feet to discourage vandalism and provide an optimum target area. The versatile mounting bracket can be attached with 2 bolts through 2 - 1/2" prepunched mounting holes or by banding to the pole.

### Mounting-(see Figure 1)

1. Remove 1/4-20 hinge bolt holding the mounting bracket to the sensor housing and detach the mounting bracket.
2. Using the bracket as a template, mark and drill mounting holes in the pole and attach or band the mounting bracket to the pole in the desired location.
3. Re-attach the sensor housing to the mounting bracket with the 1/4-20 hinge bolt removed in step 1.

### Wiring-(see Figure 2)

1. Make all wiring connections to the wire harness PRIOR to applying power.
2. The default setting for the relay is FAIL SAFE (dipswitch #4 is on).

#### FAIL SAFE ON (Relay Energized) Wiring Diagram Dipswitch #4 is ON

Red Wire = Voltage In: 12V DC+  
Black Wire = Voltage In: 12V DC-  
White Wire = Relay Normally Open (N.O.)  
Green Wire = Relay Common (COM)  
Orange Wire = Relay Normally Closed (N.C.)

#### FAIL SAFE OFF (Relay De-Energized) Wiring Diagram Dipswitch #4 is OFF

Red Wire = Voltage In: 12V DC+  
Black Wire = Voltage In: 12V DC-  
White Wire = Relay Normally Closed (N.C.)  
Green Wire = Relay Common (COM)  
Orange Wire = Relay Normally Open (N.O.)



**NOTICE:** Operating voltage is 12V DC and must be applied through an **isolated power source** for proper electrical protection.

Once power is applied, the LED will flash for 10 seconds. During this time the unit is non-functioning. **The unit is ready for normal operation once the LED turns solid green.**



**WARNING: DO NOT apply 120V AC primary power to the transformer until all secondary wiring is complete.**



**WARNING: To limit exposure to electrical damage from power surges, ALWAYS wire the sensor through the transformer that is provided or a TCPS series isolation module (sold separately).**



**WARNING: DO NOT ground one side of the secondary of the transformer. Circuit ground of the unit is electrically connected to the housing. Grounding one side of the transformer may create a direct short that will permanently damage the device.**

For more information, call us toll-free at (317) 842-2545.

### Set Up and Alignment

Sensor adjustments are made with the housing cover off. Remove the four hex head screws. Two are located on the front plate and two are on the back plate. The cover is then removed by lifting up slightly and sliding it forward (Fig. 1).

1. Set the sensor parameters via the 6 dip switches located on the printed circuit board (Fig. 2).



**NOTICE:** Dip Switches 3 & 5 are not available and factory set—DO NOT change them or the device will not function optimally.



**NOTICE:** When Approach-Only or Depart-Only detection (dip switch 6) is selected, then dip switch 1 must be set to Unidirectional (OFF). To avoid false activations, unidirectional motion detection is recommended.

**NOTICE:** When Bidirectional detection (dip switch 1) is selected, then dip switch 6 is bypassed.

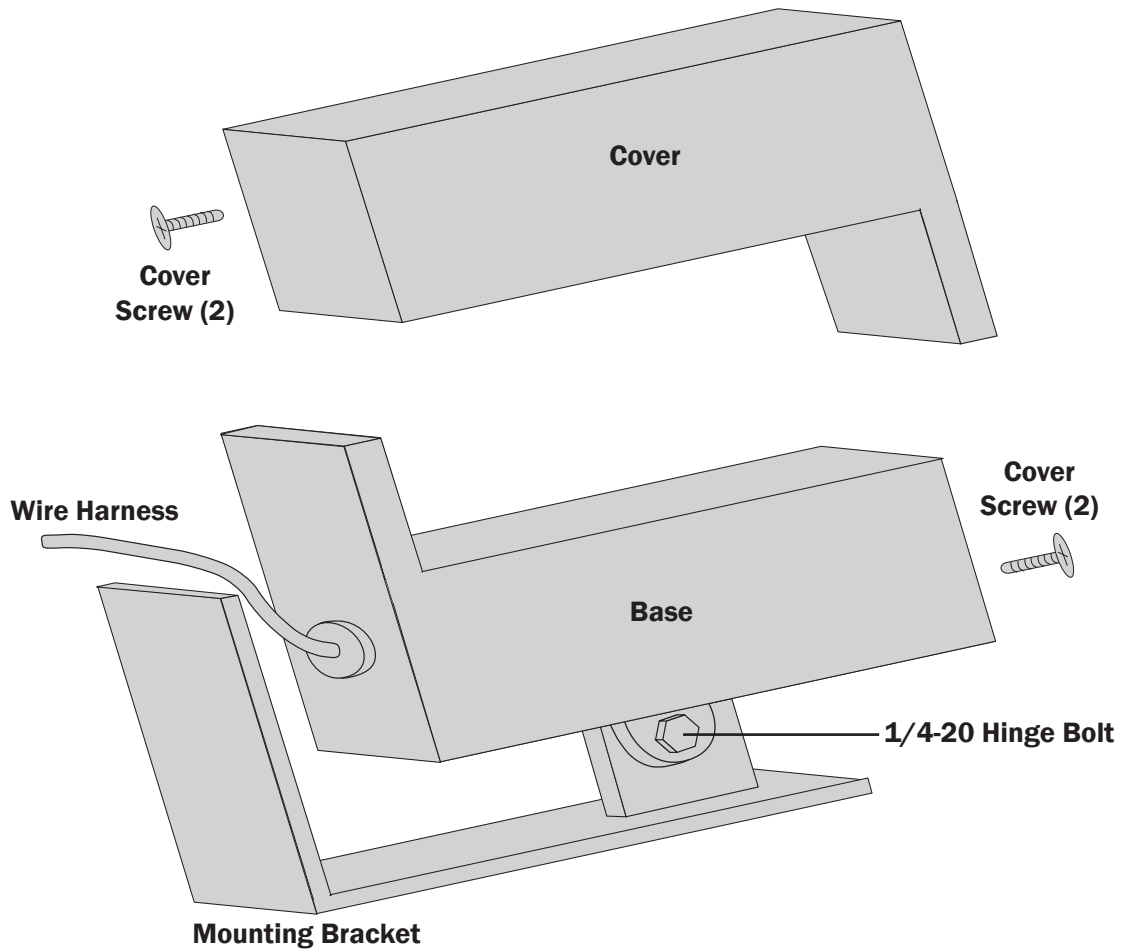
2. Align the SmartWalk by adjusting the **Range Potentiometer** and the aiming angle to achieve the desired pattern placement and size. To adjust the sensor's aiming angle, loosen the 1/4-20 hinge bolt, adjust and then re-tighten.





**FIGURE 1**

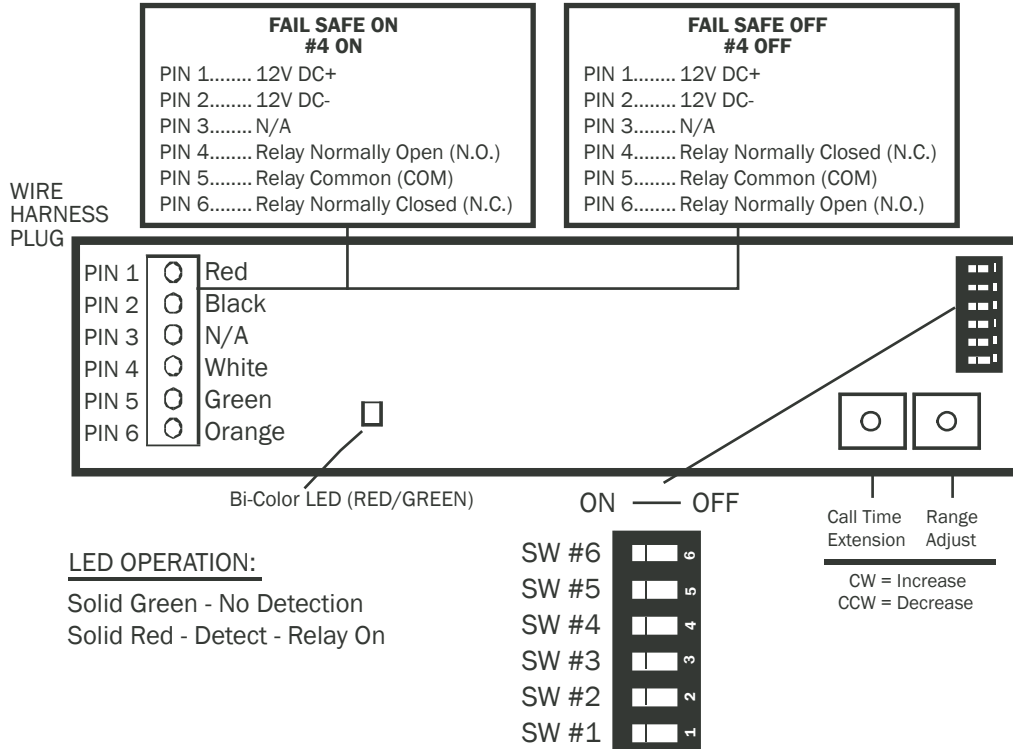
## SmartWalk XM-S Housing



NOTE: Mounting height is 10' - 12' for optimum results.

**FIGURE 2**

**SmartWalk XM-S Layout & Wiring Connections**



**Dip Switch Settings**

SW	SWITCH DESCRIPTION	SWITCH 'OFF'	SWITCH 'ON'
1*	Detection Direction	Unidirectional Motion detection	Bi-directional Motion detection
2	Pedestrian Motion Sensitivity	Pedestrian Motion More Sensitive	Pedestrian Motion Less Sensitive
3	Not Used	Not Available	Not Available
4	Fail Safe State	Fail Safe Disabled	Fail Safe Enabled
5	Not Used	-----	Must Leave in 'ON' Position
6*	Approach/Depart	Approach	Depart

**WARNING** - For SmartWalk XM-S, Switch #5 must be left in the 'ON' position.

\*When Approach-Only or Depart-Only detection (dip switch 6) is selected, then dip switch 1 must be set to Unidirectional (OFF). To avoid false activations, unidirectional motion detection is recommended.

\*When Bidirectional detection (dip switch 1) is selected, then dip switch 6 is bypassed.