

CHARGE REGULATOR FOR PV LIGHTING SYSTEMS



MPPT technology



Max module power:
- 225 W for 12 V battery
- 450 W for 24 V battery



User control with GSM remote modem



Light sensor from PV module



Full flux and reduced flux lamp power



12 V / 24 V battery auto-detect voltage



Temperature-compensated charge voltage



Internal blocking diode



Protections:
- Low battery
- Over-temperature
- Battery polarity inversion
- Output overload protection



Pb-lead acid, Pb-AGM, Pb-gel batteries and Lithium batteries



IP66 box for outdoor applications

SPB-LS/GSM è un regolatore per la carica di batterie da modulo fotovoltaico appositamente progettato per l'impiego in impianti di illuminazione offgrid (lampioni fotovoltaici). Grazie al modem **GSM** integrato, il regolatore SPB-LS/GSM può essere controllato da remoto attraverso l'applicazione web residente sul server Western CO. dove è presente una applicazione (WCloud) che permette all'utente di analizzare i dati raccolti giornalmente dai propri lampioni durante il funzionamento.

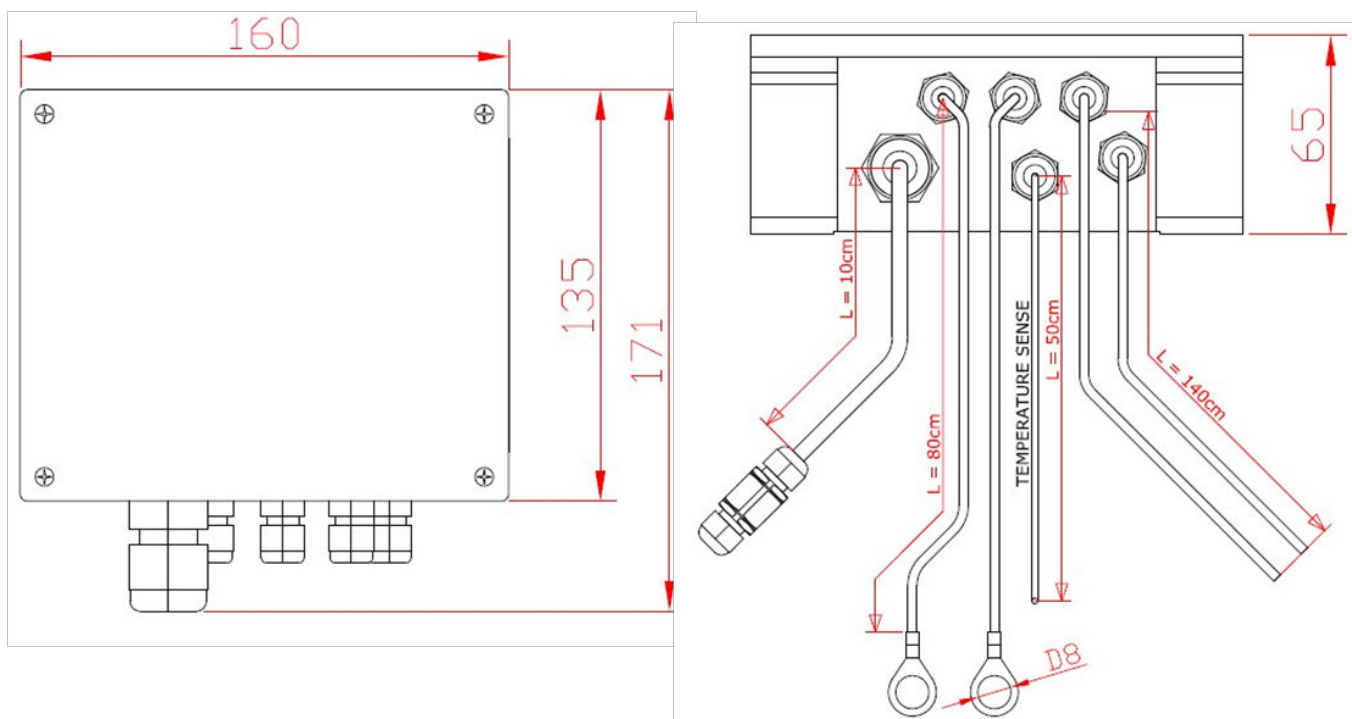
Il circuito di carica dal modulo PV implementa algoritmo di ricarica **MPPT** ed è in grado di funzionare su un esteso campo di tensioni; è ammessa una tensione massima sul modulo fino a 100V. All'accensione l'**SPB-LS/GSM** riconosce automaticamente se la batteria è a 12V o 24V e automaticamente regola le soglie di ricarica. Il regolatore gestisce automaticamente l'accensione e lo spegnimento della lampada

***SPB-LS/GSM** is a charge regulator for the charge of batteries from PV module; it has been specially designed for the use in off-grid PV lighting systems for (PV street-lamp). Thanks to the integrated **GSM** modem, the charge controller SPB-LS/GSM can be controlled remotely through a web application residing on Western CO. server where there is an application (WCloud) that allows the user to analyze the data collected every day from their PV street-lamp during its working.*

*The charge circuit from PV module implements an **MPPT** algorithm and it is allowed a maximum voltage on the PV module up to 100V. The regulator can charge either 12V Pb batteries or 24V Pb batteries. On power ON, SPB-LS/GSM automatically recognizes if the battery is at 12V or 24V and it automatically adjusts the charge thresholds. The regulator automatically manages the power on and off of the lamp.*

		12V battery nominal voltage			24V battery nominal voltage		
		Min	Typ	Max	Min	Typ	Max
Battery voltage	Vbatt	10V	12V	17V	20V	24V	34V
Open circuit voltage	Vpan	20V		100V	40V		100V
Panel current	Ipan			13,5A			13,5A
Max panel power	Pmax			225W			450W
Load output voltage	Vload	-	Vbatt	-	-	Vbatt	-
Load current	Iload	-	-	8A	-	-	8A
Charge voltage at 25°C	Vch						
	SW_6->SEAL		14.44V			28.88V	
	SW_6->FLOOD		14.88V			29.76V	
Vch compensation according to battery temperature (Tbatt) (see Graph 1)	Vtadj	-	24mV/°C	-	-	48mV/°C	-
Low battery voltage SW_5->ON	Vlb	-		-	-		-
	SW_7->ON	-	12.00V	-	-	24.00V	-
	SW_7->OFF	-	11.52V	-	-	23.04V	-
Vch compensation with SW_5->OFF (see Graph 2)	Vremch		+58mV/A			+58mV/A	
Low battery output voltage at 25°C	Vout_lb	-	Vch-0,24V	-	-	Vch-0,48V	-
Vlb compensation with SW_5->OFF (see Graph 2)	Vremlb		58mV/A			-58mV/A	
Voltage of day detection (settable)	Vday	-	6.88V	-	-	11.36V	-
Voltage of night detection: Vnight = Vday -0.8V	Vnight	-	4.48V	-	-	8.96V	-
Self-consumption	Iqsc		12.7mA			17,7mA	
Ambient temperature	Tamb	-10°C		50°C	-10°C		50°C
IP protection degree			IP66			IP66	
Weight		-	1.0Kg	-	-	1.0Kg	-
Box dimensions (mm)		160x135 H65					
Dimensions with cables (mm)		160x170 H65					

Dimensions



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