

LiFePO4 Battery Precautions

Lower temperature limit for LiFePO4 battery is 0° C to 45° C

Wires coming out from the battery should never be shorted.

Check the battery terminal voltage before its installation in the system, if the battery voltage is less than 8V, then charge the battery with external LiFePO4 charger.

DO NOT charge the battery with charger voltage greater than 14V DC and current limit greater than C/5. Where 'C' is the total Ah capacity of the battery.

During external charging connect the battery charger with the correct polarity of the terminals respectively

Handle the battery carefully to avoid the free fall, vibration, puncture, penetration by sharp object, crushing, hammering of LiFePO4 battery.

Keep the battery either in horizontal or vertical position only.

Ensure the LiFePO4 battery is connected only with the battery charger, otherwise battery will be damaged.

The LiFePO4 battery must be connected first to the luminaire followed by connection to the PV panel. If PV panel is connected first, ensure that the battery terminals are not shorted, which will damage the system.

System Precautions

Ensure that the system/panel is not mounted under shadow.

Do not cut any wire, preferably use terminal block or junction box for any connection or additional cable length.

Battery connections are done as per the wire's label and Battery terminal's marking

Panel connections are done as per the wire's label and panel terminal's marking

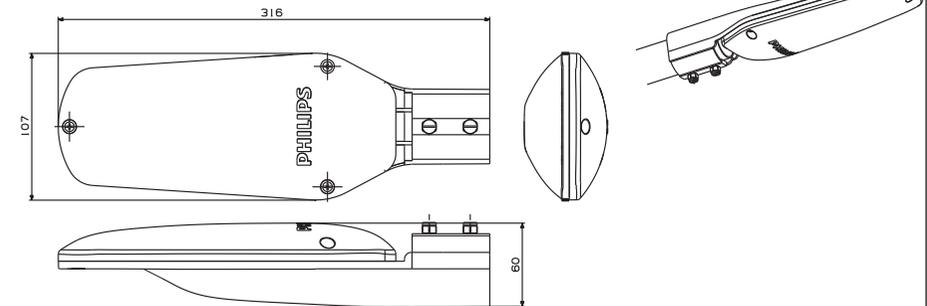
Used proper washers, spring washers and nuts as mentioned in this booklet at all the places

System mounted on the pole and Panel oriented as specified for your geographic location

BRP049

Solar Street Lighting Luminaire

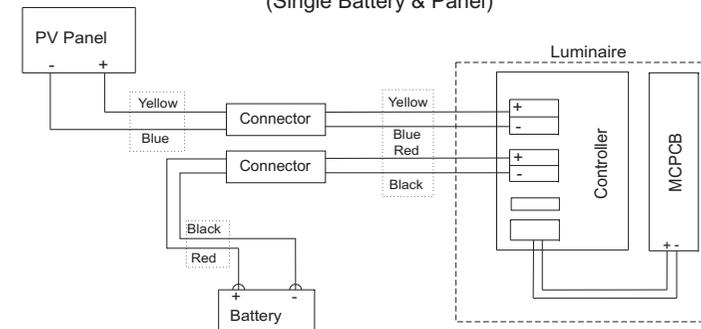
Dimensions



Type	:	BRP049
Light Source	:	LED's
Voltage	:	12V DC
IP Classification	:	Luminaire are IP-65
Net Weight	:	0.8 kg
Max. Projected Area	:	0.03 m ²
Application	:	Outdoor use only Solar LED Street Lighting System
Mounting position	:	Horizontal
Application height	:	Upto 4-6m
Pole Outer Diameter	:	32-40mm

Circuit Diagram

(Single Battery & Panel)



1

Ensure that you have received the material as per the system and all the items mentioned in the invoice are present

Check boxes are not open and that the items are undamaged

Check hardware count against the Hardware List packed with the items



← Pole

Ensure the Foundations are done as per recommendation and cured properly before installation

2

Familiarity with the major components

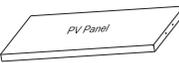
1. Luminaire



with cable attached

this or any of the other three shown on the front page

2. PV Panel



3. LiFePO4 Battery



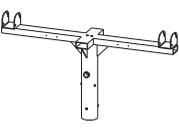
3

Opening the Boxes gives following items

Luminaire mounting Sleeve and clamp

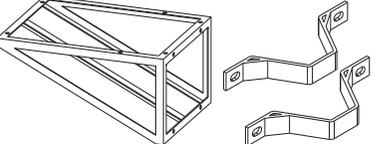


Panel Angle Adjustment Bracket (PAAB)



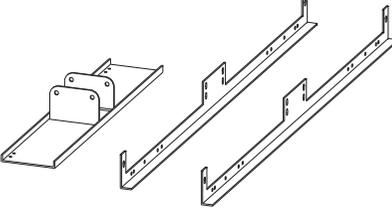
Universal Twin Mounting and Greenline

Battery Box Fixture and Fixing Clamps



4

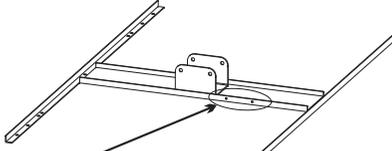
Panel Mounting Arrangement



Disintegrated Angles

OR

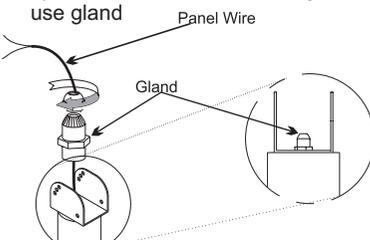
in the Welded form



Hole provision for Hybrid Junction Box mounting for Hybrid systems

5

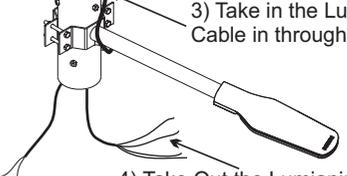
1) Take Out Panel Wire through PAAB, use gland



Panel Wire Gland

2) Mount the LMS using LMS clamp, 4 Nos of M8x80 bolts, nuts and washers

3) Take in the Luminaire Cable in through PAAB

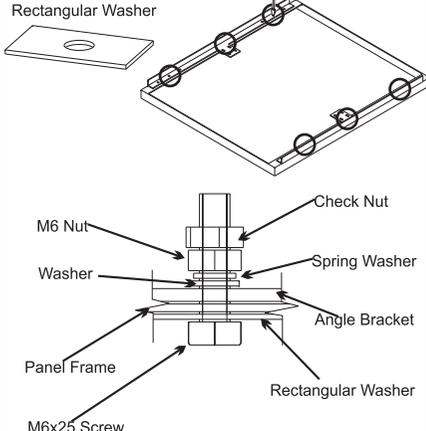


Panel Wire

4) Take Out the Luminaire cable as shown and provide the connections.

6

Lay the PV Panel upside down, place the angle bkts and tighten using 6 Nos of M6 screws and nuts at the positions marked by circle. Use plain washer, spring washer, rectangular washer and check nuts as depicted



Rectangular Washer

M6 Nut

Washer

Panel Frame

M6x25 Screw

Check Nut

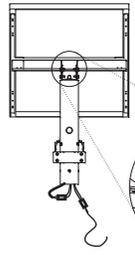
Spring Washer

Angle Bracket

Rectangular Washer

7

Mount the Panel on the PAAB as shown below using 2Nos of M8 Bolts, nuts, washers and spring washers. Use a tightening torque of 8N-m



Angle adjustment bolt. The Panel can be mounted at three positions: 20 (South India), 30 (Middle India) and 40 (North India) degrees with the horizontal. Use one of these three holes accordingly.

Hinge Bolt

Adjust the LMS and the Panel in such a way that when Luminaire is oriented towards the road, the Panel faces South

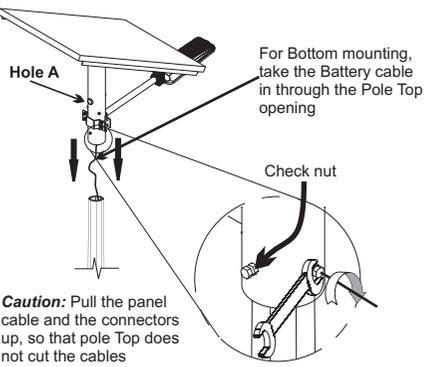


Adjust by rotating LMS around the PAAB and by tightening these screws

8

Take the entire assembly to the top of the Pole and slide it down on the pole

Tighten the assembly using 6 Nos of M8 bolts. Use Check nuts as shown.



Hole A

For Bottom mounting, take the Battery cable in through the Pole top opening

Check nut

Caution: Pull the panel cable and the connectors up, so that pole Top does not cut the cables

For Top Mounting, take out the Battery cable through the Hole A