

ESURE™ SOLAR CONVERTER

S48-2000e3



KEY FEATURES

Solar DC to 48 VDC, 2000 W

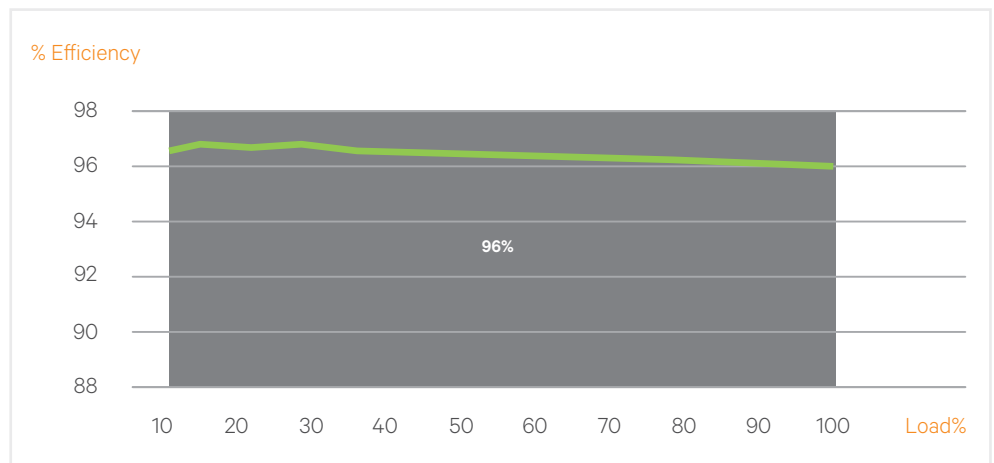
- High MPPT efficiency and precision - increases energy delivered, lowering costs
- High power density – provides more space for revenue generating equipment
- Hot pluggable and interchangeable with R48-2000e3 rectifiers – for easy expansions and maintenance
- DSP (Digital Signal Process) – means fewer components, optimized operation and active load sharing for increased reliability
- Wide input voltage range (120 VDC to 420 VDC) – allows for flexibility, durability and resilience
- Wide full power operating temperature range from -40°C to +65°C – meets the harshest climatic environment requirements
- Compliant with global standards – delivers quality, performance and reliability no matter what the application or location demands

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.



S48-2000e3 Efficiency Curve at 420 VDC Nominal

Technical Specifications

DC INPUT		S48-2000E3
Voltage	140 VDC to 400 VDC (<i>nominal</i>) 120 VDC to 420 VDC (<i>see figure 1</i>)	
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, limit set point 0 to 42 A (<i>see figure 2</i>)	
Peak Efficiency	96.8%	
Temperature Derating	See figure 3	
CONTROL AND MONITORING		
Converter Alarm 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	-40°C to +80°C / -40°F to +176°F (<i>see diagram for de-rating</i>)	
Storage	-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
at Temperature < 55°C

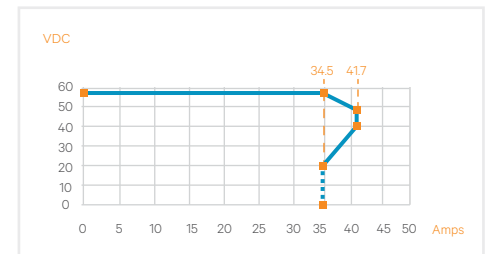


Figure 2
Output Voltage vs. Output Current,
Maximum Output Power 2000 W

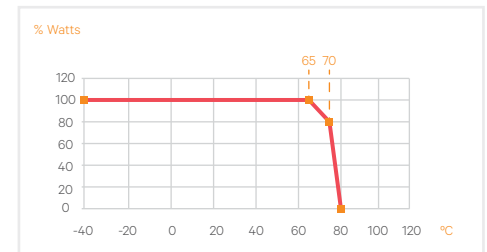


Figure 3
Output Power vs. Temperature
at 420V DC > Vin > 200VDC