

MOTION DETECTOR TVTXS868A02-B02

2 GENERAL DESCRIPTION

Infrared radio sensor, battery powered, for the detection of passing persons. At the presence detection it sends a radio signal the channel 1 (CH1) and a following radio signal the channel 2 (CH2) after a pre-programmed time on the trimmer "TIME". This function permits to activate a remote receiver and to deactivate it after a pre-programmed time.

The detection can be deactivated in function of the light intensity in the room, by means of the trimmer "LUX". The detection is adjustable by means of the trimmer "METER".

The transmission signals can be used also for a remote notice of the persons presence. The radio signals are encoded directly in the factory and the codification is different for each device.

The signal transmission type is "Rolling-code", in order to get impossible a duplication. For the codification with the receiver see paragraph "How to memorize the sensor".

3 INSTALLATION

Attention: the sensor detects the heat from a human body, for its installation follow the indications:

A. Helpful tips for a good transmission

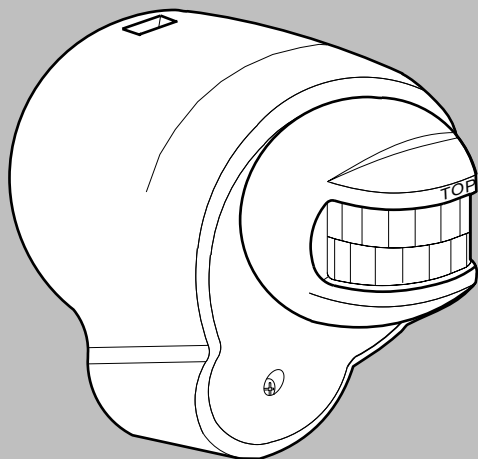
1. Install the detector at least one meter from the floor. The results will be better, if the support will be positioned higher.
2. The detector needs to warm up at least 30 seconds after turning-on.
3. Keep the detector at least one meter away from surrounding conductive devices, such as aluminium reinforced windows and doors, metallic plates, and electric cables.
4. Avoid to install the detector on thick walls or fences that may block wave transmission and shorten the remote control distance.
5. Keep the coverage of the sensor clean. In the surrounding space, respectively in 3 meters from the detector, other devices have not to be installed.
8. Avoid to test the detector by holding in hands. Install it on the wall or ceiling and check if the detecting range is good enough.

During the installation, make sure that the combining receiver is at least 2 meters away from other receivers in order to avoid a shortening of the remote control distance.

B. Select a suitable location

Detection range






1. Choose a suitable installing position for the sensor, from where it can works good with the combining receiver.
2. The sensor can be mounted on the wall, ceiling or table. The best installation height is 2~2.4m, the maximum detectable coverage is 180°, 12M (See FIG.1).
3. The sensor head is adjustable up to 70° downward. By adjusting the sensor head downward, the detection coverage will be reduced. Below are the detection patterns in different angles.
(1) Sensor head in horizontal position (see fig.1).



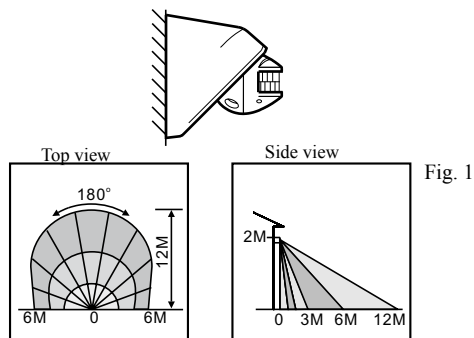
INSTRUCTION MANUAL

Voltage:	DC 6V typical. (UM-3 AA battery 1.5V 4)
Transmission Range:	Approx. 100M (in open air).
Transmission Frequency:	868.3MHz
Modulation:	FSK.
Detecting Range and Angle:	Max. about 12M/180°
Time:	Adjustable from about 5 sec. to 5 min.
LUX:	Adjustable from about 5 LUX to ∞.
Meter:	Max. about 12M.
Battery Life:	About 12 months. (By 10 activations per day at 20°C)
Operating Temperature:	-20°C – +45°C
Protection grade:	IP44

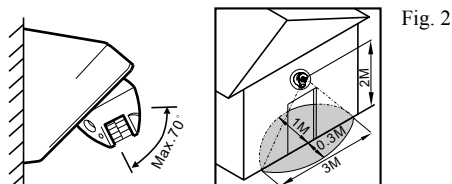
1 - 1 SET IS COMPOSED BY:

Pattern					
Item	Transmitter	Manual	Screw Φ4x25.4mm	lens shielding lable	1.5V battery
Quantity	1	1	2	1	4

Code Number:	Series	Model number	Draft	Date
TVTXS868A02/B02	TVLink RS868		T228.04	28-07-2009



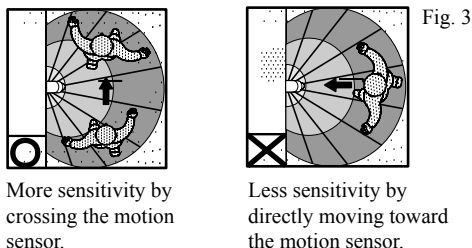
(2). Sensor head is adjustable downward to maximum angle 70° (See FIG.2).



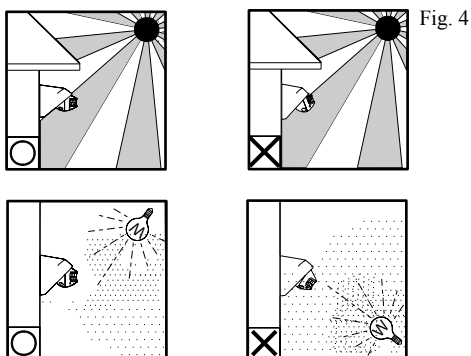
Avoid nuisance triggering

The detector TVTXS can be activated by any large body, light reflective surface, heat source or a moving object. Following guidelines will help you avoid nuisance triggering.

1 - Avoid the object moving directly toward the motion detector that should brings the less sensitivity of detection. The objects have to move across the pattern zone in order to have more sensitivity of detection.



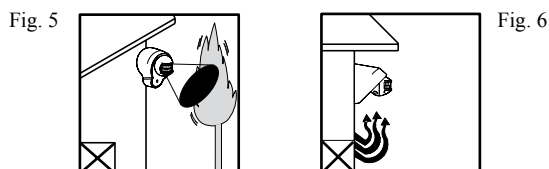
2 - Do not aim the sensor toward any kind of lighting sources (See FIG.4)



3 - Avoid aiming the sensor toward object that moves in the wind, such as bushes or lawn decorations (See FIG.5)

4 - Avoid mounting the sensor near any heat source, such as heating vent, air conditioner, dryer vent or lighting device (See FIG.6)

5 - Avoid place the sensor toward the area or the object whose surfaces are highly reflective or are subject to rapid changing of temperature, such as the pool, etc.

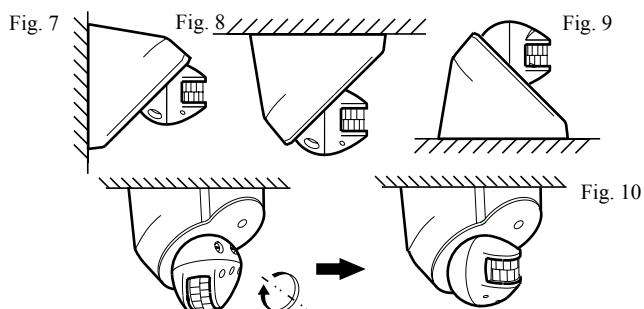


C. Installation procedure

Note:

Before starting to install the sensor, please test and make sure that the sensor and the combining receiver can work normally in the selected zone.

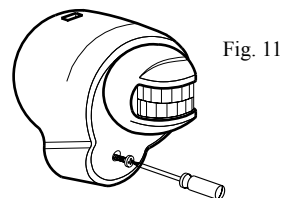
The sensor can be mounted on the wall (See FIG.7), ceiling (See FIG.8), or a table (See FIG.9). However, make sure that the "TOP" of the sensor is upside no matter wherever is chosen to mount.



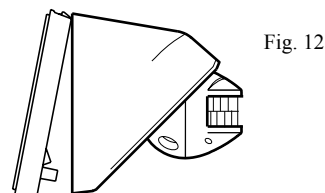
- Ceiling Mount -

Rotate the sensor head clockwise until "TOP" is to the most upside.

1. Loosen the screws of the front case with a screwdriver (See FIG. 11). The screw will not fall down they, will stay in the front case's screw holes.

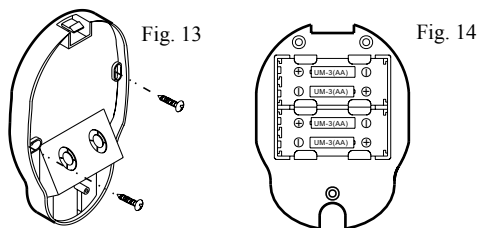


2. While take apart the bottom case from the front case, pull front case upward till it is separated from bottom case naturally (See FIG.12).

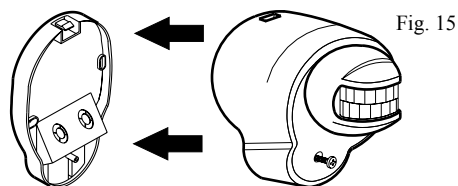


3. Fix the bottom case onto the wall with screws (See FIG.13).

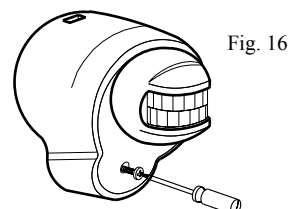
4. Put 4PCS 1.5V type AA batteries into inner case, check carefully the battery polarities (+ and -) are in correct directions (See FIG.14). Reverse polarity would cause Transmitter TVTXS burned down.



5. Insert front case into already fixed bottom case (See FIG.15).



6. Fasten front case firmly with the screw (See FIG.16).



4 TEST AND ADJUSTMENT

A. Use of lens shielding label

In order to reduce detection coverage, you can use lens label which is supplied with this manual to cover transmitter's lens. FIG.17 shows different methods to use this label.

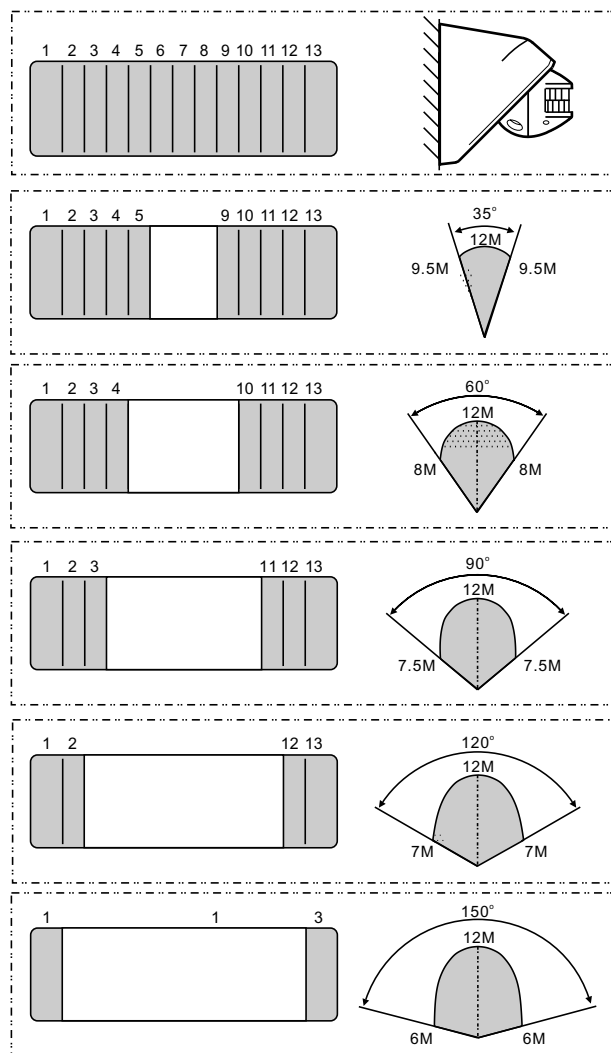


Fig. 17

B. LED function

LED is used as an indicator of the transmission in progress. When environment is applicable for LUX, by activating the sensor, the LED light up for about 5 seconds (LED emits red rays behind the lens as shown as FIG.18) and then it turns off. At the same time, the load controlled by combining receiver turns on and turns off too. The load's light-up time is decided by the time set of the trimmer time. After this time the detector can be re-activated and LED lights on for about 5 seconds and light off.

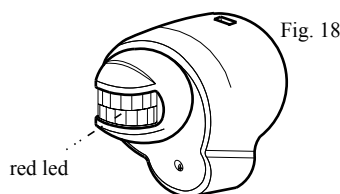


Fig. 18

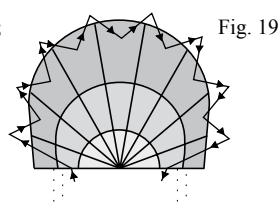


Fig. 19

C. How to memorise the sensor

The memorisation of the code on the receivers needs that the code is transmitted.

Each time the batteries are inserted, the sensor transmits automatically the code of the channel 1 for 30 sec. with intervals of 5 sec. (autotest phase). Use this time to memorise the code on the receiver, by following the normal procedure which is described on the receiver.

D. How to test the detector

Before the test, adjust LUX to "☉", Meter to "+", Time to "-", then you can start the test

1. Insert the batteries
2. Aim the toward zone that you want to protect.
3. Wait up for about 30 seconds for the autotest phase.
4. Move sure that the detector is memorized on the receiver (during the autotest phase the receiver must be activated)
5. Check that the LED of Transmitter TVTXS works normally.
6. Have someone walk across the detection zone until LED turns on.
7. When the Transmitter TVTXS is triggered at first time, LED will turn on for about 5 seconds, then turns off.
8. The detection zone is adjustable by adjusting "meter" of the sensor head.
9. Repeat step 6 to step 8 until detection coverage zone meets your requirement.

E. LUX, TIME, METER push-button (See FIG.22)

1. **LUX** (the transmission is carried out only with a set light intensity)

LUX is adjustable from the range about 5 LUX to ∞.

Set LUX push-button to "☉", the sensor can operate in darkness only.

Set LUX push-button to "☉", the sensor can operate at any light level.

Transmitter TVTXS has been preset at "☉" on factory.

2. **TIME** (time to send turning off signal, channel 2)

Time is adjustable from about 5 seconds minimum to about 5 minutes maximum by rotating the push-button from "-" to "+".

Time setting decides how long the load of the combined receiver would turn on.

Transmitter TVTXS has been preset to "-" on factory.

3. METER

Transmitter TVTXS has been preset at "+" on factory.

Setting push-button to "-", sensor detects the smallest "Field of View".

Setting push-button to "+", sensor detects the largest "Field of View".

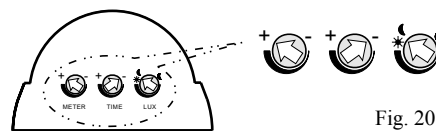


Fig. 20

5 BATTERY REPLACEMENT

Transmitter TVTXS requires 4 pieces 1.5V battery that allows motion sensor to work for about 12 months by triggering about 10 times everyday at 20 °C operating environment. One month before the power of the batteries to be exhausted, system will automatically remind user to change new batteries.

The battery's life time is decided by the activating frequency and environmental temperature. The higher activating frequency and the lower environmental temperature is, the sooner the power consumes of batteries will finish.

In addition, please note that reverse polarity would cause damage of the Transmitter

Please follow the steps below for changing the battery.

1. Take off the front case of Transmitter TVTXS from the mounting place.
2. Loosen the screws of the front case with a screw driver.
3. Pull the front case to apart with bottom case.
4. Take used batteries out and replace with new batteries.

Attention:

- Dispose of damaged or finished batteries immediately in compliance with the law. Do not throw the battery away with household rubbish.

TROUBLE SHOOTING

When Transmitter TVTXS fails to work normally, check problems and suggested solutions in following table that will be hopeful to solve your problems.

Problem	Possible cause	Suggested solution
LED does not turn on	1. Low battery or batteries are placed incorrectly.	1. Make sure the battery is in correct direction and the power is sufficient enough.
	2. LUX and Meter are set incorrectly.	2. Adjust LUX to "☼", Meter to "+". Turn power on and check LED lighting.
	3. Time set does not reach yet.	3. Activate sensor before time set reaches, LED will light on for about 5 sec. Then lights off; trigger sensor again, LED will not light on.
	4. Nuisance triggering.	4. Check if the ambient light reflects to the motion detector causing nuisance. If so, adjust the direction of the motion sensor.




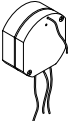
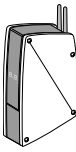
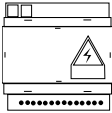
CE conformity

the transmitter is in compliance with the safety laws and with the requirements on the radio frequency according to the CE (LVD&EMC) and R&TTE.



7- Receivers that can be combined to the detector

Transmitter sends ON or OFF signals to the receiver which acts according to the signal received. Below is the table of the possible receivers that can be used:

Sensore	Ricevitori	
TVTXS 	TVRCL 	TVRPL 
	TVRRL 	TVLINK 
	TVRCD 	TVGSA 