# Power Optimiser

## For Australia
## Module Add-On

P370 / P401 / P404 / P485 / P500 / P505

POWEROPTIMISER


## 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



solaredge

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## Module Add-On

### P370 / P401 / P404 / P485 / P500 / P505

| Optimiser Model (Typical Module Compatibilty) | P370 (60&70 Cell modules) | P401 (60&70 Cell modules) | P404 (for 60-cell and 72-cell, short strings) | P485 (for high-voltage modules) | P500 (for 96-cell modules) | P505 (for higher current modules) | |
|---|---|---|---|---|---|---|---|
| **INPUT** | | | | | | | |
| Rated Input DC Power[1] | 370 | 400 | 405 | 485 | 500 | 505 | W |
| Absolute Maximum Input Voltage (Voc at lowest temperature) | 60 | | 80 | 125 | 80 | 83 | Vdc |
| MPPT Operating Range | 8 - 60 | | 12.5 - 80 | 12.5 - 105 | 8 - 80 | 12.5-83 | Vdc |
| Maximum Short Circuit Current (Isc) | 11 | 11.75 | 11 | | 10.1 | 14 | Adc |
| Maximum Efficiency | 99.5 | | | | | | % |
| Weighted Efficiency | 98.8 | | | | | | % |
| Overvoltage Category | II | | | | | | |
| **OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREDGE INVERTER)** | | | | | | | |
| Maximum Output Current | 15 | | | | | | Adc |
| Maximum Output Voltage | 60 | | 85 | | 60 | 85 | Vdc |
| **OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)** | | | | | | | |
| Safety Output Voltage per Power Optimiser | 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) | 129 x 153 x 27.5 | 129 x 153 x29.5 | 129 x 153 x 42.5 | 129 x 159 x 49.5 | 129 x 153 x 33.5 | 129 x 162 x 59 | mm |
| Weight (including cables) | 655 | | 775 | 845 | 750 | 1064 | gr |
| Input Connector[2] | MC4[2] | | | Single or Dual MC4[2][3] | MC4[2] | | |
| Input Wire Length | 0.16 / 0.9[4] | | 0.16 | | | | m |
| 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 | | | | | | % |

[1] Rated power of the module at STC will not exceed the optimiser "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.
[2] For other connector types please contact SolarEdge.
[3] Dual version for parallel connection of 2 modules; P/N: P485-4RMDMRM. In a case of odd number of PV modules in one string it is allowed to install one P485 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.
[4] Longer inputs wire length are available for use. For 0.9m input wire length order P370/P401-xxxLxxx.

| PV System Design Using a Solaredge Inverter[5] | | Single Phase HD-WAVE | Single Phase | Three Phase Residential[6] | Three Phase Commercial | |
|---|---|---|---|---|---|---|
| Minimum String Length (Power Optimisers) | P370, P401, P500 | 8 | | 8 per array | 16 | |
| | P404, P485, P505 | 6 | | 7 per array | 14 | |
| Maximum String Length (Power Optimisers) | | 25 | | 25 per array | 50 | |
| Maximum Power per String | | 5700 (6000 with SE8000H, SE10000H) | 5250 | 5700 | 11250[7] | W |
| Parallel Strings of Different Lengths or Orientations | | Yes | | | | |
| Notes | | - | | Connect 2 arrays | - | |

[5] It is not allowed to mix P404/P485/P505 with P370/P401/P500/P650/P730/P801/P850/P800p/P950 in one string. With the three phase residential inverters, use either P404/P485/P505 power optimisers or P370/P401/P500 power optimisers on an inverter.
[6] Power 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
[7] It is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W



CE RoHS