

SignBox Solar PRO

— RENEWABLE - Signage ————— 30 - 100W —

Intelligent & clean solution
to illuminate signs
with zero emissions
and electricity



3 YEARS
2000cycles
IP66

- Dimmable option increases autonomy
- Easy to select different operating modes with remote control
- Choose 8 or 16hr battery autonomy and 12 or 24V according to your needs
- Up to 8 mtrs distance

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3 YEARS
2000 cycles
IP66



IP66



12 OR 24V



0°/+50°C

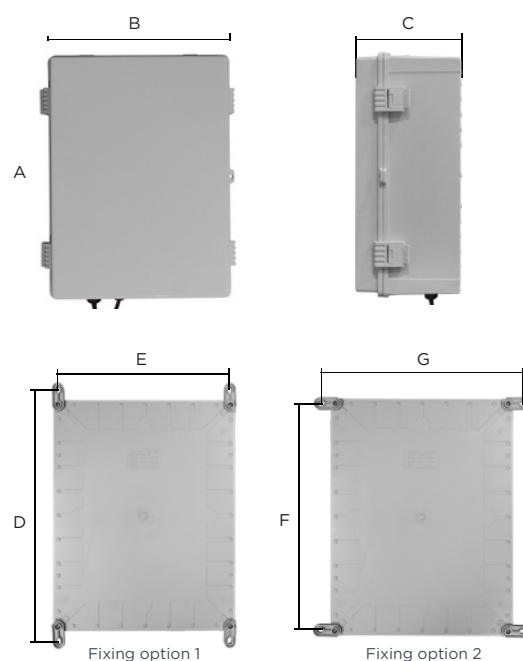
TECHNICAL DATA

Code	Designation	Output Power (W)	Battery Type	Battery capacity (Ah)	Max. Battery output voltage (V)	Solar Controller	MCB (pcs)	Net Weight (Kg/lb)	Solar panel recommend
SignBox Solar PRO DIM 12V									
30000025	SignBox Solar PRO DIM 30W 12V 8H IP66	30W	LiFePO4	18	12,8	PWM	2x1P/16A	9/19,8	80W(18V)
30000002	SignBox Solar PRO DIM 30W 12V 16H IP66	30W	LiFePO4	36	12,8	PWM	2x1P/16A	9,6/21,2	120W(18V)
30000026	SignBox Solar PRO DIM 48W 12V 8H IP66	48W	LiFePO4	36	12,8	PWM	2x1P/16A	9,6/21,2	150W(18V)
30000003	SignBox Solar PRO DIM 48W 12V 16H IP66	48W	LiFePO4	72	12,8	PWM	2x1P/16A	12,8/28,2	120W(18V) x 2 in parallel
SignBox Solar PRO 24V									
30000017	SignBox Solar PRO 100W 24V 8H IP66	100W	LiFePO4	42	25,6	PWM	2x1P/16A	14,6/32,2	100W(18V) x 2 in series
30000016	SignBox Solar PRO 100W 24V 16H IP66	100W	LiFePO4	84	25,6	PWM	2x1P/16A	26,6/58,6	150W(18V) x 2 in series
SignBox Solar PRO DIM 24V									
30000018	SignBox Solar PRO DIM 48W 24V 8H IP66	48W	LiFePO4	24	25,6	PWM	2x1P/16A	7,6/16,6	40W(18V) x 2 in series
30000015	SignBox Solar PRO DIM 100W 24V 8H IP66	100W	LiFePO4	30	25,6	PWM	2x1P/16A	11,7/25,8	80W(18V) x 2 in series
30000014	SignBox Solar PRO DIM 100W 24V 16H IP66	100W	LiFePO4	60	25,6	PWM	2x1P/16A	20,7/45,6	100W(18V) x 2 in series

**For applications with negative temperatures, please contact us.*

DIMENSIONS

Code	Designation	A x B x C (mm)	D x E (mm)	F x G (mm)
SignBox Solar PRO DIM 12V				
30000025	SignBox Solar PRO DIM 30W 12V 8H IP66	430 x 300 x 170	420 x 260	360 x 320
30000002	SignBox Solar PRO DIM 30W 12V 16H IP66	430 x 300 x 170	420 x 260	360 x 320
30000026	SignBox Solar PRO DIM 48W 12V 8H IP66	430 x 300 x 170	420 x 260	360 x 320
30000003	SignBox Solar PRO DIM 48W 12V 16H IP66	430 x 300 x 170	420 x 260	360 x 320
SignBox Solar PRO 24V				
30000017	SignBox Solar PRO 100W 24V 8H IP66	530 x 400 x 200	520 x 360	455 x 420
30000016	SignBox Solar PRO 100W 24V 16H IP66	630 x 500 x 220	TBC	TBC
SignBox Solar PRO DIM 24V				
30000018	SignBox Solar PRO DIM 48W 24V 8H IP66	430 x 300 x 170	420 x 260	360 x 320
30000015	SignBox Solar PRO DIM 100W 24V 8H IP66	430 x 300 x 170	420 x 260	360 x 320
30000014	SignBox Solar PRO DIM 100W 24V 16H IP66	530 x 400 x 200	520 x 357	455 x 420



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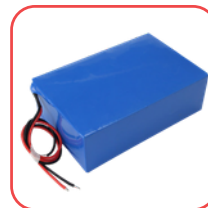
DETAILED VIEW



Timer

To help decide the on/off time with the light detected by the PWM controller

- without Timer: SignBox Solar will keep the standard set, switch on at night, switch off at day.
- with Timer: You can set the switch time independently.
- setup the timer: please refer to next paragraph.



Lithium Battery Pack

High temperature resistant, up to 2000 cycles lifetime. (DOD 80%) Smart BMS protection.



PWM Solar Control

High Charging efficiency , Ensuring enough power generated every night.
Max. power: 50W/12V; 100W/24V

CLOCK SETTING

Step	Key	Setting
1	Press P	Setting "1 ON" time (display 1 on)
2*	Press D+	Select days of week (If you want the same setting everyday, no need to press this key)
3	Press H+/M+	Set the time (hours and minutes)
4	Press P	Setting "1 OFF" time (display 1 off)
5	Press P	Select days of week (If you want the same setting everyday, no need to press this key)
6	Press H+/M+	Set the time (hours and minutes)
7	Repeat step 2-6	Set 2-16 on/off time
8*	Press 	End

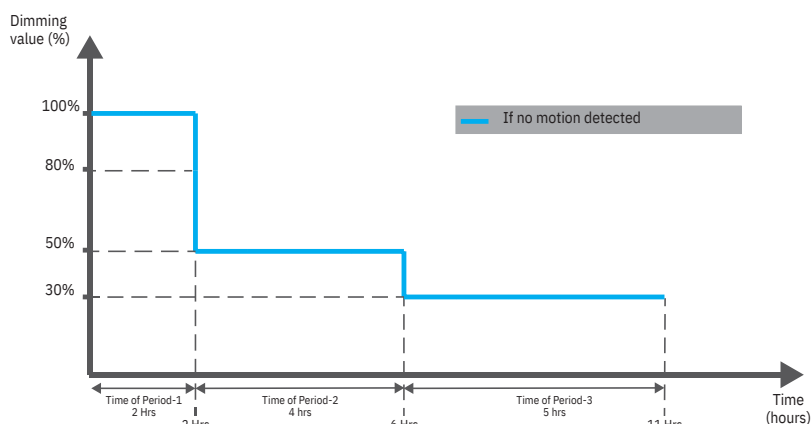


*For more details, please contact sales to receive <Clock manual>.

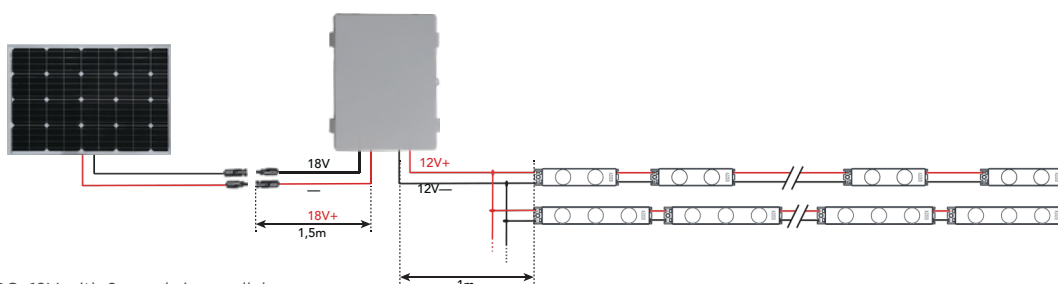
PRESET YOUR LIGHT SCENARIO

In order to reduce the size and cost of the solar panel, the user can define a lighting curve to save energy (battery power) and increase autonomy. There are 3 light intensity levels that can be set up for 3 different time periods.

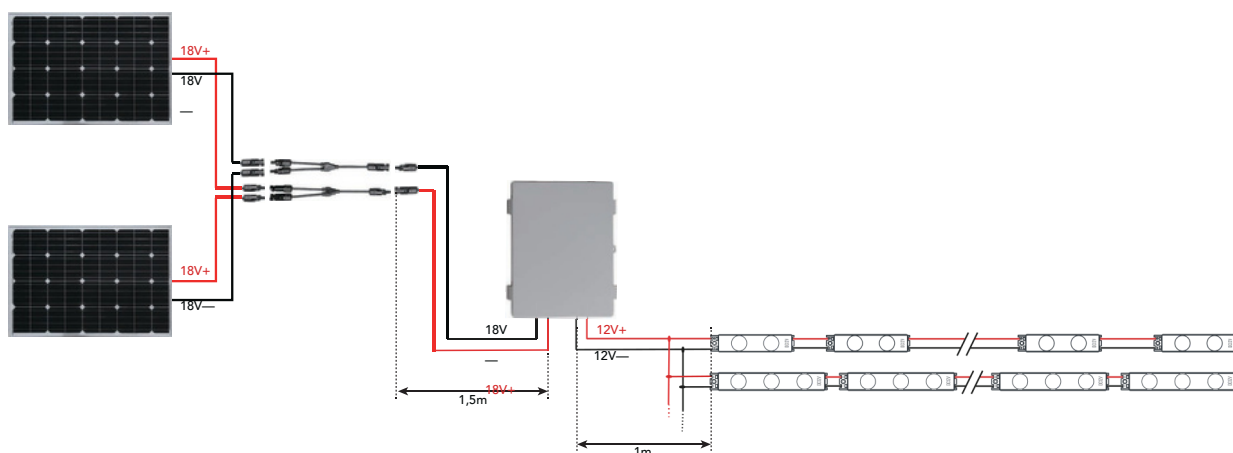
The controller is smart to know if the battery charge is sufficient to power the curve defined by the user. If it detects that the battery power is too low, the system will reduce the length of each of the 3 periods proportionally to ensure that the sign is always illuminated for the total curve length defined.



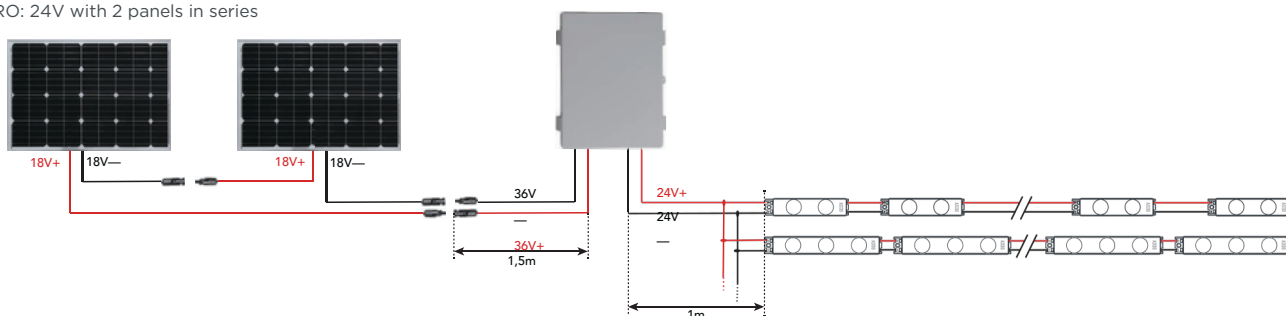
WIRING DIAGRAM



SignBox Solar PRO: 12V with 2 panels in parallel



SignBox Solar PRO: 24V with 2 panels in series



SignBox Solar PRO

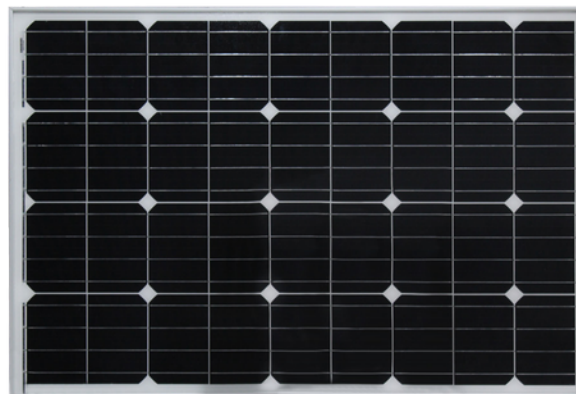
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SOLAR PANEL

Code	Designation	Size (cm)	Size (ft)	Surface (m²)
21870005	SignBox PANEL Slim 80W 18V IP65	142 x 36 x 3	4,6 x 1,2 x 0,1	0,43
21870001	SignBox PANEL 80W 18V IP65	78,5 x 67 x 3	2,6 x 2,2 x 0,1	0,44
20020311	SignBox PANEL Slim 100W 18V IP65	158 x 36 x 3	5,2 x 1,2 x 0,1	0,49
21870002	SignBox PANEL 100W 18V IP65	82 x 71 x 3	2,7 x 2,3 x 0,1	0,49
21870004	SignBox PANEL 120W 18V IP65	102 x 67 x 3	3,3 x 2,2 x 0,1	0,58
21870003	SignBox PANEL 150W 18V IP65	120 x 71 x 3	3,9 x 2,3 x 0,1	0,73

**The above products need to be purchased separately*



**The photo is for reference only, please subject to the physical product.*

- Please consult sales to order suitable solar panels according to your location and project.
- Distance from panels to box/battery:
Standard distance between the solar panels and the SignBox Solar is 2,4 m (SBS cable is 1,5 m long + panel cable 0,9 m). If you need to increase distance up to 8 mtrs you can add the extension cable. For higher distance, please check with us.
- Installation Angle:
Depends of the Latitude of the Installation place, plus 10° more.
- Direction:
The direction of the panel should be the one that gets the most sun energy. Please contact us for more details explanations.
- Cleaning:
Please make sure that surface of the panel is clean. Dust on the panel could decrease the charging efficiency.

ACCESSORIES

Code	Designation
21580060	Remote Control for SignBox Solar, LARVIK SOLAR, LARVIK S SOLAR *
PS00250015	Signbox Solar Y connector Kit IP67
30000027	SignBox Solar Extension Cable 5000mm with MC4 Male & Female IP67x2
PS00380001	Installation Bracket Grey For SignBox PANEL

**This accessories is not sold separately*



21580060



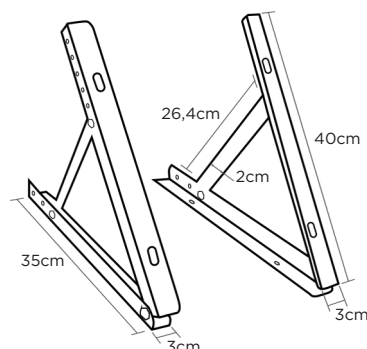
PS00250015



30000027



PS00380001



CHARGING TIME

The table below will give you the autonomy time (measured in hours) considering the SignBox Solar is working at 100% all the time.

Choose between different working modes with the Remote Control. You can increase Autonomy up to 3 days by choosing an energy-saver operating mode.

You will notice that in areas where electricity does not reach much less intensity is needed.

Please check the Remote Control manual to see the different modes available.

			Charging time when connected (hours)			
Charge and Discharge Information	Battery Capacity	Autonomy (Hours)	Solar Panel			
			80 W	100 W	120 W	150 W
<u>SignBox Solar PRO DIM 12V</u>						
SignBox Solar PRO DIM 30W 12V 8H IP66	LifePO4 18Ah	6.8	4.3	3.4	2.8	2.8
SignBox Solar PRO DIM 30W 12V 16H IP66	LifePO4 36Ah	13.6	8.5	6.8	5.7	5.6
SignBox Solar PRO DIM 48W 12V 8H IP66	LifePO4 36Ah	8.5	8.5	6.8	5.7	5.6
SignBox Solar PRO DIM 48W 12V 16H IP66	LifePO4 72Ah	17.1	17.1	13.7	11.4	11.1
<u>SignBox Solar PRO 24V</u>						
SignBox Solar PRO 100W 24V 8H IP66	LifePO4 42Ah	9.5	9.9	7.9	6.6	6.5
SignBox Solar PRO 100W 24V 16H IP66	LifePO4 84Ah	19.1	19.9	15.9	13.3	13
<u>SignBox Solar PRO DIM 24V</u>						
SignBox Solar PRO DIM 48W 24V 8H IP66	LifePO4 24Ah	11.4	5.7	4.6	3.8	3.7
SignBox Solar PRO DIM 100W 24V 8H IP66	LifePO4 30Ah	6.8	7.1	5.7	4.7	4.6
SignBox Solar PRO DIM 100W 24V 16H IP66	LifePO4 60Ah	13.6	14.2	11.4	9.5	9.3

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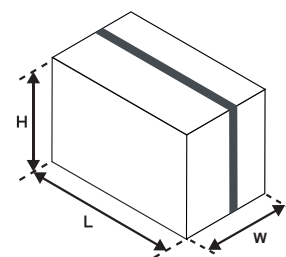
NORMS & CERTIFICATES

- ▶ EN IEC 61000-6-1:2019
- ▶ EN 61000-3-2:2007+A1:2011+AC:2012
- ▶ EN IEC 61000-3-2:2019
- ▶ EN 61000-3-3:2013+A1:2019
- ▶ EN 62368-1:2014+A11:2017



PACKAGING

Type	SIZE - LxWxH (cm)	SIZE - LxWxH (ft)	Weight (kg)	Weight (lb)	Units (pcs/set)
SignBox Solar PRO DIM 30W 12V 8H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	9,9	21,8	1
SignBox Solar PRO DIM 30W 12V 16H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	11,2	24,5	1
SignBox Solar PRO DIM 48W 12V 8H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	11,2	24,5	1
SignBox Solar PRO DIM 48W 12V 16H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	14,5	31,9	1
SignBox Solar PRO 100W 24V 8H IP66	58 x 49 x 26	1,9 x 1,2 x 0,8	16,1	35,5	1
SignBox Solar PRO 100W 24V 16H IP66	64 x 54 x 29	2,1 x 1,8 x 1,0	29,3	64,6	1
SignBox Solar PRO DIM 48W 24V 8H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	8,3	18,3	1
SignBox Solar PRO DIM 100W 24V 8H IP66	49 x 36 x 23	1,6 x 1,2 x 0,8	12,4	27,3	1
SignBox Solar PRO DIM 100W 24V 16H IP66	58 x 49 x 26	1,9 x 1,2 x 0,8	23,4	51,6	1
SignBox PANEL Slim 80W 18V IP65	148 x 41 x 37	4,8 x 1,3 x 1,2	45,8	100,9	5
SignBox PANEL 80W 18V IP65	82 x 25 x 70	2,7 x 0,8 x 2,3	45	99,2	5
SignBox PANEL Slim 100W 18V IP65	161 x 25 x 39	5,3 x 0,8 x 1,3	52	114,6	5
SignBox PANEL 100W 18V IP65	87 x 32 x 76	2,8 x 1 x 2,5	50,8	111,9	5
SignBox PANEL 120W 18V IP65	105 x 25 x 70	3,4 x 0,8 x 2,3	58	127,9	5
SignBox PANEL 150W 18V IP65	123 x 23 x 74	4 x 0,8 x 2,4	54	119	4
Remote Controller for SignBox Solar	33,5x29,5x24	1x0,9x0,8	4,4	9,7	40



(When the min and max values are not indicated, the tolerance range for optical and electrical data is $\pm 15\%$.)