# Power Optimiser

## For Australia

P605 / P730 / P801 / P850 / P800p / P950 / P1100

POWER OPTIMISER


## PV power optimisation 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
- Use with two PV modules connected in series or in parallel



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# / Power Optimiser For Australia

## P605 / P730 / P801

| Optimiser Model (Typical Module Compatibility) | P605 (for 1 x high power PV module) | P730 (for up to 2 x 72-cell PV modules) | P801 (for up to 2 x 72- cell PV modules) | |
|---|---|---|---|---|
| **INPUT** | | | | |
| Rated Input DC Power[1] | 605 | 730 | 800 | W |
| Connection Method | Single input for series connected modules | | | |
| Absolute Maximum Input Voltage (Voc at lowest temperature) | 65 | 125 | | Vdc |
| MPPT Operating Range | 12.5 - 65 | 12.5 - 105 | | Vdc |
| Maximum Short Circuit Current per Input (Isc) | 14.1 | 11 | 11.75 | Adc |
| Maximum Efficiency | 99.5 | | | % |
| Weighted Efficiency | 98.6 | | | % |
| Overvoltage Category | II | | | |
| Overcurrent Protection | 14.75 | 11.75 | 12.75 | Adc |
| **OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREDGE INVERTER)** | | | | |
| Maximum Output Current | 15 | | | Adc |
| Maximum Output Voltage | 80 | | | 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 A, IEC61000-6-2, IEC61000-6-3 | | | |
| Safety | IEC62109-1 (class II safety) | | | |
| RoHS | Yes | | | |
| Fire Safety | VDE-AR-E 2100-712:2013-05 | | | |
| **INSTALLATION SPECIFICATIONS** | | | | |
| Compatible SolarEdge Inverters | Three phase inverters SE15K & larger | | | |
| Maximum Allowed System Voltage | 1000 | | | Vdc |
| Dimensions (W x L x H) | 129 x 153 x 52 | 129 x 153 x 49.5 | | mm |
| Weight (including cables) | 1064 | 933 | | gr |
| Input Connector | MC4[2] | | | |
| Output Connector | MC4 | | | |
| Output Wire Length | 1.4 | 2.2 | | m |
| Input Wire Length | 0.16 | 0.16, 0.9[3] | | m |
| Operating Temperature Range[4] | -40 to +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) Longer inputs wire length are available for use with split junction box modules
(For 0.9m/0.52ft order P730/P801/ P850-xxxLxxx. For 1.3m/4.26ft order P850/P950/P1100 -xxxXxxx. For 1.6m/5.24ft order P850/P950-xxxYxxx)
(4) For ambient temperature above +70˚C power de-rating is applied. Refer to https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf for more details

| PV System Design Using a SolarEdge Inverter[5][6][7] | | 230/400VGrid SE15K, SE17K, SE25K*, SE30K, SE33.3K* | | 230/400V Grid SE27.6K* | | |
|---|---|---|---|---|---|---|
| Compatible Power Optimisers | | P605 | P730, P801 | P605 | P730, P801 | |
| Minimum String Length | Power Optimisers | 14 | 14 | 14 | 14 | |
| | PV Modules | 14 | 27 | 14 | 27 | |
| Maximum String Length | Power Optimisers | 30 | 30 | 30 | 30 | |
| | PV Modules | 30 | 60 | 30 | 60 | |
| Maximum Continuous Power per String | | 11250 | | 11625 | | W |
| Maximum Allowed Connected Power per String[8] (Permitted only when the difference in connected power between strings is 2,000W or less) | | 13500 | | 13875 | | W |
| Parallel Strings of Different Lengths or Orientations | | Yes | | | | |

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter
(5) P730/P801 can be mixed in one string only with P730/P801. P605 cannot be mixed with any other Power Optimiser in the same string
(6) For each string, a Power Optimiser may be connected to a single PV module if 1) each Power Optimiser is connected to a single PV module or 2) it is the only Power Optimiser connected to a single PV module in the string
(7) For SE15K and above, the minimum STC DC connected power should be 11KW
(8) To connect more STC power per string, design your project using SolarEdge Designer

# / Power Optimiser For Australia

## P800p / P850 / P950 / P1100

| Optimiser Model (Typical Module Compatibility) | P800p (for up to 2 x 96-cell 5'' PV modules) | P850 (for up to 2 x high power or bi-facial modules) | P950 (for up to 2 x high power or bi-facial modules) | P1100 (for up to 2 x high power or bi-facial modules) | |
|---|---|---|---|---|---|
| **INPUT** | | | | | |
| Rated Input DC Power(1) | 800 | 850* | 950* | 1100 | W |
| Connection Method | Dual input for Independently connected(7) | Single input for series connected modules | | | |
| Absolute Maximum Input Voltage (Voc at lowest temperature) | 83 | 125 | | | Vdc |
| MPPT Operating Range | 12.5 - 83 | 12.5 - 105 | | | Vdc |
| Maximum Short Circuit Current per Input (Isc) | 7 | 14.1 | | | Adc |
| Maximum Efficiency | 99.5 | | | | % |
| Weighted Efficiency | 98.6 | | | | % |
| Overvoltage Category | II | | | | |
| Overcurrent Protection | 15.25 | 14.75 | | | Adc |
| **OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREDGE INVERTER)** | | | | | |
| Maximum Output Current | 18 | | | | Adc |
| Maximum Output Voltage | 80 | | | | 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 A, IEC61000-6-2, IEC61000-6-3 | | | | |
| Safety | IEC62109-1 (class II safety) | | | | |
| RoHS | Yes | | | | |
| Fire Safety | VDE-AR-E 2100-712:2013-05 | | | | |
| **INSTALLATION SPECIFICATIONS** | | | | | |
| Compatible SolarEdge Inverters | Three phase inverters SE15K & larger | | | Three phase inverters SE25K &larger | |
| Maximum Allowed System Voltage | 1000 | | | | Vdc |
| Dimensions (W x L x H) | 129 x 168 x 59 | 129 x 162 x 59 | 129 x 162 x 59 | 129 x 168 x 59 | mm |
| Weight (including cables) | 1064 | | | | gr |
| Input Connector | MC4(2) | | | | |
| Output Connector | MC4 | | | | |
| Output Wire Length | 2.2 | | | 2.4 | m |
| Input Wire Length | 0.16 | 0.16, 0.9, 1.3, 1.6(3) | 0.16, 1.3, 1.6(3) | 0.16, 1.3(3) | m |
| Operating Temperature Range(4) | -40 to +85 | | | | ˚C |
| Protection Rating | IP68 / NEMA6P | | | | |
| Relative Humidity | 0 - 100 | | | | % |

* For P850/P950 models manufactured in work week 06/2020 or earlier, the maximum Isc per input is 12.5A. The manufacture code is indicated in the Power Optimizer's serial number
Example: S/N SJ0620A-xxxxxxxx (work week 06 in 2020)

(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) Longer inputs wire length are available for use with split junction box modules
(For 0.9m/0.52ft order P730/P801/ P850-xxxLxxx. For 1.3m/4.26ft order P850/P950/P1100 -xxxXxxx. For 1.6m/5.24ft order P850/P950-xxxYxxx)

(4) For ambient temperature above +70˚C power de-rating is applied. Refer to https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf for more details

| PV System Design Using a SolarEdge Inverter(5)(6)(7) | | 230/400V Grid SE15K, SE17K | 230/400V Grid SE25K* | 230/400V Grid SE27.6K* | 230/400V Grid SE30K, SE33.3K* | |
|---|---|---|---|---|---|---|
| Compatible Power Optimisers | | P800p, P850, P950 | P800p, P850, P950, P1100 | P800p, P850, P950, P1100 | P800p, P850, P950, P1100 | |
| Minimum String Length | Power Optimisers | 14 | 14 | 14 | 14 | |
| | PV Modules | 27 | 27 | 27 | 27 | |
| Maximum String Length | Power Optimisers | 30 | 30 | 30 | 30 | |
| | PV Modules | 60 | 60 | 60 | 60 | |
| Maximum Continuous Power per String | | 13500 | 13500 | 13950 | 13500 | W |
| Maximum Allowed Connected Power per String(8) (Permitted only when the difference in connected power between strings is 2,000W or less) | | 1 string - 15750 | 1 string - 15750 | 1 string - 16200 | 2 strings or less - 15750 | W |
| | | 2 strings or more - 18500 | 2 strings or more - 18500 | 2 strings or more - 18950 | 3 strings or more - 18500 | |
| Parallel Strings of Different Lengths or Orientations | | Yes | | | | |

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter

(5) P800p/P850/P950/P1100 can be mixed in one string only with P800p/P850/P950/P1100

(6) For each string, a Power Optimiser may be connected to a single PV module if 1) each Power Optimiser is connected to a single PV module or 2) it is the only Power Optimiser connected to a single PV module in the string

(7) For SE15K and above, the minimum STC DC connected power should be 11KW

(8) To connect more STC power per string, design your project using SolarEdge Designer



CE RoHS