# TSM04 Magnetic Contact Detector

General Introduction

The TSM04 Magnetic Detector is used in security or home automation applications to detect opening or closing of doors/windows. It consists of two parts; a Detector and a Magnet. Opening the protected doors/ windows will remove the magnetic field, sending an alarm signal to the gateway. Its great compatibility with our U-Net family security products makes it suitable for smart home cloud based platforms such as Homesys.

Product Layout
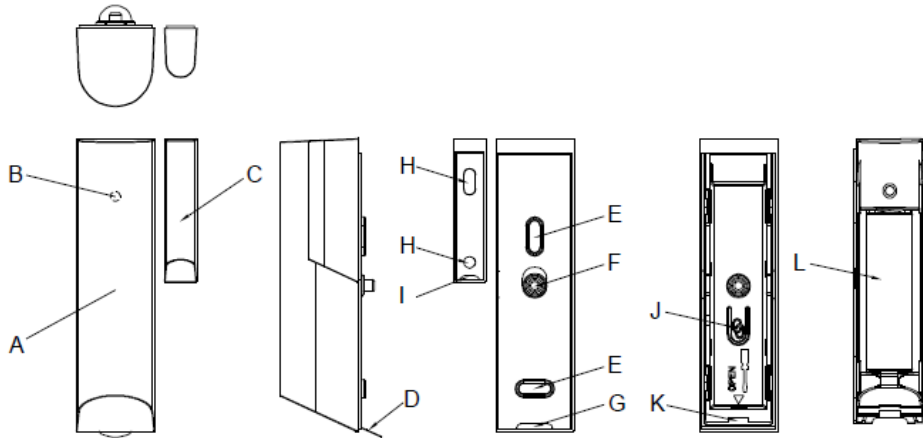
A.	Detector	G.	Mylar hole
B.	LED indicator	H.	Screw mounting hole
C.	Magnet	I	Slot
D.	Battery mylar	J	Learning button
E.	Screw mounting hole	K	Mylar hole
F.	Tamper	L	Battery

Accessories :

3M rubber   Screws
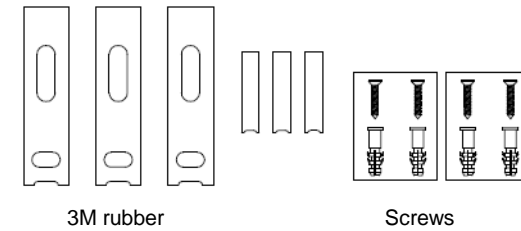
Binding with Homesys

1. Device with battery included. The battery is isolated by a mylar. Don't remove the mylar yet.

2. Log into the Homesys account from a web browser.

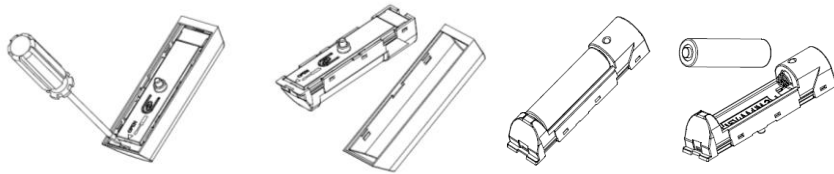3. Select "System", then "Add a Device"
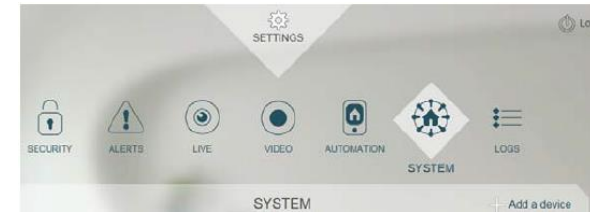
4. Select "Magnetic Detector"

.

5. The following screen will appear. This means the gateway is entering binding mode.

6. Devices with battery included : Pull out the mylar, and the LED should turn on. Devices without battery included : Open the backplate and use a screwdriver to open the battery cover as below to insert the battery
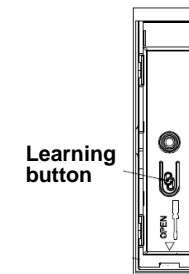

7. The screen below will appear in 10 seconds if the process is successful.

Note: Time-out will occur if the binding process was unsuccessful. Please refer to the "Manual Binding".

Manual Binding

1. Remove the backplate of the detector and leaving the battery inside the detector

2. Repeat steps 4 to 5 of the Binding with Homesys section

3. Press the Learning button for about 3 seconds and release. The LED will flash repeatedly. This implies detector has now entered the binding mode and is waiting to receive binding signals from the gateway.

4. Within 5 seconds, the LED indicator will flash rapidly and turn off, indicating the learning procedure is completed. The screen below will appear indicating the process is successful..

Operation & Testing

1. Go to System, and select ARM

2. Wait for 30 secs, then separate the detector from the magnet (at least 3.5 cm distance apart)
3. If the test is successful, the system will trigger an alarm (alarms are listed "Events")
   Notes : It is necessary that the gateway Homesys is powered and connected to internet.
4. If the test is unsuccessful, please check the troubleshooting section.

Location & Placement

1. Mount the Magnetics Detector in dry interior locations only.
2. Don't place the unit near combustible substances or any source of heat, e.g. fires, radiators, boilers etc.

   Note: Mounting the detector to a metal frame or within 1 meter of metalwork (e.g. radiators, water pipes) may affect radio range of the device. Please use plastic or wooden spacers to separate the detector and metal surface when required.

3. Fit the magnet on the moving part of the door/window, and vice versa if necessary. The magnet could be in the detector both side. Use the provided self-adhesives tape to secure them in place.
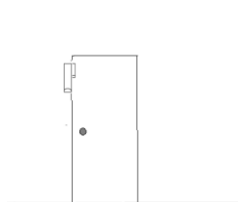

4. Make sure the parallel gap between the magnet and detector is less than 20mm and that they are aligned from the top. An alarm will be triggered if the gap is greater than 35mm.
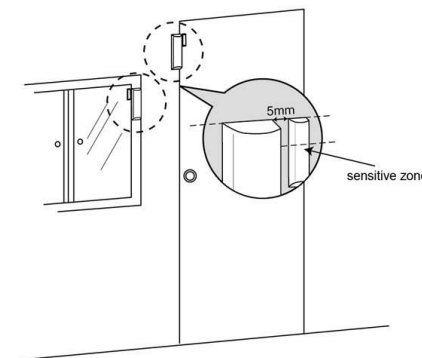
5. Perform the test using the same steps described in Operation & Testing section above to ensure the unit is working properly.

Maintenance

1. Low Battery: When the battery becomes low. The detector will report back to the gateway. If the door or window is poen the LED will flash to indicate low battery condition to the user.
2. If the battery needs to be changed. Please insert the batteries at a 45° angle as shown below.
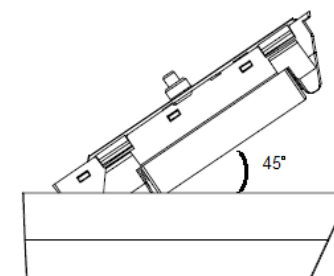
Software reporting commands

Auto report	When battery is inserted, it will report to gateway after 2 minutes. It will report the condition every hour.
Status change	1. Tamper switch is on: It will report to gateway and LED won't flash 2. Tamper switch is release: It will report to gateway and LED will flash

Trouble Shooting

Symptoms	Possible Cause	Recommendation
Device does not work, LED does not illuminate.	No batteries attached or no power.	Check if batteries are attached or replace with new ones.
LED does illuminate, appliance does not respond	Binding with gateway did not complete successfully.	Bind again using manual binding
	Disturbed by other radio waves	Please operate later

Reset to Factory Settings

To reset TSM04 back to factory default state:
1. Press and hold the Learning button for 3 seconds until the LED flashes moderately then release the button.
2. Within 30 seconds, press and hold the Learning button again, this time for more than 6 seconds then release the button.

3. Re-insert the batteries, if the LED blinks slowly for 30 seconds this implies the device is reset back to factory mode.

Specifications

Operating temperature range	0°C to 40°C
Operating humidity	85% RH at 30°C
Battery type	AA alkaline 1.5V *1
RF Frequency	868.30 MHz/923.00MHz
RF transmission range	Outdoors >200m (Open space)

*Specifications are subject to change without notice.

WARNING:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal free of charge.

CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can

radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

NCC 警語:
♦ 根據 NCC 低功率電波輻射性電機管理辦法規定：
第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。
♦ 減少電磁波影響，請妥適使用。