

Fronius IG TL

Transformerless PV inverter with
standard system monitoring

System monitoring with the Status Manager comes standard with the Fronius IG TL. This includes string malfunction detection, detailed status codes as well as a direct signaling contact. The Status Manager immediately reports any problems throughout the entire system thus locking in system yields for the long-term. It also has a unique feature in which a commercially-available USB stick can be used for easy system monitoring as well as simple inverter updating. Get plugged into the future!



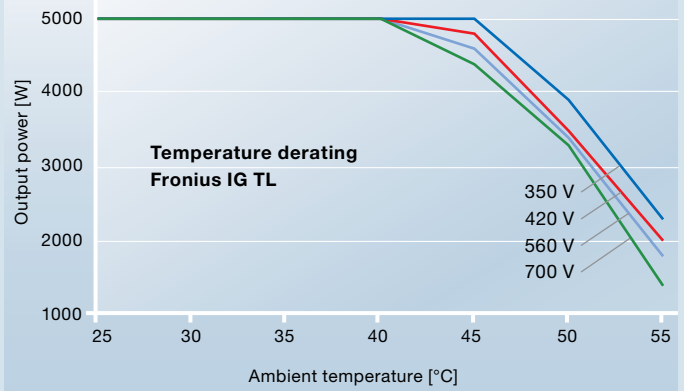
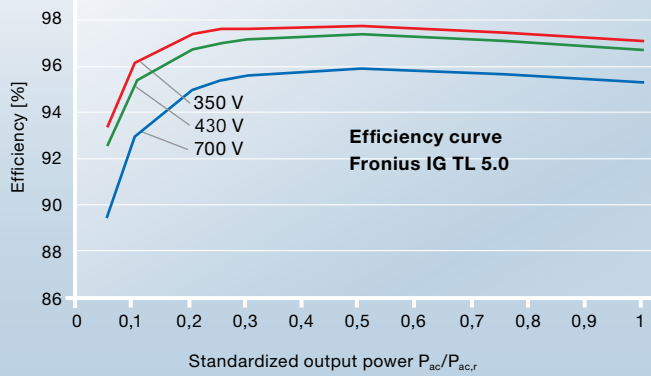
Technical Data Fronius IG TL 3.0 / 3.6 / 4.0 / 5.0

Naturally, all Fronius IG TL devices have the **CE** mark and meet all required guidelines and standards. For more information and certificates as well as details regarding system analysis and control using the DATCOM system, please go to www.fronius.com.

Data as per EN 50524:2008

INPUT DATA	Fronius IG TL 3.0	Fronius IG TL 3.6	Fronius IG TL 4.0	Fronius IG TL 5.0
DC maximum power	3130 W	3840 W	4190 W	5250 W
Max. input current ($I_{dc\ max}$)	8.9 A	11.0 A	12.0 A	15.0 A
Min. input voltage ($U_{dc\ min}$)			350 V	
Feed-in starting voltage ($U_{dc\ start}$)			350 V	
Nominal input voltage ($U_{dc\ n}$)			350 V	
Max. input voltage ($U_{dc\ max}$)			850 V	
MPP voltage range ($U_{mpp\ min} - U_{mpp\ max}$)			350 - 700 V	
OUTPUT DATA				
AC nominal output ($P_{ac\ n}$)	3000 W	3680 W	4000 W	4600 W* / 5000 W
Max. output power	3000 W	3680 W	4000 W	5000 W
Max. output current ($I_{ac\ max}$)	13.0 A	16.0 A	17.4 A	21.7 A
Grid connection			1~NPE 230 V	
Min. output voltage ($U_{ac\ min}$)			180 V	
Max. output current ($U_{ac\ max}$)			270 V	
Frequency (f_i)			50 Hz / 60 Hz	
Frequency range ($f_{min} - f_{max}$)			45 Hz - 65 Hz	
Harmonic distortion			< 3 %	
Power factor ($\cos \varphi_{ac\ n}$)			1	
Night consumption			< 1 W	

* Fronius IG TL 5.0 devices destined for Germany, Austria, Belgium and the Czech Republic have an AC nominal output of 4600 W.



EFFICIENCY	Fronius IG TL 3.0	Fronius IG TL 3.6	Fronius IG TL 4.0	Fronius IG TL 5.0
Max. efficiency	97.7 %	97.7 %	97.7 %	97.7 %
Euro. efficiency (η_{EU})	97.1 %	97.2 %	97.3%	97.3 %
η at 5 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	92.1 / 87.8 %	92.6 / 88.3 %	92.9 / 88.6 %	93.4 / 89.4 %
η at 10 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	94.2 / 90.2 %	95.3 / 91.2 %	95.7 / 91.8 %	96.1 / 92.9 %
η at 20 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	96.6 / 93.6 %	96.9 / 94.2 %	97.2 / 94.5 %	97.4 / 94.9 %
η at 25 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	97.0 / 94.3 %	97.2 / 94.7 %	97.4 / 94.9 %	97.6 / 95.3 %
η at 30 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	97.3 / 94.7 %	97.4 / 95.1 %	97.5 / 95.2 %	97.6 / 95.5 %
η at 50 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	97.6 / 95.5 %	97.6 / 95.7 %	97.7 / 95.7 %	97.7 / 95.8 %
η at 75 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	97.6 / 95.8 %	97.6 / 95.8 %	97.5 / 95.7 %	97.4 / 95.6 %
η at 100 % $P_{ac,r}$ and at $U_{mpp\ min} / U_{mpp\ max}$	97.5 / 95.7 %	97.4 / 95.6 %	97.3 / 95.5 %	97.0 / 95.2 %
MPP adaptation efficiency	99.9 %			

GENERAL DATA

Dimensions (height x width x depth)	597 x 413 x 195 mm
Weight	19.1 kg
Degree of protection	IP 55
Protection class	1
Inverter concept	Transformerless
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 2.5 mm ² - 16 mm ²
AC connection technology	3-pin AC screw terminal connection 2.5 mm ² - 16 mm ²
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	Universal-current-sensitive fault monitoring
Overload behavior	Operating point shift, power limiter
DC circuit breaker	integrated

INTERFACES

USB A socket	For USB sticks** with max. dimensions of 80 x 33 x 20 mm (L x W x H)
Signalling output (NO contact)	2-pin screw terminal, 12 V max. 300 mA
2x RJ45 sockets (RS485)	Solar Net interface, interface protocol

** Please note the information regarding the use of USB sticks in the operating instructions (temperature range).



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