

# FRONIUS ECO

The compact project inverter for maximum yields



SnapINverter  
Technology



Integrated data  
communication



Dynamic Peak  
Manager



Smart Grid  
Ready



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    |
|--------------------------------------------------------|----------------------|-------------------------|
| Number of MPP trackers                                 |                      | 1                       |
| Max. input current ( $I_{dc\ max}$ )                   | 44.2 A               | 47.7 A                  |
| Max. array short circuit current ( $I_{sc\ pv}$ )*     |                      | 80 A                    |
| DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ ) |                      | 580 - 1,000 V           |
| Feed-in start voltage ( $U_{dc\ start}$ )              |                      | 650 V                   |
| Usable MPP voltage range                               |                      | 580 - 850 V**           |
| Number of DC connections                               |                      | 6                       |
| Max. PV generator output ( $P_{dc\ max}$ )             |                      | 37.8 kW <sub>peak</sub> |

\*  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1,25$  according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021. \*\* based on 230 V grid voltage

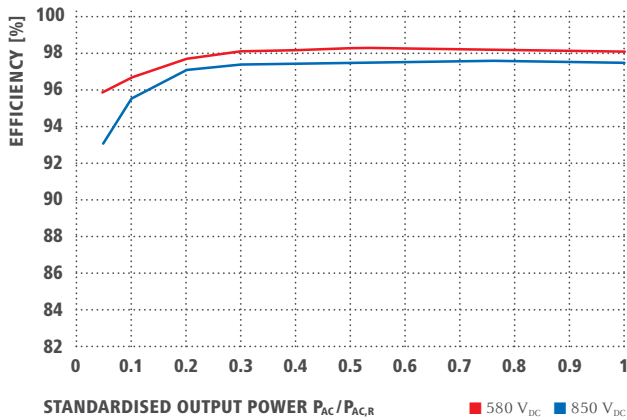
| OUTPUT DATA                              | FRONIUS ECO 25.0-3-S                                        | FRONIUS ECO 27.0-3-S |
|------------------------------------------|-------------------------------------------------------------|----------------------|
| AC nominal output ( $P_{ac\ n}$ )        | 25,000 W                                                    | 27,000 W             |
| Max. output power / rated apparent 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                | < 3,0 %                                                     |                      |
| Power factor ( $\cos \phi_{ac\ n}$ )     | 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) <sup>1)</sup> | 2 / 3                                                                                                                                                                                                |                      |
| Night-time consumption                       | < 1 W                                                                                                                                                                                                |                      |
| Inverter concept                             | Transformerless                                                                                                                                                                                      |                      |
| Cooling                                      | Regulated air cooling                                                                                                                                                                                |                      |
| Installation (DIN rail)                      | Indoor and outdoor installation (106 x 90 x 66 mm)                                                                                                                                                   |                      |
| Ambient temperature range                    | -25 - +60 °C                                                                                                                                                                                         |                      |
| Permitted humidity                           | 0 to 100 %                                                                                                                                                                                           |                      |
| Max. altitude                                | 2,000 m / 2,500 m unrestricted / restricted voltage range                                                                                                                                            |                      |
| DC connection technology                     | 6x DC+ and 6x DC- screw terminals 2.5 - 16 mm <sup>2</sup>                                                                                                                                           |                      |
| AC connection technology                     | 5-pole AC screw terminals 2.5 - 16 mm <sup>2</sup>                                                                                                                                                   |                      |
| 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, G98, G99, UNE 206007-1, SI 4777, CEI 0-16, CEI 0-21 |                      |
| Country of manufacture                       | Austria                                                                                                                                                                                              |                      |

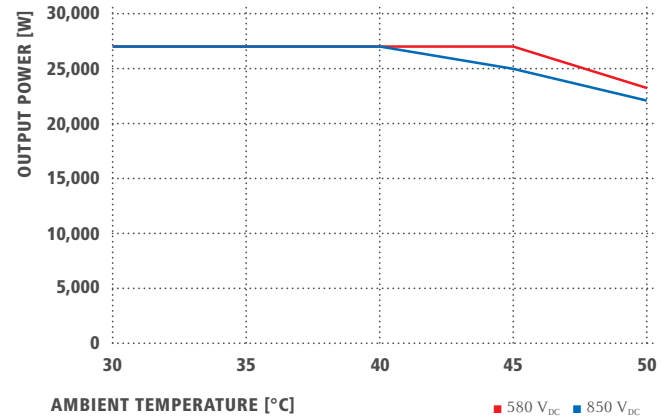
<sup>1)</sup> According to IEC 62109-1. DIN rail for optional type 1 + 2 or type 2 surge protection device available.

Further information regarding the availability of the inverters in your country can be found at [www.fronius.com](http://www.fronius.com).

## 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 <sub>EU</sub> ) | 98.0 %               | 98.0 %               |
| 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 disconnector                              |                                         | Yes                  |
| Integrated string fuse holders <sup>1)</sup> |                                         | Yes                  |
| Reverse polarity protection                  |                                         | Yes                  |
| RCMU                                         |                                         | 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) <sup>2)</sup>          | Datalogging, inverter update via USB flash drive                |                      |
| 2x RS422 (RJ45 socket) <sup>2)</sup>  | Fronius Solar Net                                               |                      |
| Signalling output <sup>2)</sup>       | Energy management (floating relay output)                       |                      |
| Datalogger and Webserver              | Included                                                        |                      |
| External input <sup>2)</sup>          | 50 meter connection / Evaluation of overvoltage protection      |                      |
| RS485                                 | Modbus RTU SunSpec or meter connection                          |                      |

<sup>1)</sup> Optionally fitted with 6 fuses 15 A / 1,000 V on the plus side. <sup>2)</sup> Also available in the light version.  
Further information and technical data can be found at [www.fronius.com](http://www.fronius.com).

/ Perfect Welding / Solar Energy / Perfect Charging

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Further information about all Fronius products and our global sales partners and representatives can be found at [www.fronius.com](http://www.fronius.com)

**Fronius India Private Limited**  
Plot no BG-71/2/B,  
Pimpri Industrial Area,  
MIDC- Bhosari,  
Pune- 411026, India  
[pv-sales-india@fronius.com](mailto:pv-sales-india@fronius.com)  
[www.fronius.in](http://www.fronius.in)

**Fronius Australia Pty Ltd.**  
90-92 Lambeck Drive  
Tullamarine VIC 3043  
Australia  
[pv-sales-australia@fronius.com](mailto:pv-sales-australia@fronius.com)  
[www.fronius.com.au](http://www.fronius.com.au)

**Fronius UK Limited**  
Maidstone Road, Kingston  
Milton Keynes, MK10 0BD  
United Kingdom  
[pv-sales-uk@fronius.com](mailto:pv-sales-uk@fronius.com)  
[www.fronius.co.uk](http://www.fronius.co.uk)

**Fronius International GmbH**  
Froniusplatz 1  
4600 Wels  
Austria  
[pv-sales@fronius.com](mailto:pv-sales@fronius.com)  
[www.fronius.com](http://www.fronius.com)