



## Hybrid inverter series ES-IRH08

Power classes: 3 kW - 6 kW; Single-phase, 2 MPPT

Product Name Code: ES-IRH08-3K-2 | ES-IRH08-3.6K-2 | ES-IRH08-4K-2 | ES-IRH08-5K-2 | ES-IRH08-6K-2

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2 independent MPPTs | Matte black housing | Single phase hybrid, residential inverter | Smart Energy Management System

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Quick & easy-to-install with basic tools  
| Compact wall mount design

IP66 rated design for outdoor- use  
| UPS capability-power during blackouts



10-year product warranty

For full warranty terms see  
[www.electroluxsolar.com](http://www.electroluxsolar.com)

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## Technical Datasheet

|                   |                                                                                   | ES-IRH08-3k-2                      | ES-IRH08-3.6k-2 | ES-IRH08-4k-2 | ES-IRH08-5k-2 | ES-IRH08-6k-2 |
|-------------------|-----------------------------------------------------------------------------------|------------------------------------|-----------------|---------------|---------------|---------------|
| PV Input          | Max. PV array power                                                               | 5500 Wp STC                        | 6180 Wp STC     | 6500 Wp STC   | 7500 Wp STC   | 9000 Wp STC   |
|                   | Max. input voltage                                                                | 550 V                              |                 |               |               |               |
|                   | MPP voltage range / rated input voltage                                           | 40 V to 530 V / 380 V              |                 |               |               |               |
|                   | Min. input voltage / start voltage                                                | 40 V / 50 V                        |                 |               |               |               |
|                   | No. of independent MPPT trackers / strings per MPPT input                         | 2 / 1                              |                 |               |               |               |
|                   | Max. input current per MPP tracker                                                | 16 A                               |                 |               |               |               |
| Battery input     | Max. short-circuit current per MPP tracker                                        | 20 A                               |                 |               |               |               |
|                   | Nominal battery voltage                                                           | 48 V                               |                 |               |               |               |
|                   | Battery voltage range                                                             | 40 V to 60 V                       |                 |               |               |               |
|                   | Max. charging / discharging power                                                 | 5000 W / 5000 W                    |                 |               |               |               |
|                   | Max. charging current / Max. discharging current                                  | 100 A / 100A                       |                 |               |               |               |
|                   | Battery type                                                                      | LiFePO4                            |                 |               |               |               |
| AC output         | Compatible Battery                                                                | ES-BML08-5.1                       |                 |               |               |               |
|                   | AC voltage range / Nominal AC voltage                                             | 180 V to 280 V / 230 V             |                 |               |               |               |
|                   | Rated AC grid frequency                                                           | 50 Hz / 60 Hz                      |                 |               |               |               |
|                   | AC grid frequency range                                                           | 50 Hz±5Hz / 60 Hz±5Hz              |                 |               |               |               |
|                   | Rated active power                                                                | 3000 W                             | 3680 W          | 4000 W        | 5000 W*1      | 6000 W        |
|                   | Rated apparent power                                                              | 3000 VA                            | 3680 VA         | 4000 VA       | 5000 VA*1     | 6000 VA       |
|                   | Max. apparent power                                                               | 3000 VA                            | 3680 VA         | 4000 VA       | 5000 VA*1     | 6000 VA       |
|                   | Rated grid output Current (@230V)                                                 | 13.1 A                             | 16 A            | 17.4 A        | 21.7 A        | 26.1 A        |
|                   | Max. grid output current                                                          | 13.6 A                             | 16 A            | 18.2 A        | 22.7 A        | 27.3 A        |
| AC input          | Harmonics THDi (@ Nominal power)                                                  | < 3%                               |                 |               |               |               |
|                   | Rated grid voltage                                                                | a.c. 230V                          |                 |               |               |               |
|                   | Rated apparent power                                                              | 6000 VA                            |                 |               |               |               |
|                   | Max. input apparent power from grid                                               | 6000 VA                            |                 |               |               |               |
|                   | Rated input current from grid                                                     | a.c. 26.1 A                        |                 |               |               |               |
|                   | Max. input current from grid                                                      | a.c. 27.3 A                        |                 |               |               |               |
| EPS output        | Nominal output voltage                                                            | 230 V                              |                 |               |               |               |
|                   | Nominal output frequency                                                          | 50 Hz / 60 Hz                      |                 |               |               |               |
|                   | Rated apparent power                                                              | 5000 VA                            |                 |               |               |               |
|                   | Max. output apparent power                                                        | 5000 VA                            |                 |               |               |               |
|                   | Peak output apparent power                                                        | 7500 VA, 10s                       |                 |               |               |               |
|                   | Rated Current (@230V)                                                             | 21.7A                              |                 |               |               |               |
|                   | Max. output current                                                               | 21.7A                              |                 |               |               |               |
|                   | Max. switch time                                                                  | ≤ 10 ms                            |                 |               |               |               |
| Efficiency        | Output THDi (@ Linear load)                                                       | <3%                                |                 |               |               |               |
|                   | MPPT efficiency                                                                   | 99.90%                             |                 |               |               |               |
|                   | Euro efficiency / Max. efficiency                                                 | 97% / 97.6%                        |                 |               |               |               |
| Safety protection | Max. battery to load efficiency                                                   | 94.70%                             |                 |               |               |               |
|                   | DC-side disconnection device                                                      | Available                          |                 |               |               |               |
|                   | PV string- / Battery input reverse polarity protection                            |                                    |                 |               |               |               |
|                   | All-pole sensitive residual current monitoring unit                               | Available                          |                 |               |               |               |
|                   | Anti-islanding protection                                                         | Available                          |                 |               |               |               |
|                   | Ground fault protection                                                           | Available                          |                 |               |               |               |
|                   | AC output over current / short circuit current protection                         | Available / Available              |                 |               |               |               |
|                   | AC over voltage protection                                                        | Available                          |                 |               |               |               |
| General data      | Protection class (as per IEC 62109-1) / overvoltage category (as per IEC 62109-1) | I / AC: III; DC: II                |                 |               |               |               |
|                   | Power factor at rated power / adjustable displacement                             | ≥0.99 / 0.8 leading to 0.8 lagging |                 |               |               |               |
|                   | Dimensions (W * H * D)                                                            | 483 * 455 * 193.5 mm               |                 |               |               |               |
|                   | Device weight                                                                     | 25.1kg                             |                 |               |               |               |
|                   | Operating temperature range                                                       | -25 °C to +60 °C                   |                 |               |               |               |
|                   | Noise emissions (typical)                                                         | 30 dB(A)                           |                 |               |               |               |
|                   | Standby consumption                                                               | < 10 W                             |                 |               |               |               |
|                   | Cooling concept                                                                   | Natural convection                 |                 |               |               |               |
|                   | Degree of protection (as per IEC 60529)                                           | IP66                               |                 |               |               |               |
|                   | Climatic category (according to IEC 60721-3-4)                                    | 4K4H                               |                 |               |               |               |
|                   | Max. permissible value for relative humidity (non-condensing)                     | 100%                               |                 |               |               |               |
|                   | Max. operating altitude                                                           | 4000m (>3000m power derating)      |                 |               |               |               |
| Features          | User interface                                                                    | LED & App                          |                 |               |               |               |
|                   | Communication with BMS                                                            | CAN                                |                 |               |               |               |
|                   | Communication with meter                                                          | RS485                              |                 |               |               |               |
|                   | Communication with portal                                                         | WIFI stick / LAN                   |                 |               |               |               |
|                   | Other communication                                                               | DRM                                |                 |               |               |               |
|                   | Integrated power control / Zero export control                                    | Available / Available              |                 |               |               |               |

1. For VDE-AR-N4105, Smax=Sn=4600VA, Pn=4600W

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