



# SolarEdge Power Optimiser

for Australia  
Module Add-On

P300 / P370 / P404 / P405 / P500 / P505

POWER OPTIMISER



## PV power optimisation at the module-level

- Specifically designed to work with SolarEdge inverters
- 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
- Fast installation with a single bolt
- Next generation maintenance with module level monitoring
- Module-level voltage shutdown for installer and firefighter safety



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Module Add-On P300 / P370 / P404 / P405 / P500 / P505

| Optimiser model<br>(typical module compatibility)   | P300<br>(for 60-cell<br>modules) | P370<br>(for high-power<br>60 and 72-cell<br>modules) | P500<br>(for 96-cell<br>modules) | P404<br>(for 60-cell<br>and 72-cell,<br>short strings) | P405<br>(for thin film<br>modules) | P505<br>(for higher<br>current<br>modules) |                 |
|---|----------------------------------|---|----------------------------------|--|------------------------------------|--|-----------------|
| <b>INPUT</b>  |                                  |   |                                  |  |                                    |  |                 |
| Rated Input DC Power <sup>(1)</sup>   | 300                              | 370 <sup>(2)</sup>                                    | 500 <sup>(2)</sup>               | 405 <sup>(2)</sup>                                     | 405 <sup>(2)</sup>                 | 505 <sup>(2)</sup>                         | W               |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)   | 48                               | 60  | 80                               | 80   | 125                                | 83   | Vdc             |
| MPPT Operating Range  | 8 - 48                           | 8 - 60  | 8 - 80                           | 12.5 - 80  | 12.5 - 105                         | 12.5-83                                    | Vdc             |
| Maximum Short Circuit Current (Isc)   | 11                               |   | 10.1                             |  | 14                                 |  | A <sub>dc</sub> |
| Maximum Efficiency  |                                  |   |                                  | 99.5   |                                    |  | %               |
| Weighted Efficiency   |                                  |   |                                  | 98.8   |                                    |  | %               |
| Overtoltage Category  |                                  |   |                                  | II   |                                    |  |                 |
| <b>OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>                     |                                  |   |                                  |  |                                    |  |                 |
| Maximum Output Current  |                                  |   |                                  | 15   |                                    |  | A <sub>dc</sub> |
| Maximum Output Voltage  | 60                               |   |                                  | 85   |                                    |  | Vdc             |
| <b>OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)</b> |                                  |   |                                  |  |                                    |  |                 |
| Safety Output Voltage per Power Optimiser   |                                  |   |                                  | 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                   |                                    |  |                 |
| RoHS  |                                  |   |                                  | Yes  |                                    |  |                 |
| Fire Safety   |                                  |   |                                  | VDE-AR-E 2100-712:2013-05                              |                                    |  |                 |
| <b>INSTALLATION SPECIFICATIONS</b>  |                                  |   |                                  |  |                                    |  |                 |
| Maximum Allowed System Voltage  |                                  |   |                                  | 1000   |                                    |  | Vdc             |
| Dimensions (W x L x H)  | 128 x 152 x 28                   |   | 128 x 152 x 36                   |  | 128 x 152 x 50                     | 128 x 152 x 59                             | mm              |
| Weight (including cables)   | 630                              | 655   | 750                              | 775  | 845                                | 1064                                       | gr              |
| Input Connector   | MC4 <sup>(3)</sup>               |   |                                  | Single or Dual<br>MC4 <sup>(4)</sup>                   |                                    | MC4 <sup>(3)</sup>                         |                 |
| Output Connector  |                                  |   |                                  | MC4  |                                    |  |                 |
| Output Wire Length  | 0.95                             |   |                                  |  | 1.2                                |  | m               |
| Operating Temperature Range   |                                  |   |                                  | -40 - +85  |                                    |  | °C              |
| 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> When connecting modules with rated STC power >350Wp, labels with optimiser de-energising instructions may need to be attached to the optimisers.

For details refer to: [http://www.solaredge.com/sites/default/files/se\\_optimizer\\_deenergizing\\_guide\\_aus.pdf](http://www.solaredge.com/sites/default/files/se_optimizer_deenergizing_guide_aus.pdf)

<sup>(3)</sup> For other connector types please contact SolarEdge.

<sup>(4)</sup> Dual version for parallel connection of 2 thin film modules; P/N: P405-5RMDMRM. In a case of odd number of PV modules in one string it is allowed to install one P405 dual version power optimiser connected to one PV module. When connecting a single module seal the unused input connectors with the supplied pair of seals.

| PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER <sup>(6)</sup>    |                  | SINGLE PHASE<br>HD-WAVE                  | SINGLE<br>PHASE | THREE PHASE<br>RESIDENTIAL <sup>(7)</sup> | THREE PHASE<br>COMMERCIAL |   |
|--|------------------|--|-----------------|---|---------------------------|---|
| Minimum String Length<br>(Power Optimisers)                    | P300, P370, P500 | 8  |                 | 8 per array                               | 16                        |   |
|  | P404, P405, P505 | 6  |                 | 7 per array                               | 13                        |   |
| Maximum String Length (Power Optimisers)                       |                  | 25                                       |                 | 25 per array                              | 50                        |   |
| Maximum Power per String                                       |                  | 5700 (6000<br>with SE8000H,<br>SE10000H) | 5250            | 5700                                      | 11250                     | W |
| Parallel Strings of Different Lengths or Orientations<br>Notes |                  |  |                 | Yes<br>Connect 2 arrays                   |                           |   |

<sup>(6)</sup> It is not allowed to mix P404/P405/P505 with P300/P370/P500/P600/P700/P800 in one string. With the three phase residential inverters, use either P404/P405/P505 optimisers or P300/P350/P500 optimisers on an inverter.

<sup>(7)</sup> Optimisers must be connected in two separate arrays. For complete design guidelines for the three phase residential inverters refer to: [https://www.solaredge.com/sites/default/files/se\\_inverter\\_installation\\_guide\\_e\\_series\\_design\\_installation\\_addendum\\_aus.pdf](https://www.solaredge.com/sites/default/files/se_inverter_installation_guide_e_series_design_installation_addendum_aus.pdf)

