

ASC48-ES Solar Charger



The Eaton® ASC48-ES Solar Charger is designed for communications network operators who are striving to cut energy costs across the network, and/or to meet aggressive carbon footprint reduction targets.

It includes a high-performance Maximum Power Point Tracking (MPPT) function to extract the maximum available power from the solar panels.

Combined with efficiency of above 96%, it ensures that the maximum power is available to charge batteries and run load under all conditions.

An ASC48-ES may be connected to one or more strings of parallel solar panels.

Several ASC48-ES chargers, each with its own solar panels, may be operated in parallel.

This solar charger features intelligent digital signal processing for enhanced control, producing peak efficiency in excess of 96% for typical operating loads, while also maintaining a very high minimum operating efficiency of 95 to 96%, over a very wide range of loads (from 30% to 100% of the 2kW capacity).

The ASC48-ES combines with the Eaton SC200 controller to provide a fully managed solution.

Full monitoring includes energy metering and logging on input and output.

The ASC48-ES is fully compatible with existing Eaton 3G systems, such as the APS3 and APS6 systems. The output may be paralleled with one or more APR48-ES rectifiers to produce a versatile power solution for both AC or generator power and solar power.

This makes it an ideal solution for a fully integrated solar / diesel hybrid solution, or an AC powered system with solar added to reduce energy consumption.

Intelligent control in the SC200 allows optimal balance of solar energy and backup fuel.

The solar charger is protected against input over-voltage, surges and over-temperature. It is rated for operation in temperatures at up to 70°C (158°F).

Features

- 2000W output power
- MPPT extracts maximum available energy
- Energy saving efficiency greater than 96%
- Wide efficiency curve
- Industry leading power density
- Fast on-line expansion of rectifiers (hot-swap)
- Simple 'plug and go' insert
- Digital signal processing for enhanced control
- Wide input voltage range
- Wide output voltage range
- Compliant with international standards

Technical Specifications

Input

Input voltage range	100 V DC to 300V DC nominal Maximum open circuit voltage 350 V DC Absolute maximum input voltage 350V DC
Optimisation	Maximum power point tracking
Efficiency	>96% peak >95% (30 – 100% output power)

Output

DC Output Voltage Range	43 – 57.5V
DC Output (maximum)	2000W @ 48V / 185V to 300V input 1150W at 120V input

Parallel operation

Output	Multiple chargers may be connected in parallel to the DC bus
Input	Not supported (each ASC48-ES must be connected to separate string(s) of solar panels)

Environmental

Operating Temperature Range	-40°C – +70°C [-40°F – +158°F]
Cooling	Output power derates above 50°C [122°F] Temperature controlled, variable speed, high reliability fan

Mechanical

Dimensions	3U: 133mm [5.25"], 42mm [1.65"],
H,W,D	266mm [10.45"] overall
Weight	1.7kg [3.7 lb]

Certifications

Europe	CE
Australia / New Zealand	RCM

In the interests of continual product improvement all specifications are subject to change without notice. Performance ratings are valid with all other variables at Nominal.



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