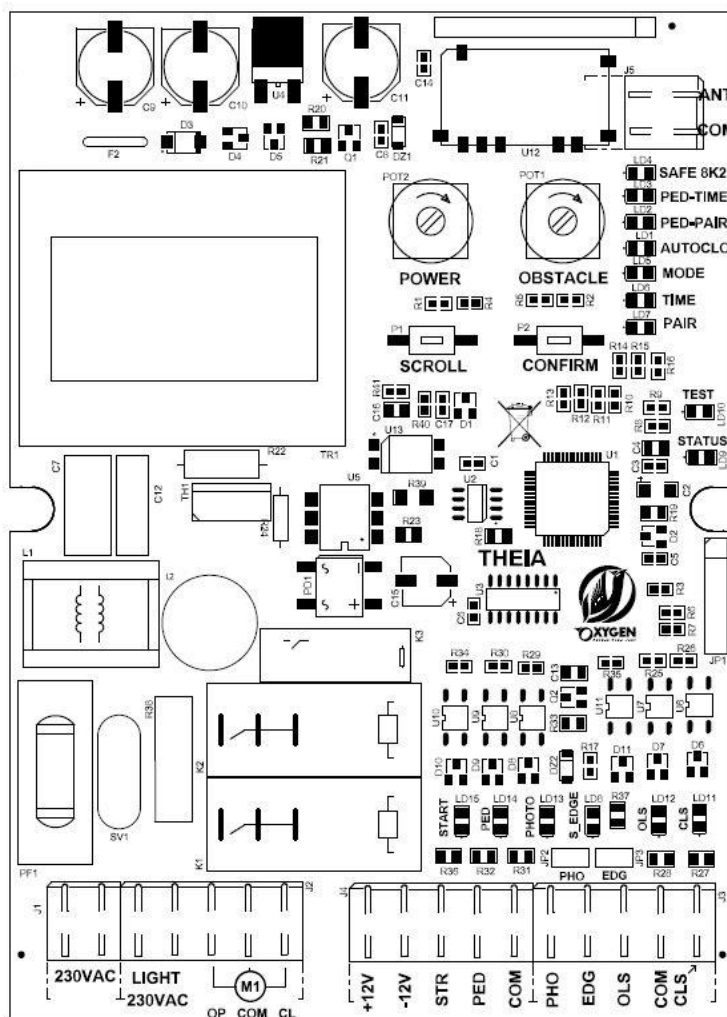


THEIA 230VAC



CONNECTIONS (from left to right)

Left Terminal Block (High Voltage)	
230Vac line (Live)	
230Vac line (Neutral)	
Flashing Light 230Vac (Live)	
Flashing Light 230Vac (Neutral)	
Motor Open	
Motor Common	
Motor Close	

Right Terminal Block (Low Voltage)	
Positive Photocells (+12V)	
Negative Photocells (-12V)	
STR Open and close input (NO)	
PED Pedestrian input (NO)	
COM Common	
PHO Standard Photocells (NC)	
EDG Safety device (NC)	
OLS Open limit switch	
COM Common limit switch	
CLS Close limit switch	

TECHNICAL FEATURES

Main power supply	230Vac 50Hz
Flashing Light	230Vac 100W max.
Motor	230Vac 500W max.
Photocells power supply	12Vdc 3W max.
Operating temperature	10÷55 °C
Integrated receiver	Rolling Code 433Mhz
Max Number of Remotes	100 max.
Control Board size	100x138x45 mm

THEIA 230V - QUICK INSTALLATION (DO IT YOUR-SELF)

1) Put the gate about midway and block the motor by the release key supplied with the motor.

2) Motor and limit switches wires are already connected

Motor wires are the three terminals connected to M1 as per last page diagrams:

- Common is GRAY (or BLUE) motor wire, connected to the COM terminal
- Opening and Closing are the BROWN and BLACK motor wires. Connected to OP and CL
- The Capacitor is the cylinder with two wires connected in parallel together with BROWN and BLACK wires, in the same OP and CL terminals. The two capacitor wires have no polarity
- Yellow/green wire is earth, it must be connected to an external terminal together with the main power earth.

Limit switches wires are the three terminals connected to OLS-COM-CLS as per last page diagrams:

- Common is GRAY (or BLUE) limit switches wire, connected to the COM terminal
- Opening and Closing are the BROWN and BLACK limit switches wires. Connected to OLS and CLS

3) Connect Main Power Live and Neutral in the first two terminals on the left, 230VAC terminals.

They have no polarity so it is not important to pay attention to the connections, Live and Neutral can be inverted

The main power accepted range is from 200Vac up to 250Vac single phase (domestic power supply)

4) - Verify that the two LEDs PHO and EDG are ON. They are ON when the two jumpers PHO and EDG under the respective two LEDs are inserted.

- Verify that the two LEDs OLS and CLS are ON. They are ON when the two limit switches are not activated. When the spring activates one of the micro switches, one of these two LEDs goes OFF, depending on the micro switch that is activated

The two LEDs next to them, LEDs START and PED, must be OFF

- Check that the POWER trimmer is fully turned clockwise = maximum power
- Check that the OBSTACLE trimmer is fully turned anticlockwise = obstacle disabled

5) Pair a remote control. The remote control has more buttons to trigger more automations, if you only have this gate you need to use only one button of your choice, the remaining buttons will be disabled.

- Press the SCROLL button and keep it pressed until the PAIR LED lights up
- Press the button you like on the remote control, the PAIR LED stays ON steady and the remote control is paired
- Repeat the operation for all the remote controls you want to pair

6) Press the button on the remote control, the gate opens, the STATUS LED on the right flashes quickly.

If the motor works contrariwise, i.e. it closes instead of open, switch the board off and:

- swap the BROWN and BLACK wires of the motor always keeping the capacitor wires connected together with BROWN and BLACK wires
- swap the BROWN and BLACK wires of the limit switches

Switch the board on and open the gate by the remote control, now the gate opens when the STATUS LED flashes quickly.

The STATUS LED flashes quickly while opening, it flashes slowly while closing, it is on steadily with the gate open and still, it is off with the gate closed and still.

7) - By default the gate opens and closes the gates for about 25 seconds at normal speed and about 5 extra seconds at slowdown speed

If the settings are correct, it's already ok. If the gate does not open or close fully, it's needed to set the correct times.

Follow the step by step procedure, TIME paragraph (page 4).

- In case of incorrect settings, it is always possible to restore the factory settings by pressing the SCROLL and CONFIRM buttons simultaneously for a few seconds. Keep them until all the LEDs at the top right turn on and off.

Optional Accessories connection (depending on the kit purchased):

8) Photocells: They are an important safety device and they are always supplied in pairs. The photocell with 2 terminals is the transmitter, the one with 4 terminals is the receiver. It's needed a standard 4 core 0.5mm² cable.

It is necessary to place one of them on the right pillar and the other one on the left pillar. The two photocells have to see on each other so they can make a laser beam as long as the gate itself.

We suggest to fit them on the pillars about 50cm far from the ground and about 5cm far from the gates on the outside.

Connect them as per last page diagram. When the connections are completed, remove the PHO factory jumper and check correct operation:

The PHOTO LED must be ON, and it must go OFF only when the photocell beam is broken.

If there are two pairs of photocells, connect them as per last page diagrams, i.e. the two receivers connected in series.

9) The 17cm cable supplied with the board is connected to ANT, it's the Antenna for the remote controls. Leave the 17cm cable inside the waterproof box, do not drill the box.

10) Flashing light: Connect the 230V flashing light with 2 wires to the LIGHT 230VAC terminals by a 2 core 1.5mm² cable

11) Opening devices: Connect all the desired devices, for example a button, an intercom, a key selector, etc. to the START and COM terminals. Important: All the devices must be connected by a Normally Open free contact, not powered.

12) Metal wired keypad: Connect it with 3 wires, RED, BLACK, ORANGE, to the control board by a standard 3 core 0.5mm² cable, as per last page diagram. Do not connect the Yellow wire. Program it as indicated at the bottom of next page

13) Safety Edge: connect it with two wires to EDG and COM terminals. remove the EDG factory jumper and check the correct operation: The EDG LED must be ON, and it must go OFF only when the edge is pressed.

CONTROL UNIT FUNCTIONS

Flashing Light

Connect a 230Vac light to the two terminals "LIGHT 230VAC". The control unit will manage the flashing while the gate opens and closes

Motor

Connect the 230V motor with the 3 wires to the OP (Opening) COM (Common) CL (Closing) terminals.

Connect the capacitor wires to the OP and CL terminals together with the motor wires.

STR (START) and PED inputs

It is possible to connect one or more devices to control the gate, such as a button, a key selector or other devices.

All the devices must be Normally Open and Not Powered (Free Contact).

The START input is the general command

The PED input is the command for the Pedestrian passage (Partial opening)

If it is not necessary to connect an external device, just leave the terminals disconnected

PHO safety device (Photocells)

Connect the Photocells.

When the photocells beam is broken while the gate opens, the gate continues to open.

When the photocells beam is broken while the gate closes, the gate stops and opens fully.

After connecting the photocells, the PHO jumper above the terminal must be removed.

If it is not necessary to connect the photocells, the PHO jumper above the terminal must be inserted

EDG safety device (Safety Edge or emergency button)

Connect a NC safety device to the terminals EDG and COM

When the device is activated, the gate stops and invert for 5 seconds.

After connecting the safety device, the EDG jumper above the terminal must be removed

If it is not necessary to connect a safety device, the EDG jumper above the terminal must be inserted

Antenna

After pairing the remote controls, connect the supplied short cable to the ANT terminal to increase the range of the remote controls.

It is possible to increase the range of the remote controls by an external antenna too. Connect the core of the antenna to the ANT terminal and connect the Shield of the cable to the COM next to it.

Motor Power Adjustment

The control unit is equipped with a specific trimmer (POWER) that adjusts the power of the motor.

Maximum power (100%) with cursor fully clockwise, Average power (75%) with cursor halfway and Minimum power (50%) with cursor fully anticlockwise. Important note: After any trimmer adjustment, it is needed to do a new motor time programming by the "TIME" LED.

Obstacle Control Sensitivity Adjustment

The control unit is equipped with a specific trimmer (OBSTACLE) that adjusts the obstacle detection.

With the cursor fully anticlockwise detection is disabled, with the cursor halfway there is standard detection, with the cursor fully clockwise obstacle detection is immediate (maximum sensitivity). Important note: with maximum sensitivity, any weather or gate condition (wind, cold, rust, not-lubricated hinges, etc..) could be detected like an obstacle.

Programming menu

The MAIN menu is accessed by pushing and holding the SCROLL button for 2 seconds.

After 4 minutes the LEDs switch OFF to save energy. The LEDs switch ON again by pressing any of the two buttons.

The SCROLL button selects the function, the selection is indicated by the flashing of the Led. By pressing the SCROLL button, the menu is scrolled and it is possible to select the desired function. The selected function is activated for 10 seconds.

The CONFIRM button programs the selected function.

Slowdown Speed

The slowdown speed can be set at the desired points, before the complete opening and closing, by the TIME setting.

Command input test

Above each command input (START, PED, PHOTO, EDGE, OLS, CLS inputs), the control unit has the relative status LED, in order to quickly check the status of each input. Operating logic: LED on = input contact is closed, LED off = input contact is open.

During normal operation, the START and PED LEDs are always off and the PHOTO and STOP LEDs are always on.

OLS and CLS are on when the limit switches are not activated. When one of the two limit switches is activated, complete open or close position, the relative Led goes off

Factory reset

Press and hold the SCROLL and CONFIRM buttons simultaneously for a few seconds. All the LEDs at the top right turn on and off and the factory settings are restored

MAIN MENU (access with SCROLL button)

FUNCTION	LED OFF	LED ON
PAIR - Remote control pairing	No remote controls paired	Remote controls paired
TIME - Motors learning time	25 seconds + 5 seconds slowdown	Customized time
MODE - Working logic	Step by step mode	Collective mode
AUTOCLOSE - Automatic closing	The gate doesn't close automatically	The gate closes automatically after the set time
PED-PAIR - Pedestrian button pairing	No remote controls paired	Remote controls paired
PED-TIME - Pedestrian Opening Time	10 Seconds	Customized time
SAFE 8K2	NC Safety edge	8K2 Safety edge

PAIR: Remote controls pairing to the control board

The control board internal memory can manage up to 100 different Oxygen Automation remote controls.

Program procedure: Press the SCROLL button and keep it pressed until the PAIR LED lights up. Press the button you choose on the remote control, the PAIR LED stays on steady and the remote control is paired. Repeat the operation for all the remote controls you want to pair.

When the memory is full with 100 remote controls paired, all the LEDs will start flashing and it's not possible to pair more remote controls.

Remote controls memory reset: Press the SCROLL button, the PAIR LED starts flashing, press and hold the CONFIRM button for 5 seconds, the PAIR LED turns off and the memory is clear.

TIME: Program the correct opening and closing times

From default the motors opening and closing time is 25 seconds + 5 extra seconds with slowdown speed

This is already correct for most gates since it's a standard time.

If it is necessary to set different opening and closing times, follow this step by step procedure:

The gate must be closed and still. Push SCROLL button twice, scrolling the menu to the TIME LED (flashing)

- 1) **Push CONFIRM** --> Gate Opens
- 2) **Push CONFIRM** when the Gate is about 5 seconds before the full opening ---> Gate Slowdown
- 3) Gate reach the full opening by the limit switch ---> Gate Stops and after 2 seconds gate starts to close
- 4) **Push CONFIRM** when Gate is about 5 seconds before the full closing ---> Gate Slowdown
- 5) Gate reach the full closing by the limit switch ---> Gate Stops

MODE: Working logic

From default the control unit is set with Step by Step logic with MODE LED off. If it's needed the Collective logic:

Push SCROLL button four times, scrolling the menu to the MODE LED and push CONFIRM, the MODE LED stays on steady.

Repeat the operation if you want to restore the original configuration with the Step by Step logic, MODE LED turns off.

Step-by-step logic:

Using both the remote control (PAIR LED on) and the low voltage push-button panel (START) to operate the gate, the following operation will be obtained: the first impulse open the gate until the motor time expires, the second impulse close the gate, if an impulse is sent before the motor time expires, the control unit **stops** movement both in the opening and in the closing phase. A further command starts the motor in the opposite direction.

Collective logic:

Using both the remote control (PAIR LED on) and the low voltage push-button panel (START) to operate the gate, the following operation will be obtained: the first impulse commands the opening of the gate, if a further impulse is sent:

- _ while it is opening, it is ignored.
- _ during Pause, the Pause time count is restarted (if automatic closing is activated)
- _ during closing, the control unit **reverses** the movement

AUTOCLOSE: Automatic closing time programming (Max. 5 minutes)

The control unit is supplied by the manufacturer without automatic closing. If you wish to enable automatic closing, proceed as follows: use the SCROLL key to position yourself on the flashing AUTOCLOSE Led, press the CONFIRM key, then wait for the time required, press the CONFIRM key again, the automatic closing and the AUTOCLOSE Led will remain on steady. If you wish to restore the initial condition (without automatic closing), position yourself on the flashing AUTOCLOSE Led then press the CONFIRM key twice within a time interval of 2 seconds, the AUTOCLOSE Led will switch off and the operation will be completed.

PED-PAIR: Pairing of the remote control button for pedestrian opening

The programming and cancellation procedure is similar to that described in PAIR. You need to use a different button on the remote control

PED-TIME: Pedestrian work time programming

The control unit is supplied by the manufacturer with a predefined Pedestrian time of 10 seconds.

If it is necessary to modify the Pedestrian work time, the programming must be carried out with the gate closed as follows:

Position yourself with the SCROLL button on the flashing PED-TIME Led, press the CONFIRM key, Motor 1 opens, when the desired position is reached press the CONFIRM key, after 2 seconds Motor 1 closes, wait for complete closure and press the CONFIRM key.

SAFE 8K2: (NC or 8K2 Safety edge)

The control unit is equipped with the EDG input in the terminal board, a NC or 8K2 Safety Edge or Photocells can be connected.

From default the input is NC (Normally Closed)

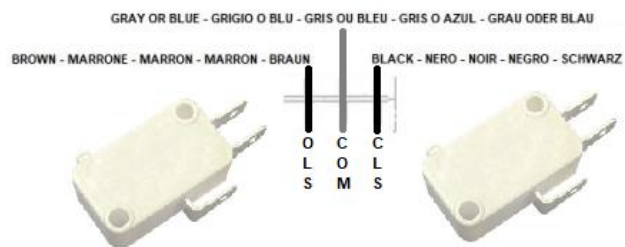
If you want to connect a 8K2 Resistive Safety Edge, proceed as follows: Position yourself with the SCROLL button on the flashing of the SAFE 8K2 LED, then press the CONFIRM button, the SAFE 8K2 LED will light up permanently. Repeat the operation if you wish to restore the previous configuration.

DIAGRAMS AND CONNECTIONS

MAIN POWER AND MOTOR



LIMIT SWITCHES



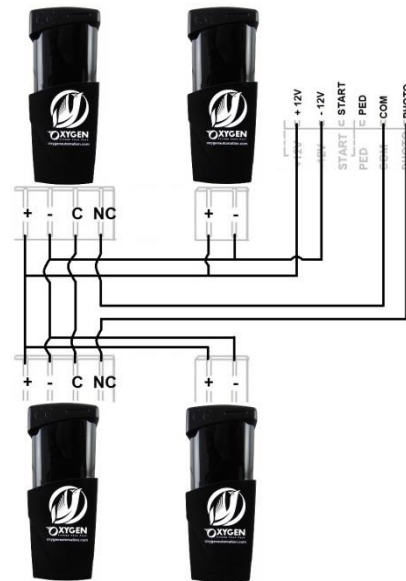
METAL WIRED KEYPAD



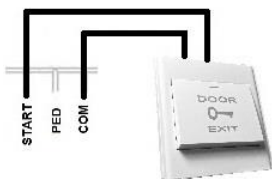
STANDARD PHOTOCELLS



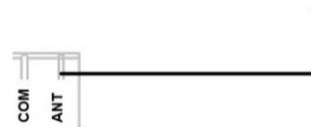
TWO PAIRS OF PHOTOCELLS



START DEVICES



ANTENNA WIRE



FLASHING LIGHT

