YF – NO TOUCH HAND SENSOR

YF

User Manual V1.1

Be sure to read the user manual before you start using your device. Pay attention to the necessary installation, electrical connection and start-up sections and fulfill the specified items step by step. After this stage, the product owner/user must keep this user manual in a known and visible place throughout the life of the product.

- Only use the product indoors and in dry environments. This product is designed for indoor use and does not have sealing protection against water and dust.
- Store the product in a dry environment. Otherwise, a malfunction may occur in the product.
- All service and repair operations can only be carried out by Kontal Elektronik technical service. The product should not be interfered with by other persons.
- The operating voltage of each product is indicated on the label on it. Do not supply the product with a different source other than this voltage rating.

If the product is used in accordance with the above-mentioned items, it may cause fire, serious personal injury, damage to the products or the structure to which they are attached. In case of such mistakes caused by the user, Kontal Elektronik San. and Tic. Ltd. Sti. does not accept any responsibility.

✓ This exclamation mark will be used to highlight important points.

Do not touch supply input of the product with bare hands.

✓ This electric mark will be used to highlight electricity hazard.

This sign on the label indicates that the supply voltage of the product is DC.

This symbol on the product or product box indicates that this product cannot be treated as normal household waste. Instead, the product should be delivered to designated collection points for the recycling of electronic equipment. Disposal normal trash or incorrect destruction of the product can lead to negative consequences for the environment and human health.

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1. DEFINITION

YF, No Touch Hand Sensor is a product that gives a relay output when a hand or object approaches it. YF can be used in many scenarios but it is mainly used in places where hygiene is important like hospitals and toilets.

2. TECHNICAL FEATURES

Model	:	YF
Product Code	:	K006-01
Operating Voltage	:	12/24V DC
Operating Current	:	50mA @24V DC
Operating Frequency	:	38KHz
Maximum Power	:	1,2W
Zone Number	:	1 Transmitter / 1 Receiver Zone
Working Distance	:	5 – 30cm
Relay Number	:	1
Contact Type	:	Dry Contact NO / NC
Maximum Contact Power	:	60V DC 100mA / 42V AC 100mA
Contacting Time	:	0.4/5sn(PULSE Mode)
Colour Options	:	White, Grey
Weight	:	47gr
Dimensions (Depth x Diameter)	:	23 x 80mm

2.1. YF Control Board

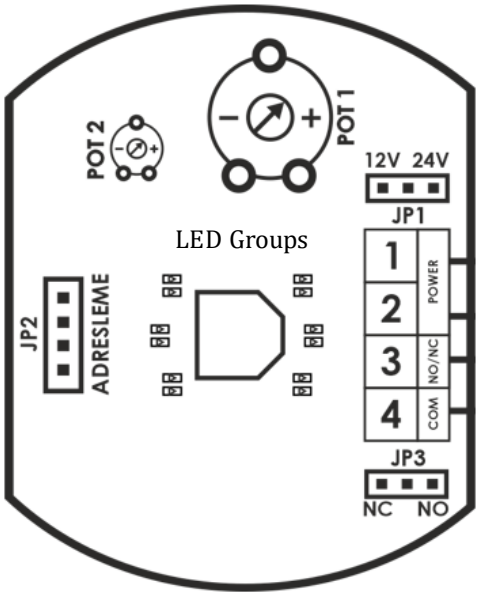


Figure 1 - YF Control Board

There are 2 trimpots (POT 1, POT 2), 3 jumpers (JP1, JP2, JP3), 4 terminal blocks and LED groups on the approach photocell.

12/24 V DC Operating Voltage
Depending on the status of the JP1 jumper on the YF card, it can be operated as 12V or 24V;

12V Supply Connection	24V Supply Connection
	
JP1	JP1
12V DC	**24V DC**

Output Contact Type
JMP1 is used for chosing output contact type: 12V or 24V DC

NC Contact	NO Contact
	
JP3	JP3

2.2. System Operating Modes

The YF board features multiple operating modes, which can be configured immediately after power is supplied. The mode selection process and corresponding operation are as follows:

When the system is powered on, the blue LEDs on the YF board will begin flashing rapidly for 2 seconds. During this time, mode selection can be initiated by holding your hand over the board for approximately 10 seconds. While holding, the blue LEDs will begin flashing more slowly, indicating that the board is in mode selection mode.

After 10 seconds, once the board has entered the desired mode, the LEDs will remain steadily lit. The operating mode and duration will then be determined based on the number of times you pass your hand over the board.

NUMBER OF CAPTURES	CONTACTING TIME	WORKING MODE
1	400 miliseconds	Pulse
2	1 Second	Pulse
3	2 Second	Pulse
4	3 Second	Pulse
5	4 Second	Pulse
6	The card will work in this mode depending on the trigger it receives, not depending on the time.	Toggle

For example, when you swipe your hand over the sensor while your card is in mode, and the 4 seconds that it stays in mode are completed, your card will blink once to indicate which mode it is in. The number of blinks here will change depending on the number of times you swipe your hand.

NOTE: If you do not make any transactions on your YF card, it will come to you set to mode 1.

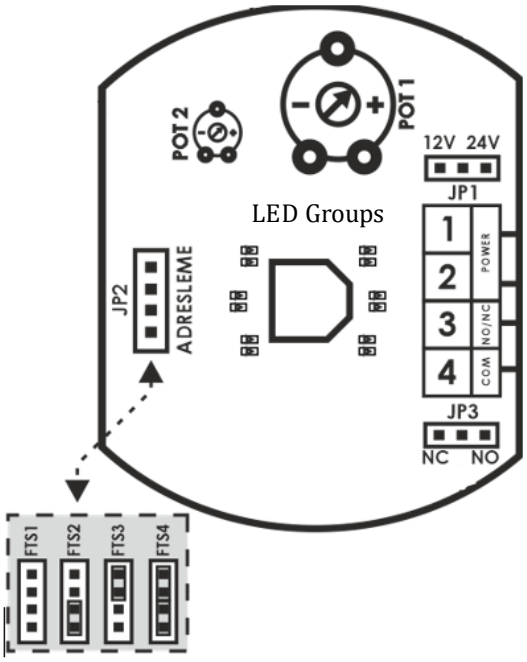
NOTE: If you pass your hand 6 times while your card is in the mode, the red LEDs will turn on once instead of the blue LEDs on your card, unlike other modes. If there is no recapture process again during the stay in the mode, your card will turn on the red LEDs again and indicate that it is operating in toggle mode.

NOTE: If there is a re-swiping immediately after your 6th handover, your card will recognize it as a one-time swiping and will revert to mode 1.

• **Pulse Mode:** It is the defined operating mode of the device. In this mode, the user pulls and releases the relay at specified times according to the number of passes previously specified in the system operating mode.

• **Toggle Mode:** This mode will be active only when the user passes his hand 6 times in the system operating mode. As an operating structure, when you pass your hand, the relay's position will change and it will remain active. You will need to pass your hand again to make the relay passive.

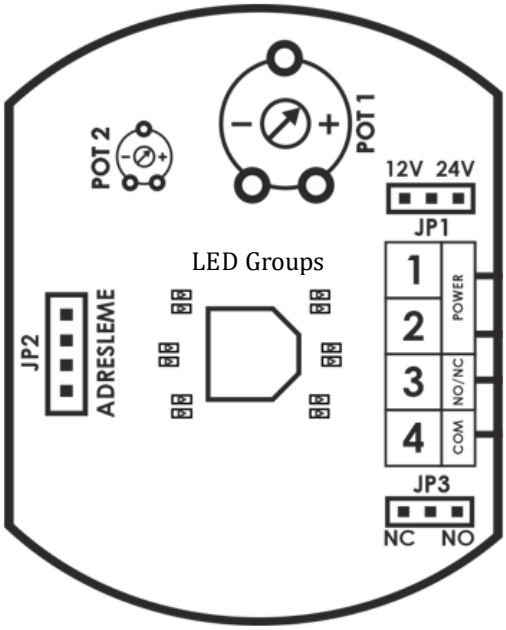
2.3 Side-by-Side Operation of Multiple Sensors



When you need to run multiple YFs side-by-side or opposite each other in your application; The jumper, which is indicated by JP2 on the YF card, must be positioned correctly so that the signals of the photocells do not interfere with each other. If 4 docking photocells are installed side by side, the jumper positions of the photocell groups are **indicated in the diagram in the lower left corner**.

Figure 2 - YF

2.4 Adjusting Transmitter Signal Strength



With the trimpot shown as POT 1 on the YF card, the setting you will make **in the "(+) direction"** will increase the working distance, while the setting you will make **in the "(-) direction"** will decrease the working distance.

!WARNING! PLEASE DO NOT CHANGE THE SETTINGS OF THE TRIMPOT NAMED POT 2!!

2.5 Terminal Block and LED Groups

- **Terminal Blocks**

The functions of the 4 terminal blocks on the board are as follows;

KLM. 4	KLM. 3	KLM. 2	KLM. 1
COM	NO/NC OUT	12-24V DC (-)	12-24V DC (+)

- **LED Groups**

There are 2 different colored LED groups on the YF. One of these LED groups will light up when the system is stationary, while the other LED group will light up when switching is done when you approach the sensor with your hand.

3 CONNECTION SCHEMA

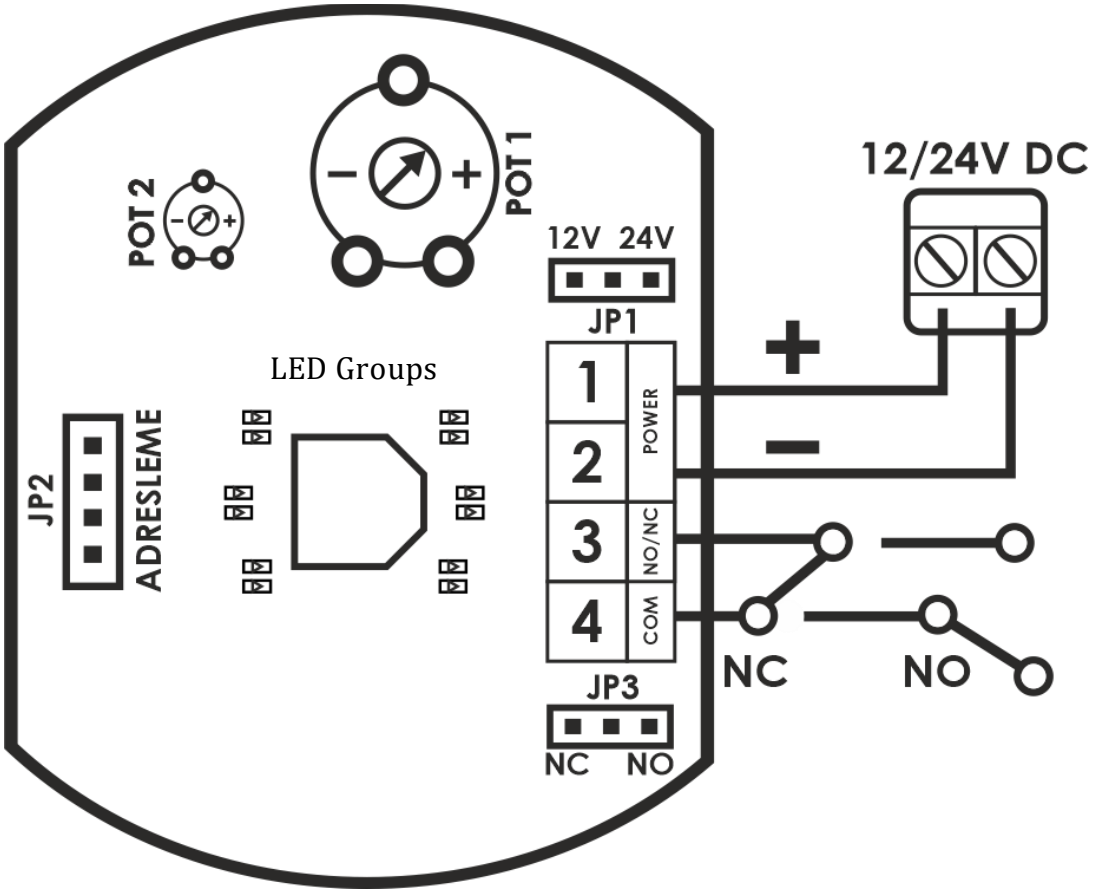


Figure 3 – YF CONNECTION SCHEMA

4 INSTALLATION

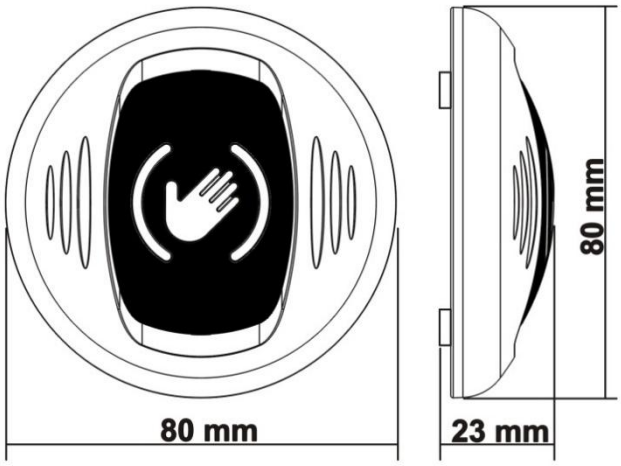


Figure 4 - Dimensions

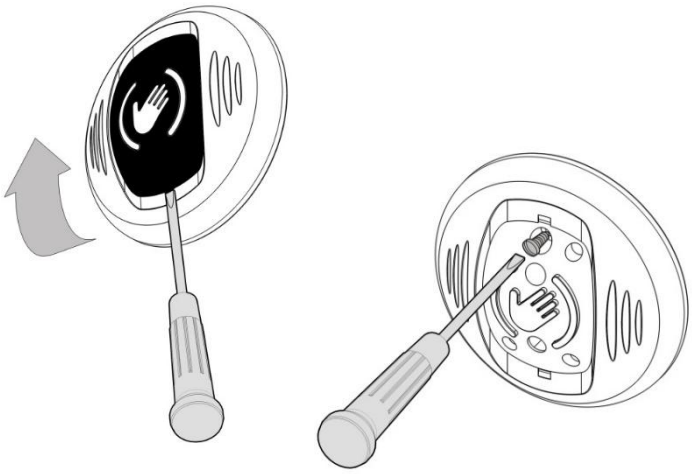


Figure 5 – Opening Front Cover

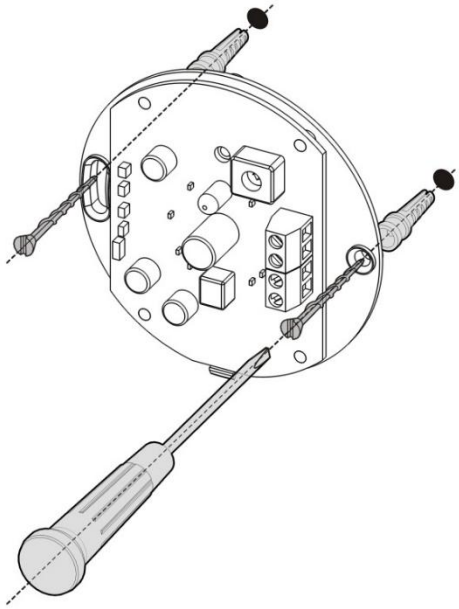


Figure 6 – Montage to Wall

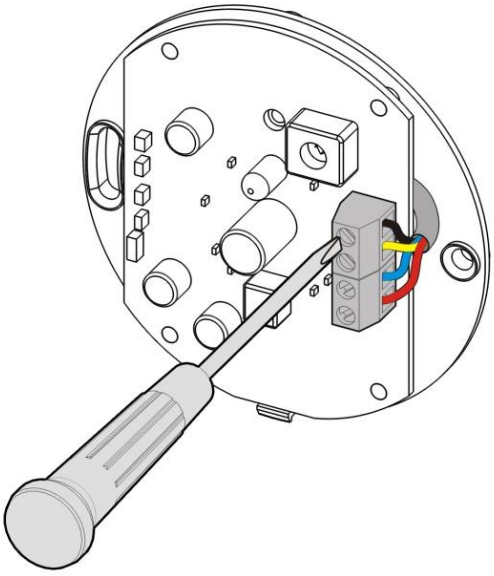


Figure 7 – Connections of Terminals

An easily accessible separation device (switch, fuse, etc.) connected to the building electrical installation should be available.

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