



**The Fronius IG inverter has gained broad market acceptance due to its advanced High Frequency technology which offers high efficiency, precision MPP-tracking and active cooling, all of which results in superior energy production from photovoltaic systems.**

#### **Light Weight**

As a result of HF technology, the Fronius IG weights in at 26 lbs (11.8 kg), half the weight of the competition. The reduced weight saves your back and shipping dollars while it helps the environment by using fewer raw materials and reducing CO<sup>2</sup> emissions. Easier to ship, safer to install and better for the environment too.

#### **Integrated DC/AC Disconnects**

Each inverter comes with built-in DC and AC disconnects and in many cases eliminate the need for external breakers reducing installation time and total system costs. With its lightweight and compact design the Fronius IG can be easily lifted on or off of the bracket. Standard knockouts and terminal strip saves time and expense when making electrical connections.

#### **Graphic Display and User Interface**

Owning a PV system is great. Knowing exactly what it is doing is even better. A large, bright, easy-to-use LCD display comes standard with every Fronius IG inverter. You can view over 20 critical system parameters pertaining to the inverter and solar system operation. If a system fault has occurred, the display shows the reason for the problem, making it easy for the user or installer to troubleshoot and repair.

#### **Reliable-Rugged-Built to Last**

Fronius IG inverters are built in an ISO 9001 facility. As a world leading manufacturer of HF welding equipment Fronius builds products that can withstand the test of time in harsh environments and heavy use. That know-how is built into each and every IG inverter. Built to last by a company that has been around long enough to know.



#### **High Frequency (HF) Technology**

High frequency technology is extremely compact and yet capable of transforming considerable power. Using an innovative Phase-Shift process the Fronius IG minimizes switching losses and is able to generate ultra high conversion efficiencies of 94.4 %!

#### **Maximum Power Point Tracking (MPPT) accuracy of 99.9 %**

Regardless of which PV modules you use; crystalline, poly or thin film, the Fronius IG Module-Manager software locks onto the array maximum power point to optimize the energy output from your array.

#### **Wide Input Voltage Range**

A wide input voltage range (150-500 V) permits the use of modules of every power size and voltage. You can easily fine-tune your system with different wattage modules and string configurations. Accurate MPP tracking and high efficiency is maintained throughout the voltage and power range.



### Intelligent Thermal Management

For high reliability, long life and the ability to operate at full power over a wide range of temperatures, inverter components must be kept cool. Fronius, which perfected Active Cooling in HF welders, employs the same Active Cooling technology in its IG inverters. Fronius IG inverters operate reliably at full power, without de-rating, over a wider range of temperatures than competing inverters.

### Protections

- | Ground fault protection:  
internal GFDI, in accordance with UL 1741 and NEC
- | DC reverse polarity protection:  
internal diode Islanding protection Internal, in accordance with UL 1741 and NEC

- | Over temperature: output power de-rating
- | Surge Protection:  
internal DC & AC protection, Tested to 6 kV

### Certifications and compliance

- | UL certification in progress, FCC Part 15 Class B
- | Ground fault detector and interrupter:  
compliant with NEC Art. 690 requirements
- | Maximum AC over current protection:  
two-pole circuit breaker 40 A
- | AC wire sizing:  
use minimum AWG 10 90 °C copper wire
- | DC wire sizing:  
use minimum AWG 8 90 °C copper wire
- | Warranty 5 years; 10 year available

## Technical data Fronius IG 4000/5100/4500-LV:

| DC Input Data                     | IG 4000                            | IG 5100        | IG 4500-LV     |
|-----------------------------------|------------------------------------|----------------|----------------|
| Recommended PV Power              | 3,200-4,600 Wp                     | 4,600-6,000 Wp | 3,700-5,300 Wp |
| Operating DC Voltage Range        | 150-500 V                          | 150-500 V      | 150-500 V      |
| Nominal Input Current             | 16.3 A                             | 20.8 A         | 18.3 A         |
| Max. DC Input Voltage             | 500 V                              | 500 V          | 500 V          |
| Max. DC Input Current             | 26.1 A                             | 33.2 A         | 29.3 A         |
| <b>AC Output Data</b>             |                                    |                |                |
| Maximum Output Power at 40 °C     | 4,000 W                            | 5,100 W        | 4,500 W        |
| Nominal AC Output Voltage         | 240 V                              | 240 V          | 208 V          |
| Utility AC Voltage Range          | 212 – 264 V (240 V +10% / -12 %)   |                | 183 - 227 V    |
| Nominal AC Current                | 16.7 A                             | 21.3 A         | 21.6 A         |
| Maximum AC Current                | 16.7 A                             | 21.3 A         | 21.6 A         |
| Maximum Utility Back Feed Current | 0.0 A                              | 0.0 A          | 0.0 A          |
| Operating Frequency Range         | 59.3-60.5 Hz (60 +0.5/-0.7 Hz nom) |                |                |
| Total Harmonic Distortion THD     | < 5 %                              | < 5 %          | < 5 %          |
| Power Factor                      | 1                                  | 1              | 1              |

Available from:

IG40005100-TD-USA-0507

BALANCE OF SYSTEMS