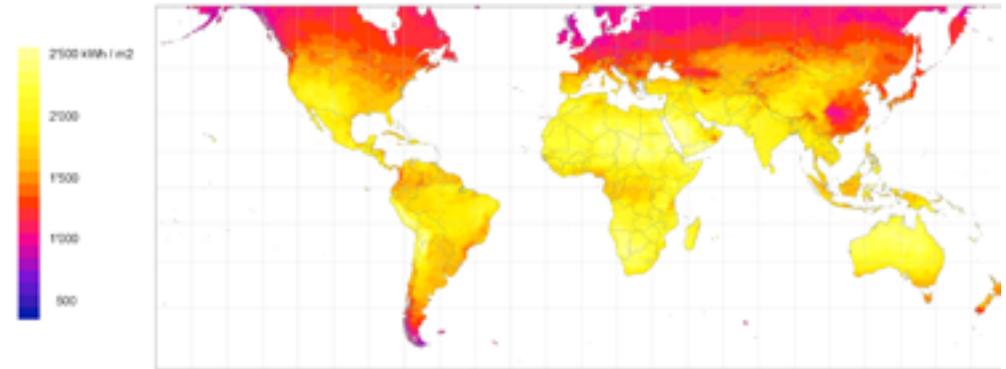


■ SOLAR PANELS SOLAR 1012 / SOLAR 2012/ SOLAR 3012 / SOLAR2524

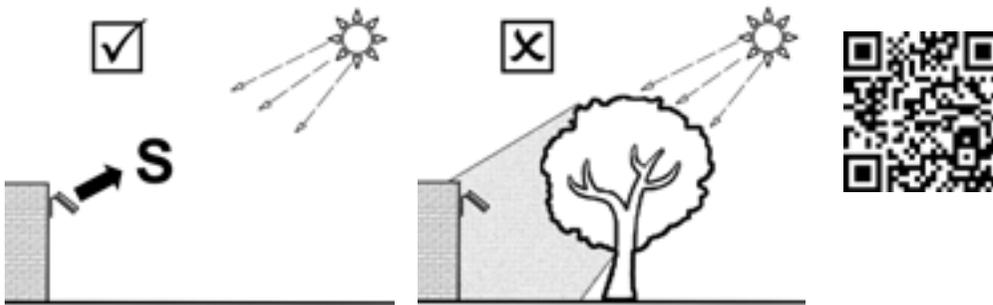
It is recommended to position the solar panel at a distance not exceeding 10 meters from the automation control board. Use a outdoor use 2 wired cable 0,5mmq. if the panel has to be placed at a higher distance from the control board, use a 2 wires 1mmq outor use cable. Fix the solar module to the wall with the supplied fixing bracket.

The solar module should be facing south. And at full light. Check that no obstruction or shadow reduces lighting to the solar panel. Connect the module to the electronic board and pay attention to the polarity of the wiring. Connect the panel to the circuit board being careful to respect the polarity of the wiring.

 Warning: in case of intensive use or to ensure greater autonomy in low light conditions it may be advised to use sgreater solar panelcombined with a greater storage capacity battery. combining a minimum 12V 12A battery. Warning: when increasing the watt of the solar module, the battery capacity must be increased proportionally. In the case of double solar panels or dual batteries, note that one terminal in series connection will increase the volts(V) and a parallel connection will increase the ampere (A)



SUNLIGHT WORLD MAP to control the level of solar radiation at your location - use the free APP of the European program PVGIS at the following link: <http://re.jrc.ec.europa.eu/pvgis/apps4/pvest.php?lang=it&map=europe>



Board model	GATE	Stand-by consumption (A)	daily consumption	Consumption for a complete cycle (open+ close), (A)	Suumption of total n° of daily cycles (open+close)	total daily consumption (A)	average charge of a 10W 12V solar panel (A /hour) in non ideal weather	hypotesis of lixght exposure (hours/per day)	Total recharge capacity (A)	balance between consumption and recharge
CTH44	1 wing	0,007	0,16	0,012	60	0,88	0,3*	5	1,5	+ 0,62
CTH48	2 wings			0,024	50	1,36				+ 0,14

The table gives an estimation of autonomy in the worst light conditions (we calculated only 5 hours of daily light with a low brightness level).

This condition may correspond to the situation: winter with overcast / partly covered or veiled.

The table shows the maximum number of maneuvers, maintaining the same level of charge of the battery.

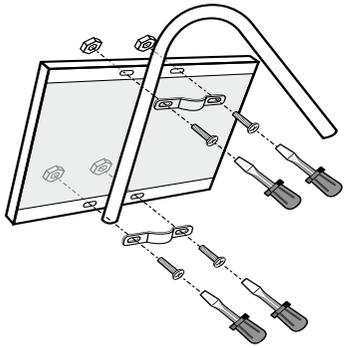
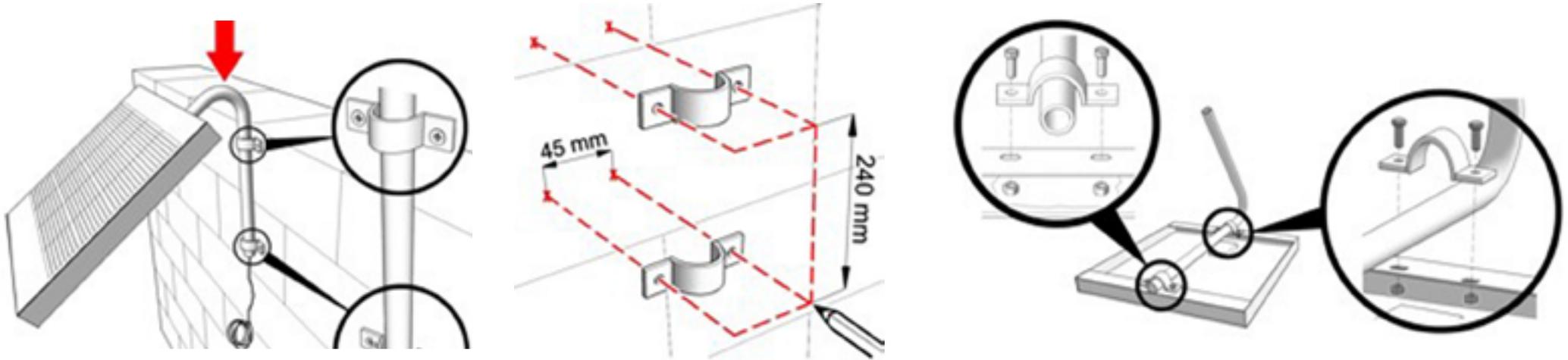
With summer weather and excellent exposure to light for more hours per day, the levels of autonomy increase exponentially.

With use of photocells and especially in the case of double pair of photocells SW7120 we recommend the use of a 20W panels combined with a 12A battery to ensure an even better energy autonomy.

NOTE: the solar panel 1020 combined 12V 12A battery has a charging capacity of about 1A / hour ,exponentially increasing the autonomy compared to a 10W panel 7A battery.

Caution: the use of a solar panel 20W combined to a 12V 7A battery is inadvisable because it would not exploit all the charge given by the panel.

- Example Mounting Bracket 10W solar module Solar1012 (Attention: brackets may be different to the pictures below)



- Example of Mounting Bracket for Larger Modules (Attention: Brackets may be different to the pictures below)

