



# **SMART WALK**

**PEDESTRIAN DETECTORS**

**FOR RELIABLE CURBSIDE  
& CROSSWALK OCCUPANCY DETECTION**



---

SENSORS & SWITCHES

# SMART WALK

## PEDESTRIAN DETECTORS



Using MICRO-MOTION™ technology, the SmartWalk™ 1400 and the SmartWalk™ 1800 provide reliable, stable and vandal-resistant detection of pedestrians, both at the curbside (Model 1400) and in the crosswalk (Model 1800).

### Background

Microwave (Doppler radar) sensors are unsurpassed for the reliable detection of pedestrians in motion. However, for curbside and crosswalk pedestrian detection, pedestrians are often not moving enough to be continuously detected by conventional microwave devices. Therefore, other pedestrian detection technologies have often been employed, including infrared and ultrasonic. However, these technologies have their drawbacks as well, including susceptibility to background noise, temperature variation, and color variation. The result has been that, until now, traffic engineers have had to make uncomfortable performance compromises.

With the introduction of MICRO-MOTION technology (patent pending), MS Sedco has revolutionized pedestrian detection. With MICRO-MOTION technology, even the smallest of pedestrian movements is sufficient to maintain detection. While not true presence detection, MICRO-MOTION technology provides reliable detection of very small movements while eliminating performance variations caused by changing temperature, color variations, or background noise.

### Product Operation

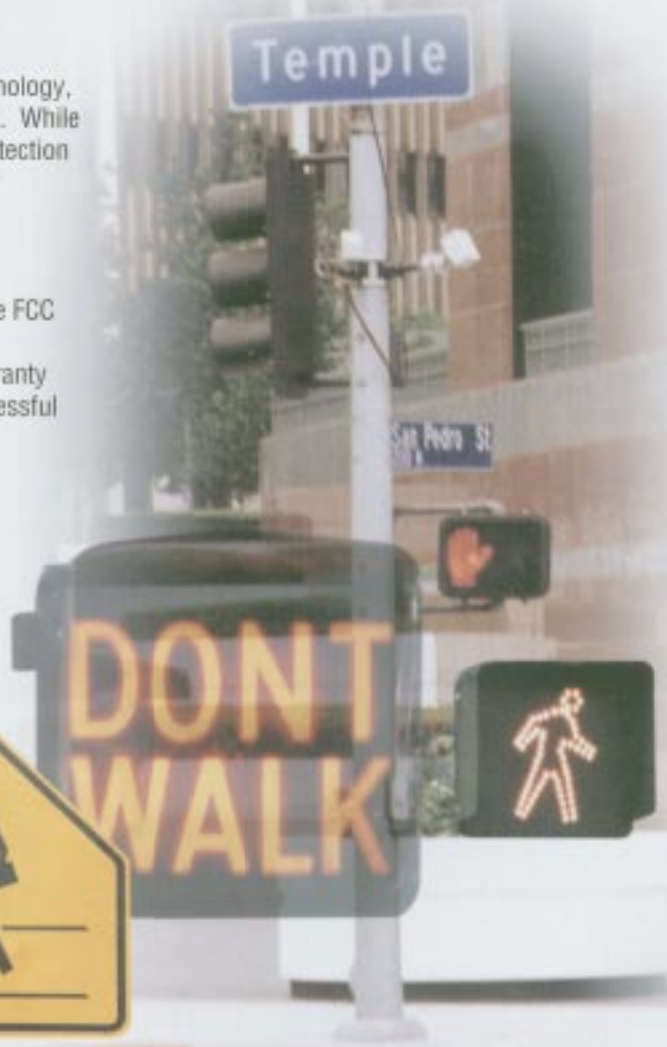
The SmartWalk 1400 and the SmartWalk 1800 have both been certified by the FCC for safe operation in any outdoor environment. Both feature state-of-the-art microprocessor control, for long-term stability and reliability (a one year warranty is standard). For both units, initial prototypes have been in continuous, successful operation since May 1997.

Both models are easy to install, adjust and maintain. Mounting is usually accomplished using poles already in place. Mounting heights can be up to 12 feet, depending on how far the pole is from the target detection area. Power input is 12V to 24V AC or DC.

For the 1400, the user can easily adjust range, MICRO-MOTION sensitivity, and the minimum time a pedestrian must be in the pattern before detection is registered. This last feature allows pedestrians to "pass through" the detection zone without issuing a call unnecessarily. For the 1800, the user selects whether the unit detects only approaching motion, or motion in both directions.

Set-up is easily accomplished, using LEDs for installer feedback.

Both models have a weatherproof housing of ABS plastic, for long-term outdoor performance. Electrical connections are made quickly and easily.



■ **Microwave Reliability**

■ **Detects Extremely Small Movements**

■ **Insensitive to Temperature, Humidity, Color or Background Noise Variations**

■ **Stable Detection Pattern**

■ **Installs and Aligns in Minutes**

■ **User Adjustable**

■ **Environmentally Secure**

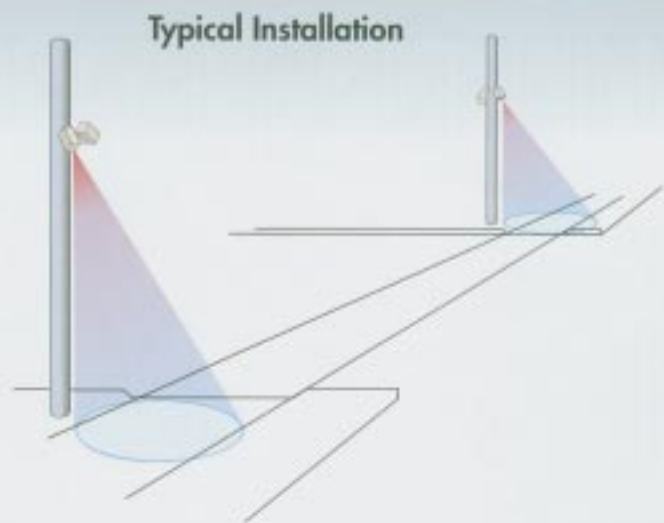
■ **Vandal Resistant**

# 1400

FOR ACTIVATION OF PEDESTRIAN SIGNALS

By combining conventional microwave detection techniques with MICRO-MOTION technology, the SmartWalk 1400 is able to initially detect pedestrians in the targeted curbside area, and maintain that detection for even very small pedestrian movements. With easy to use DIP switches, the installer can determine the amount of time a pedestrian must be in the target area before detection is indicated. This allows the SmartWalk 1400 to ignore pedestrians just passing through the detection area and not stopping to indicate they wish to cross.

The SmartWalk 1400 is easy to install, adjust and maintain. Mounting is usually accomplished using existing poles, at a mounting height of up to 12 feet, to effectively discourage vandalism. Electrical connections are easily made. Indicator LEDs are provided to assist in set-up, providing feedback to the installer. Range and MICRO-MOTION sensitivity are also easily adjusted.

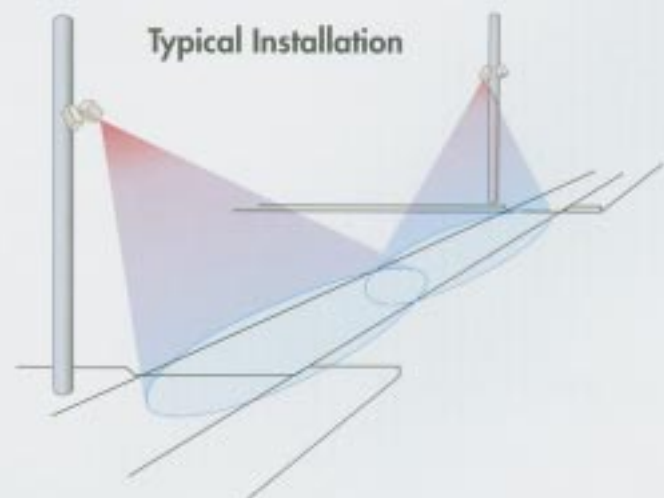


# 1800

FOR CROSSWALK OCCUPANCY DETECTION

Using MICRO-MOTION technology, the SmartWalk 1800 is able to reliably detect pedestrians moving in the designated crosswalk area, even if that motion is minimal. Slow moving pedestrians, including the physically challenged, can now be continuously detected while in the crosswalk area. The SmartWalk 1800 can operate in the approach only mode, or, by simply changing a DIP switch, the unit can detect both approaching and departing motion.

The SmartWalk 1800 is easy to install, adjust and maintain. Mounting is usually accomplished using existing poles, at a mounting height of up to 12 feet, to effectively discourage vandalism. Electrical connections are easily made. Indicator LEDs are provided to assist in set-up, providing feedback to the installer. Range and MICRO-MOTION sensitivity are also easily adjusted.



# SMART WALK

## Feature:

## Benefit:

<b>Model 1400 enables hands-free pedestrian signal activation</b>	Eliminates dependence on push buttons, providing benefits for those unable to see or reach the push button.
<b>Model 1800 provides hands-free detection of pedestrians in the crosswalk</b>	Detects slow moving pedestrians in crosswalk, allowing extension of signal time.
<b>Employs MS Sedco's proprietary MICRO-MOTION technology</b>	Provides enhanced pedestrian detection, able to sense motion down to a fraction of an inch per second.
<b>Installs in minutes</b>	Saves time and money by using existing poles.
<b>Easy to set up</b>	No specific training is required; simply follow the easy-to-use instructions.
<b>User selectable sensitivity</b>	The installer can select the sensitivity, using a range potentiometer, ensuring proper coverage.
<b>Environmentally secure</b>	Insensitive to heat, cold, rain, snow, reducing the need for service calls.
<b>Stable detection pattern</b>	Once the unit is mounted and aligned, additional service / adjustment calls are not necessary.
<b>Tamper resistant, non-obtrusive enclosure</b>	Unit is mounted out of reach of would-be vandals, further reducing the need for service calls. Captive screws help to ensure the integrity of the enclosure.

## Technical Data

### SmartWalk Model 1400

Operating Frequency	24.125 GHz $\pm$ 50MHz (K-Band)
Detection Method	Microprocessor-analyzed Doppler microwave with MICRO-MOTION technology
Detection Pattern	Adjustable with cover off
Detection Angle	Adjustable
Detection Mode	Bidirectional motion
Call Delay Time	0 to 14 seconds (selectable in 2 second intervals)
Power Requirements	12V to 24V AC or DC $\pm$ 10%
Power Consumption	3.5W maximum
Relay Output	Form C, rated at 1 amp @ 24V DC (N.O. and N.C.)
Output Power	5mW typical, 2mW minimum
Relay Contact Ratings	0.5A:50V AC— 1A:24V DC
Operating Temperature	-22°F to 158°F (-30°C to 70°C)
Size	8.56"L x 4"W x 5"H (21.8cm x 10.2cm x 12.7cm) (measurements include bracket)
Enclosure	ABS plastic & anodized aluminum
Weight	Approx. 2 lbs. (0.9 kg)

### SmartWalk Model 1800

Operating Frequency	24.125 GHz $\pm$ 50MHz (K-Band)
Detection Method	Microprocessor-analyzed Doppler microwave with MICRO-MOTION™ technology
Detection Pattern	Adjustable with cover off
Detection Angle	Adjustable
Detection Mode	Switch selectable (unidirectional or bidirectional)
<b>MICRO-MOTION</b>	
Extend Time	2 or 5 seconds
Power Requirements	12V to 24V AC or DC $\pm$ 10%
Power Consumption	3.5W maximum
Relay Output	Form C, rated at 1 amp @ 24V DC (N.O. and N.C.)
Output Power	5mW typical, 2mW minimum
Relay Contact Ratings	0.5A:50V AC— 1A:24V DC
Operating Temperature	-22°F to 158°F (-30°C to 70°C)
Size	8.56"L x 4"W x 5"H (21.8cm x 10.2cm x 12.7cm) (measurements include bracket)
Enclosure	ABS plastic & anodized aluminum
Weight	Approx. 2 lbs. (0.9 kg)



SENSORS & SWITCHES



8701 Castle Park Drive • Indianapolis, IN 46256  
 Phone: (800) 842-2545 or (317) 842-2545  
 Fax: (800) 849-3387 or (317) 849-3387  
[www.msstedco.com](http://www.msstedco.com)

8995M  
 Printed in USA