

# TAKEX

# MICROWAVE SENSOR

## MW-50

## Instruction Manual

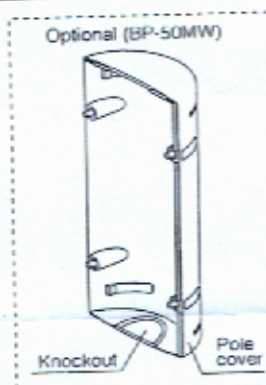
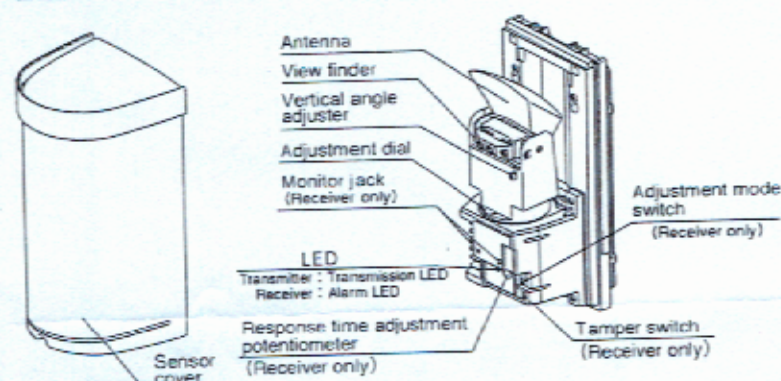
We appreciate your purchase of a TAKEX microwave sensor. This sensor will provide long and dependable service when properly installed. Please read this Instruction Manual carefully for correct and effective use.

**Please Note:** This sensor is designed to detect intrusion and to initiate an alarm; it is not a burglary-preventing device. TAKEX is not responsible for damage, injury or losses caused by accident, theft, Acts of God (including inductive surge by lightning), abuse, misuse, abnormal usage, faulty installation or improper maintenance.

### PRODUCT DESCRIPTION

This Product consists of transmitter which sends 24.15GHz of microwave and receiver which receives the beam. It will initiate an alarm signal when receiver detects drop in the beam reception level because objects interrupt between transmitter and receiver. Compared to photoelectric beam, microwave's wavelength is extremely long, which prevent the sensor from being affected by weather such as torrential rainfall, snowfall, fog or frost especially during the cold winter time. Stable detection performance is possible. Two types of frequencies, MW-50 (H) and MW-50 (L) are available.

## 1 PARTS DESCRIPTION



#### Accessories

- Bracket 2



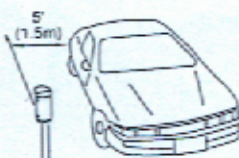
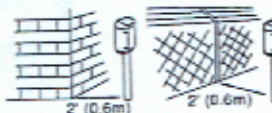


- Tapping screw ( $\phi 4 \times 30$ ) 6

- Countersunk screw (M4  $\times$  30) 4

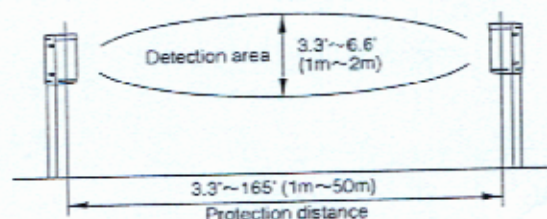
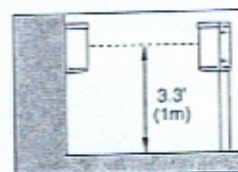
## 2 CAUTIONS ON INSTALLATION

### 1) DO'S AND DON'T'S

- Do not install the unit at places where it may be interrupted by obstacles such as trees.
- Do not install the unit on unsteady surfaces.
- Do not install the unit on street side or in parking lots where many cars may pass by. Installation must be at 5ft. (1.5m) away from the automobile and traffic.
- When installing the unit along the side of a building or fence, installation must be at least 2ft. (60cm) away from the construction.

### 2) Height of installation

Install the unit at a height of 39" (1m), ground to center of microwave sensor, to detect human being walking or running through the beam.



The protection distance should be between 3.3ft. (1m) and 165ft. (50m).

### 3) Check the environment of the installation site

Microwave is affected by electric waves reflected from buildings, fences or the ground. Beam reception level of the microwave depends on how the unit is installed in the area. Install the sensor so that the microwave beam reception is not obstructed.

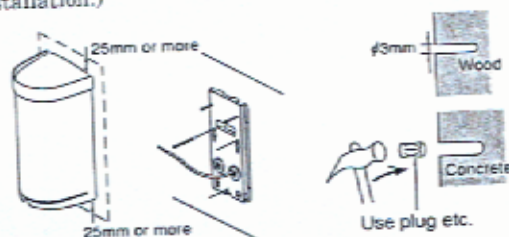




### 3) Wall mount

#### ① Make holes in wall.

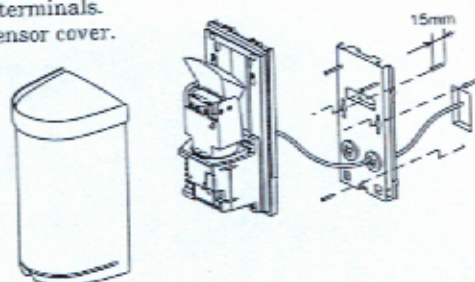
- Place the mounting plate on wall as a template for drilling and mark the screw holes. (Allow a space 1" (25mm) above and below the plate.)
- This will provide easy detachment of the cover after installation.)



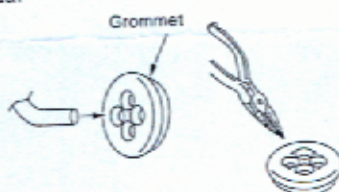
- Pre-drill on wall.
- Concrete wall: Refer to specification of the securing plug used.
- Wooden wall: 3mm dia.

#### ② Install the sensor.

- Insert tapping screws to 15mm under the screw head.
- Install mounting plate on the wall after pulling wire through it.
- Connect terminals.
- Attach sensor cover.

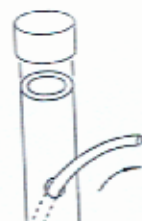


- The grommet is compatible with a wire of  $\phi 0.12"$  ( $\phi 3\text{mm}$ ) to  $\phi 0.24"$  ( $\phi 6\text{mm}$ ) outer dia.
- When a wire of more than  $\phi 0.24"$  ( $\phi 6\text{mm}$ ) outer dia. is used, cut off the dotted line portion as illustrated using pliers or the like.
- Then use caulking to prevent insects from entering into the unit.



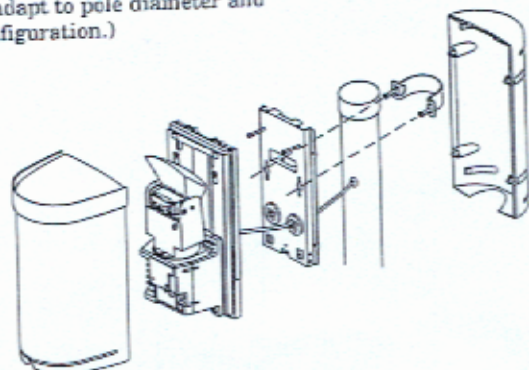
### 4) Pole mount

- Make wiring hole in pole. Pull through wire. Place the pole cap on top of the pole.



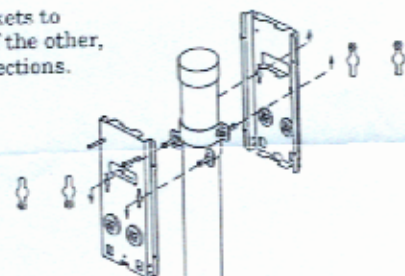
#### ② Install sensor on pole.

- Attach U brackets to pole and fix the mounting plate with screws.
- Fix sensor the body to the mounting plate.
- Connect terminals.
- Attach sensor cover and pole cover.
- (Break knockouts on cover and pole cover to adapt to pole diameter and configuration.)



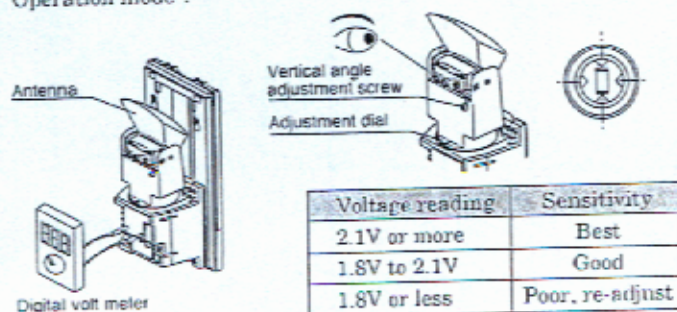
### 5) Pole mounting back to back.

- Attach two U brackets to poles, one on top of the other, facing opposite directions.
- (See illustration.)



## 3 SET-UP OF FUNCTIONS AND BEAM ALIGNMENT

- Supply power with covers off.
- Look through view finder on the transmitter unit and move until the receiver unit is visible.
- Repeat the procedure on the receiver unit.
- Set adjustment mode switch on the receiver at "adjustment mode".
- Connect digital volt meter to monitor jack and check the monitor output voltage (beam reception level).
- When output voltage is low, adjust the installation height of transmitter and receiver so that the output voltage will reach the highest level. (Make sure that the angle of the antenna does not change.)
- After adjustment, make sure that the adjustment switch is set at "Operation mode".

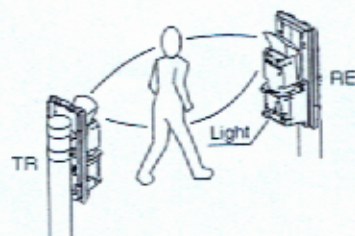


- After adjustment, set adjustment mode switch at "Operation mode".

## 4 OPERATION CHECK

After installation and angle adjustment are finished, test operation by walk testing the beam. Two methods may be used.

### 1) Check by alarm LED only.



### 2) Check by alarm LED and control panel

