



# SolarEdge Power Optimizer

Frame-Mounted Module Add-On

P300 / P370 / P404 / P500



POWER OPTIMIZER

## Fast mount power optimizers with module-level optimization

- Specifically designed to work with SolarEdge inverters
- Quicker installation - Power optimizers can be mounted in advance saving installation time
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Next generation maintenance with module level monitoring
- Module-level voltage shutdown for installer and firefighter safety



# SolarEdge Power Optimizer

Frame-mounted Module Add-On P300 / P370 / P404 / P500

| Optimizer model<br>(typical module compatibility)  | P300<br>(for 60-cell<br>modules)               | P370<br>(for high-power<br>60-cell and for<br>72-cell modules) | P500<br>(for 96-cell<br>modules)      | P404<br>(for 60-cell<br>and 72-cell,<br>short strings) |         |
|--|--|--|---------------------------------------|--|---------|
| INPUT  |  |  |                                       |  |         |
| Rated Input DC Power <sup>(1)</sup>  | 300  | 370  | 500                                   | 405  | W       |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)  | 48   | 60   | 80                                    | 80   | Vdc     |
| MPPT Operating Range   | 8 - 48   | 8 - 60   | 8 - 80                                | 12.5 - 80  | Vdc     |
| Maximum Short Circuit Current (Isc)  | 11   |  | 10.1                                  |  | Adc     |
| Maximum Efficiency   | 99.5   |  |                                       |  | %       |
| Weighted Efficiency  | 98.8   |  |                                       |  | %       |
| Overvoltage Category   | II   |  |                                       |  |         |
| OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)                     |  |  |                                       |  |         |
| Maximum Output Current   | 15   |  |                                       |  | Adc     |
| Maximum Output Voltage   | 60   |  |                                       | 85   | Vdc     |
| OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF) |  |  |                                       |  |         |
| Safety Output Voltage per Power Optimizer  | 1 ± 0.1  |  |                                       |  | Vdc     |
| STANDARD COMPLIANCE  |  |  |                                       |  |         |
| EMC  | FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3 |  |                                       |  |         |
| Safety   | IEC62109-1 (class II safety), UL1741           |  |                                       |  |         |
| 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)   | 139 x 165 x 41 / 5.47 x 6.5 x 1.61             |  | 139 x 165 x 49 /<br>5.47 x 6.5 x 1.93 | 139 x 165 x 56 /<br>5.47 x 6.5 x 2.2                   | mm / in |
| Weight (including cables)  | 750 / 1.65                                     | 775 / 1.7  | 870 / 1.9                             | 895 / 2.0  | gr / lb |
| Input Connector  | MC4 <sup>(2)</sup>                             |  |                                       |  |         |
| Output Connector   | MC4  |  |                                       |  |         |
| Output Wire Length   | 0.95 / 3.0                                     | 1.2 / 3.9  |                                       |  | m / ft  |
| Operating Temperature Range  | -40 - +85 / -40 - +185                         |  |                                       |  | °C / °F |
| Protection Rating  | IP68 / NEMA6P                                  |  |                                       |  |         |
| Relative Humidity  | 0 - 100  |  |                                       |  | %       |

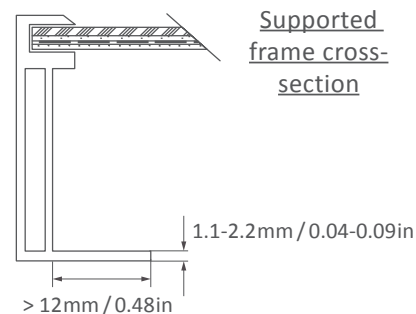
<sup>(1)</sup> Rated STC power of the module. Module of up to +5% power tolerance allowed.

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

| PV SYSTEM DESIGN USING A<br>SOLAREEDGE INVERTER <sup>(3)</sup> |                               | SINGLE<br>PHASE<br>HD-WAVE | SINGLE<br>PHASE | THREE<br>PHASE       | THREE<br>PHASE<br>FOR MV<br>GRID |   |
|--|-------------------------------|----------------------------|-----------------|----------------------|----------------------------------|---|
| Minimum String Length<br>(Power Optimizers)                    | P300/P370/P500 <sup>(4)</sup> | 8                          |                 | 16                   | 18                               |   |
|  | P404                          | 6                          |                 | 13 (12 with<br>SE3K) | 14                               |   |
| Maximum String Length (Power Optimizers)                       |                               | 25                         |                 | 50                   | 50                               |   |
| Maximum Power per String                                       |                               | 5700                       | 5250            | 11250                | 12750                            | W |
| Parallel Strings of Different Lengths<br>or Orientations       |                               | Yes                        |                 |                      |                                  |   |

<sup>(3)</sup> It is not allowed to mix P404 with P300/P370/P500 in one string

<sup>(4)</sup> The P300/P370/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to E-Series inverter datasheet).



## LIMITED PRODUCT WARRANTY

This SolarEdge Technologies Ltd. Limited Warranty covers defects in workmanship and materials of the below-listed products for the applicable warranty period set out below:

- **Power optimizers:** 25 years commencing on the earlier of: (i) 4 months from the date the power optimizers are shipped from SolarEdge; and (ii) the installation of the power optimizers, *provided, however*, that for the module embedded power optimizers (CSI and OPJ models), the Warranty Period shall not exceed the maximum of (1) the module product warranty and (2) the module power warranty periods provided by the applicable module manufacturer.
- **Inverters, Safety & Monitoring Interface (SMI), Auto-transformer, GSM Cellular Modem:** 12\* years commencing on the earlier of: (i) 4 months from the date the products are shipped from SolarEdge; and (ii) the installation of the products.
- **StorEdge Interface:** 10 years commencing on the earlier of: (i) 4 months from the date the Interfaces are shipped from SolarEdge; and (ii) the installation of the Interfaces.
- **Home Gateway, Control and Communication Gateway, Firefighter Gateway, Wireless Communication Products excluding GSM Cellular Modem, RS485 Expansion Kit, SolarEdge Meter, Smart Monitoring Combiner Box:** 5 years commencing on the earlier of: (i) 4 months from the date the product is shipped from SolarEdge; and (ii) the installation of the product. Warranty duration of wireless communication products is the same whether or not the product is pre-installed in the inverter.

\* In some countries the inverter warranty is limited to 7 years. For a list of these countries please access [http://www.solaredge.com/warranty\\_exceptions](http://www.solaredge.com/warranty_exceptions)

The Limited Warranty does not apply to components which are separate from the Products, ancillary equipment and consumables, such as, for example, cables, fuses, wires and connectors, whether supplied by SolarEdge or others. Some components may carry their own manufacturer warranty. See product datasheet for more details. In addition, for all power optimizers with a part number ending in C, the SolarEdge warranty does not apply to the input connector.

The Limited Warranty only applies to the buyer who has purchased the Products from an authorized seller of SolarEdge for use in accordance with their intended purpose. The Limited Warranty may be transferred from buyer to any assignee, and will remain in effect for the time period remaining under the foregoing warranties, *provided* that the Products are not moved outside its original country of installation and any reinstallation is done in accordance with the installation directions and use guidelines accompany the Products (collectively the "Documentation").

If, during the applicable Warranty Period, buyer discovers any defect in workmanship and materials and seeks to activate the Limited Warranty, then buyer shall, promptly after such discovery, report the defect to SolarEdge by sending an email to [support@solaredge.com](mailto:support@solaredge.com) with the following information: (i) a short description of the defect, (ii) the Product's serial number, and (iii) a scanned copy of the purchase receipt or warranty certificate of the applicable Product.

Upon buyer's notification, SolarEdge shall determine whether the reported defect is eligible for coverage under the Limited Warranty. The Product's serial number must be legible and properly attached to the Product in order to be eligible for Warranty coverage. If SolarEdge determines that the reported defect is not eligible for coverage under the Limited Warranty, SolarEdge will notify buyer accordingly and will explain the reason why such coverage is not available. If SolarEdge determines that the reported defect is eligible for coverage under the Limited Warranty, SolarEdge will notify buyer accordingly, and SolarEdge may, in its sole discretion, take any of the following actions:

- repair the Product at SolarEdge's facilities or on-site; or
- issue a credit note for the defective Product in an amount up to its actual value at the time buyer notifies SolarEdge of the defect, as determined by SolarEdge, for use toward the purchase of a new Product; or
- provide Buyer with replacement units for the Product.

SolarEdge will determine whether the Product should be returned to SolarEdge and, if SolarEdge so determined, the Return Merchandise Authorization ("RMA") Procedure (set out below) will be invoked. Where replacement Products are sent, SolarEdge generally sends such products within 48 hours. SolarEdge may use new, used or refurbished parts that are at least functionally equivalent to the original part when making warranty repairs. The repaired Product or replacement parts or Product, as applicable, shall continue to be covered under the Limited Warranty for the remainder of the then-current Warranty Period for the Product.

Where the RMA Procedure is invoked by SolarEdge, SolarEdge will instruct buyer how to package and ship the Product or part(s) to the designated location. SolarEdge will bear the cost of such shipment, upon receipt of the Product or part(s), SolarEdge will, at its expense and sole discretion, either repair or replace the Product or part(s).

SolarEdge will deliver the repaired or replaced Product or part(s) to buyer at buyer's designated location in countries where SolarEdge has an office and/or there is a significant PV market. For the specific list of countries to which such service is provided, please access [http://www.solaredge.com/articles/shipping\\_cost\\_coverage\\_warranty](http://www.solaredge.com/articles/shipping_cost_coverage_warranty). SolarEdge will bear the cost of such shipment, including shipping and customs (where applicable) and buyer shall bear any applicable value added tax. SolarEdge may elect to ship replacement Product and/or part(s) prior to receipt of the Product and/or part(s) to be returned to SolarEdge as per the above.

Where SolarEdge decides to repair the Product or part(s), warranty coverage includes labor and material costs necessarily incurred to correct the Product defect; and where SolarEdge decides to replace the Product or part(s) to which the Limited Warranty applies, warranty coverage includes the cost of the replacement of the Product or part(s). In addition, SolarEdge shall bear shipping costs in respect to the foregoing, as set out above. All other costs, including, without limitation, travel and boarding costs of SolarEdge service personnel that are incurred for repairs of Products on-site, as well as costs related to buyer's employees and contractors repair or replacement activities, are not covered by the Limited Warranty and, unless otherwise agreed in writing in advance by SolarEdge, shall be borne by the buyer.

**Warranty Exclusions:** This Limited Warranty will not apply if (a) buyer is in default under the General Terms and Conditions of other Agreement governing the purchase of the Product, or (b) the Product or any part thereof is:

- damaged as a result of misuse, abuse, accident, negligence or failure to maintain the Product;
- damaged as a result of modifications, alterations or attachments thereto which were not pre-authorized in writing by SolarEdge;
- damaged due to the failure to observe the applicable safety regulations governing the proper use of the Product;
- installed or operated not in strict conformance with the Documentation, including without limitation, not ensuring sufficient ventilation for the Product as described in SolarEdge installation guide;
- opened, modified or disassembled in any way without SolarEdge's prior written consent;
- used in combination with equipment, items or materials not permitted by the Documentation or in violation of local codes and standards;
- damaged or rendered non-functional as a result of power surges, lightning, fire, flood, pest damage, accident, action of third parties, or other events beyond SolarEdge's reasonable control or not arising from normal operating conditions; or
- damaged during or in connection with shipping or transport to or from buyer where buyer arranges such shipping or transport.

This Limited Warranty does not cover cosmetic or superficial defects, dents, marks or scratches, which do not influence the proper functioning of the Product.

THE LIMITED WARRANTIES SET OUT HEREIN ARE IN LIEU OF ANY OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS PURCHASED BY BUYER FROM SOLAREEDGE, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL (INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), ALL OF WHICH ARE EXPRESSLY EXCLUDED TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW.

Claims by buyer that go beyond the warranty terms set out herein, including claims for compensation or damages, are not covered by the Limited Warranty, insofar as SolarEdge is not subject to statutory liability. In such cases, please contact the company that sold you the Product. Eventual claims in accordance with the law on product liability remain unaffected.

Coverage under the Limited Warranty is subject to buyer complying with the foregoing notification requirements and cooperating with SolarEdge's directions. SolarEdge's sole obligation and buyer's exclusive remedy for any defect warranted hereunder is limited to those actions expressly stated above. Such actions are final and do not grant any further rights, in particular with respect to any claims for compensation.

Unless otherwise specified in an executed Agreement with SolarEdge, the Limited Warranty and related provisions set out herein are subject to SolarEdge's General Terms and Conditions, including, without limitation, the provisions thereof, which relate to disclaimer of warranties, limitation of liability and governing law and jurisdiction.

Revised: June 2016