

# Vertiv™ eSure™ Solar Converter

S48-2000e3



## Benefits

- Maximize energy delivered with the efficiency and precision of Maximum Power Point Tracking (MPPT).
- Increase space for revenue generating equipment with modules that pack more power in a small space with high power density.
- Facilitate easy maintenance, expansion and system changes with hot swappable capabilities and ability to interchange with R48-2000e3 rectifiers as needed.
- Enjoy increased reliability and active load sharing with Digital Signal Processing (DSP), which translates into fewer components and optimized operation.
- Appreciate the flexibility to utilize in a variety of applications with a wide input voltage range of 120 VDC to 420 VDC and full power output at temperatures from -40°C to +65°C.

*In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency converters offer superior performance and uncompromised reliability.*

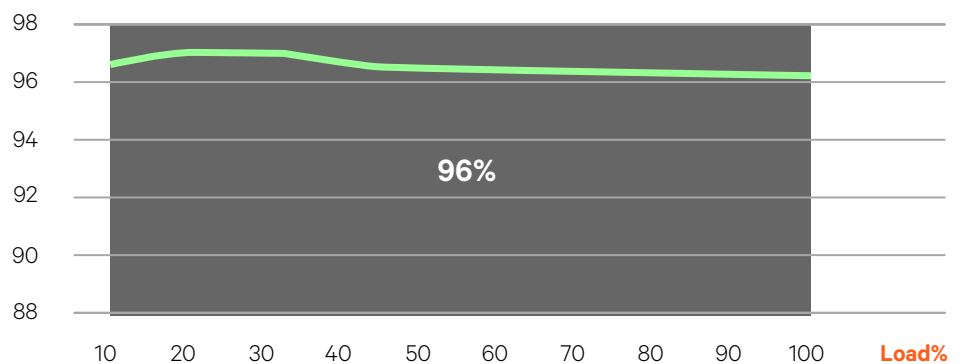
## Description

The S48-2000e3 MPPT solar converter efficiently delivers 2000W power at -48 VDC to the load and battery. This constant power converter designed with the latest patented switch-mode technology, uses DSP (Digital Signal Process) to provide clean power to the load with acute control and management.

The S48-2000e3 can be connected in parallel with other converters and rectifiers to support a variety of telecom applications. Unified remote management and control of the power system is enabled when combined with a controller. Implementing solar conversion and control from Vertiv, ensures your critical network is highly available and extremely affordable to operate.



## % Efficiency



S48-2000e3 Efficiency Curve at 320 VDC Nominal

## Technical Specifications

DC Input	S48-2000E3
Voltage	120 VDC to 420 VDC (see figure 1) 140 VDC to 400 VDC (nominal)
Maximum Current	12 A
MPPT Precision	>99% when the output power more than 350 W

DC Output	
Voltage	-42 VDC to -58 VDC
Maximum Power	2000 W maximum
Maximum Current	42 A @ -48 VDC (see figure 2)
Peak Efficiency	96.8%

Control and Monitoring	
Alarms and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure

Environmental	
Operating Temperature	-40°C to +80°C / -40°F to +176°F (see figure 3)
Storage Temperature	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power

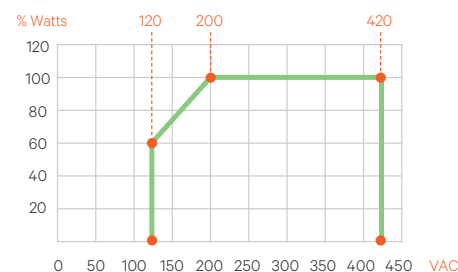
Standards Compliance	
Safety	60950-1 (EN, IEC and UL), 62109-1 (EN, IEC)
EMC	ETSI EN300 386 V1.6.1. Other than telecom centers. EN55022, Class A conducted and Class B radiated, Telcordia GR-1089-CORE issue 6: 2009
Environment	REACH, RoHS, WEEE

Mechanics	
Dimensions (H x W x D)	41 x 84.5 x 252.5 mm / 1.61 x 3.33 x 9.94 inches
Weight	1.13 kg / 2.49 lbs

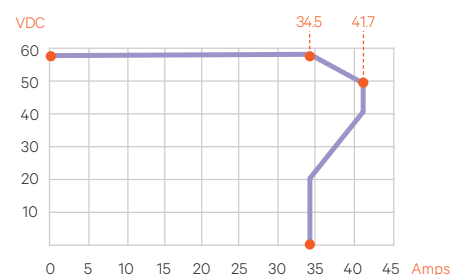
## Ordering Information

Model Number	Description
1S482000E3	eSure solar converter, 48 VDC, 2000 W

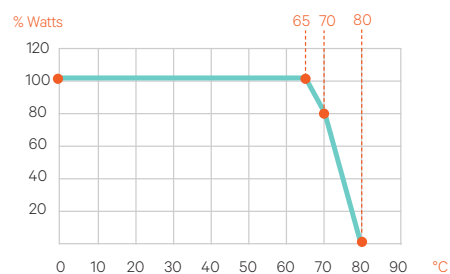
## Figures



**Figure 1:** Output Power vs. Input Voltage and  $V_o > 48$  VDC at  $T_{amb} < 55^\circ\text{C}$



**Figure 2:** Output Voltage vs. Output Current at Maximum Output Power 2000 W



**Figure 3:** Output Power vs. Temperature at 250 VDC  $> V_{in} > 200$  VDC