EDGE1 Quick Start Guide

Read this prior to installation

The Electric Gate Shop

M7

Roger Technology Swing Gate Brushless EDGE1 Control Panel Quick Start Guide

The following instruction is designed and intended for use by the professional installer only, to quickly prove the ROGER brushless swing gate motors and set the control panel work parameters prior to the final installation. The final commissioning should only be done in conjunction with the correct full **relevant ROGER SERIES MOTOR instructions manuals and all the necessary safeties applied.**

STEP 1)

Check the gates to receive the automation are level, free to swing throughout the full arc open/closed and all hinges well lubricated. Assemble the std or (heavy duty Fig1) brackets for above ground installations, securely and adhere to the measurement tables for your motor type. In particullar measurements A&B from the separate motor installation manual.

STEP 2)

Connect the motor cables XYZ and earth to the XYZ points inside the control panel for each motor respecting that brushless motors need a minimum of 2.5mm cross section cable size. If the cables to be connected to the motor are extended over 10 metres in total length, a 4.0mm cross section cable must be used. In the case on just 1 motor, connect to

Fig.1

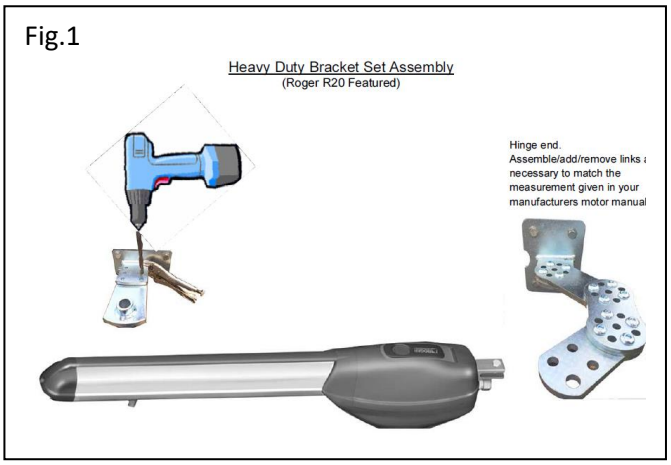
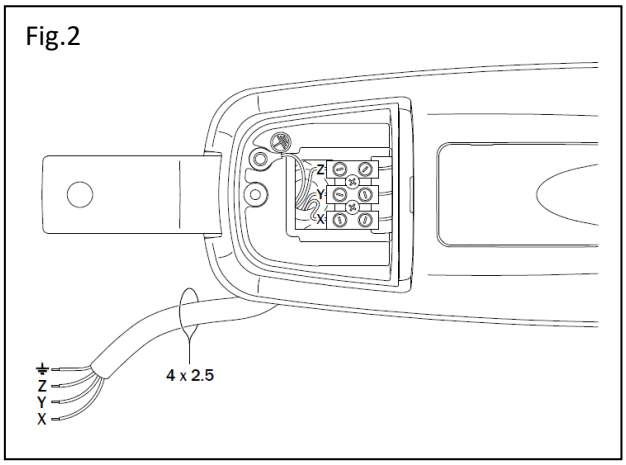


Fig.2



Step 3)

Connect the power supply to the control panel. Press the test button once. The display should read a number on the display. Example, (27). The system is looking for the safety device input terminal number 27 from the connection block in Fig.5. Either connect the necessary safety device or link out the terminal number to the nearest COM terminal on the same block if the safety input displayed is not necessary. Repeat the proceedure and connect the displayed number to COM or connect the safety device if necessary, until the display reads 00 when the TEST button is pressed. Fig.6 is an example of how the terminal block may look with some devices linked out.

Fig.3

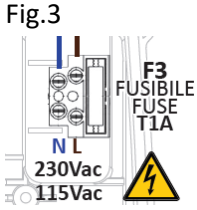


Fig.4

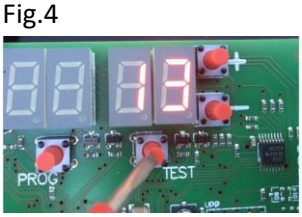


Fig.5

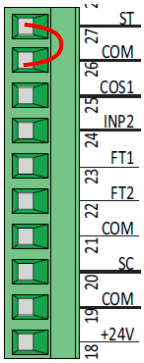
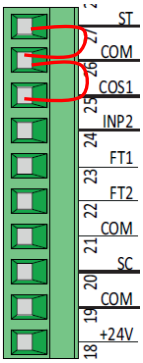


Fig.6



V2.0

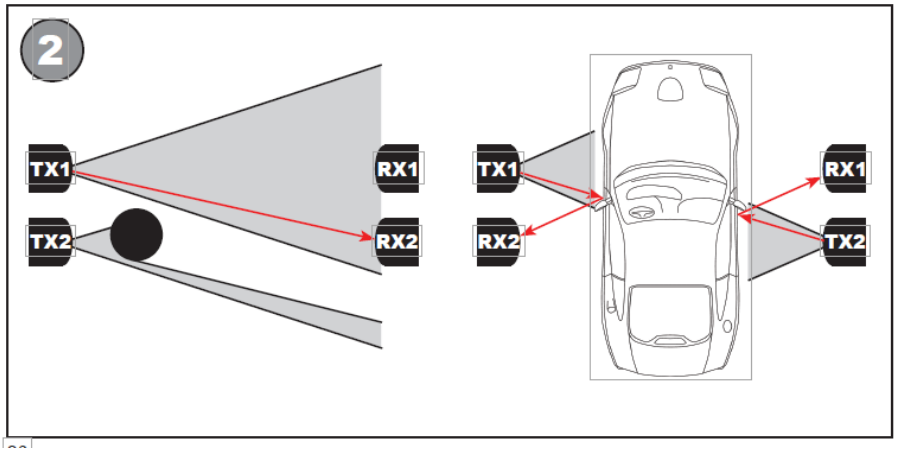
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The photocells are in pairs, one transmitter and one receiver. They should be mounted 500-600 mm from the ground and face each other level. Each photocell regardless of type has a 24VAC supply.

The receiving photocell does the switching on and off to the control panel. If the transmitting beam can reach the receiving photocell, there will be a completed circuit to the main panel and the gate/s will function. If the beam is broken, during operation of closing, the gates will stop and reopen.

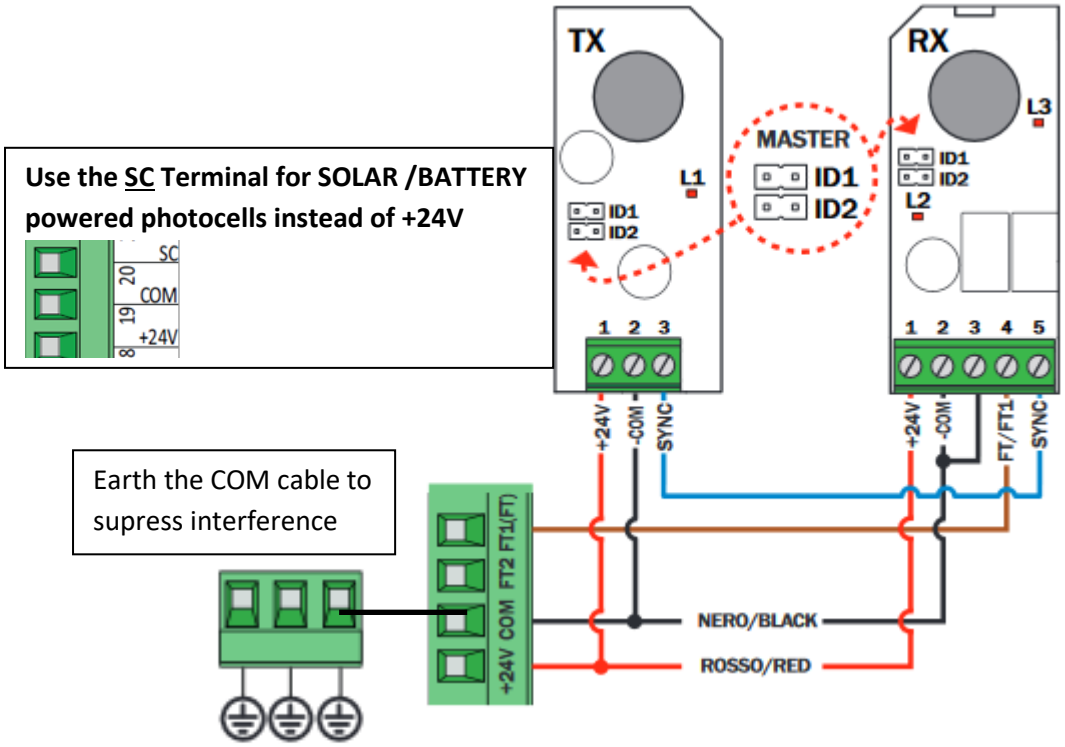
If you are using two pairs of photocells as pictured, the receivers should be crossed on opposite sides so that you do not have two receivers at the same side. To understand the issues related to reflection and interference between unsynchronized pairs see figure 2. Synchronization allows you to connect up to 4 pairs of photocells without worrying that they may interfere with each other. Synchronization is accomplished through an additional wire that connects all the photocells transmitters and receivers. (BLUE WIRE)
Synchronization is achieved with a photocell TX, called MASTER, and is transmitted to the receiver coupled to it and to all the other pairs of photocells available (called SLAVE).

For this purpose 5 core BT type cable is recommended for use. (CW1128) Follow the wiring diagram provided to wire both the receiver and transmitting photocells. At the control box end, wire the colour coded cables up as per the diagram provided showing a typical photocell placement.
When the photocells are working and correctly aligned, you should hear a clicking sound from the transmitter when the beam is broken intermittently. Once wired, place the covers over the photocells and secure the fixing screw. Fill any cable gaps with silicone to prevent insects from entering the device and interfering with it.

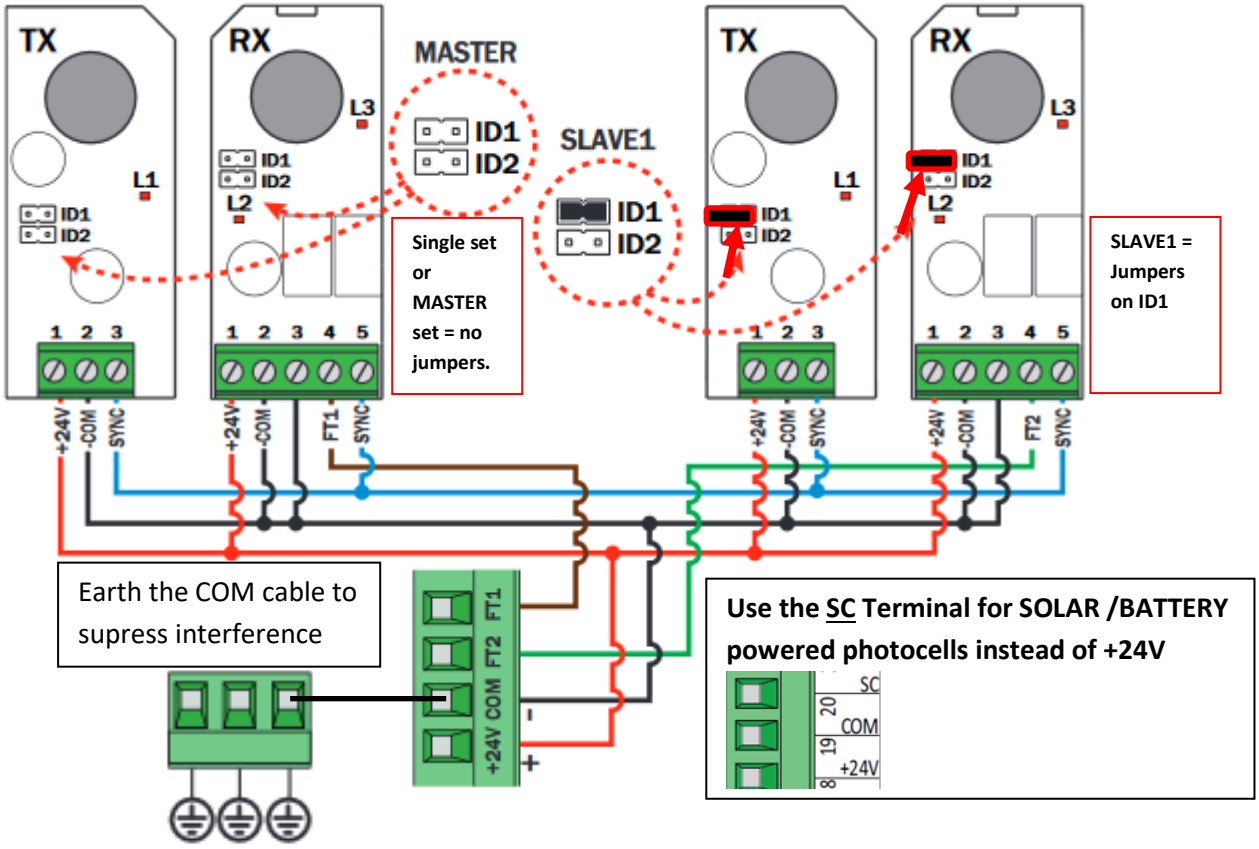


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M90/F4ESO Photocells with synchronised function



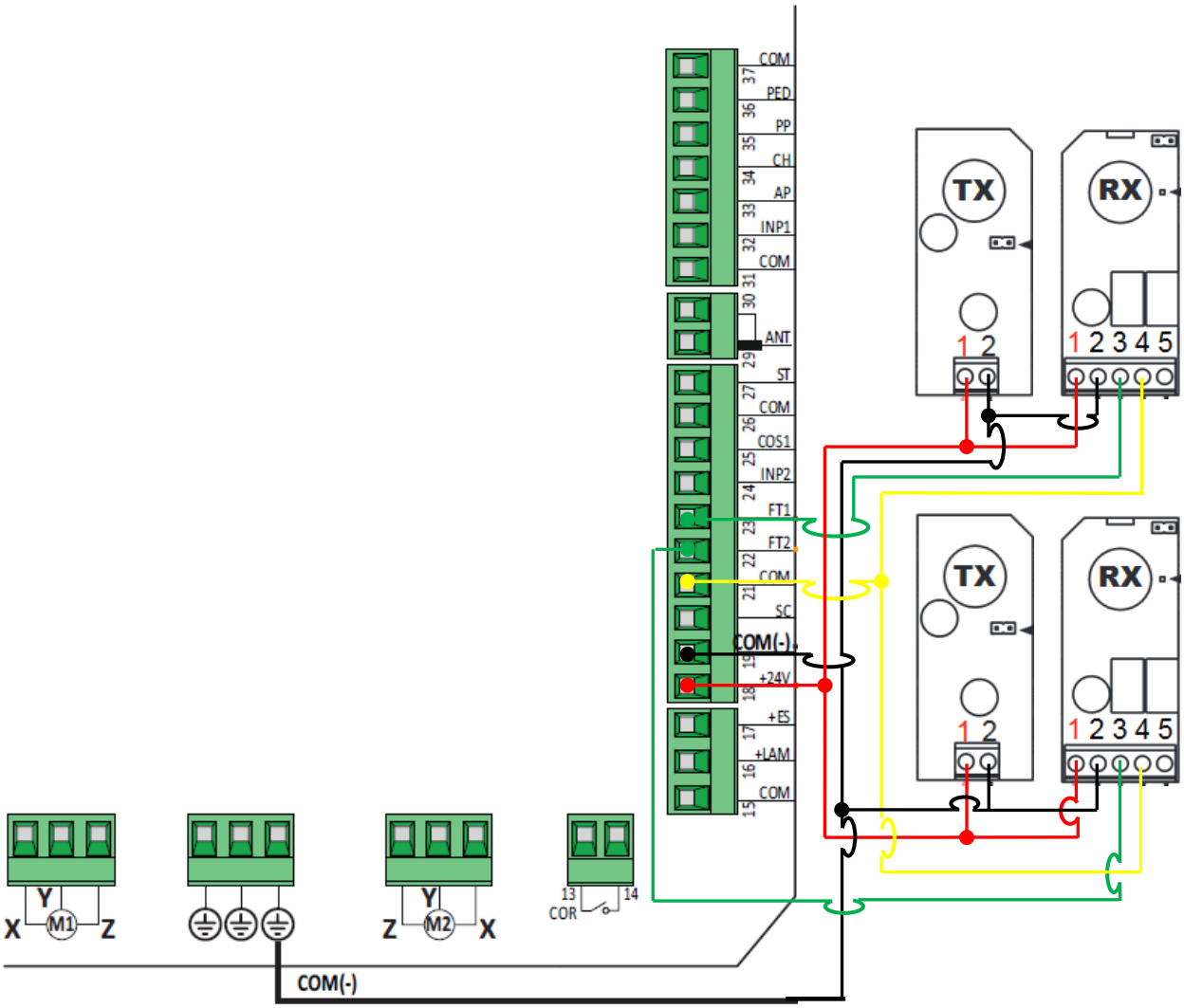
M90/F4ESO Photocells with two pairs with synchronised function



It is absolutely necessary to cycle the power of the main controller after any changes have been made to the SYNC line or jumpers.

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M90/F2ESO Photocells



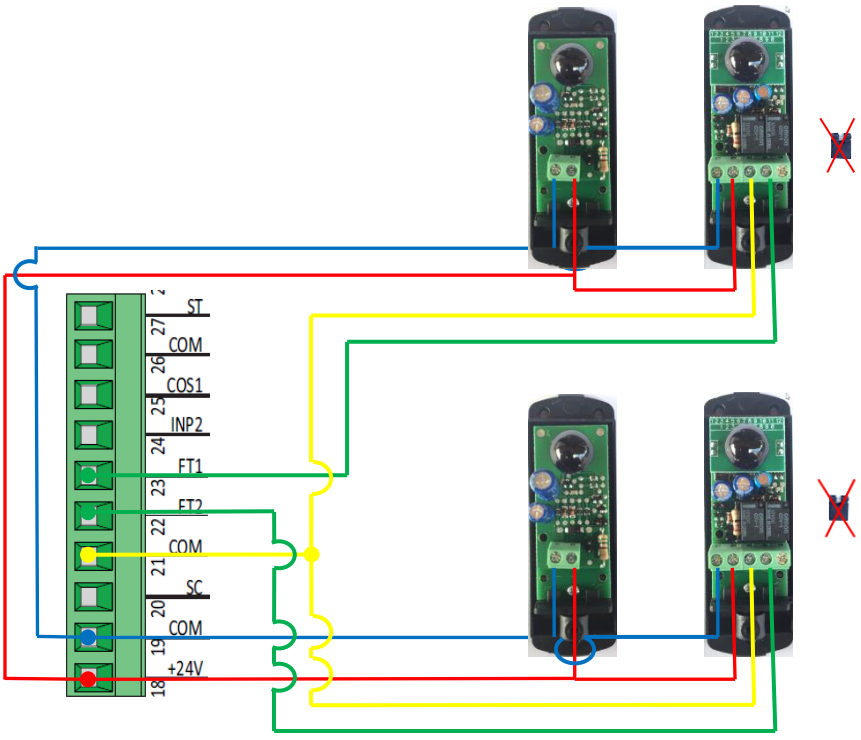
Earth connection of the negative terminal (COM) of F2ES0/F2S range photocells.

Description

In the event of malfunctioning, failed intervention after being triggered, continuous detection, or the abnormal behaviour of the automation (gate, tilt door, barrier, etc.), you are advised to connect the negative terminal (COM) of the photocells to the system earth line.

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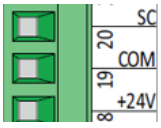
BIG1F Photocells



FES180/FOTO180 BIG1/F, photocells. Jumpers should not be used.

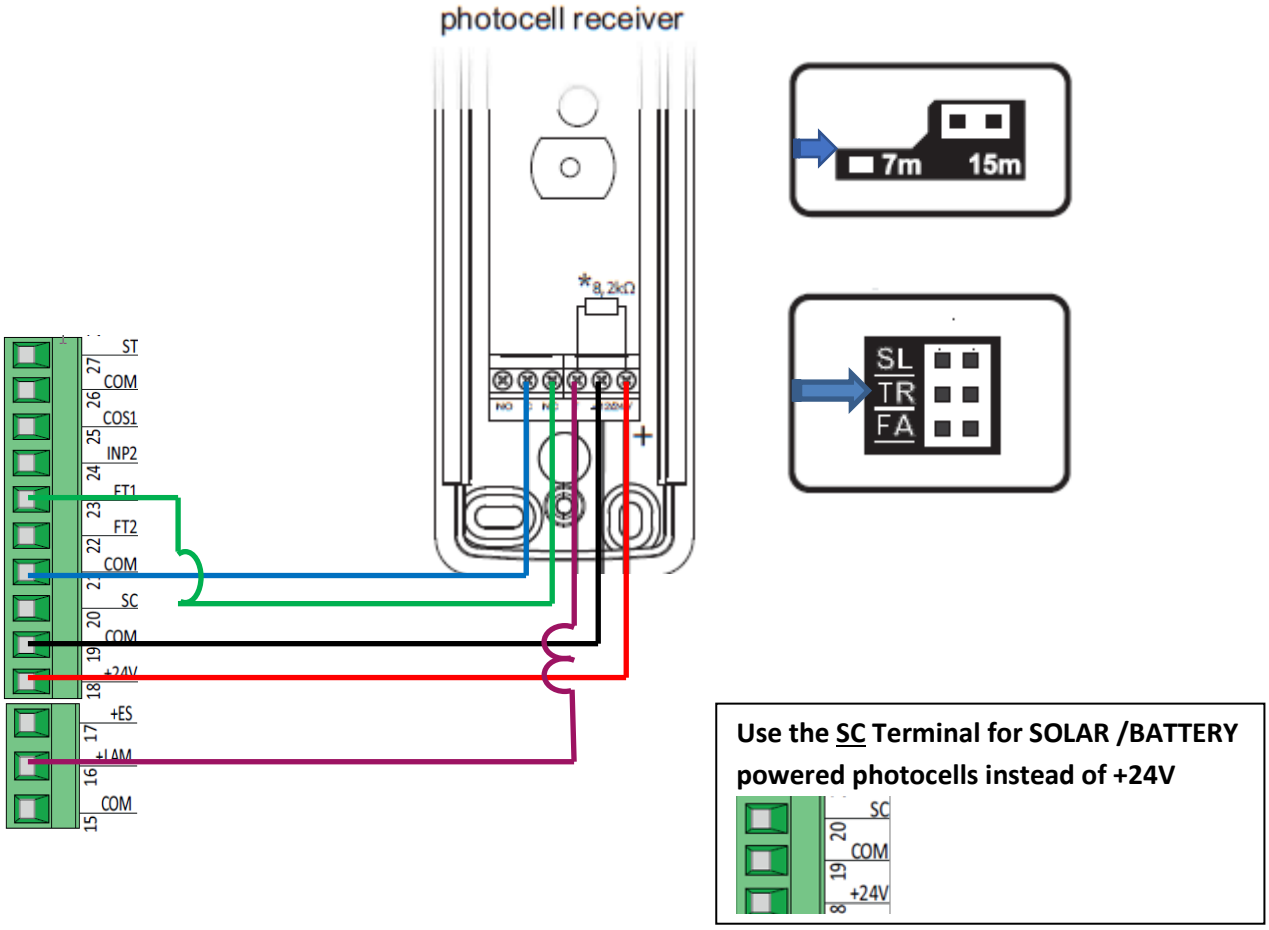
See the main manual EDGE1 for other photocell types.

Use the SC Terminal for SOLAR /BATTERY powered photocells instead of +24V



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SlimBat battery photocell with Edge 1 with Maximum battery saving



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STEP 4)

Using the control panel buttons UP/DOWN, Fig.7 - Scroll down to menu 70 Fig.8 and select 1 motor or 2 motors. Change the parameter using the **+ -** buttons. After a few seconds the board will realise the change automatically. From the chart in Fig.9, scroll down to parameter **A1**. Select the correct parameter for the motor you have connected using the **+ -** buttons, making sure the panel realises the change. It should do this again automatically after a few seconds of the change.

Fig.7

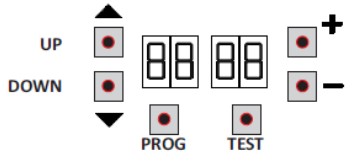


Fig.8

70 02	Select number of motors installed
01	1 motor.
02	2 motors. IMPORTANT: Use the same type of motor for both gate leaves.

Fig. 9

1. Select the automation system model installed with the parameter A 1.

KEY: HIGH SPEED Motor REVERSIBLE Motor

SELECTION	MODEL	MOTOR TYPE	CONFIGURATIONS
A 1 01	BE20/200/HS		-
A 1 02	Serie BR20	-	-
A 1 03	BH23/282	-	-
A 1 04	Serie BR21	-	-
A 1 05	SMARTY5	-	If SMARTY/EMA is installed, set 7 1 01 **NB:** the position data request message dAtA appears on the display whenever this parameter is modified. Press the PROG key until APP- appears on the display, then repeat the acquisition procedure (see chap. 11.2).
	SMARTY7		
A 1 06	SMARTY7R		Set 64 01 and 7 1 01 **NB:** the position data request message dAtA appears on the display whenever this parameter is modified. Press the PROG key until APP- appears on the display, then repeat the acquisition procedure (see chap. 11.2).
A 1 07	SMARTY5R5		Set 64 01 and 7 1 01 **NB:** the position data request message dAtA appears on the display whenever this parameter is modified. Press the PROG key until APP- appears on the display, then repeat the acquisition procedure (see chap. 11.2).
A 1 08	SMARTY4HS		If SMARTY/EMA is installed, set 7 1 01 **NB:** the position data request message dAtA appears on the display whenever this parameter is modified. Press the PROG key until APP- appears on the display, then repeat the acquisition procedure (see chap. 11.2).
A 1 09	BH23/252/HS		-
A 1 10	BR21/351/HS		-
A 1 11	BE20/400	-	-
	MONOS4	-	-
A 1 12	BR20/400/R		-

Using a hex key tool, and the unlock lever, set the maximum open and closed stop positions of the motor, to give the correct corresponding gate open and closed positions for each gate as shown in Fig.10. Double check the positions of the collars by swinging the gate open/closed with the motor unlocked.

Fig. 10)

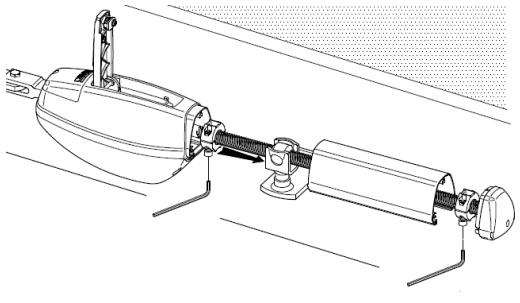
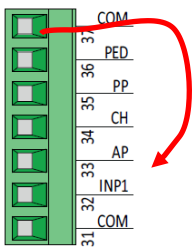


Fig. 11)



Step 6)
You should now be ready to carry out the Acquisition Procedure, but first you should check that the motors are traveling in the correct direction in relation to the control panel. To do this it will be necessary to give the panel a brief open or close command and compare the command to the movement of the gate direction, but then quickly turn off the power once you realise the movement. Attach a temporary cable to COM as FIG.11 then, briefly touch the other end into the AP terminal. The AP terminal is the open command, so the gates should open. Turn off the power to the panel as soon as you see the movement. If the gates close with the AP input, the gates are going the wrong way. It will be necessary to swap around any two wires to the incorrect motor (ZYX) as detailed in Fig.2.

Step 7) **THE ACQUISITION PROCEDURE** (also detailed in the main EDGE 1 manual)
WARNING! Before proceeding, make sure that:
The doors are in a fully closed position: bring the doors into position by giving a close command, (CH) or manually unlock the motors, bring them to the fully closed position and lock the drive again with gates closed. In the case of the underground where it may not be possible to manually position the motors, the closed position can be achieved by using the programme (acquisition procedure) twice. The first one will fail, **APP.L**, but the gate will then be in the closed position where you can start again.

The program needs start from the fully closed position. This is important because the control unit performs a mapping of the absorption of current along the entire movement while opening and closing. If a different path is detected between opening and closing the program fails and returns an error message of **AP PL** and the process will need repeating.

The motors will stop on the motor adjustable stops or the gate wing stops set.

To enter programming press the PROG button for 4 s.: the display will show **AP P-** ; Press the **PROG button** again. The display shows the indication **AUTO**.

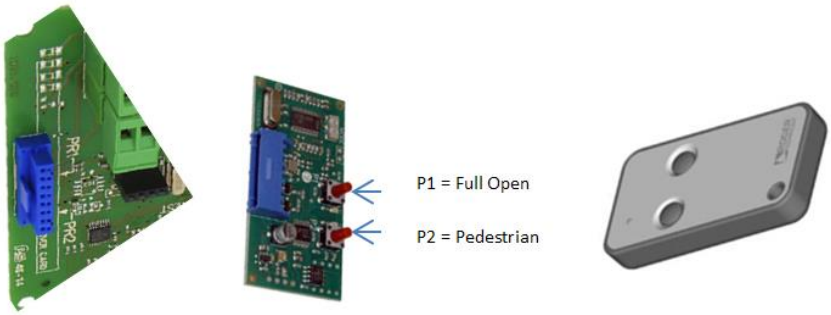
The display shows the indication **AU TO** and motor 1 starts opening, after the phase shift time motor 2 is also automatically activated. When the wings both reach the fully open position, the gates stop. The display should read **AU TO** flashing on the display for 2 seconds indicating that it is going to close, then the indication **AU TO** stops flashing and the closing operation starts. If the program is successfully finished, the display goes back to showing the control and safety status. (Flashing dots and lines)
Otherwise, **APPE** appears (acquisition error) or **APPL** (path length error) and the program will have to be repeated.

Restoring standard factory parameters.
Turn off the control unit, simultaneously press and hold the UP and DOWN buttons then turn on again while keeping the buttons pressed. After 4 seconds the display will show the writing **rE S-** flashing, which indicates that the values have been restored to factory. N.B.: parameter A1 is not restored but, recheck the number of motors connected at parameter 70.

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Step 8)
Insert the radio card into the slot on the main PCB.
Push the P1 button once on the radio card, followed by the button on your remote fob that you want to open the gate fully with. Push the P2 button once on the radio card, followed by the button on your remote fob that you want to open the gate partially. (PEDESTRIAN)

(Deleting all codes.)
Press the receiver buttons P1 and P2 simultaneously for 4 seconds: 5 fast blinks of the two LEDs indicates total erasure of stored codes.
NOTE: it's recommended to delete all codes at the first installation before starting storing codes.



Step 9)
Test the system
You can now test run the system with the fob.

<u>If necessary, reduce the impact force level with the menus 30 to 33 in the parameters. These settings are explained in the manufacturers EDGE1 manual.</u>

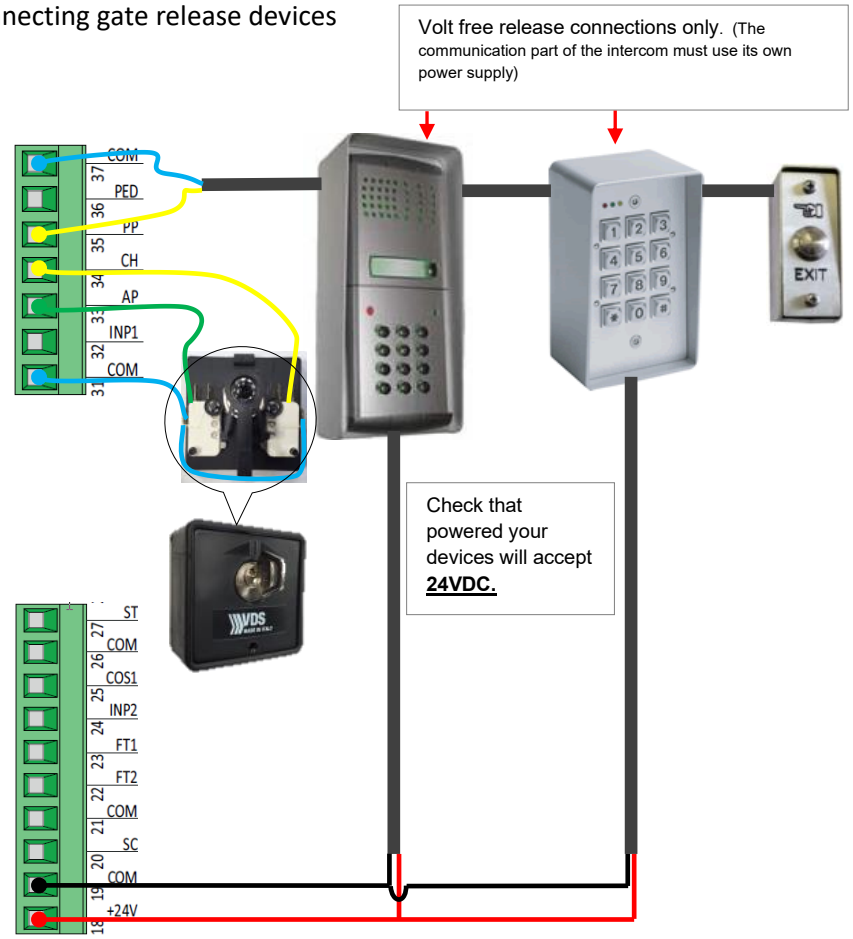
Step 10)
Add in the necessary safety photocells, safety edges and other devices applicable to your installation as explained in the manufacturers EDGE1 manual

Step 11) Enabling Automatic Closing.
Change the parameter A2 to any number other than 00. Eg. 05 would make the gate auto-close and re-attempt a further 5 times before remaining open.
The pause time for auto-closing is pre-set to 30 seconds. Use the parameter **21** to change the time.

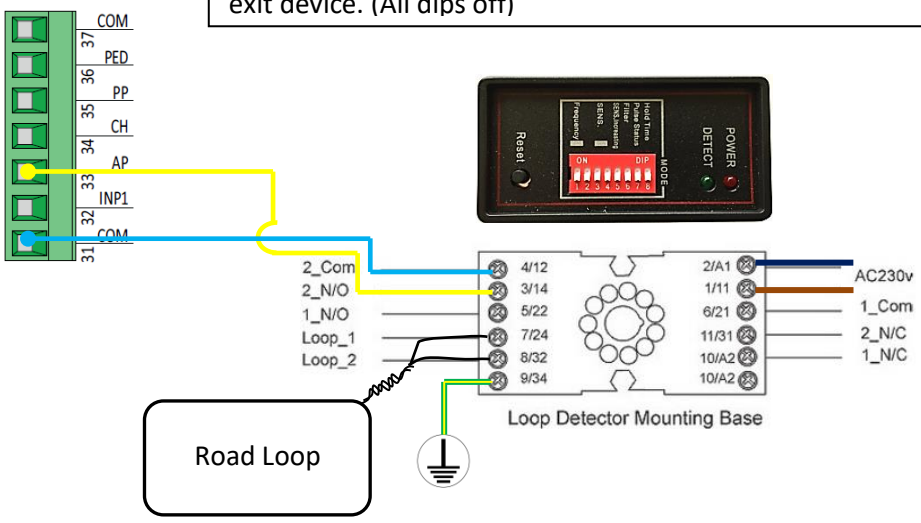
A2 00	**Automatic closure after photocell is triggered (from gate completely open)**
00	Disabled.
01-15	From 1 to 15 of gate closure attempts after photocell is triggered. Once the number of attempts set is reached, the gate remains open.
99	The gate tries to close indefinitely.
21 30	**Setting automatic closing time** The timer starts from the gate open state and continues for the set time. Once the set time is reached, the gate closes automatically. The timer count restarts if a photocell is triggered.
00-90	Pause time settable from 00 to 90 s.
92-99	Pause time settable from 2 to 9 min.

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Connecting gate release devices

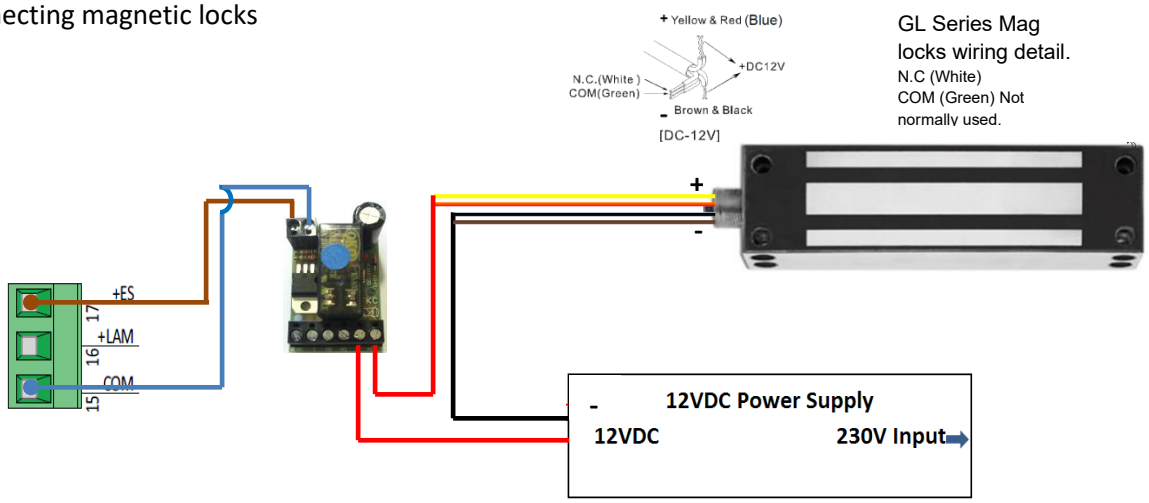


Connection of the inductive loop detector PD132 **230VAC** for use as an exit device. (All dips off)



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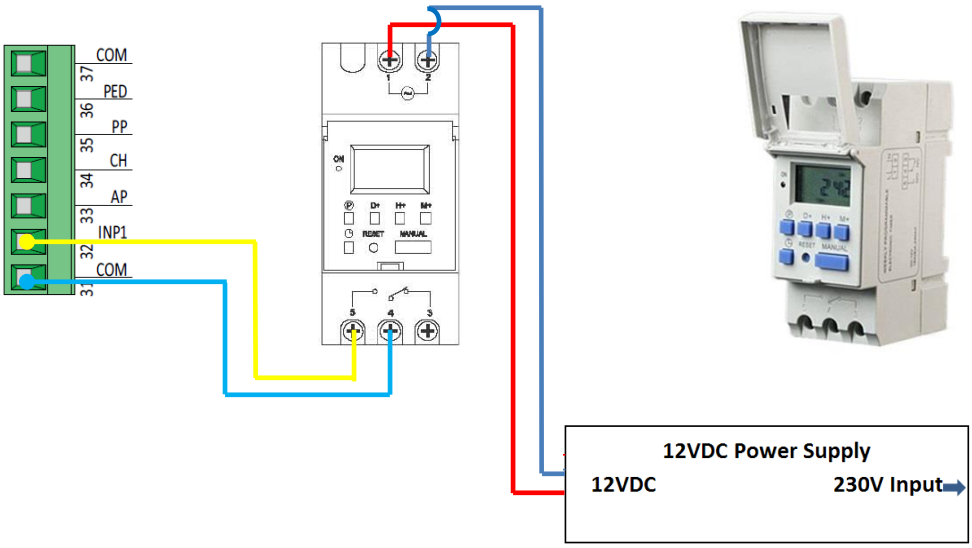
Connecting magnetic locks



29 01	Electric lock
00	DEACTIVATED
01	ENABLED

Activation occurs 0.5 seconds before the start of the movement and lasts 3 seconds.
The controller takes into account when door 1 is approaching the closure stop, and helps the electric lock to hook. WARNING! For proper operation, adjust the mechanical stop inside the BR21 motor carefully (see also Note 13 and 14 relating to the parameters).

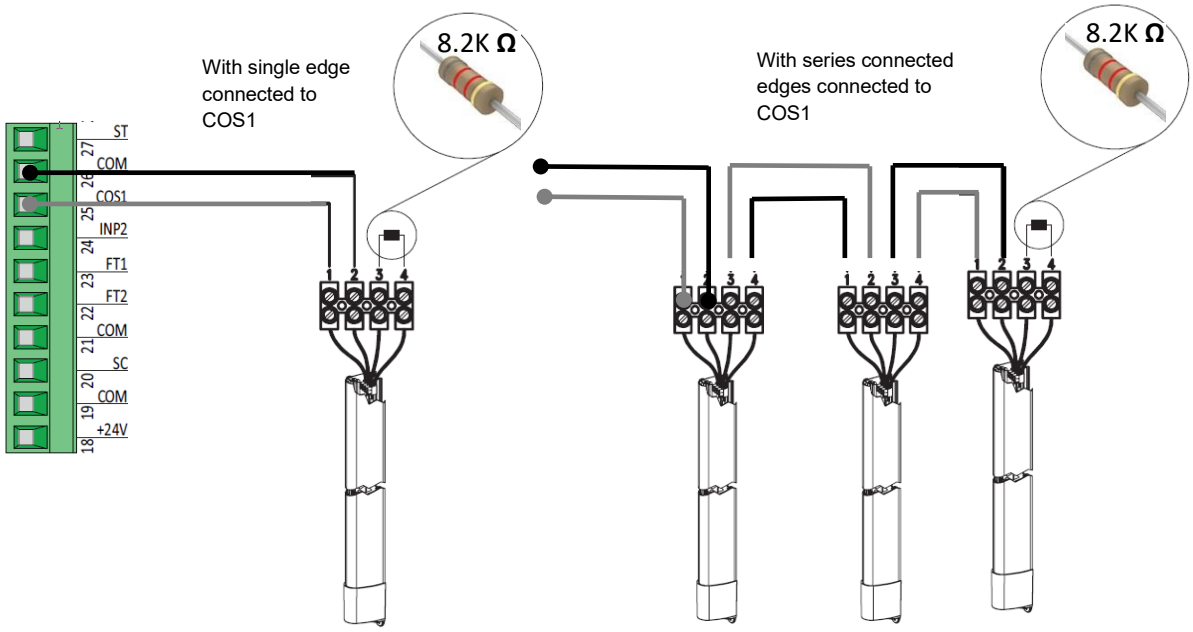
Connecting a 12V time clock



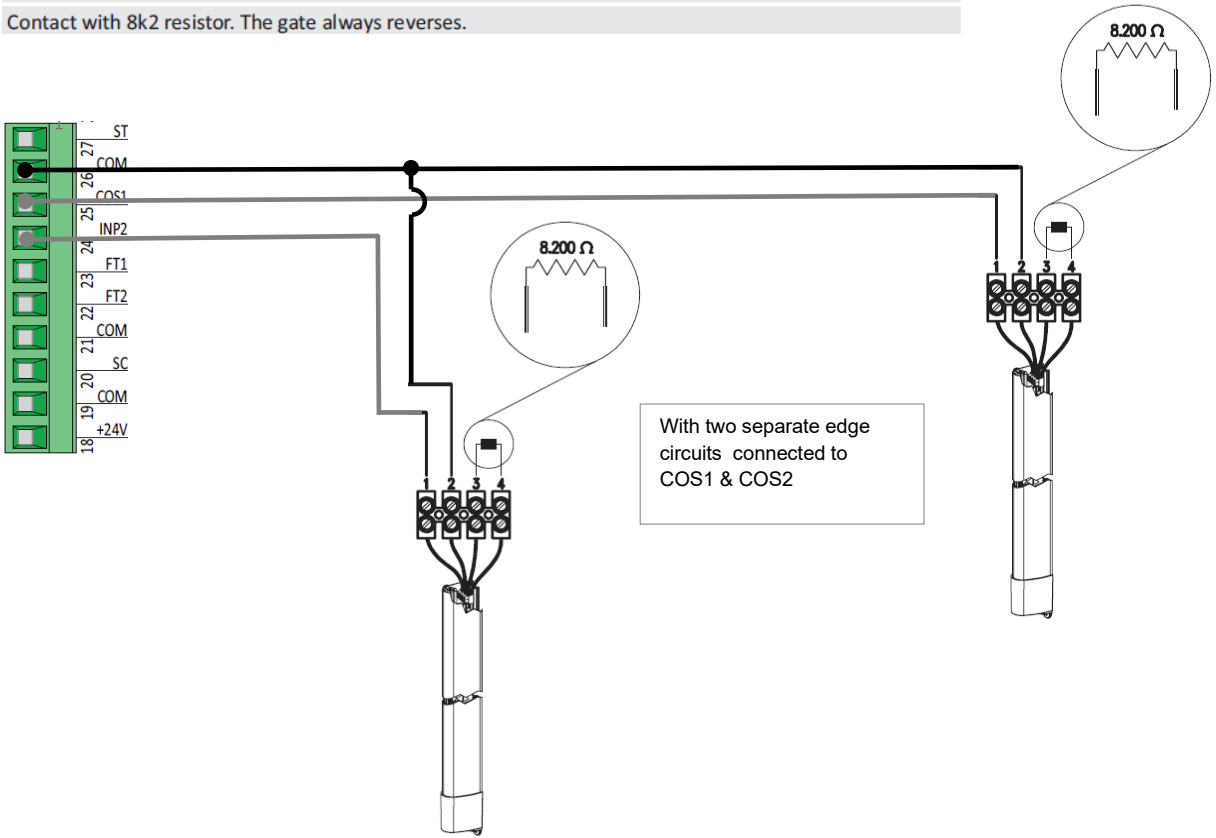
80 00	**Clock contact configuration (INP1)** When the clock function is active, the gate opens and remains open. At the end of the programmed time set with the external device (clock), the gate closes. **N.B.:** This parameter is not visible if A1 03 and 7201.
00	When the clock function is active, the gate opens and remains open. Any command signal received is ignored.
01	When the clock function is active, the gate opens and remains open. Any command signal received is accepted. When the gate returns to the completely open position, the clock function is reactivated.

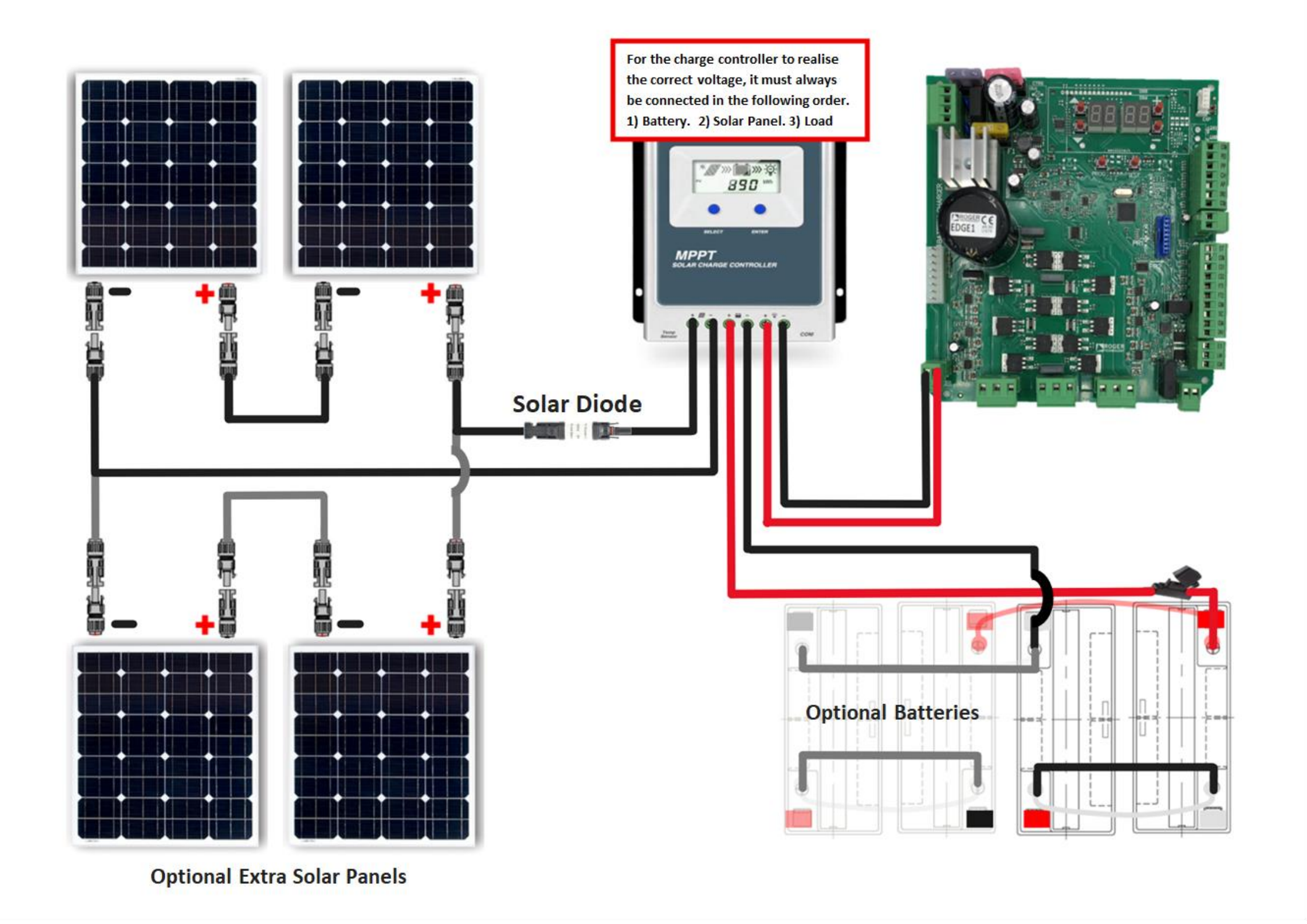
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Connecting solar charged power plants.
Safety edge connection examples.



73 03	Configuring sensing edge COS1
00	Sensing edge NOT INSTALLED.
01	NC contact (normally closed). The gate reverses only when opening.
02	Contact with 8k2 resistor. The gate reverses only when opening.
03	NC contact (normally closed). The gate always reverses.
04	Contact with 8k2 resistor. The gate always reverses.
74 00	**Configuring sensing edge COS2** **N.B.:** This parameter is not visible if A1 03 and 7201.
00	Sensing edge NOT INSTALLED.
01	NC contact (normally closed). The gate reverses only when closing.
02	Contact with 8k2 resistor. The gate reverses only when closing.
03	NC contact (normally closed). The gate always reverses.
04	Contact with 8k2 resistor. The gate always reverses.

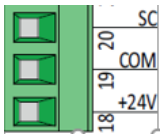



For the charge controller to realise the correct voltage, it must always be connected in the following order. 1) Battery. 2) Solar Panel. 3) Load
MPPT
SOLAR CHARGE CONTROLLER
EDGE1
Solar Diode
Optional Batteries
Optional Extra Solar Panels

After the connections have been made, insert the B71/BCHP Battery backup card into the white expansion slot that can be found on the left side of the board. Once this card is correctly plugged in the board will boot. MAKE SURE TO CORRECTLY PLUG THE CARD IN AND HAVE THE PINS ALIGNED. After the board has booted, please change menu 84 like in the image below:

84 00	**Battery type selection and consumption reduction** NOTE: An INCORRECT setting of this parameter, when there is no mains voltage, blocks the functions and the display shows the message bEL 0 (if set to 01 or 02 and the battery is 2x12Vdc) or an error alert bNod.
00	Battery 24Vdc (2x12V) with B71/BCHP. Acceleration/deceleration/speed reduction enabled, to increase the battery life.
01	Battery 24Vdc (2x12V) with B71/BCHP. No performance reduction, maximum battery consumption.
02	Battery 36Vdc (3x12V) with external charger. Acceleration/deceleration/speed reduction enabled, to increase the battery life. - DO NOT SELECT. FUTURE USE -
03	Battery 36Vdc (3x12V) with external charger. No performance reduction, maximum battery consumption. - DO NOT SELECT. FUTURE USE -

Use the <u>SC</u> Terminal for SOLAR /BATTERY powered photocells instead of +24V The SC line turns off after the gate has finished a cycle.




MPPT
YUASA
REC22-12I 12V,22Ah
CYCLIC APPLICATION
Pb
www.yuasa.com
YUASA
REC22-12I 12V,22Ah
CYCLIC APPLICATION
Pb
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