

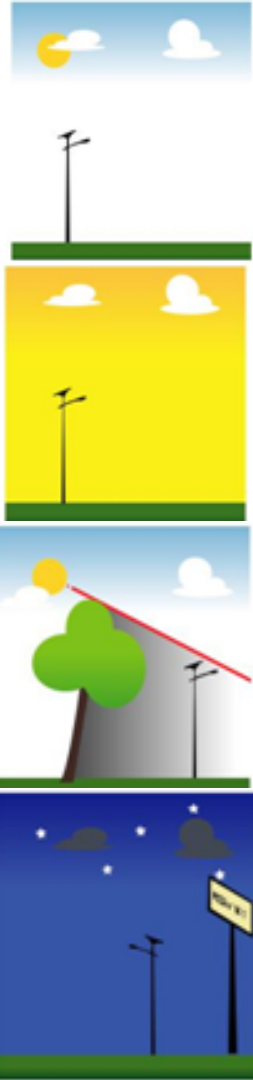


**FONROCHE**  
lighting

**INSTALLATION MANUAL**  
TWIN LED SOLAR STREET LIGHT

**LEKLA<sup>MD</sup>**

## How does it work ?



The battery gets loaded during daytime with the electricity produced by the solar panel (PV).

Nighttime is detected by measuring the voltage of the solar panel :

- daytime  $\rightarrow$  PV voltage  $> 30V$
- nighttime  $\rightarrow$  PV voltage =  $0V$

Avoid **any shadow** on the solar panel (trees, houses, traffic signs...). Shadows will considerably impact electricity production of the panel and hence reduce battery charging.

Avoid **artificial light** on the solar panel during nighttime. This could hinder correct detection of dusk by the panel and can, worst case, completely disable light to switch on.

## Transport

Do not depalletise the solar panels before arriving at the construction site. FONROCHE guarantee is voided if the modules are handled before.

All mechanical parts are collected together on a separate pallet. Do not disassemble the packages before arriving at construction site.

## Reception

The delivery must be checked for completeness and possible transit damage immediately at receipt:

- Control if the parts have not been harmed during transport, otherwise please claim damage to the shipper within 48h after receipt (and inform FONROCHE Lighting).
- Likewise, control the right fit bracket/pole, if any operating problem is found, claim damage to FONROCHE Lighting.

*Installation must comply with the installation manual ;  
all items provided must be installed otherwise the  
guarantee is voided.*

## Long-term storage

### **Power365 system:**

Batteries must be stored within their original packing in a dry location.



**The installation of batteries should happen before the date indicated on the packing. Contact FONROCHE Lighting in case you need to store them longer.**

### **Mechanical parts:**

Mechanical parts must not be stored directly on the ground or near a storage place of powdery products. The storage area should be sufficiently ventilated to avoid any deterioration.

Poles strapping should be removed for storage periods longer than 3 weeks.

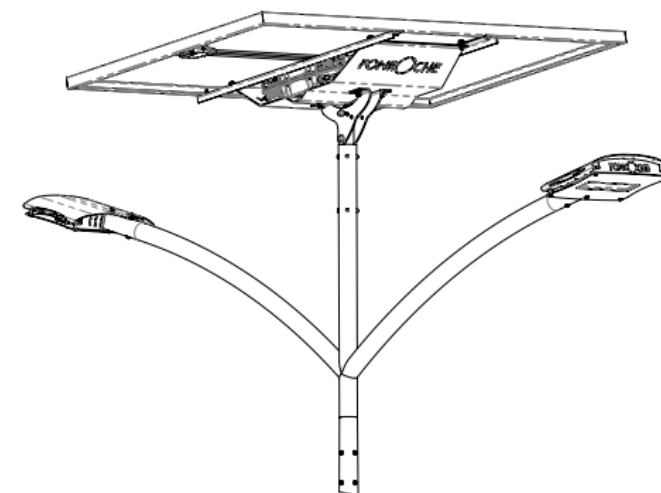
## Maintenance - swap

The client is responsible for returning any defective part to FONROCHE Lighting for expertise. After receipt of the defective parts, FONROCHE Lighting will determine the guarantee validity. Depending on the result of the expertise, the defective spare part may be charged to the client if the guarantee period has expired or if the default is the result of an event out of FONROCHE Lighting responsibility (bumps, falls, unadapted handling...).

# Part list

N° screw	Thread type	Tightening torque (Nm)
11	M6	> 10
10	M8	> 24
3, 8, setscrews	M10	> 47,7

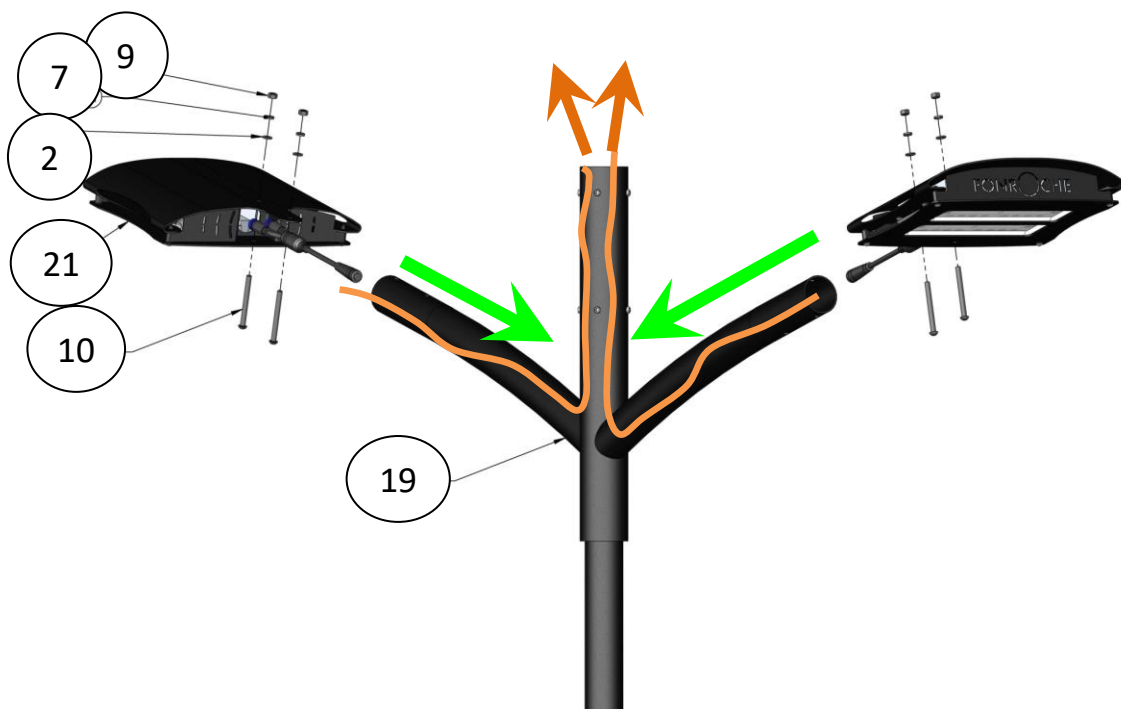
N°	Reference	Designation	Quantity
1	1100001	Universal tool disconnect MC4	1
2	1108025	Washer M08 Inox A2-70-M	8
3	1108044	Screw TBHC M10x70 Inox A2 - 70	2
4	1108046	Washer M10 - M - Inox A2 - 70	20
5	1108047	Grower washer M10 - Inox A2 - 70	10
6	1108048	Nut M10 Inox A2 - 70	10
7	1108058	Grower washer M08 - Inox A2-70	4
8	1108063	Screw TBHC M10 x25 Inox A2 - 70	8
9	1108066	Nut M08 - Inox A2-70	4
10	1108068	Screw TBHC M08 x 80 - Inox A2-70	4
11	1108070	Black Screw Hexa Head notched base HM06 x 20 - DIN 6921 - Inox A2-70	4
12	1108384	Grey nut M 06 - DIN 6923 - Inox A2-70	4
13	1999008	PV module - 60 cells - 38 mm - 3,2 mm - Black	1
14	2301201-2301202	Plate width=4 - battery support	1
15	2301203 - 2301204	Binding - Module 60 cel	2
16	2301207- 2301209	Orientation flask Left	1
17	2301208 - 2301210	Orientation flask Right	1
18	2301211- 2301212	High tube	1
19	2301289	Double bracket D60 - POWER 365	1
20	-	Pole with M10 screws	1
21	2309120	Box energy - Power 365	1
22	2309234	Led lantern - 1 x M16B	2



Setscrews M10	16
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# 1 Assemble the lanterns on the bracket

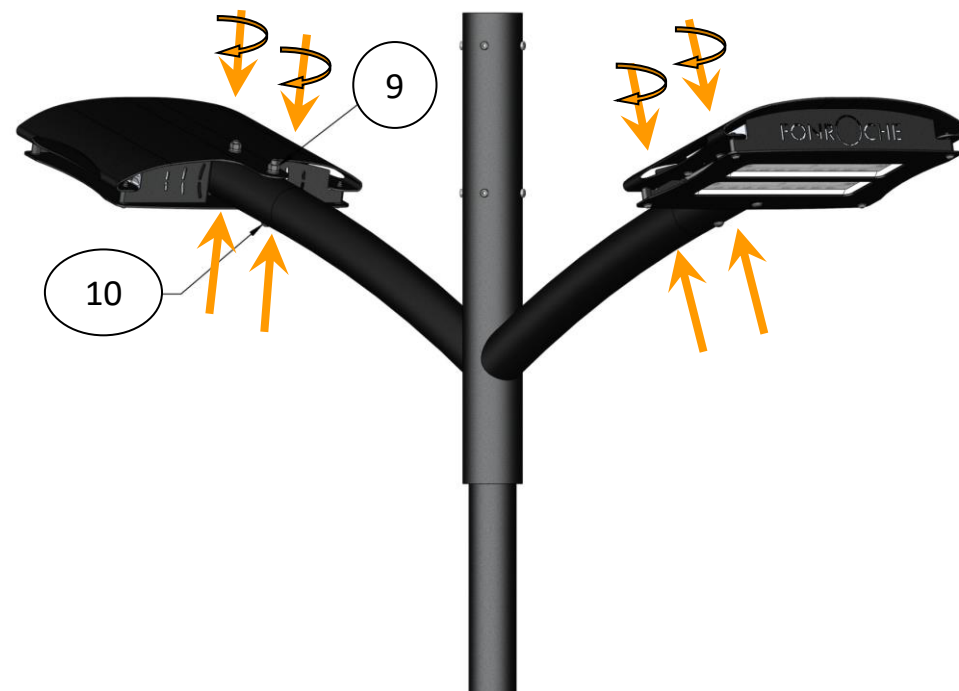
Use an electrician needle (fish-tape) to draw the connector cables of the 2 lanterns through the bracket to the top.



# 2 Set the luminaries



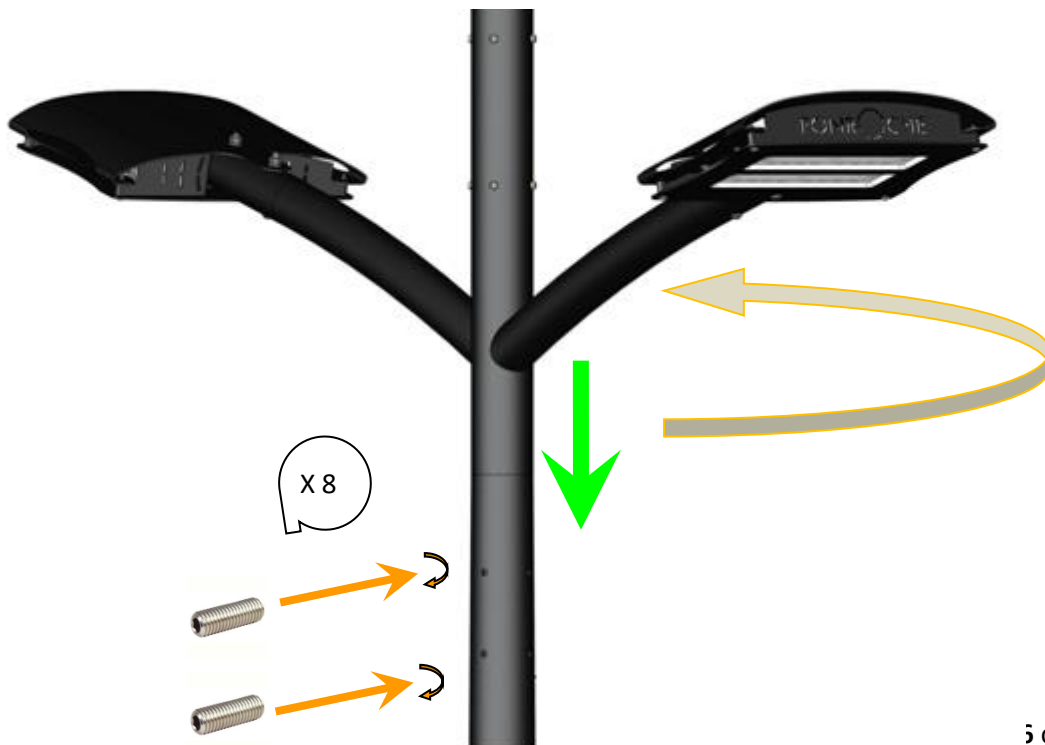
*For all the assembly, every screw/nut system must be tightened to the torque recommended by FONROCHE Lighting\**



Make sure to put the nuts on the top of the lantern

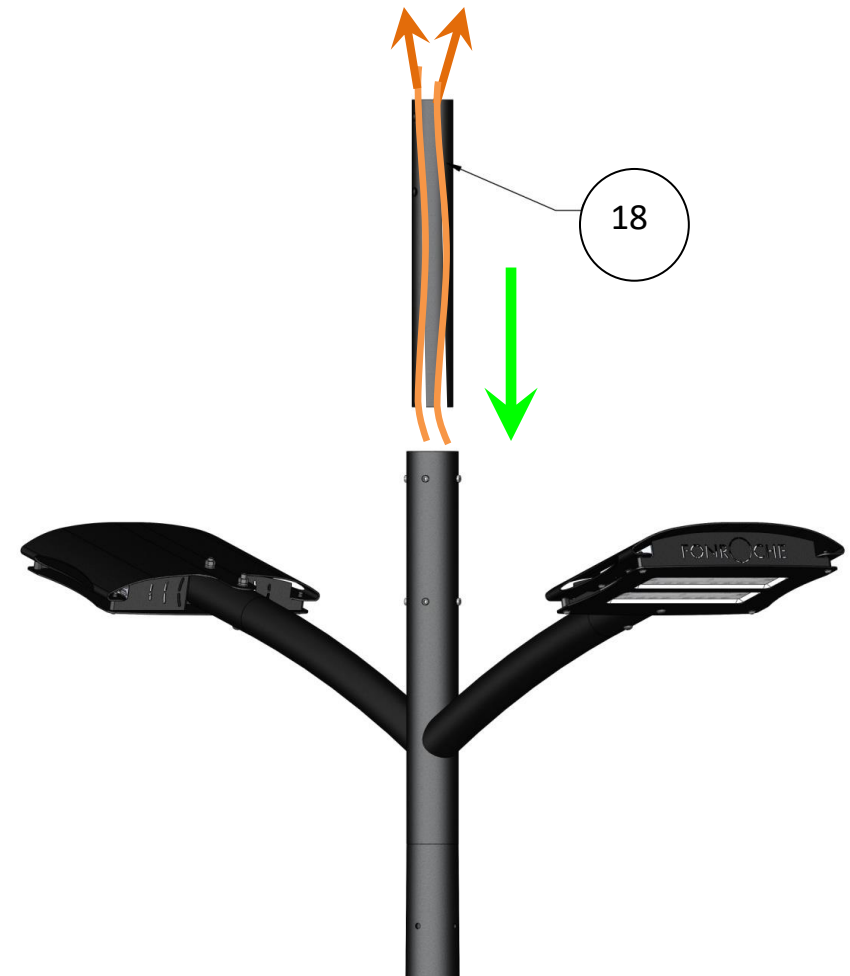
### 3 Assemble the bracket on the pole and adjust it \*See table on page 4

Orient the lanterns, fasten slightly each pressure screw, and then tighten them all.



### 4 Insert the tube into the bracket

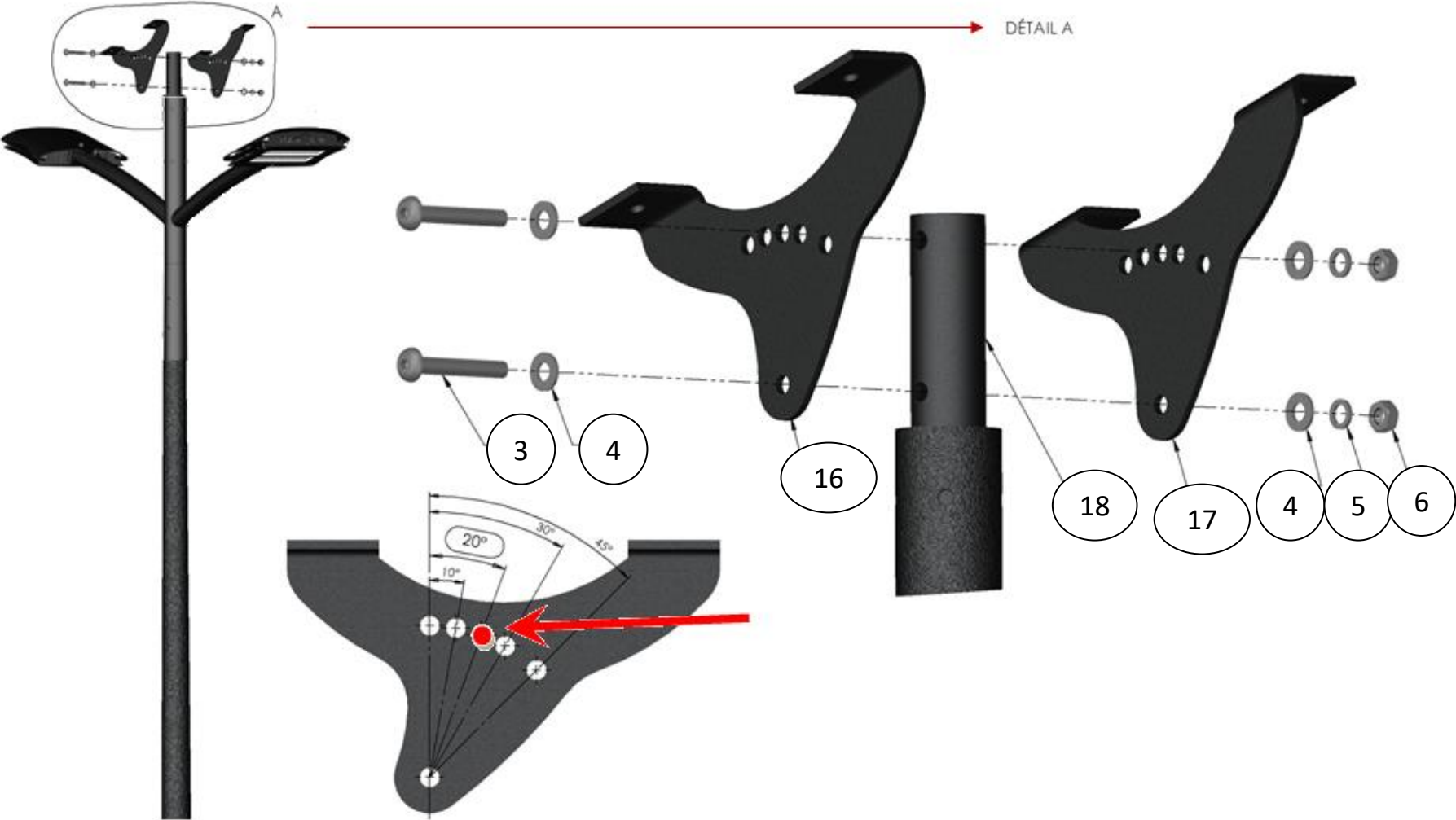
insert the cable into the tube.



# 5

## Assemble the base of the mounting kit

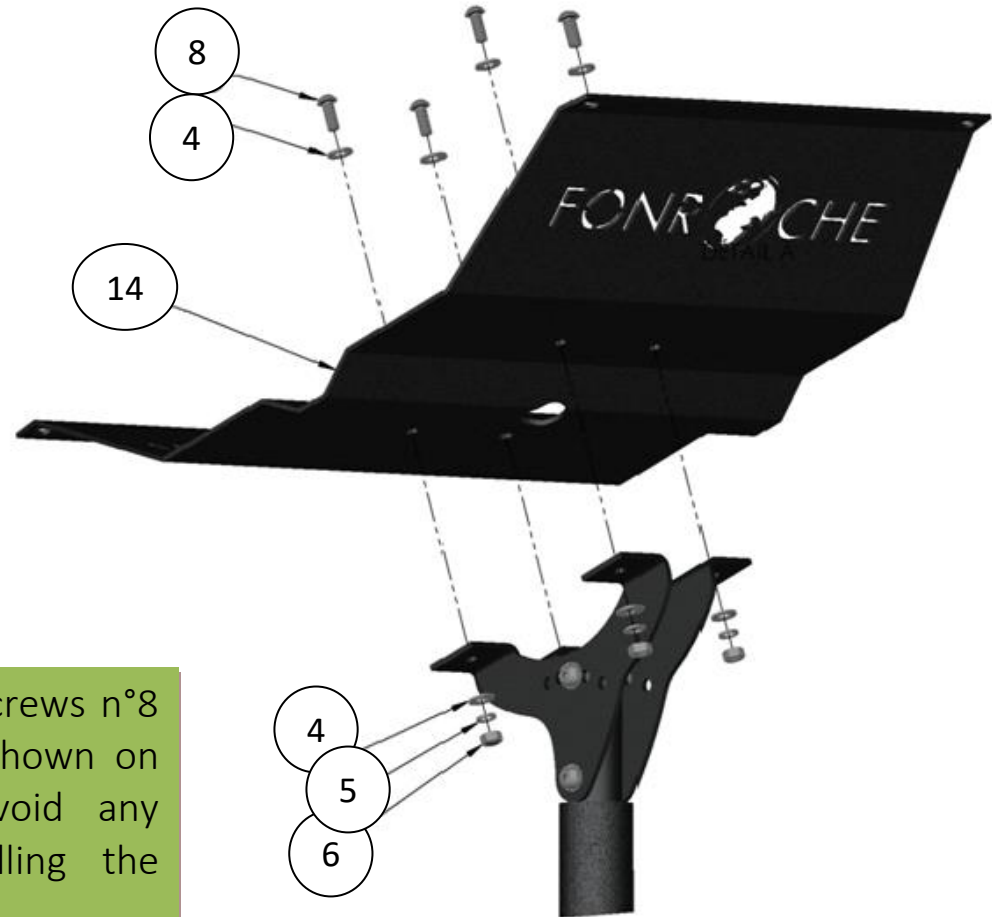
Set to 45° tilt (unless otherwise stated).



## 6 Assemble the support for PV module



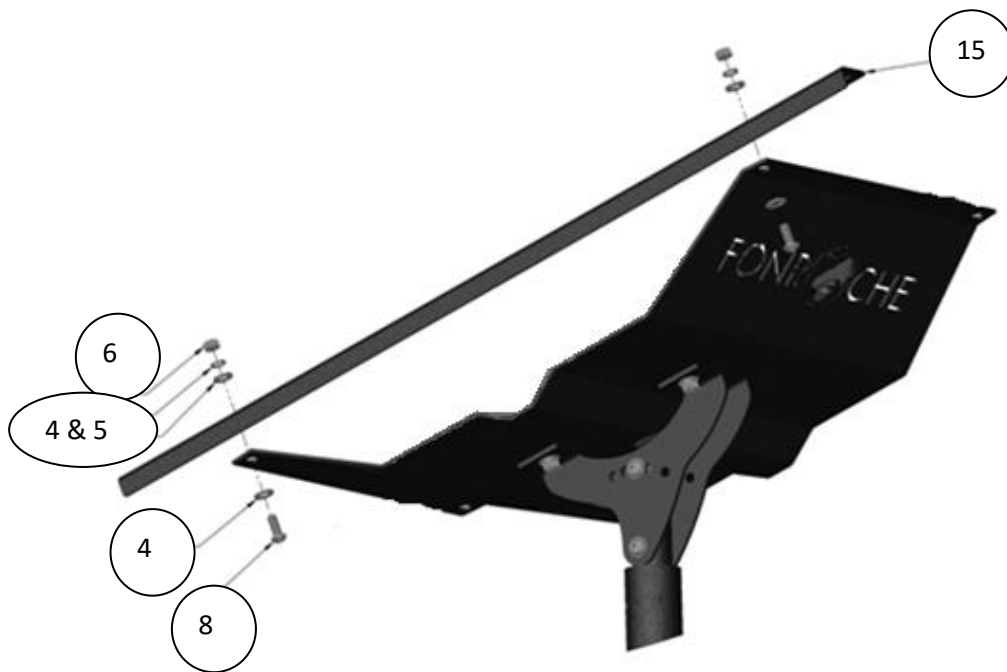
Be careful to fit the screws n°8 in the same way as shown on the schematic to avoid any problem when installing the battery.



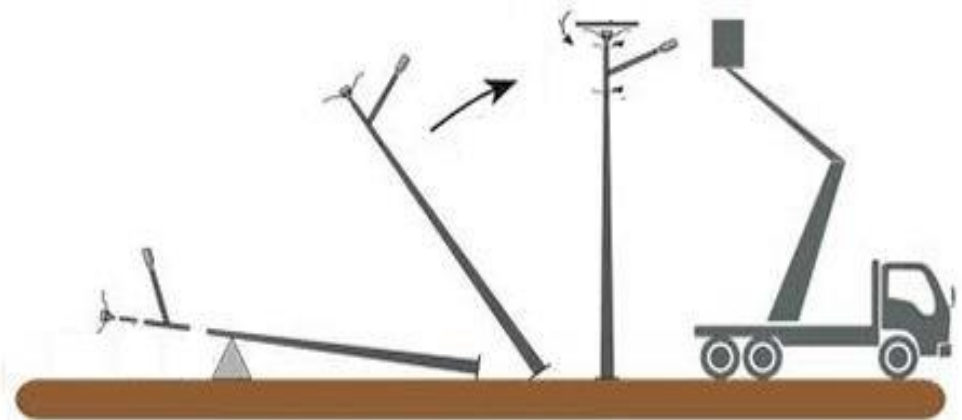


## 7 Install the first PV mounting, on the ground

Install only one PV mounting angle n°19 before erecting the pole.



## 8 Erect the streetlight



Once the streetlight erected, go to step 9.

## 9 Install the second PV mounting, the battery and connect the lantern



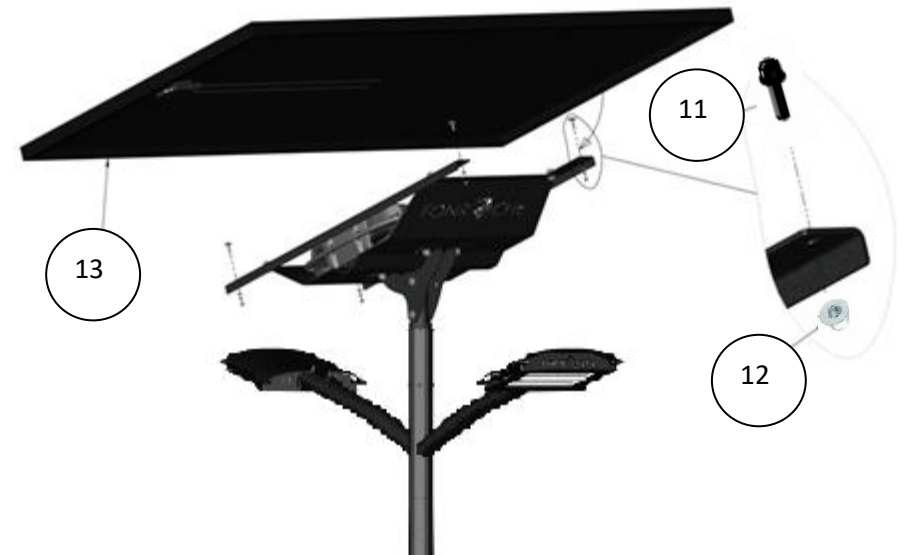
Same pieces as step 7

Pass the cable under the battery.

Do not leave the cables hanging under the support.

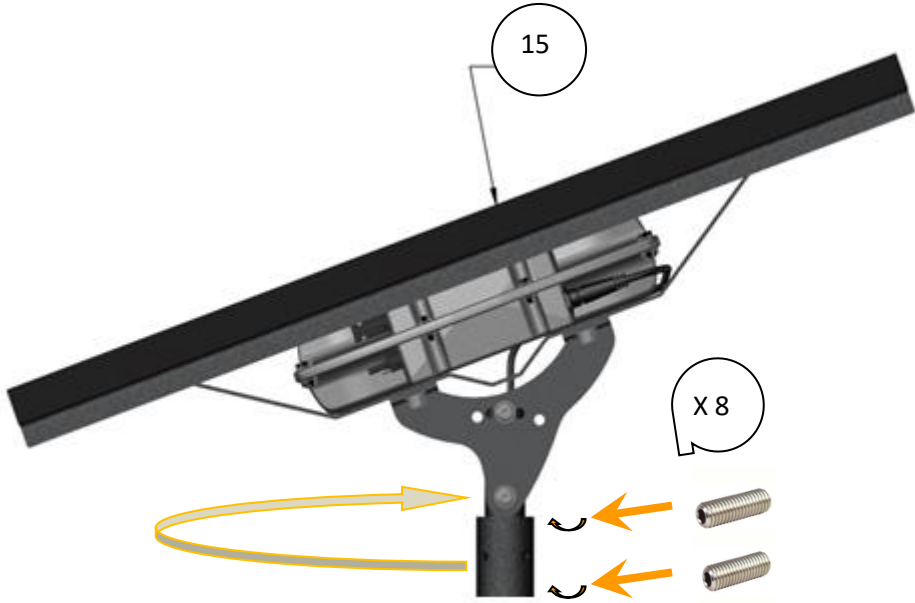


## 10 Assemble the PV



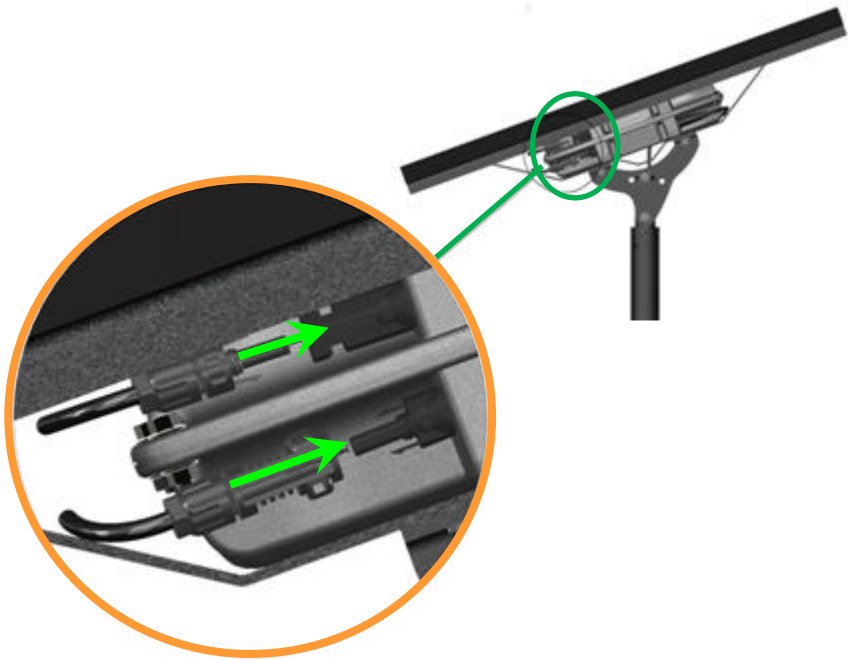
# 11

## Orient the PV towards the equator



- Orient the PV towards the equator,
- Tighten the 8 pressure screws,
- Position the lanterns straight in order to optimize the lighting

**12** Connect the PV to the battery



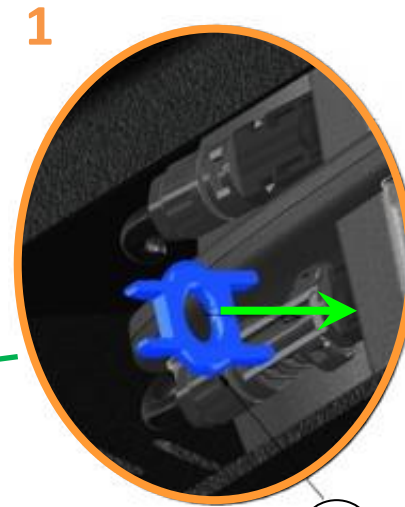
**13** Initialize the battery



**Please wait  
30 seconds**

*after plugging for system  
activation*


# 14 Validate your installation



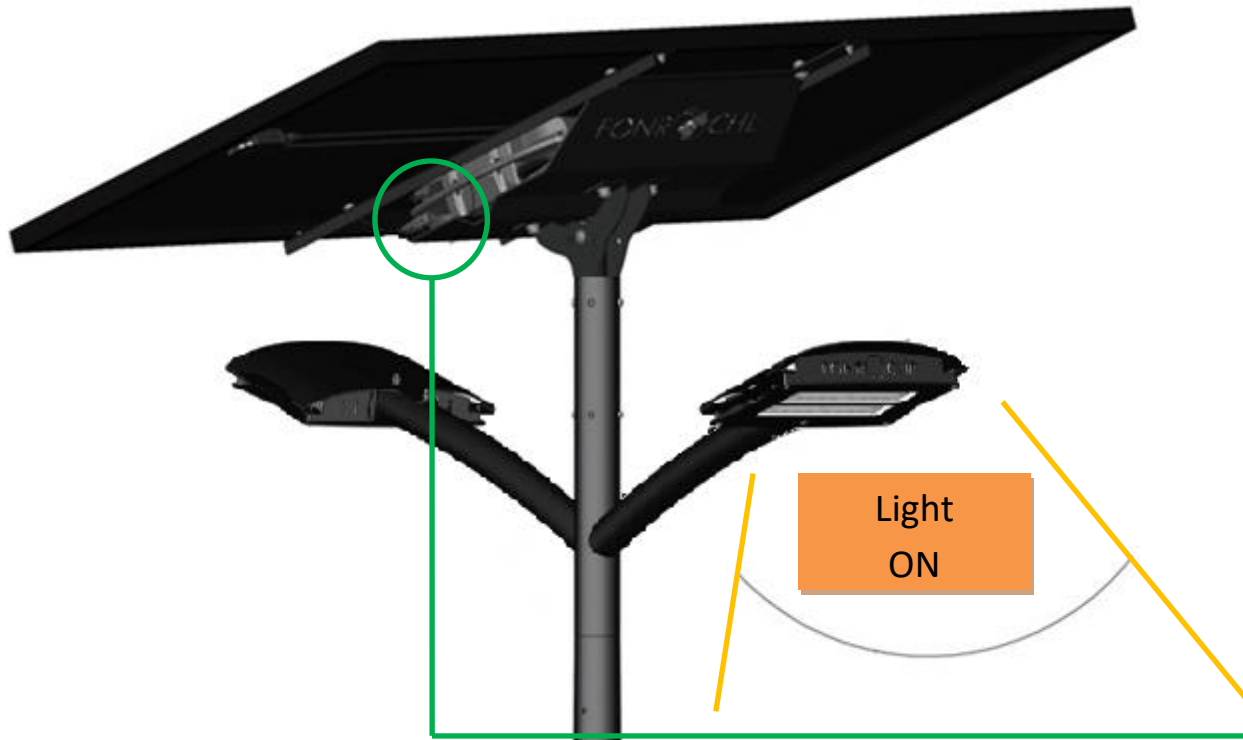
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Disconnect only one connector of the PV with the “Universal tool disconnect” n°1.

 *Wait 1 min max, light must switch ON*

Then you can reconnect the PV



 *Wait another min max, light must switch OFF*



If light switches OFF, installation is OK.

You can then bind all the cables with cable ties.

## Last step of installation – Check-list

Check points		Installer check (write OK or no)
Are lanterns straight positioned to optimize the lighting ?		
Are the 16 pressure screws installed and correctly tightened ?		
Is the PV oriented towards the equator ? If several solar street lights are installed, are the PVs oriented towards the same direction ?		
Is the PV set to 20° tilt (unless otherwise stated) ?		
Are all the cable ties installed (so that the cables will not hang anywhere) ?		
Are all the parts installed on the solar streetlight ?  <i>If parts remain, please check on this manual to find out what has been forgotten and please be careful to install everything.</i>		
Have the nut-screws system at page 4 ?	<b>Trouble shooting</b>	Recommended
Problems	Causes	Solutions

<b>The light remains switched on during the day</b>	Wrong connection of the PV	<ul style="list-style-type: none"> <li>• Check that the solar module is correctly connected to the Power 365 battery system unit.</li> </ul>
	Defect of the solar module	<ul style="list-style-type: none"> <li>• Verify open circuit voltage on the cable towards the module. You should measure a voltage between 30 and 40 V. If not, the module is damaged.</li> </ul>
<b>The light doesn't work</b>	Open circuit voltage during the night is higher than detection threshold for day/night detection	<ul style="list-style-type: none"> <li>• Check that the solar module doesn't catch stray light from the surrounding.</li> </ul>
<b>The light doesn't work during installation test</b>	Bad cables connection	<ul style="list-style-type: none"> <li>• Check that all connectors are connected and correctly locked onto the Power 365 battery system unit.</li> </ul>
	If the installation happens too late in the evening, the system unit doesn't detect the solar module and the system stays in low-power transport mode.	<ul style="list-style-type: none"> <li>• Wait until next day so that the output voltage of the solar module is high enough.</li> </ul>
<b>The light doesn't work after it has been working for several days</b>	Batteries are discharged	<ul style="list-style-type: none"> <li>• Check the connections of the solar module.</li> <li>• Check that there is no shadow on the solar module.</li> <li>• Check tilt angle and orientation of the solar module.</li> <li>• Wait some days if it is winter, if not call FONROCHE Lighting for further actions.</li> </ul>

For any other problem, please contact FONROCHE Lighting  
 info@lekla.ca  
 1-819-769-0350