



## SolarEdge Power Optimizer

Module Add-On for Commercial Installations  
for North America P600 / P700 / P730 /  
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
- Compliant with arc fault protection and rapid shutdown NEC requirements (when installed as part of the SolarEdge system)
- Use with two PV modules connected in series or in parallel



# SolarEdge Power Optimizer Module Add-On For Commercial Installations for North America P600 / P700 / P730 / 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) | P730<br>(for 2 x high power<br>72-cell PV modules) | P800p<br>(for parallel connection<br>of 2x 96-cell 5" PV<br>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                                            | 700                                     | 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)                                                                             | 10.1                                           |                                         | 11                                                 | 14                                                                   | 12.5                                                                         | Adc        |
| Maximum DC Input Current                                                                                        | 12.65                                          |                                         | 13.75                                              | 17.5                                                                 | 15.63                                                                        | Adc        |
| Maximum Efficiency                                                                                              |                                                |                                         |                                                    | 99.5                                                                 |                                                                              | %          |
| Weighted Efficiency                                                                                             |                                                |                                         |                                                    | 98.6                                                                 |                                                                              | %          |
| Overvoltage 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), UL1741           |                                         |                                                    |                                                                      |                                                                              |            |
| Material                                                                                                        | UL-94 (5-VA), UV Resistant                     |                                         |                                                    |                                                                      |                                                                              |            |
| RoHS                                                                                                            | Yes                                            |                                         |                                                    |                                                                      |                                                                              |            |
| <b>INSTALLATION SPECIFICATIONS</b>                                                                              |                                                |                                         |                                                    |                                                                      |                                                                              |            |
| Compatible SolarEdge Inverters                                                                                  | Three phase inverters                          |                                         |                                                    |                                                                      |                                                                              |            |
| 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 / 5 x 5.97 x 1.96        |                                                    | 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<br>/ in |
| Weight (including cables)                                                                                       | 994 / 2.2                                      | 1064 / 2.34                             |                                                    | 1090 / 2.4                                                           | 1064 / 2.34                                                                  | gr / lb    |
| Input Connector                                                                                                 | MC4 Compatible                                 |                                         |                                                    |                                                                      |                                                                              |            |
| Output Wire Type / Connector                                                                                    | Double Insulated; MC4 Compatible               |                                         |                                                    |                                                                      |                                                                              |            |
| Output Wire Length                                                                                              | 1.8 / 5.9                                      | 2.1 / 6.9                               |                                                    | 1.8 / 5.9                                                            | 2.1 / 6.9                                                                    | m / ft     |
| Operating Temperature Range <sup>(2)</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 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>(3)(4)</sup> |                  | THREE PHASE 208V                 |                     | THREE PHASE 480V     |       |   |
|----------------------------------------------------------------|------------------|----------------------------------|---------------------|----------------------|-------|---|
| Compatible Power Optimizers                                    |                  | P600, P700 & P730 <sup>(5)</sup> | P800 <sup>(5)</sup> | P600, P700 & P730    | P800  |   |
| Minimum String Length                                          | Power Optimizers | 8                                |                     | 13                   |       |   |
|                                                                | PV Modules       | 16                               |                     | 26                   |       |   |
| Maximum String Length                                          | Power Optimizers | 30                               |                     | 30                   |       |   |
|                                                                | PV Modules       | 60                               |                     | 60                   |       |   |
| Maximum Power per String                                       |                  | 6000 <sup>(6)</sup>              | 7200                | 12750 <sup>(7)</sup> | 15300 | W |
| Parallel Strings of Different Lengths or Orientations          |                  |                                  |                     | Yes                  |       |   |

<sup>(3)</sup> P600, P700 and P730 can be mixed in one string. It is not allowed to mix P600/P700/P730/P800 with P300/P320/P400/P405 in one string.

<sup>(4)</sup> In a case of odd number of PV modules in one string it is allowed to install one P600/P700/P730/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>(5)</sup> P700/P730/ P800 design with three phase 208V inverters is limited. Use the SolarEdge Site Designer for verification.

<sup>(6)</sup> For SE14.4KUS: It is allowed to install up to 6,500W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 1,000W.

<sup>(7)</sup> For SE33.3KUS: 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.

