

Power Optimizer

For India

S1200



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

S1200

| | S1200 | Units |
|---|--|---------|
| INPUT⁽¹⁾ | | |
| Rated Input DC Power ⁽²⁾ | 1300 | 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 | 20 | 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 | | |
| Maximum Allowed System Voltage | 1000 | Vdc |
| Dimensions (W x L x H) | 129 x 165 x 59 / 5.08 x 6.49 x 2.32 | mm / in |
| Weight (including cables) | 1106 / 2.4 | gr / lb |
| Input Connector | MC4 ⁽³⁾ | |
| Input Wire Length | Short Input: 0.1 / 0.32 Long Input: 1.6 / 5.24 ⁽⁴⁾ | m / ft |
| Output Connector | MC4 | |
| Output Wire Length ⁽⁵⁾ | Option 1: (+) 5.3 (-) 0.10 / (+) 17.38 (-) 0.32 Option 2: (+) 2.7 (-) 0.10 / (+) 8.8 (-) 0.32 | m / ft |
| Operating Temperature Range ⁽⁶⁾ | -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 other connector types please contact SolarEdge.

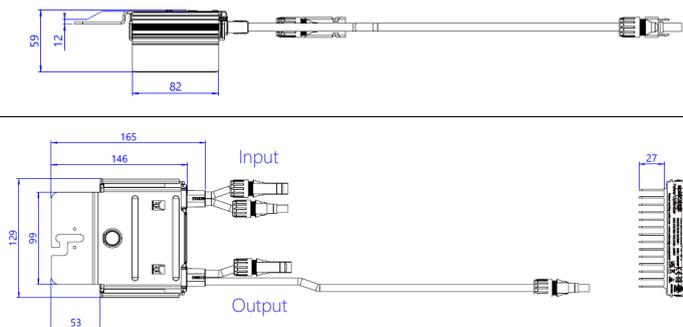
(4) For S-Series models with long input cables (1.6m / 5.24ft), the Sense Connect feature is only enabled on the output cable connectors.

(5) 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.

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

S1200 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

S1200

| PV System Design Using a SolarEdge Inverter ⁽¹⁾⁽²⁾⁽³⁾ | | 230/400V Grid SE15K* | 230/400V Grid SE16K, SE17K, SE25K* | 230/400V Grid SE27.6K* | 230/400V Grid SE30K, SE33.3K ⁽⁴⁾ | 277/480V Grid SE40K* | Units |
|--|------------------|--|------------------------------------|----------------------------|---|----------------------------|-------|
| Minimum String Length | Power Optimizers | 14 | 14 | 14 | 15 | 15 | |
| | PV Modules | 27 | 27 | 27 | 29 | 29 | |
| Maximum String Length | Power Optimizers | 30 | 30 | 30 | 30 | 30 | |
| | PV Modules | 60 | 60 | 60 | 60 | 60 | |
| Maximum Continuous Power per String | | 15,500 | 15,000 | 15,500 | 17,000 | 17,000 | |
| Maximum Allowed Connected Power per String ⁽⁵⁾ | | 1 string or more – 20,500 | 1 string – 17,250 | 1 string – 17,750 | 1 strings – 19,250 | 1 – 2 strings – 19,250 | W |
| | | | 2 strings or more – 20,000 | 2 strings or more – 20,500 | 2 strings or more – 23,000 | 3 strings or more – 23,000 | |
| 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) S1200 cannot be mixed with any other Power Optimizer in the same string.

(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 an S1200 Power Optimizer with an SE33K Inverter, you must toggle the Fixed String Voltage from 750Vdc to 850Vdc via SolarEdge SetApp. For details, see [this application note](#).

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

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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