InstaGen
your energy

# InstaGen Single-Phase Hybrid Inverter


The INS-3.6LV-EUA1 is a high-performance single-phase hybrid inverter with excellent reliability, including a power class of 3.6kW.

The intelligent EMS function supports self-consumption mode, economic mode, and backup mode for multi-scenario applications.

Mangement through Cloud remote monitoring allows users to remotely diagnose and track system's performance over time, maximizing the total solar power production and battery utilization.

## Key features

- Max. Efficiency 97.6%, CEC Efficiency 97.0%
- Double MPPT tracker, up to 14 A MPPT current
- DC/AC ratio up to 160%
- Ultralight for easy installation and space-saving
- Support both DC-coupled and AC-coupled system
- EMS has integrated with self-consumption, economic mode, backup mode for multi-scenario application
- Built-in dry contact flexibly set to earth fault alarm, load control or generator control
- Cloud remote monitoring

10 years

Enhanced product guarantee on product and workmanship

## Product Certificates

CE UK CA

For InstaGen enquiries email **productsales@instagroup.co.uk**

# InstaGen Single-Phase Hybrid Inverter

## Technical Specifications

| INS-3.6LV-EUA1 | |
|---|---|
| **Battery** | |
| Battery Type | Li-ion/Lead-acid |
| Nominal Battery Voltage (V) | 48 |
| Voltage Range (V) | 40-60 |
| Max. Charge Current (A) | 90 |
| Max. Discharge Current (A) | 90 |
| Charging Strategy for Li-ion Battery | Self adaption to BMS |
| Charging Curve | 3 Stages / Equalization |
| External Temperature Sensor | Optional |

| PV Input | |
|---|---|
| Max. PV Input Power | 6000 |
| Max. PV Input Voltage (V) | 550 |
| Nominal Input Voltage (V) | 360 |
| MPPT Voltage Range (V) | 125-500 |
| Start-up Voltage | 150 |
| Number of MPPTs | 2 |
| Max.Number of PV String per MPPT | 1/1 |
| Max. PV Input Current (A) | 14/14 |
| Short-circuit Current of PV Input (A) | 17/17 |

| AC Input and Output (On-grid) | |
|---|---|
| Nominal Output Apparent Power (VA) | 3680 |
| Max. Output Apparent Power (VA) | 3680 |
| Max. Input Apparent Power (VA) | 7360 |
| Nominal AC Voltage (V) | 230 |
| Nominal Grid Frequency (Hz) | 50/60 |
| Max. Output Current (A) | 16.0 |
| Max. Input Current (A) | 32.0 |
| Power Factor | 0.8 leading...0.8 lagging |
| Total Harmonic Distortion (@nominal output) | <3% |

| AC Input and Output (Off-grid) | |
|---|---|
| Max. Output Apparent Power (VA) | 3680 |
| Peak Output Apparent Power (VA)(1) | 7360, 10s |
| Nominal AC Voltage (V) | 230 |
| Nominal AC Frequency (Hz) | 50/60 |
| Max. Output Current | 16.0 |
| Total Harmonic Distortion (@linear load) | <3% |

(1) Can be achieved only if PV and battery power are sufficient

| Efficiency | |
|---|---|
| Max. Efficiency | 97.6% |
| Euro Efficiency | 97.0% |
| Max. Battery to Load Efficiency | 95.0% |
| MPPT Efficiency | 99.9% |

| Protection | |
|---|---|
| Anti-islanding Protection | Integrated |
| PV String Input Reverse Polarity Protection | Integrated |
| Insulation Resistor Detection | Integrated |
| Residual Current Monitoring Unit | Integrated |
| AC Over Current Protection | Integrated |
| AC Short Current Protection | Integrated |
| AC Overvoltage and Undervoltage Protection | Integrated |
| Surge Protection | DC Type II/AC Type III |

| General | |
|---|---|
| Dimension (W x H x D) [mm] | 502 X 461 X 202 |
| Weight (kg) | 25 |
| Mounting | Wall Mounting |
| Operation Temperature (°c) | -25 to +65 (>45, derating) |
| Relative Humidity | 0-95%, no condensing |
| Altitude (m) | ≤2000 |
| Cooling | Natural Convection |
| Protection Degree | IP65 |
| Noise (db [A]) | <40 |
| User interface | LED & App |
| Communication with BMS | RS485, CAN |
| Communication with Meter | RS485 |
| Communication Interface | RS485, Wi-Fi/Ethernet/4G (optional) |
| Digital Input/Output | DRM, 1 x DI, 2 x DO |
| Isolation Method (Solar/Battery) | Transformerless/High-frequency Isolation |

| Certification and Standards | |
|---|---|
| Grid Regulation | EN 50549, VDE-AR-N 4105, AS/NZS 4777.2 |
| Safety Regulation | IEC 62109-1, IEC 62109-2 |
| EMC | EN 61000-6-1, EN 61000-6-3 |