

In the MIX™ – a closer look at the Fronius IG Plus PV Inverters

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An important advantage of having a Fronius IG Plus inverter involves the exclusive MIX™ (Master Inverter eXchange) concept. Like its predecessor, the Fronius IG, the IG Plus can have more than one power stage. An inverter becomes significantly more efficient with a DC loading of 25 or more percent of the nominal rated output. As solar irradiation wavers and dips in the procession of the day, the Fronius inverter can scale back and run a single power stage. The three stage 12kW inverter can now perform as a 4kW or 8kW inverter. Hence, we keep the loading on the power stages higher than would otherwise be possible with a single-stage inverter. The central processor evaluates and determines which power stage has the least amount of operation hours, then selects that power stage as the Master. This is the first power stage to be turned on and will run until the end of the day. The other power stages are the slaves that will turn on and off as needed. This keeps an equal balance on component wear and extends the overall life of the inverter. This MIX™ concept is the ideal situation for keeping the efficiency high in low light conditions such as cloudy days or those that occur naturally every morning and evening.

The IG Plus boasts an upgraded design and improved efficiency. This new design provides these inverters with a wider input voltage range of 230V-600V. The V_{mpp} is 230V-500V and the start up voltage is 245V. When designing your systems, keep this question in mind: 15 years from now, on a hot day, will you still achieve at least 230V $_{mpp}$ from the aging modules to produce the needed voltage to stay within the Maximum Power Point range?



1: Fronius IG Plus Inverters are available from 3 to 12kW

[More information the Fronius IG Plus product line](#)