

Power Optimizer

For India

S1000



POWER OPTIMIZERS

SolarEdge's most advanced, cost-effective Power Optimizer for commercial and large field installations

Greater Energy Yields

- High efficiency (99.5%) with module-level MPPT, for maximized system energy production and revenue, and fast project ROI
- Supports high power and bifacial PV modules, and high string current for more power per string

Maximum Protection with Built-In Safety

- Designed to automatically reduce high DC voltage to touch-safe levels, upon grid/inverter shutdown, with SafeDC™
- Includes SolarEdge Sense Connect, allowing continuous monitoring to detect overheating due to installation issues or connector-level wear and tear

Lower BoS Costs

- Flexible system design enables maximum space utilization and up to 2x longer string lengths, 50% less cables, fuses and combiner boxes
- Supports connection of two PV modules in series with easy cable management and fast installation times

Simpler O&M

- Module-level system monitoring enabling pinpointed fault detection and remote, time-saving troubleshooting

Power Optimizer

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	S1000	Units
INPUT⁽¹⁾		
Rated Input DC Power ⁽²⁾	1100	W
Absolute Maximum Input Voltage (Voc)	125	Vdc
MPPT Operating Range	12.5 – 105	Vdc
Maximum Continuous Input Current	15	Adc
Maximum Short Circuit Current (Isc) of Connected PV Module	20	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	
OUTPUT DURING OPERATION		
Maximum Output Current	18	Adc
Maximum Output Voltage	80	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)		
Safety Output Voltage per Power Optimizer	1±0.1	Vdc
STANDARD COMPLIANCE		
EMC	FCC Part 15, IEC 61000-6-2, and IEC 61000-6-3 – Class B, EN 55011	
Safety	IEC 62109-1 (class II safety), UL 3741	
Material	UL 94 V-0, UV Resistant	
RoHS	Yes	
Fire Safety	VDE-AR-E 2100-712:2013-05	
INSTALLATION SPECIFICATIONS		
Warranty	8 ⁽³⁾	Years
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	129 x 165 x 52 / 5.08 x 6.49 x 2.047	mm / in
Weight (including cables)	1064 / 2.3	gr / lb
Input Connector	MC4 ⁽⁴⁾	
Input Wire Length	Short Input: 0.1 / 0.32 Long Input: 1.3 / 4.26 ⁽⁵⁾	m / ft
Output Connector	MC4	
Output Wire Length ⁽⁶⁾	Option 1: (+) 4.7 (-) 0.10 / (+) 15.41 (-) 0.32 Option 2: (+) 2.7 (-) 0.10 / (+) 8.8 (-) 0.32	m / ft
Operating Temperature Range ⁽⁷⁾	-40 to +85 / -40 to +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 – 100	%
Maximum Operating Altitude	3000	m

(1) For detailed Power Optimizer/PV module compatibility guidelines, refer to the [Application Note – Power Optimizer Compatibility with PV Modules](#).

(2) Rated power of the module at STC will not exceed the power optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed.

(3) For specific warranty details of the S1000 Power Optimizer in India, refer to [SolarEdge Limited Product Warranty \(India\)](#).

(4) For other connector types please contact SolarEdge.

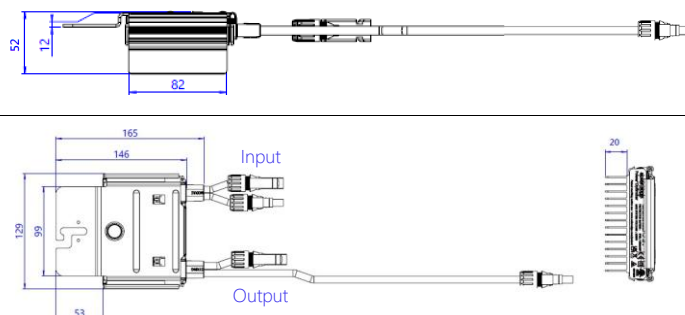
(5) For S-Series models with long input cables (1.3m / 4.26ft), the Sense Connect feature is only enabled on the output cable connectors.

(6) Option 1 fits best when modules are placed in landscape orientation or in portrait orientation with the Power Optimizers connected using the leapfrog wiring method.

Option 2 fits best when modules are placed in portrait orientation.

(7) For ambient temperatures above +65°C / +149°F power derating is applied.

S1000 Mechanical Drawing



* When installing SolarEdge power optimizers, maintaining clearance is required. Refer to the [Power Optimizer Clearance Application Note](#) for more details.

/ PV System Design

S1000

PV System Design Using a SolarEdge Inverter ⁽¹⁾⁽²⁾⁽³⁾		230/400V Grid SE15K, SE16K, SE17K, SE25K*	230/400V Grid SE27.6K*	230/400V Grid SE30K*	230/400V Grid SE33.3K*	277/480V Grid SE40K*	Units
Minimum String Length	Power Optimizers	14	14	15	14	15	
	PV Modules	27	27	29	27	29	
Maximum String Length	Power Optimizers	30	30	30	30	30	
	PV Modules	60	60	60	60	60	
Maximum Continuous Power per String		13,500	13,950	15,300	13,500	15,300	
Maximum Allowed Connected Power per String ⁽⁴⁾		1 string – 15,750	1 string – 16,200	1 string – 17,550	1 – 2 strings – 15,750	1 – 2 strings – 17,550	W
		2 strings or more – 18,500	2 strings or more – 18,950	2 strings or more – 20,300	3 strings or more – 18,500	3 strings or more – 20,300	
Parallel Strings of Different Lengths or Orientations		Yes					
Maximum Difference Allowed Between Strings Connected to the Same Inverter Unit		5 Power Optimizers Between the Shortest and Longest String					

*The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter.

(1) S1000 cannot be mixed with S1200 in the same string. For P-series compatibility please refer to the [SolarEdge Power Optimizer Inter-Compatibility Technical Note](#).

(2) For each string, a Power Optimizer may be connected to a single PV module if:

- 1) Each Power Optimizer is connected to a single PV module (the entire string has a 1:1 configuration).
- 2) It is the only Power Optimizer connected to a single PV module.

(3) For SE15K and above, the minimum STC DC connected power should be 11KW.

(4) To connect more STC power per string, design your project using [SolarEdge Designer](#).

PV System Design Using a SolarEdge Inverter ⁽⁵⁾⁽⁶⁾		SolarEdge Home Wave/Hub Inverter Single Phase SE3000H, SE4000H, SE5000H	SolarEdge Home Short String Inverter Three Phase SE5K	Three Phase for 230/400V Grid SE5K, SE8K, SE10K	Units
Minimum String Length	Power Optimizers	6	8	14	
Maximum String Length	Power Optimizers	25	20	30	
Maximum Continuous Power per String [W]		6840	6750	13,500	W
Maximum Allowed Connected Power per String		Per the inverter's maximum input DC power			
Parallel Strings of Different Lengths or Orientations		Yes			
Maximum Difference Allowed Between Strings Connected to the Same Inverter Unit		5 Power Optimizers Between the Shortest and Longest String			

(5) For installations with SE10K and below, S1000 cannot be mixed with any other Power Optimizers models in the same string.

(6) For installations with SE10K and below, each Power Optimizer must be connected to a single PV module.

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

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