DETAS SpA Divisione D-Power - Via Treponti, 29 - 25086 Rezzato (BS) ITALY
www.d-power.com - info@d-power.com - tel. +39 030 2594120 - fax +39 030 2792864

USE AND MAINTENANCE INSTRUCTIONS

Photovoltaic power kit

To use the photovoltaic kit correctly, follow the instructions below:

Installation guide

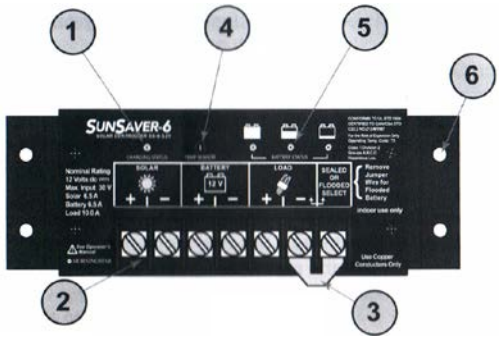
Place the photovoltaic panel on the pole facing south. **Make sure there are no obstacles to sunlight (trees, buildings, etc.) from 10 a.m. to 4 p.m., especially during Winter.** Place the box nearby the photovoltaic panel. Generally, the box is installed on the same pole as the photovoltaic panel. In the case of a compact photovoltaic kit, the panel and the box are integrated in a single solution.
Access the box and connect the devices to the charge regulator respecting the safety standards in force, as indicated below:

a. Positive and negative load.
b. Positive and negative battery.
c. Positive and negative photovoltaic panel.

Fig.1

The kit contains an AGM gel battery. To ensure the correct functioning, it is necessary to create the connecting bridge on the terminal blocks as shown in Fig. 2 (3). Connect a sufficiently charged battery (>12.8V).
NOTE: respect the polarity indicated on the terminal block.

Fig.2



Functioning

Verify the correct functioning making sure that:
- The green LED light (1) turns on once the photovoltaic panel catches the sunlight.
- There is current on the output terminal block (load).

BATTERY TESTER
There is a battery tester (5) that shows the level of charge. In case the battery level lowers below 11.5V, the charge regulator disconnects the load and turns on the red LED. The load will be reconnected only once the battery charge reaches a level of 12.6V. For any further information about the battery tester, see section "Problems resolution".

Check the correct ignition of the connected load.

The device is correctly installed.

Maintenance

Check periodically:
1. The charge level of the battery, especially during Winter.
2. The cleanliness of the panel to guarantee the efficiency during the charge (e.g., snow, leaves etc.).
3. The condition of the electric connections. Replace in case of deterioration of the insulation material.
4. The tightening of the bolts.

Problems resolution

In case of malfunctioning, verify the error message that appears on the battery tester of the charge regulator:

LED battery tester	Description	Solution
Green - flashing light	**The battery is charged**	**Correct functioning of the kit**
Green – steady light	**The battery is almost charged**	**Correct functioning of the kit**
Yellow - steady light	**The battery level is at 50%**	**Check sun exposure of the panel**
Red - flashing light	**The battery is almost dead**	**Check sun exposure of the panel**
Red - steady light	**The battery is dead**	**Check sun exposure of the panel**
No LED on	**Disconnected/damaged battery**	**Check battery wiring and battery voltage**
Red-green sequence	**Overvoltage**	**Check the voltage in the photovoltaic panel**
Red-yellow sequence	**Overtemperature**	**Check ventilation of the charge regulator**
Red+green-yellow sequence	**Load in short-circuit/overload**	**Check load/connections**
Red-yellow-green sequence	**Failed self-diagnosis**	**Disconnect and reconnect the battery and the photovoltaic panel**

Features of the charge regulator

CHARACTERISTICS OF THE CHARGE REGULATOR			
Charge regulator code		**82016**	**82018**
Charge regulator model		**SunSaver 06**	**SunSaver 10**
Photovoltaic panel maximum current		**6A**	**10A**
Maximum load current		**6A**	**10A**
Maximum photovoltaic panel power		**50W**	**140W**
Nominal photovoltaic panel voltage		**12Vdc**	
Maximum photovoltaic panel voltage		**25Vdc**	
Maximum time with % overload		**Max 5 minutes**	
Self-consumption current		**8 mA**	
Charging voltage	*Unsealed batteries*	**14,4 Vdc**	
	Sealed batteries	**14,1 Vdc**	
Protection Block download	*Disconnected load*	**11,5Vdc**	
	Reconnected load	**12,6Vdc**	
Operative temperature		**-40÷60 °C**	

For any further information, please contact

DETAS spa – D-power Division
Via Treponti, 29, 25086 Rezzato BS
Tel: +29 030 259 4120
info@d-power.com

VER 1.1		Approved	Approved
17 / 01 / 2017		TEC	AQ