

FRONIUS ECO

/ The compact project inverter for maximum yields.



/ SnapINverter technology



/ Integrated data communication



/ SuperFlex Design



/ Smart Grid Ready



/ PC board replacement



/ Zero feed-in



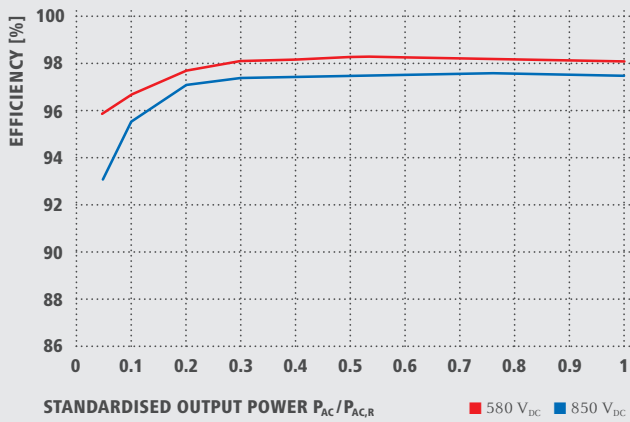
/ The three-phase Fronius Eco in power categories 25.0 and 27.0 kW perfectly meets all the requirements of large-scale installations. Thanks to its light weight and SnapINverter mounting system, this transformerless device can be installed quickly and easily either indoors or outdoors. This inverter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

TECHNICAL DATA FRONIUS ECO

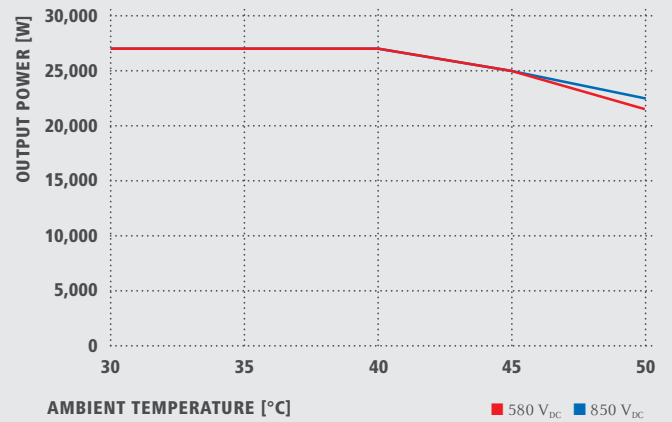
INPUT DATA	FRONIUS ECO 25.0-3-S	FRONIUS ECO 27.0-3-S
Max. input current ($I_{dc\ max}$)	44.2 A	47.7 A
Max. array short circuit current		71.6 A
Min. input voltage ($U_{dc\ min}$)		580 V
Feed-in start voltage ($U_{dc\ start}$)		650 V
Nominal input voltage ($U_{dc,r}$)		580 V
Max. input voltage ($U_{dc\ max}$)		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 total PV array size ($P_{dc\ max}$)		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) ¹⁾	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	

¹⁾According to IEC 62109-1. DIN rail for optional type 1 + 2 and type 2 overvoltage protection available.

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 Solar.web, 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 Webserver	Included	
External input ³⁾	S0 meter connection / Input for 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.

/ Perfect Welding / Solar Energy / Perfect Charging

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