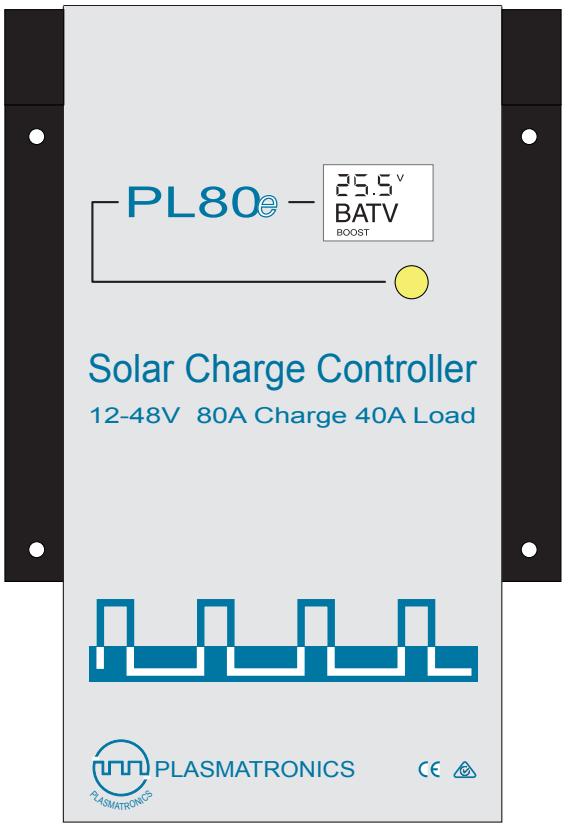
PL80e

80A Solar Charge Controller



Introduction

The PL80e is a solar charge controller for 12-48V off grid systems. It handles charge currents of up to 80A and has a load disconnect switch rated to 40A.
The PL80e is positive ground and uses protected Mosfet switches. It uses 3 charge stages - boost, absorption and float. A periodic equalisatione can also be enabled if required.
The user can select PWM or slow speed switching control of the charge current. Slow switching is useful for low noise radio sites.

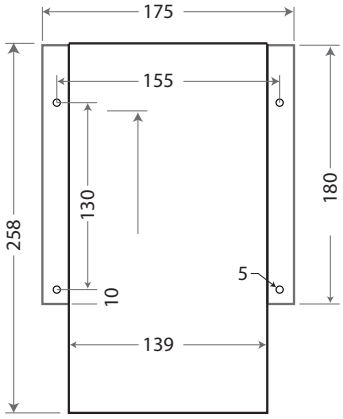
All the settings are user adjustable and held in non volatile memory. There are 4 programs with preset levels and one which is fully user adjustable.

The user interface alllows the user to see the battery voltage, charge current, load current, daily charge Ah, daily load Ah, and daily minimum and maximum battery voltages.
The PL80e records daily history data. It keeps 30 days worth of data in a revolving non volatile memory.

Adjustable low voltage load disconnection is provided. There is a back up generator controller which can be based on voltage or state of charge and includes a generator exercise function. An auxilary output ('G terminal') is provided via an optically isolated solid state relay. This can be assigned to generator , event or load control.

A flexible event controller is included which allows conditional events to be programmed.

External shunts can be added to capture other system currents and there is a serial computer interface. A battery temperature sensor can be added to improve regulation accuracy.



Features

Rated to 50°C ambient
IEC62109 certification from TUV Rheinland
User selectable PWM or slow switching control
Improved thermal perform-ance in hot conditions

Specifications

Nominal Battery voltages selectable	12,24,32,36,48	V
Maximum solar Voc for a 48V system	100	V
Minimum solar Voc for a 48V system	80	V
Maximum solar Voc for a 24V system	80	V
Minimum solar Voc for a 24V system	40	V
Maximum solar Voc for a 12V system	70	V
Maximum voltage between the "G"relay terminals	85	V
Maximum voltage B- sense to BAT-	+/-10	V
Maximum voltage LOAD- to BAT-	75	V
Maximum continuous charge current (SOL-)	80	A
Maximum continuous load current (LOAD-)	40	A
Maximum short term load current (<5 minutes)	50	A
Maximum "G" relay contact current	300	mA
Battery temperature sensor operating range	-5 to +50	°C
Maximum ambient temperature without derating	50	°C
Maximum storage temperature	70	°C
Meter accuracy	<+/-2% FSD +2 dig	
Termination stud diamater	6	mm
Minimum wire size for Solar & Battery connection at 80A	50	mm^2
Minimum wire size for Load connection at 40A	16	mm^2
Recommended stud tightening torque	5	Nm
IP Rating	IP20	