



# SolarEdge Power Optimizer

Module Add-On for Commercial Installations

P600 / P700 / P800p / P800s



POWER OPTIMIZER

## PV power optimization at the module-level

The most cost effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Use with two PV modules connected in series or in parallel



# SolarEdge Power Optimizer Module Add-On For Commercial Installations P600 / P700 / P800p / P800s

| Optimizer model<br>(typical module compatibility)   | P600<br>(for 2 x 60-cell<br>PV modules)  | P700<br>(for 2 x 72-cell<br>PV modules)  | P800p<br>(for parallel connection of<br>2x 96-cell 5" PV modules)              | P800s<br>(for series connection of<br>2x high power or bi-facial<br>modules)   |         |
|---|--|--|--|--|---------|
| <b>INPUT</b>  |  |  |  |  |         |
| Rated Input DC Power <sup>(1)</sup>   | 600  | 730  | 800  |  | W       |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)   | 96   | 125  | 83   | 120  | Vdc     |
| MPPT Operating Range  | 12.5 - 80  | 12.5 - 105   | 12.5 - 83  | 12.5 - 105   | Vdc     |
| Maximum Short Circuit Current (Isc)   | 10.25  | 10.1   | 14   | 12.5   | Adc     |
| Maximum Efficiency  | 99.5   |  |  |  | %       |
| Weighted Efficiency   | 98.6   |  |  |  | %       |
| Overtoltage Category  | II   |  |  |  |         |
| <b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>                     |  |  |  |  |         |
| Maximum Output Current  | 15   |  | 18   |  | Adc     |
| Maximum Output Voltage  |  |  | 85   |  | Vdc     |
| <b>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)</b> |  |  |  |  |         |
| Safety Output Voltage per Power Optimizer   | 1 ± 0.1  |  |  |  | Vdc     |
| <b>STANDARD COMPLIANCE</b>  |  |  |  |  |         |
| EMC   | FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3                                 |  |  |  |         |
| Safety  | IEC62109-1 (class II safety)   |  |  |  |         |
| RoHS  | Yes  |  |  |  |         |
| Fire Safety   | VDE-AR-E 2100-712:2013-05  |  |  |  |         |
| <b>INSTALLATION SPECIFICATIONS</b>  |  |  |  |  |         |
| Compatible SolarEdge Inverters  | Three phase inverters<br>SE15K & larger  |  | Three phase inverters<br>SE16K & larger  |  |         |
| Maximum Allowed System Voltage  |  |  | 1000   |  | Vdc     |
| Dimensions (W x L x H)  | 128 x 152 x 43 /<br>5 x 5.97 x 1.69  | 128 x 152 x 50 /<br>5 x 5.97 x 1.93  | 128 x 158 x 59 /<br>5 x 6.22 x 2.32  | 128 x 152 x 59 /<br>5 x 5.97 x 2.32  | mm / in |
| Weight (including cables)   | 834 / 1.8  | 933 / 2.1  | 1019 / 2.2   | 1064 / 2.3   | gr / lb |
| Input Connector <sup>(2)</sup>  | MC4  |  | MC4 Dual Input <sup>(6)</sup>  |  |         |
| Output Connector  |  |  | MC4  |  |         |
| Output Wire Length  | 1.2 / 3.9 (portrait<br>orientation) or<br>1.8 / 5.9 (landscape<br>orientation) | 1.2 / 3.9 (portrait<br>orientation) or<br>2.1 / 6.9 (landscape<br>orientation) | 1.2 / 3.9 (portrait<br>orientation) or<br>1.8 / 5.9 (landscape<br>orientation) | 1.2 / 3.9 (portrait<br>orientation) or<br>2.1 / 6.9 (landscape<br>orientation) | m / ft  |
| Operating Temperature Range <sup>(3)</sup>  | -40 - +85 / -40 - +185   |  |  |  | °C / °F |
| Protection Rating   | IP68 / NEMA6P  |  |  |  |         |
| Relative Humidity   | 0 - 100  |  |  |  | %       |

<sup>(1)</sup> Rated STC power of the module. Module of up to +5% power tolerance allowed.

<sup>(2)</sup> For other connector types please contact SolarEdge.

<sup>(3)</sup> For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Application Note for more details.

| PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER <sup>(5)(6)</sup> |                  | THREE PHASE SE15K AND LARGER | THREE PHASE SE16K AND LARGER | THREE PHASE FOR MV GRID |                              |
|--|------------------|------------------------------|------------------------------|-------------------------|------------------------------|
| Compatible Power Optimizers                                    |                  | P600                         | P600, P700                   | P800                    | P600, P700, P800             |
| Minimum String Length  | Power Optimizers | 13                           |                              | 12                      | 13                           |
|  | PV Modules       | 26                           |                              | 24                      | 26                           |
| Maximum String Length  | Power Optimizers |                              | 30                           |                         |                              |
|  | PV Modules       |                              | 60                           |                         |                              |
| Maximum Power per String                                       |                  | 11250 <sup>(7)</sup>         |                              | 13500                   | 12750 <sup>(8)</sup>   15300 |
| Parallel Strings of Different Lengths or Orientations          |                  |                              | Yes                          |                         |                              |

<sup>(5)</sup> P600 and P700 can be mixed in one string. It is not allowed to mix P600/P700/P800 with P300/P370/P500/P404/P405/P505 in one string.

<sup>(6)</sup> In a case of odd number of PV modules in one string it is allowed to install one P600/P700/P800 power optimizer connected to one PV module. When connecting a single module to the P800p seal the unused input connectors with the supplied pair of seals.

<sup>(7)</sup> For SE27.6K, SE50K, SE55K, SE82.8K: It is allowed to install up to 13,500W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 2,000W; inverter max DC power: 37,250W.

<sup>(8)</sup> For inverters for MV grid: It is allowed to install up to 15,000W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 2,000W; inverter max DC power: 45,000W.

