

Together we can  
make a difference.™



## Origin6800

Your Origin system will be supplied with the following inverters:

- Clenergy
- Fronius

Please note the inverter supplied with your solar system is AS4777 accredited.

The choice of inverter will be at the **sole discretion** of our installer subject to such matters as stock availability.

Please see the following specification sheet for further details and inverter specifications.

# SolarPowerHouse Grid Connected Inverters



## Performance

- 94%-96% Efficiency
- Wide Input Range
- Dual Processor
- Dual Stage Input Protection

## Connectivity

- RS232 and USB
- Field upgradeable
- Lan and wireless

## Reliability

- CEC Approved
- 5 years warranty
- IP65 for external mounting

## Options

- 10 Year Extended Warranty
- SNMP & RS485
- Zigbee interface
- Panorama Display

The Cleenergy SolarPowerHouse range of grid connected inverters provide the latest technology in a smart package. They are highly reliable and light weight. SolarPowerHouse inverters have a wide input range with a high efficiency. They are designed to be simple to install and maintenance free.

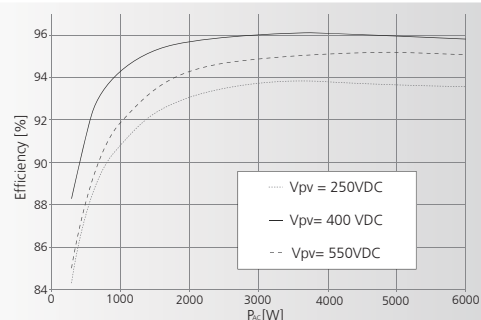
| PV Input                    | SPH15              | SPH20              | SPH30              | SPH40              | SPH50              | SPH60              |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Nominal DC Voltage          | 360 VDC            | 360 VDC            | 360 VDC            | 360 VDC            | 360 VDC            | 360 VDC            |
| MPPT range                  | 150 to 500VDC      | 150 to 500 VDC     | 150 to 500 VDC     | 150 to 500 VDC     | 150 to 600 VDC     | 150 to 600 VDC     |
| Working range               | 100 to 500 VDC     | 100 to 500 VDC     | 100 to 500 VDC     | 100 to 500 VDC     | 100 to 600 VDC     | 100 to 600 VDC     |
| Max PVO circuit voltage     | 550V DC            | 550V DC            | 550V DC            | 550V DC            | 600V DC            | 600V DC            |
| Max. input current at 360DC | 7.5A DC            | 10A DC             | 15A DC             | 20A DC             | 25A DC             | 30A DC             |
| Max. input current          | 8.77A DC           | 11.57A DC          | 17.36A DC          | 20A DC             | 25A DC             | 30A DC             |
| Max. input power.           | 1755W              | 2315W              | 3470W              | 4580W              | 5205W              | 6250W              |
| <b>Grid Output</b>          |                    |                    |                    |                    |                    |                    |
| Nominal output power        | 1500W              | 2000W              | 3000W              | 4000W              | 5000W              | 6000W              |
| Maximum output power        | 1650W              | 2200W              | 3300W              | 4400W              | 5000W              | 6000W              |
| Operational voltage         | 190VAC to 270VAC   | 190VAC to 270VAC   | 190VAC to 270VAC   | 190VAC to 270VAC   | 190VAC to 270VAC   | 190VAC to 270VAC   |
| Operational frequency       | 47-53 Hz           | 47-53 Hz           | 47-53 Hz           | 47-53 Hz           | 47-53 Hz           | 47-53 Hz           |
| Current distortion          | < 3%               | < 3%               | < 3%               | < 3%               | < 3%               | < 3%               |
| Power factor                | >0.99              | >0.99              | >0.99              | >0.99              | >0.99              | >0.99              |
| Max. efficiency             | >94%               | >95%               | >95%               | >96%               | >96%               | >96%               |
| Max. efficiency (Euro)      | >93%               | >94%               | >94%               | >95%               | >95%               | >95%               |
| <b>Environment</b>          |                    |                    |                    |                    |                    |                    |
| Protection degree           | IP65               | IP65               | IP65               | IP65               | IP65               | IP65               |
| Operation temperature       | -25 to 55° C       | -25 to 55° C       | -25 to 55° C       | -25 to 55° C       | -25 to 55° C       | -25 to 55° C       |
| Humidity (0 to 95%)         | non-condensing     | non-condensing     | non-condensing     | non-condensing     | non-condensing     | non-condensing     |
| Heat dissipation            | Convection         | Convection         | Convection         | Convection         | Fan Assisted       | Fan Assisted       |
| Acoustic noise level        | <40dB, A- weighted | <40dB, A- weighted | <40dB, A- weighted | <40dB, A- weighted | <40dB, A- weighted | <40dB, A- weighted |
| <b>Communication</b>        |                    |                    |                    |                    |                    |                    |
| Comm. Interface             | RS232 & USB        | RS232 & USB        | RS232 & USB        | RS232 & USB        | RS232 & USB        | RS232 & USB        |
| Optional                    | SNMP & RS485       | SNMP & RS485       | SNMP & RS485       | SNMP & RS485       | SNMP & RS485       | SNMP & RS485       |
| FW upgrade                  | Yes, via RS232     | Yes, via RS232     | Yes, via RS232     | Yes, via RS232     | Yes, via RS232     | Yes, via RS232     |
| <b>Technology</b>           |                    |                    |                    |                    |                    |                    |
| Transformeless              | Yes                | Yes                | Yes                | Yes                | Yes                | Yes                |
| Waveform                    | Sine PWM           | Sine PWM           | Sine PWM           | Sine PWM           | Sine PWM           | Sine PWM           |
| <b>Mechanical</b>           |                    |                    |                    |                    |                    |                    |
| HxWxD (mm)                  | 362x312x131        | 362x312x131        | 362x312x141        | 384x464x131        | 515x464x142        | 515x464x142        |
| Weight (kg)                 | 14                 | 14                 | 14                 | 21                 | 27                 | 27                 |

Lab:



Certificate:

AS3100  
AS4777





# FRONIUS **IG** PV Inverter

## Technical data sheet

- + An informative display for monitoring all system functions.
- + Quick and easy installation.
- + Maximum reliability.
- + High Frequency Transformer Technology offers maximum output in minimum space.
- + The Intelligent Module-Manager's™ process optimises yields.
- + The MIX™ Concept increases energy yields in the part load area.
- + FRONIUS IG DatCom components offer a reliable and simple visualisation and monitoring.



POWERING YOUR FUTURE



## OVERVIEW OF THE FRONIUS IG FAMILY

### FRONIUS IG. The Reliable PV Inverter Series.

The FRONIUS IG series has proven itself to be powerful, user-friendly and highly reliable in a compact format. Equipped for every size of system, the combination of different types available for selection is limitless. The ingenious processor control combined with the powerful HF transformer extracts the maximum energy yield from all types of modules.

### FRONIUS IG 60 HV. The Powerhouse.

Higher yield due to work-sharing is achieved by linking the two power circuits using the MIX™ concept, our optimised master-slave system. In the part-load range only one of the two power stage sets operates, while both work together at full-load. The advantages are a noticeable increase in yield with a simultaneous reduction in operating wear.

### FRONIUS IG Outdoors. The Weatherproof IG.

The FRONIUS IG Outdoors has been created specially for use in the open air and has been tested to an IP45 degree of protection. This ensures a continuous circulation of air that prevents condensate from collecting. The IG is also protected against the ingress of solid foreign bodies and hose water. It is also reliable and safe to use near the sea due to a special protective coating applied to the printed circuit boards within the inverter.

## TECHNICAL DETAILS.

It goes without saying that every FRONIUS IG complies with all the obligatory guidelines and standards of each country. More in-depth information and certificates may be viewed at [www.fronius.com](http://www.fronius.com) under "downloads". Of course, all FRONIUS IG bear the **CE** mark.

| TECHNICAL DATA  | FRONIUS IG 15   | 20             | 30             | 40             | 60 HV          |
|---|---|----------------|----------------|----------------|----------------|
| MPP voltage range                                     | 150 - 400 V   | 150 - 400 V    | 150 - 400 V    | 150 - 400 V    | 150 - 400 V    |
| Max. input voltage (at 1000 W/m <sup>2</sup> ; -10°C) | 500 V   | 500 V          | 500 V          | 500 V          | 530 V          |
| PV array output                                       | 1300 - 2000 Wp  | 1800 - 2700 Wp | 2500 - 3600 Wp | 3500 - 5500 Wp | 4600 - 6700 Wp |
| Nominal output  | 1300 W  | 1800 W         | 2500 W         | 3500 W         | 4600 W         |
| Max. power output                                     | 1500 W  | 2000 W         | 2650 W         | 4100 W         | 5000 W         |
| Max. efficiency                                       | 94.2 %  | 94.3 %         | 94.3 %         | 94.3 %         | 94.3 %         |
| Euro efficiency                                       | 91.4 %  | 92,3 %         | 92.7 %         | 93.5 %         | 93.5 %         |
| Mains voltage/frequency                               | 230 V / 50 Hz (60 Hz)   |                |                |                |                |
| Size (l x w x h)                                      | 366 x 344 x 220 mm (500 x 435 x 225 mm) 610 x 344 x 220 mm (733 x 435 x 225 mm) |                |                |                |                |
| Weight  | 9 kg (12 kg)  |                | 16 kg (20 kg)  |                |                |
| Cooling   | controlled forced-air cooling   |                |                |                |                |
| Housing variations                                    | designer internal housing; optional outer housing                               |                |                |                |                |
| Ambient temperature range                             | -20 ..... 50 °C   |                |                |                |                |



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