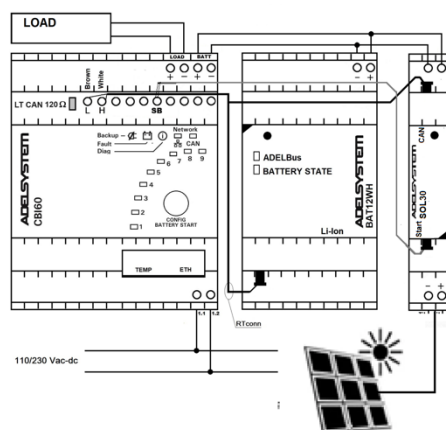


SOL30 Solar Controller MPPT



MPPT Maximum Power Point Tracking Buck-Boost

Maximizes Energy Harvest Using MPPT Technology to determine and adjust to the true maximum power point as solar insolation changes throughout the day

High Efficiency

At low, medium, and high power levels

Data Logging

Up to 10 days of detailed power and load data connected to CBI60

Automatic PV Based Lighting Control

Field adjustable, multi-event load control enables powerful options for PV lighting systems

ADELSYSTEM Communications (CAN)

Communications protocol allows for monitoring, recording, configuring, updating

High Strength

Polycarbonate case for DIN rail or Wall mount application

Self Diagnostics

Continuous monitoring and reporting of any errors through its status LED's and ADELSYSTEM through DC Ups Web Server

Fan less Design: For long-term reliability

Easy Configuring

Adjustments to charging and control settings by Web Server

Temperature compensated Charger

Auto-detector of battery Voltage: 12 / 24V

Main Protections:

Low Battery, Over temperature, Battery Inversion, Overload Charging

Technical features

The SOL30 MPPT solar controller is an advanced maximum power point tracking (MPPT) battery charger for off-grid photovoltaic (PV) systems. It is developed for connecting to an Adel System DC-UPS, it automatically maximizes the efficiency by using all the solar power available to charge the battery and supply the load. The device is working in parallel to the main input Vac, when the sun is present the DC UPS prioritizes energy coming from the sun to power the load and charge the battery if necessary.

The "Battery Care" algorithm performs rapid and automatic charging. Each fault is signaled by a blink code of Diagnosis Led or via ADELSYSTEM in order to be easily detected and removed during installation and operation. Connected to an Adel System DC-UPS via ADELSYSTEM, the battery configuration set on the DC-UPS is automatically transferred onto the SOL30. Open Lead Acid, AGM and Gel Lead Acid; Ni-Cd, Li-Ion are rechargeable using the same device.

Output voltage 12V / 24V automatically selected based on battery settings.

Rugged casing with bracket for DIN rail or Wall mounting.

Norms and Certifications

In Conformity to: Safety EN IEC 62368-1: 2014/AC:2015; EN54-4 Fire Detection and fire alarm systems; 89/336/EEC; EMC Directive 2014/35/UE and Low voltage Directive 2014/35/UE; DIN41773 (Charging cycle); Emission: IEC 61000-6-4; Immunity: IEC 61000-6-2. CE.

PV Input

PV module Open circuit voltage *	12 – 35 max 45V (1 min)
PV module power min	30W
Internal fuse (not replaceable)	6.3 A
External Fuse (recommended) MCB curve B	10 A
PV module threshold voltage for day detection (settable) ; Internal Power On at 8Vc	18 V
PV module threshold voltage for night detection	12 V
Reverse polarity protection on PV	Yes
Nighttime reverse current protection	Yes

Battery Connection 24 V

Output voltage (at In)	22 – 28.8 Vdc
Nominal current Ibat	1.3 A ± 5%

Battery Connection 12 V

Output voltage (at In)	10 – 14.4 Vdc
Nominal current Ibat	1.3 A ± 5%

Generic Battery Output

Charging Curve automatic:	Follow's DC Ups Configurations
Boost-Fast charge Switch Configuration 25°C (V/cell)	Follow's DC Ups Configurations
Float Charge Switch Configuration 25°C (V/cell):	Follow's DC Ups Configurations
Max.Time Boost-Bulk charge (Typ. At In)	Follow's DC Ups Configurations
Min.Time Boost-Bulk charge (Typ. At In)	Follow's DC Ups Configurations

Reverse polarity battery protection	Yes
Overload protection	Yes
Short circuit protection	Yes
High temperature protection	Yes

Indicators and Command

Status LED Green flashing	Battery Charging
Status LED Orange blinking	Not Charging
Status LED Red blinking	Fault code
CAN LED Green solid or flashing	CAN bus active
CAN LED Red/Green flickering	Awaiting configuration
CAN LED Red solid	CAN bus error
Push Button to turn ON and OFF the SOL30	from battery (with auto turn-off)

Ambient Conditions

Nominal Temperature operation	-25 up to +60°C (>60°derating 2.5%°C)
Ambient Temperature operation	-25 up to +70 °C
Ambient Temperature storage	-40 up to +85 °C
Humidity at 25 °C, no condensation	95 % to 25 °C (acc. to IEC 60721)
Vibration (operation) IEC 60068-2-6	<15 Hz, amplitude ± 2.5mm <15Hz-150Hz, 2.3G 90 min.
Altitude: 0 to 6 000m - 0 to 19685ft	No restrictions

General Data

Leakage Current	< 5mA
Peak Efficiency	91%
Dissipation Power	6 W
Protection Class (EN/IEC 60529)	IP20
Reliability: MTBF IEC 61709	> 700.000 h
Protection class	III
Pollution Degree Environment	2
Housing material	Polycarbonate
Foot latch material	Plastic POM
Dimension (w-h-d) mm	18 x 90 x 62
Weight	0.1 kg approx.

Connection

Input 30V	Screw Type:	0.2 - 2.5 mm ²
Input 0V	Screw Type	(24 – 12 AWG);
Outputs 12V / 24V	Screw Type	0.6 - 0.8 Nm

Data and Communications

Remote monitoring data:	Aux 1
Protocol:	ADELSYSTEM (CAN)

Accessory

RTConn: connector cable for the connection to the ADELSYSTEM and Aux 1