



DATASHEET

Solar Smart Controller v2

SE42-009-05-01

Version 3.1

Status: 10/2020

AGAMINE Solar Street Lights / Agamine Solar Powered Poles



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Overview:
<ul style="list-style-type: none"> • Lead Gel and LiFePO4 Battery Charger Boost Up • LED Power Driver (up to 120 W) • uC Energy Management • Integrated external temperature sensor with ring lug mount • RS485 Data Interface • Rugged Metal Housing (IP67) • Engineered in Germany • Datalogger: 30 days daily values + 2 years monthly data including Ah in & out, max & min: Ubat, Upv, Icharge, Idischarge, ext./int. temperature

General Specifications:		
Operating temperature range @ max Output (during night at full operation)	-20 – 60	°C
Operating temperature range @ Standby (during day)	-20 – 85	°C
Operating temperature range @ Off / storage temperature	-55 – 85	°C
Humidity (non-condensing)	5 – 95	%
Certifications and Ratings:		
IP rating:	67	
EMC compliance:	yes	
CE compliant (EN 60730)	yes	
ROHS compliance:	yes	

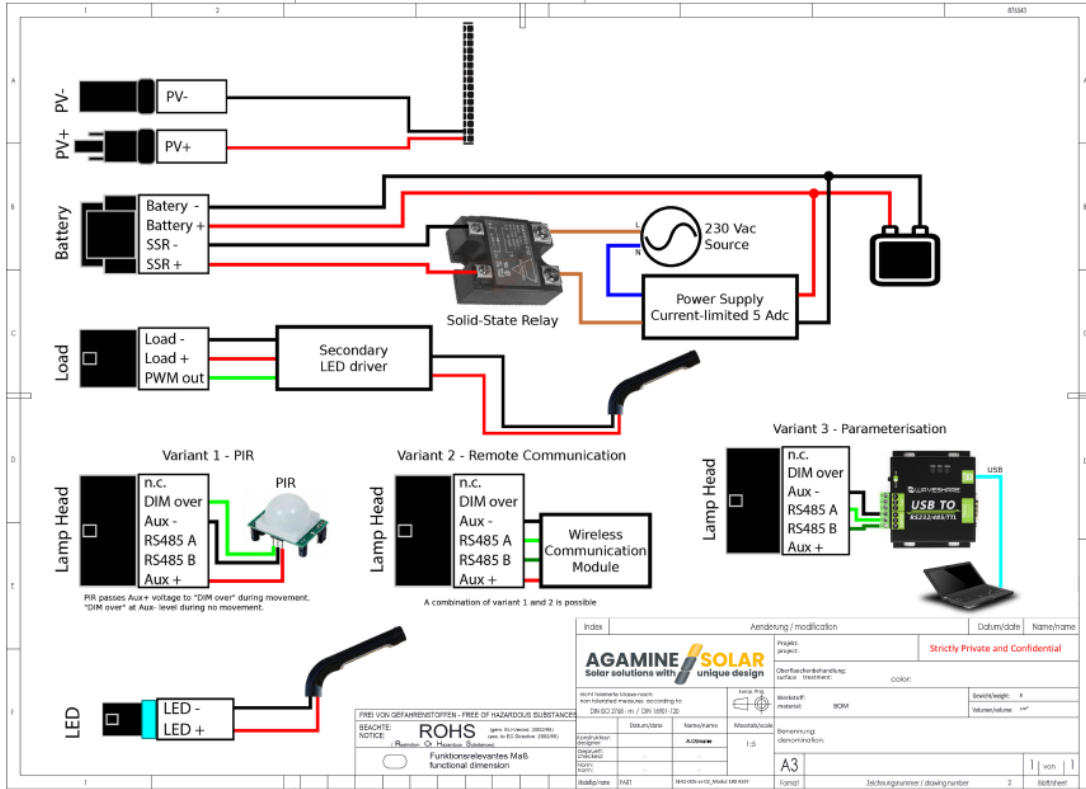
Housing:		
Details:	See “technical drawing”	
Material:	Aluminum	
Size:	143 x 42 x 51.5	mm
Weight:	1.25	kg

Additional Features:		
Firmware Update:	via USB / RS485 for any component	
PV Energy Regulation:	MPPT (Maximum Power Point Tracking) algorithm	
De-rating (charging step):	> 75	°C
Battery Temperature Compensation:	Charging voltage compensated by charge controller's external temperature sensor.	
Additional 12V output and additional 2 nd LED driver option		
Ready for remote monitoring via external communication device (RS485)		
Ready for additional smart device (UV meter etc)		

Electrical Specifications Internal LED Driver		
Operating conditions (limited by the control unit)		
Operating input voltage nominal:	11 - 16	VDC
Output voltage:	30-49	VDC
Output current total max:	0 – 3500	mA
Electrical Specifications 2nd LED Output		
PWM Output for Dimming Control		
Operating input voltage nominal:	11 - 16	VDC
Output voltage:	30-49	VDC
Output current total max:	0 – 3500	mA

Electrical Specifications Charging Controller		
DC-input (solar) – absolute maximum ratings		
Input voltage:	12	V
Input current:	20	A
Input power:	240	W
DC-output (battery) - absolute maximum ratings		
Battery system:	12	V
Range of voltage:	11 - 16	VDC
Battery type	Lead Acid / LiFePO4	
Solar charging current:	12	A
Charging current (PSU):	3.5	A
Final charging voltage:	13.8 - 14.4	V
Remark: via communication MC to CC		
DC-fuse (safety fuse):	25	A
Efficiency :	>93	%
Overcurrent and short circuit protection (Polyfuse, Firmware and Hardware FET control)		
Overtemperature protection (Firmware)		

Device Examples



Parts and Connectors

