

# Single Phase Energy Hub Inverter with Prism Technology

for Australia

SE3000H / SE4000H / SE5000H / SE6000H /  
SE8250H / SE10000H



## Optimised battery storage with HD-Wave technology

- Single string design for inverters up to 5kW AC
- Record-breaking 99% weighted efficiency with 200% DC oversizing, for higher energy yield
- Modular design, future ready with optional upgrades enabling:
  - Full home backup power
  - High efficiency DC-coupled storage
  - Backup generator connection
  - EV charging, with SolarEdge Smart EV Charger
- Built-in consumption monitoring
- Multi-inverter, scalable storage solution
- Advanced safety features including SafeDC™, rapid shutdown, and integrated arc fault protection
- Built-in panel-level monitoring
- Rapid inverter commissioning via smartphone using SetApp
- Small, lightweight, and easy to install
- IP65-rated, for indoor and outdoor installations

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|                                                                           | SE3000H                                                                              | SE4000H | SE5000H | SE6000H | SE8250H | SE10000H | UNITS |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|---------|---------|---------|----------|-------|
| <b>OUTPUT - AC ON GRID</b>                                                |                                                                                      |         |         |         |         |          |       |
| Rated AC Power                                                            | 3000                                                                                 | 4000    | 5000    | 6000    | 8250    | 10000    | VA    |
| Maximum AC Power Output                                                   | 3000                                                                                 | 4000    | 5000    | 6000    | 8250    | 10000    | VA    |
| AC Output Voltage (Nominal)                                               | 220 / 230                                                                            |         |         |         |         |          | Vac   |
| AC Output Voltage Range                                                   | 184 - 264.5                                                                          |         |         |         |         |          | Vac   |
| AC Frequency Range (nominal)                                              | 50/60 ± 5                                                                            |         |         |         |         |          | Hz    |
| Maximum Continuous Output Current                                         | 14                                                                                   | 19      | 23      | 28      | 38      | 46       | A     |
| Total Harmonic Distortion (THD)                                           | <3                                                                                   |         |         |         |         |          | %     |
| Power Factor                                                              | 1, adjustable -0.8 to 0.8                                                            |         |         |         |         |          |       |
| Utility Monitoring, Islanding Protection, Country Configurable Thresholds | Yes                                                                                  |         |         |         |         |          |       |
| Charge Battery from AC (if Allowed)                                       | Yes                                                                                  |         |         |         |         |          |       |
| Typical Nighttime Power Consumption                                       | <2.5                                                                                 |         |         |         |         |          | W     |
| <b>OUTPUT - AC BACKUP<sup>(2)</sup></b>                                   |                                                                                      |         |         |         |         |          |       |
| Rated AC Power in Backup Operation <sup>(3)</sup>                         | 3000                                                                                 | 4000    | 5000    | 6000    | 7400    | 9000     | W     |
| AC Output Voltage (Nominal)                                               | 220 / 230                                                                            |         |         |         |         |          | Vac   |
| AC Output Voltage Range                                                   | 184-264.5                                                                            |         |         |         |         |          | Vac   |
| AC Frequency                                                              | 50/60 ± 5                                                                            |         |         |         |         |          | Hz    |
| Maximum Continuous Output Current in Backup Operation <sup>(4)</sup>      | 14                                                                                   | 19      | 23      | 28      | 34      | 41.5     | A     |
| <b>INPUT - DC (PV AND BATTERY)</b>                                        |                                                                                      |         |         |         |         |          |       |
| Transformer-less, Ungrounded                                              | Yes                                                                                  |         |         |         |         |          |       |
| Max Input Voltage                                                         | 480                                                                                  |         |         |         |         |          | Vdc   |
| Nom DC Input Voltage                                                      | 380                                                                                  |         |         |         | 400     |          | Vdc   |
| Reverse-Polarity Protection                                               | Yes                                                                                  |         |         |         |         |          |       |
| Ground-Fault Isolation Detection                                          | 600kΩ Sensitivity                                                                    |         |         |         |         |          |       |
| Maximum DC PV Power                                                       | 6000                                                                                 | 8000    | 10000   | 12000   | 16500   | 20000    | W     |
| Maximum Input Current <sup>(5)</sup>                                      | 8.5                                                                                  | 11      | 14      | 16.5    | 22.5    | 27.5     | Adc   |
| Maximum Inverter Efficiency                                               | 99.2                                                                                 |         |         |         |         |          | %     |
| European Weighted Efficiency                                              | 98.8                                                                                 |         | 99      |         |         |          | %     |
| 2-pole Disconnection                                                      | Yes                                                                                  |         |         |         |         |          |       |
| <b>BATTERY STORAGE</b>                                                    |                                                                                      |         |         |         |         |          |       |
| Supported Battery Types                                                   | SolarEdge Energy Bank Battery, LG RESU10H Prime, LG RESU16H Prime                    |         |         |         |         |          |       |
| Number of Batteries per Inverter                                          | Up to 3 SolarEdge Energy Bank Batteries or up to 2 LG Prime batteries <sup>(6)</sup> |         |         |         |         |          |       |
| Continuous Power                                                          | Up to inverter rated power                                                           |         |         |         |         |          |       |
| <b>SMART ENERGY CAPABILITIES</b>                                          |                                                                                      |         |         |         |         |          |       |
| Consumption Metering                                                      | Built-in <sup>(7)</sup>                                                              |         |         |         |         |          |       |
| Battery Storage                                                           | In backup: Up to 3 inverters, 88.2kWh with SolarEdge Energy Bank Battery             |         |         |         |         |          |       |
| EV Charging                                                               | Smart EV ready - separate EV charger and cabling required                            |         |         |         |         |          |       |

(1) These specifications apply to inverters with part numbers SExxxxH-AUS3xxxx and connection unit model number DCD-1PH-AU-PxH-F-x

(2) Not designed for standalone applications and requires AC for commissioning

(3) Rated AC power in Backup Operation are valid for installations with multiple inverters. For a single backup inverter operation, rated AC power in backup is 90% of the stated value

(4) Rated current in backup operation are valid for installations with multiple inverters. For a single backup inverter operation, rated current in backup is 90% of the stated value

(5) A higher current source may be used; the inverter will limit its input current to the values stated

(6) Support for 2 LG Prime batteries with compatible inverter firmware

(7) For consumption metering current transformers should be ordered separately: SE-CTML-0350-070 or SE-ACT-0750-100 or SE-ACT-0750-250

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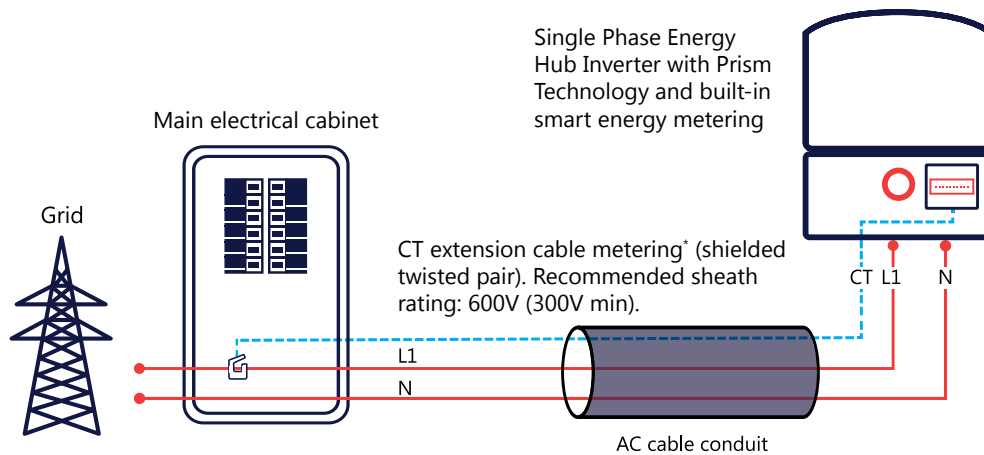
for Australia

SE3000H / SE4000H / SE5000H / SE6000H / SE8250H / SE10000H<sup>(1)</sup>

|                                                          | SE3000H                                                                                   | SE4000H | SE5000H | SE6000H         | SE8250H | SE10000H | UNITS |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------|---------|---------|-----------------|---------|----------|-------|
| <b>ADDITIONAL FEATURES</b>                               |                                                                                           |         |         |                 |         |          |       |
| Supported Communication Interfaces                       | RS485 - Modbus devices, RS485 - SE protocol, Ethernet, Wi-Fi, EnergyNet                   |         |         |                 |         |          |       |
| Integrated AC, DC and Communication Connection Unit      | Yes                                                                                       |         |         |                 |         |          |       |
| Inverter Commissioning                                   | With the SetApp mobile application using built-in Wi-Fi Access Point for local connection |         |         |                 |         |          |       |
| <b>STANDARD COMPLIANCE</b>                               |                                                                                           |         |         |                 |         |          |       |
| Safety                                                   | IEC-62103 (EN50178), IEC-62109, AS/NZS3100                                                |         |         |                 |         |          |       |
| Grid Connection Standards                                | AS/NZS4777                                                                                |         |         |                 |         |          |       |
| Emissions                                                | IEC61000-6-2, IEC61000-6-3, IEC61000-3-11, IEC61000-3-12                                  |         |         |                 |         |          |       |
| <b>INSTALLATION SPECIFICATIONS</b>                       |                                                                                           |         |         |                 |         |          |       |
| AC Output and DC Input Conduit Size / Wire Cross Section | 32 mm Maximum / 1-10 mm <sup>2</sup>                                                      |         |         |                 |         |          |       |
| Dimensions with Connection Unit (HxWxD)                  | 450 X 370 X 174                                                                           |         |         | 540 x 370 x 185 |         |          |       |
| Weight with Connection Unit                              | <15                                                                                       |         |         | <20             |         |          |       |
| Communication Glands                                     | 2                                                                                         |         |         |                 |         |          | kg    |
| Noise                                                    | <25                                                                                       |         |         | <50             |         |          | dBA   |
| Cooling                                                  | Natural convection                                                                        |         |         |                 |         |          |       |
| Operating Temperature Range                              | -40 to +60 <sup>(8)</sup>                                                                 |         |         |                 |         |          | °C    |
| Protection Rating                                        | IP65 - Outdoor and Indoor                                                                 |         |         |                 |         |          |       |

(8) Full power up to at least 50°C; for power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf>

## Connecting CTs to the Revenue Grade and Consumption Meter



\* One CT for import/export or consumption metering

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# Power Optimiser For Australia Module Add-On

P401 / 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

# / Power Optimiser For Australia

## Module Add-On

P401 / P500 / P505

| Optimiser Model<br>(Typical Module Compatibility)                                                               | P401<br>(60&70 Cell modules) | P500<br>(for 96-cell<br>modules)                | P505<br>(for higher current<br>modules) |     |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------|-----------------------------------------|-----|
| <b>INPUT</b>                                                                                                    |                              |                                                 |                                         |     |
| Rated Input DC Power <sup>(1)</sup>                                                                             | 400                          | 500                                             | 505                                     | W   |
| Absolute Maximum Input Voltage<br>(Voc at lowest temperature)                                                   | 60                           | 80                                              | 83                                      | Vdc |
| MPPT Operating Range                                                                                            | 8 - 60                       | 8 - 80                                          | 12.5-83                                 | Vdc |
| Maximum Short Circuit Current (Isc)                                                                             | 11.75                        | 10.1                                            | 14                                      | Adc |
| Maximum Efficiency                                                                                              |                              | 99.5                                            |                                         | %   |
| Weighted Efficiency                                                                                             |                              | 98.8                                            |                                         | %   |
| Overvoltage Category                                                                                            |                              | II                                              |                                         |     |
| <b>OUTPUT DURING OPERATION (POWER OPTIMISER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>                     |                              |                                                 |                                         |     |
| Maximum Output Current                                                                                          |                              | 15                                              |                                         | Adc |
| Maximum Output Voltage                                                                                          | 60                           | 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 Part 15 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)                                                                                          | 129 x 153 x 29.5             | 129 x 153 x 33.5                                | 129 x 162 x 59                          | mm  |
| Weight (including cables)                                                                                       | 655                          | 750                                             | 1064                                    | gr  |
| Input Connector <sup>(2)</sup>                                                                                  | MC4 <sup>(2)</sup>           |                                                 | MC4 <sup>(2)</sup>                      |     |
| Input Wire Length                                                                                               | 0.16 / 0.9 <sup>(4)</sup>    |                                                 | 0.16                                    | m   |
| Output Connector                                                                                                |                              | MC4                                             |                                         |     |
| Output Wire Length                                                                                              |                              | 1.2                                             |                                         | m   |
| Operating Temperature Range                                                                                     |                              | -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) 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 P401-xxxLxxx

| PV System Design Using a Solaredge Inverter <sup>(5)</sup> | Single Phase<br>HD-WAVE                           | Single Phase        | Three Phase<br>Residential | Three Phase<br>Commercial |   |
|------------------------------------------------------------|---------------------------------------------------|---------------------|----------------------------|---------------------------|---|
| Minimum String Length (Power Optimisers)                   | P401, P500                                        | 8                   | 9                          | 16                        |   |
|                                                            | P505                                              | 6                   | 8                          | 14                        |   |
| Maximum String Length (Power Optimisers)                   |                                                   | 25                  | 25                         | 50                        |   |
| Maximum Nominal Power per String                           | 5700 <sup>(6)</sup> (6000 with SE8000H, SE10000H) | 5250 <sup>(6)</sup> | 5625 <sup>(6)</sup>        | 11250 <sup>(7)</sup>      | W |
| Parallel Strings of Different Lengths or Orientations      |                                                   |                     | Yes                        |                           |   |

(5) It is not allowed to mix P505 with P401/P500 in one string

(7) It is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W

(6) If the inverters rated AC power ≤ maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power Refer to: <https://www.solaredge.com/sites/default/files/se-single-string-power-optimizer-application-note-aus.pdf>