



SMT-I 1000W



Introduction

SmartEnergy Tech's SMT-I 1000W micro-inverter delivers superior commercial project economically by increasing overall energy harvest and system availability along with substantial reductions in system installation complexity with its all-AC approach. With the SMT-I 1000W, the DC circuit is isolated and insulated from ground, so no Ground Electrode Conductor (GEC) is required for the micro-inverter. This further simplifies installation, enhances safety, and saves on labor and materials costs.

SMT-I 1000W has four DC input ports. Each input port is individually connected to one photovoltaic (PV) module in an array. This configuration makes Maximum Power Point Tracking (MPPT) to each PV module. This ensures that every PV module generates the maximum power regardless of the performance of the other PV modules in the array. That is, other PV modules in the array may be affected by shading, soiling, orientation, or PV module mismatches.

With support for both 60 and 72 cell modules, the system provides a flexible, operationally efficient, and cost effective solution across all commercial segments.

The SMT-I 1000W integrates seamlessly with company's DataEye Communications gateway and Dataeye monitoring and analysis software.

PRODUCTIVE

- Maximize energy harvest with capture up to 25% more energy per site over central and string inverter-based system.
- Optimize output with module-level maximum power point tracking (MPPT)
- Expand business opportunities with more installation sites qualified for solar

RELIABLE

- All units performance tested prior to shipment
- Wide range input voltage 20-50V
- Islanding effect protection
- Over current protection
- Reverse polarity protection

SIMPLE

- Prevent arc faults in DC field wiring, the leading cause of fires in PV system
- No DC design or string calculation required
- Assist emergency first responders with easy AC module system power shutoff
- Keep installers safe by eliminating high-voltage DC on rooftops
- Input /output is fully isolated to protect the electrical safety

TECHNICAL PARAMETER 技术参数

SMT-I1KW-CN SMT-I1KW-230-SAA SMT-I1KW-240-cETLus

直流输入Input Data (DC)

建议最大输入功率/Maximum Recommended PV Power	1280W (320Wx4)	1280W (320Wx4)	1280W (320Wx4)
额定输入功率/Nominal Input Power	1200W (300Wx4)	1200W (300Wx4)	1200W (300Wx4)
最大直流电压/Maximum Input DC Voltage	50V	50V	50V
工作电压范围/Operation Voltage Range	23 V~ 50V	23 V~ 50V	22V~ 50V
MPPT电压范围/MPPT Voltage Range	28V~ 43V	28V~ 43V	28V ~ 43V
最小启动电压/Minimum Startup Voltage	25 V	25 V	22V
最大直流电流/Maximum Input Current	14.8A × 4	12.5A × 4	12.5A × 4

交流输出Output Data (AC)

最大输出功率/Maximum Output Power	1050W	1050W	1050W
额定输出功率/Nominal Output Power	1000W	1000W	1000W
额定交流电压/Nominal AC Voltage	220V	230V	240V
扩展交流电压范围/Adjustable Voltage Range	201V~269V	201V~269V	
默认交流电压范围/Operating Voltage Range	207V~264V	207V~264V	212V~263V
额定输出频率/Nominal AC Frequency	50Hz	50Hz	60Hz
扩展交流频率范围/Adjustable Frequency Range	45 Hz ~ 55 Hz	45 Hz ~ 55 Hz	
默认交流频率范围/Operating Frequency Range	48 Hz ~ 50.5 Hz	45.1 Hz ~ 54.9 Hz	59.5Hz ~ 60.5Hz
额定输出交流电流Nominal Output Current	4.34 A	4.34 A	4.2A
输出电流总谐波畸变率/Total Harmonic Distortion	<5%	<5%	<5%
功率因数/Power Factor	>0.99	>0.99	>0.99

效率Efficiency

峰值效率/Peak Efficiency	95%	94.5%	95%
最大功率点跟踪效率/Nominal MPPT Efficiency	>99%	>99%	>99%
夜间功耗/Night Power Consumption	<200mW	<200mW	<200mW

机械数据Mechanical Data

尺寸(长×宽×高)/Dimensions (W x H x D)	386mm × 258mm × 52mm	386mm × 258mm × 52mm	386mm × 258mm × 52mm
重量/Weight	5 kg	5kg	5kg
工作环境温度/Operating Ambient Temperature Rang	-30°C~+65°C (50°C降额)	-30°C to +65°C (50°C derating)	-30°C to +65°C (50°C derating)
存储环境温度/Storage Temperature Range)	-30°C~+65°C	-30°C~+65°C	-30°C~+65°C
保护类等级/Protective Class (I, II or III)		Class I	
防护等级/Enclosure Rating	IP65	IP65	Type3
冷却方式/Cooling	自然冷却	Natural Convection	Natural Convection

其它特征Features

通讯方式/Communication	电力线载波	Power line	Power line
安全规范/Safety Class Compliance	IEC62109-1:2010	IEC62109-1Ed.1.0 IEC62109-2Ed.1.0	UL1741, CSA C22.2 No.107.1-01
电网连接规范/Grid Connection Compliance	CNCA/CTS0004:2009A	AS 4777.2:2005 AS 4777.3:2005	IEEE 1547
最大海拔高度/Maximum Operating Altitude		2000m	
质保期/Warranty	15/20/25年(可选)	15/20/25yrs(optional)	15/20/25yrs(optional)