

# Fronius IG Plus

The next generation grid-connected PV inverter

The objective was clear: Make maximum use out of every ray of light. And this doesn't just depend on the peak of maximum efficiency. What's more important here is intelligent cooperation between different factors: constant efficiency over a wide input voltage range, for example, as well as fast and precise reaction to even the smallest changes in weather conditions. And don't forget reliable and uninterrupted operation. All of this is integrated into the new inverter generation, the Fronius IG Plus. With power classes of 3.5 to 12 kW. For maximum yield. In any weather.



## Technical data Fronius IG Plus 35 V / 50 V / 70 V / 100 V / 120 V / 150 V

Naturally, all Fronius IG Plus devices have the **CE** mark and meet all required country-specific guidelines and standards. For more information and certificates as well as details regarding system analysis and control using the Fronius DATCOM system, please go to [www.fronius.com](http://www.fronius.com).

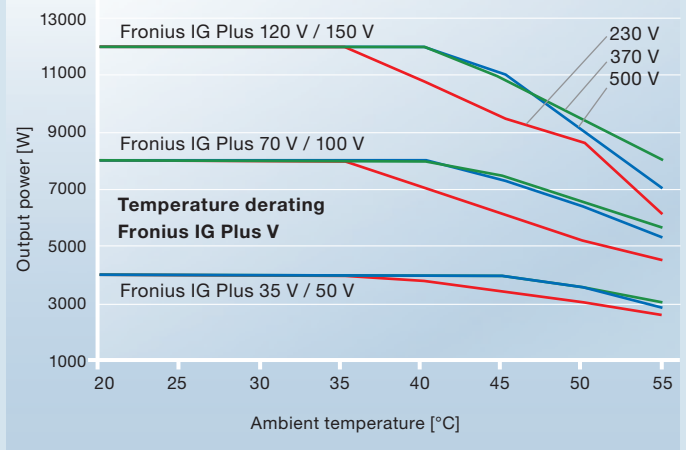
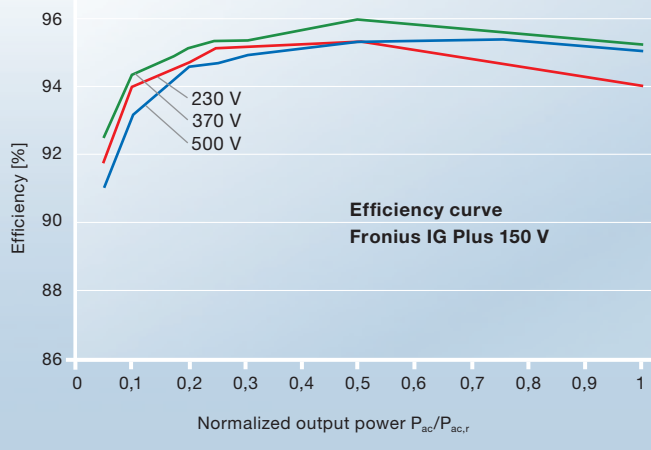
Data as per EN 50524:2008

INPUT DATA	Fronius IG Plus 35 V	50 V	70 V	100 V	120 V	150 V
DC maximum power at $\cos \varphi=1$	3710 W	4260 W	6880 W	8520 W	10590 W	12770 W
Max. input current ( $I_{dc,max}$ )	16.1 A	18.5 A	29.9 A	37.0 A	46.0 A	55.5 A
Min. input voltage ( $U_{dc,min}$ )			230 V			
Feed-in starting voltage ( $U_{dc,start}$ )			260 V			
Nominal input voltage ( $U_{dc,r}$ )			370 V			
Max. input voltage ( $U_{dc,max}$ )			600 V			
MPP voltage range ( $U_{mpp,min} - U_{mpp,max}$ )			230 - 500 V			
<b>OUTPUT DATA</b>						
AC nominal output ( $P_{ac,r}$ ) at $\cos \varphi=1$	3500 W	4000 W	6500 W	8000 W	10000 W	12000 W
Max. output power	3500 VA	4000 VA	6500 VA	8000 VA	10000 VA	12000 VA
Max. output current ( $I_{ac,max}$ )	15.2 A	17.4 A	14.1 A (28.3 A)*	17.4 A (34.8 A)*	14.5 A	17.4 A
Grid connection	1-NPE 230 V		2-NPE 400 V / 230 V (1-NPE 230 V)		3-NPE 400 V / 230 V	
Min. output voltage ( $U_{ac,min}$ )	180 V					
Max. output voltage ( $U_{ac,max}$ )	270 V					
Frequency ( $f$ )	50 Hz / 60 Hz					
Frequency range ( $f_{min} - f_{max}$ )	45 Hz - 65 Hz					
Harmonic distortion	< 3 %					
Power factor ( $\cos \varphi_{ac,r}$ )	0.85 - 1 ind. / cap.					
Night consumption	< 1 W					

\* 1-phase (opt.)



POWERING YOUR FUTURE



EFFICIENCY	Fronius IG Plus 35 V	50 V	70 V	100 V	120 V	150 V
Max. efficiency	95.7%	95.7%	95.7%	95.7%	95.9%	95.9%
Euro. efficiency ( $\eta_{EU}$ )	95.0%	95.0%	95.1%	95.2%	95.4%	95.4%
$\eta$ at 5% $P_{ac,r}^{**}$	88.2 / 88.1 / 87.4 %	88.7 / 88.6 / 88.2 %	90.4 / 91.1 / 90.3 %	90.9 / 91.4 / 90.5 %	91.5 / 92.2 / 90.7 %	91.8 / 92.5 / 91.1 %
$\eta$ at 10% $P_{ac,r}^{**}$	91.6 / 92.3 / 91.5 %	92.1 / 92.7 / 92.1 %	93.0 / 93.2 / 92.0 %	93.6 / 93.7 / 92.5 %	93.4 / 93.7 / 92.6 %	94.0 / 94.3 / 93.2 %
$\eta$ at 20% $P_{ac,r}^{**}$	94.1 / 94.6 / 93.4 %	94.4 / 94.7 / 93.5 %	94.7 / 94.7 / 94.0 %	94.7 / 95.1 / 94.4 %	94.6 / 95.2 / 94.5 %	94.7 / 95.1 / 94.6 %
$\eta$ at 25% $P_{ac,r}^{**}$	94.6 / 94.8 / 93.7 %	94.8 / 94.9 / 94.0 %	94.9 / 95.1 / 94.4 %	94.9 / 95.3 / 94.8 %	94.7 / 95.3 / 94.7 %	95.1 / 95.3 / 94.7 %
$\eta$ at 30% $P_{ac,r}^{**}$	94.9 / 95.0 / 94.1 %	95.1 / 95.2 / 94.5 %	95.0 / 95.3 / 94.8 %	94.9 / 95.4 / 95.0 %	95.0 / 95.4 / 94.7 %	95.1 / 95.3 / 94.9 %
$\eta$ at 50% $P_{ac,r}^{**}$	95.3 / 95.7 / 95.3 %	95.2 / 95.7 / 95.3 %	95.3 / 95.5 / 94.9 %	95.2 / 95.7 / 95.2 %	95.3 / 95.9 / 95.1 %	95.3 / 95.9 / 95.3 %
$\eta$ at 75% $P_{ac,r}^{**}$	94.9 / 95.6 / 95.4 %	94.7 / 95.5 / 95.4 %	95.0 / 95.7 / 95.3 %	94.7 / 95.5 / 95.3 %	95.0 / 95.5 / 95.4 %	94.7 / 95.6 / 95.4 %
$\eta$ at 100% $P_{ac,r}^{**}$	94.4 / 95.2 / 95.1 %	94.0 / 95.0 / 95.0 %	94.5 / 95.4 / 95.2 %	94.0 / 95.1 / 95.0 %	94.6 / 95.5 / 95.3 %	94.0 / 95.2 / 95.1 %
MPP adaptation efficiency	> 99.9%					

\*\* at  $U_{mpp\ min} / U_{dc,r} / U_{mpp\ max}$

#### GENERAL DATA

Dimensions (height x width x depth)	673 x 434 x 250 mm	968 x 434 x 250 mm	1263 x 434 x 250 mm
Weight	23.8 kg	36.9 kg	49.2 kg
Degree of protection	IP 54***		
Protection class	1		
Inverter concept	HF transformer		
Cooling	Regulated air cooling		
Installation	indoor and outdoor installation		
Ambient temperature range	From -20°C to +55°C		
Permitted humidity	0% to 95%		
DC connection technology	6x DC+ and 6x DC- screw terminal connections 1.5 mm <sup>2</sup> – 16 mm <sup>2</sup>		
AC connection technology	3 – 5 pin AC screw terminal connection 2.5 mm <sup>2</sup> – 35 mm <sup>2</sup>		
Standards for grid interface (country-specific)	DIN V VDE V 0126-1-1, ÖVE/ÖNORM E 8001-4-712, UTE C15-712, EN 50438, G83, G59, C 10 / 11, CER 06-190, Guida per le connessioni alla rete elettrica di ENEL Distribuzione, AS 4777-1, AS 4777-2, AS 4777-3		

#### SAFETY EQUIPMENT

DC insulation measurement	Warning when $R_{ISO} < 500\ k\Omega$
Overload behavior	Operating point shift, power limiter
DC circuit breaker	integrated

\*\*\* Please follow the guidelines in the operating instructions for properly installing the inverter.



**FRONIUS UK LTD.**  
Maidstone Road, Kingston  
Milton Keynes, MK10 0BD  
E-Mail: pv-sales-uk@fronius.com

**FRONIUS INTERNATIONAL GMBH**  
Buxbaumstraße 2, 4600 Wels, Austria  
E-Mail: PV@fronius.com

[www.fronius.com](http://www.fronius.com)