



## SolarEdge Power Optimizer

Module Add-On for Commercial Installations  
for North America P600 / P700



POWER OPTIMIZER

### PV power optimization at the module-level The most cost effective solution for commercial and large field installations

- 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
- Next generation maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Use with two PV modules connected in series



# SolarEdge Power Optimizer Module Add-On

## For Commercial Installations for North America P600 / P700

|   | P600<br>(for 2 x 60-cell PV modules)           | P700<br>(for 2 x 72-cell PV modules) |                                  |
|---|--|--------------------------------------|----------------------------------|
| <b>INPUT</b>  |  |                                      |                                  |
| Rated Input DC Power <sup>(1)</sup>   | 600  | 700                                  | W                                |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)                             | 96   | 125                                  | Vdc                              |
| MPPT Operating Range  | 12.5 - 80                                      | 12.5 - 105                           | Vdc                              |
| Maximum Short Circuit Current (Isc)   |  | 10                                   | Adc                              |
| Maximum DC Input Current  |  | 12.5                                 | Adc                              |
| Maximum Efficiency  |  | 99.5                                 | %                                |
| Weighted Efficiency   |  | 98.6                                 | %                                |
| Overvoltage Category  |  | II                                   |                                  |
| <b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING INVERTER)</b>          |  |                                      |                                  |
| Maximum Output Current  |  | 15                                   | Adc                              |
| Maximum Output Voltage  |  | 85                                   | Vdc                              |
| <b>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)</b> |  |                                      |                                  |
| Safety Output Voltage per Power Optimizer   |  | 1                                    | Vdc                              |
| <b>STANDARD COMPLIANCE</b>  |  |                                      |                                  |
| EMC   | FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3 |                                      |                                  |
| Safety  | IEC62109-1 (class II safety), UL1741           |                                      |                                  |
| RoHS  | Yes  |                                      |                                  |
| <b>INSTALLATION SPECIFICATIONS</b>  |  |                                      |                                  |
| Compatible SolarEdge Inverters  | Three phase inverters                          |                                      | Vdc                              |
| Maximum Allowed System Voltage  | 1000   |                                      |                                  |
| Dimensions (W x L x H)  | Pxxx-2 series                                  | 143 x 210 x 45 / 5.63 x 8.26 x 1.75  |                                  |
|   | Pxxx-5 series                                  | 128 x 152 x 43 / 5 x 5.97 x 1.69     | 128 x 152 x 48 / 5 x 5.97 x 1.89 |
| Weight (including cables)   | Pxxx-2 series                                  | 1100 / 2.4                           |                                  |
|   | Pxxx-5 series                                  | 930 / 2.05                           |                                  |
| Input Connector   | MC4 Compatible                                 |                                      |                                  |
| Output Wire Type / Connector  | Double Insulated; Amphenol                     |                                      |                                  |
| Output Wire Length  | 1.8 / 5.9                                      | 2.1 / 6.9                            |                                  |
| Operating Temperature Range <sup>(2)</sup>  | -40 - +85 / -40 - +185                         |                                      | °C / °F                          |
| Protection Rating   | Pxxx-2 series                                  | IP65 / NEMA4                         |                                  |
|   | Pxxx-5 series                                  | IP68 / NEMA6P                        |                                  |
| Relative Humidity   | 0 - 100  |                                      | %                                |

<sup>(1)</sup> Rated combined STC power of 2 modules connected in series. 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 <sup>(5)</sup> | P600 & P700      |   |
| 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                       | 12750            | W |
| Parallel Strings of Different Lengths or Orientations          |                  | Yes                        |                  |   |

<sup>(3)</sup> P600 and P700 can be mixed in one string. It is not allowed to mix P600/P700 with P300/P350/P400 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 power optimizer connected to one PV Module.

<sup>(5)</sup> P700 design with three phase 208V inverters is limited. Use the SolarEdge Site Designer for verification.

