

FRONIUS ECO

/ The compact project inverter for maximum yields.



/ SnapINverter Technology



/ Integrated data communication



/ Smart Grid Ready



/ Dynamic Peak Manager



/ Zero feed-in



/ The three-phase Fronius Eco in power categories 25.0 and 27.0 kW perfectly meets all the requirements of large-scale installations. Thanks to its light weight and SnapINverter mounting system, this transformerless device can be installed quickly and easily either indoors or outdoors. This inverter range is setting new standards with its IP 66 protection class. Furthermore, thanks to its integrated double fuse holders and optional overvoltage protection, string collection boxes are no longer necessary.

TECHNICAL DATA FRONIUS ECO

INPUT DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Max. input current ($I_{dc\ max}$)	44.2 A	47.7 A
Max. array short circuit current		71.6 A
Min. input voltage ($U_{dc\ min}$)		580 V
Feed-in start voltage ($U_{dc\ start}$)		650 V
Nominal input voltage ($U_{dc,r}$)		580 V
Max. input voltage ($U_{dc\ max}$)		1,000 V
MPP voltage range ($U_{mpp\ min} - U_{mpp\ max}$)		580 - 850 V
Number of MPP trackers		1
Number of DC connections		6
Max. PV generator output ($P_{dc\ max}$)		37.8 kW _{peak}
OUTPUT DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
AC nominal output ($P_{ac,r}$)	25,000 W	27,000 W
Max. output power	25,000 VA	27,000 VA
AC output current ($I_{ac\ nom}$)	37.9 A / 36.2 A	40.9 A / 39.1 A
Grid connection (voltage range)		3-NPE 380 V / 220 V or 3-NPE 400 V / 230 V (+20 % / -30 %)
Frequency (frequency range)		50 Hz / 60 Hz (45 - 65 Hz)
Total harmonic distortion		< 2.0 %
Power factor ($\cos \varphi_{ac,r}$)		0 - 1 ind. / cap.
GENERAL DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Dimensions (height x width x depth)		725 x 510 x 225 mm
Weight		35.7 kg
Degree of protection		IP 66
Protection class		1
Overvoltage category (DC / AC) ²⁾		1 + 2 / 3
Night-time consumption		< 1 W
Inverter concept		Transformerless
Cooling		Regulated air cooling
Installation		Indoor and outdoor installation
Ambient temperature range		-25 - +60 °C
Permitted humidity		0 to 100 %
Max. altitude		2,000 m
DC connection technology		6x DC+ and 6x DC- screw terminals 2.5 - 16 mm ²
AC connection technology		5-pole AC screw terminals 2.5 - 16 mm ²
Certificates and compliance with standards	ÖVE / ÖNORM E 8001-4:712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G59/3, UNE 206007-1, SI 4777, CEI 0-16, CEI 0-21	



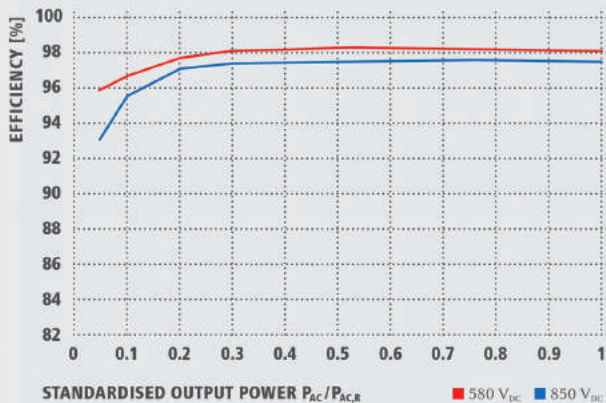
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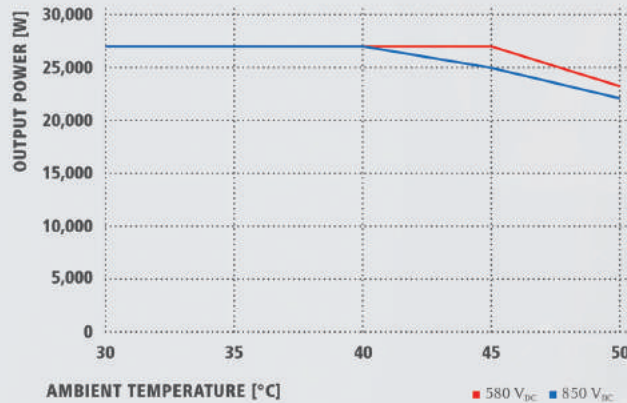
INVEREX[®]

SOLAR ENERGY

FRONIUS ECO 27.0.3-S EFFICIENCY CURVE



FRONIUS ECO 27.0.3-S TEMPERATURE DERATING



TECHNICAL DATA FRONIUS ECO

EFFICIENCY	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Max. efficiency	98.2 %	98.3 %
European efficiency (η_{EU})	98.0 %	98.0 %
η at 5 % $P_{Ac,r}$ ¹⁾	95.1 / 91.5 %	95.9 / 93.1 %
η at 10 % $P_{Ac,r}$ ¹⁾	97.0 / 95.2 %	96.8 / 95.7 %
η at 20 % $P_{Ac,r}$ ¹⁾	97.8 / 96.9 %	97.7 / 97.1 %
η at 25 % $P_{Ac,r}$ ¹⁾	98.0 / 97.0 %	98.1 / 97.3 %
η at 30 % $P_{Ac,r}$ ¹⁾	98.1 / 97.2 %	98.1 / 97.4 %
η at 50 % $P_{Ac,r}$ ¹⁾	98.2 / 97.5 %	98.3 / 97.5 %
η at 75 % $P_{Ac,r}$ ¹⁾	98.2 / 97.5 %	98.2 / 97.6 %
η at 100 % $P_{Ac,r}$ ¹⁾	98.2 / 97.5 %	98.1 / 97.5 %
MPP adaptation efficiency		> 99.9 %

PROTECTION DEVICES	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
DC insulation measurement		Yes
Overload behavior		Operating point shift, power limitation
DC disconnecter		Yes
Integrated string fuse holders ²⁾		Yes
Reverse polarity protection		Yes

INTERFACES	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
WLAN / Ethernet LAN		Fronius Solarweb, Modbus TCP SunSpec, Fronius Solar API (JSON)
6 inputs and 4 digital inputs/outputs		Interface to ripple control receiver
USB (A socket) ³⁾		Datalogging, inverter update via USB flash drive
2x RS422 (RJ45 socket) ³⁾		Fronius Solar Net
Signalling output ³⁾		Energy management (floating relay output)
Datalogger and Webservice		Included
External input ³⁾		S0 meter connection / Evaluation of overvoltage protection
RS485		Modbus RTU SunSpec or meter connection

¹⁾ And at $U_{mpp\ min} = U_{dc,r} / U_{mpp\ max}$. ²⁾ Optionally fitted with 6 fuses 15 A / 1,000 V on the plus side. ³⁾ Also available in the light version.