



# Designed to rely on.

## Product advantages

- 01 More safety features included
- 02 Endless freedom
- 03 Optimal performance as standard

The Fronius Symo Advanced impresses not only with levels of performance and flexibility that have been proven a million times over, but also with its new equipment. The highlight in terms of safety is the integrated Fronius Arc Guard technology, which ensures the Fronius Symo Advanced exceeds the highest standards and is the future-proof and reliable choice for commercial photovoltaic systems of any size.

**Fronius Symo Advanced. Designed to rely on.**

# Developed with safety in mind:

The Fronius Symo Advanced opens the next chapter in the Fronius SnapINverter portfolio. Performance proven a million times over meets new safety technology, making the Fronius Symo Advanced more than ever a future-proof choice for installers and their customers.

## 01 More safety features included

Detect, intervene, learn – the new Fronius Arc Guard technology follows this principle to protect against dangerous arcs. The algorithm developed by Fronius reliably detects arcing and shuts down the photovoltaic system before a fire can occur. The Fronius Arc Guard is being continuously trained by the manufacturer to make the Arc Fault Circuit Interrupter more precise and to optimize system protection.

## 02 Endless freedom

Easily plan complex roofs thanks to SuperFlex Design. The PV modules can be flexibly aligned and connected as the Fronius Symo Advanced is able to handle a wide range of input voltages as well as very high PV module currents.

## 03 Optimal performance as standard

Maximum yield even when the PV modules are partially in the shade is possible thanks to the Dynamic Peak Manager feature of the Fronius Symo Advanced. The intelligent software-based shade management tool is installed as standard and requires no additional components.

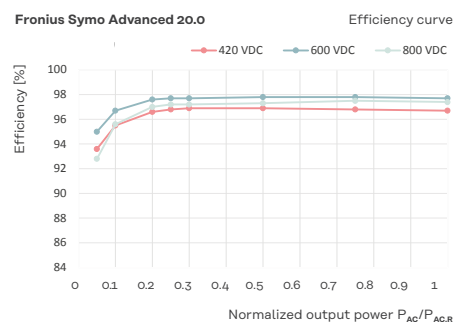
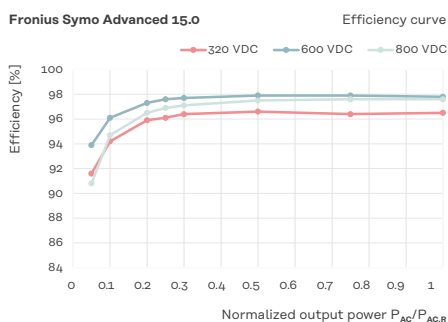
Fronius Symo Advanced



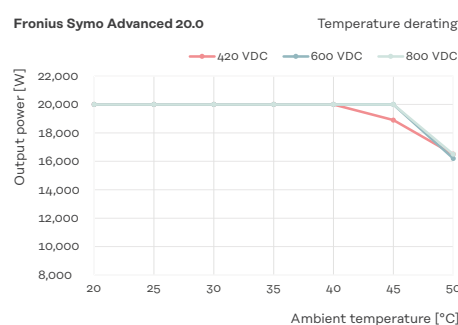
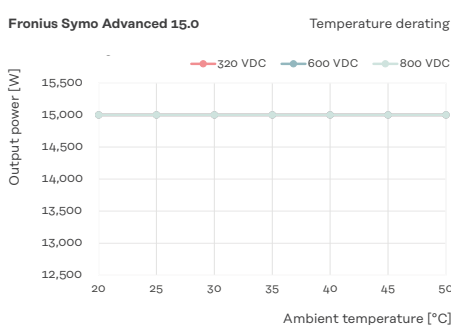
# Impressive power data

The Fronius Symo Advanced impresses with its flexible system design and the highest safety standards.

## Efficiency



## Power derating



# Technical data

10.0 / 12.5 / 15.0 kW

|              |                                                                                 |                 | Symo Advanced                                                                                                                                                                                                           |                     |                     |                     |                     |                     |
|--------------|---------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|              |                                                                                 |                 | 10.0-3-M                                                                                                                                                                                                                |                     | 12.5-3-M            |                     | 15.0-3-M            |                     |
| Input data   | Number of MPP trackers                                                          |                 | 2                                                                                                                                                                                                                       |                     | 2                   |                     | 2                   |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               | MPPT1               | MPPT2               |
|              | Max. input current (I <sub>dc max</sub> )                                       | A               | 27.0                                                                                                                                                                                                                    | 16.5 <sup>1</sup>   | 27.0                | 16.5 <sup>1</sup>   | 33.0                | 27.0                |
|              | Max. usable input current (I <sub>dc max</sub> MPPT 1+2)                        | A               | 43.5                                                                                                                                                                                                                    |                     | 43.5                |                     | 51.0                |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               | MPPT1               | MPPT2               |
|              | Max. array short circuit current MPPT1/MPPT2 (I <sub>sc pv</sub> ) <sup>2</sup> | A               | 55.7                                                                                                                                                                                                                    | 34                  | 55.7                | 34                  | 68                  | 55.7                |
|              | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )             | V               | 200–1000                                                                                                                                                                                                                |                     | 200–1000            |                     | 200–1000            |                     |
|              | Feed-in start-up input voltage (U <sub>dc start</sub> )                         | V               | 200                                                                                                                                                                                                                     |                     | 200                 |                     | 200                 |                     |
|              | Usable MPP voltage range                                                        | V               | 270–800                                                                                                                                                                                                                 |                     | 320–800             |                     | 320–800             |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               | MPPT1               | MPPT2               |
|              | Number of DC connections                                                        |                 | 3                                                                                                                                                                                                                       | 3                   | 3                   | 3                   | 3                   | 3                   |
|              | Max. PV generator output (P <sub>dc max</sub> )                                 | kWp             | 15,000                                                                                                                                                                                                                  |                     | 18,800              |                     | 22,500              |                     |
| Output data  | AC nominal output (P <sub>ac,r</sub> )                                          | W               | 10,000                                                                                                                                                                                                                  |                     | 12,500              |                     | 15,000              |                     |
|              | Max. output power / rated apparent power                                        | VA              | 10,000                                                                                                                                                                                                                  |                     | 12,500              |                     | 15,000              |                     |
|              |                                                                                 |                 | 380 V <sub>AC</sub>                                                                                                                                                                                                     | 400 V <sub>AC</sub> | 380 V <sub>AC</sub> | 400 V <sub>AC</sub> | 380 V <sub>AC</sub> | 400 V <sub>AC</sub> |
|              | AC output current (I <sub>ac nom</sub> )                                        | A               | 15.2                                                                                                                                                                                                                    | 14.4                | 18.9                | 18                  | 22.7                | 21.7                |
|              | Grid connection (voltage range)                                                 |                 | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %)                                                                                                                                                              |                     |                     |                     |                     |                     |
|              | Frequency (frequency range)                                                     | Hz              | 50 / 60 (45 - 65)                                                                                                                                                                                                       |                     | 50 / 60 (45 - 65)   |                     | 50 / 60 (45 - 65)   |                     |
|              | Total harmonic distortion                                                       | %               | < 1.75                                                                                                                                                                                                                  |                     | < 2.0               |                     | < 1.5               |                     |
|              | Power factor (cos φ <sub>ac,r</sub> )                                           |                 | 0–1 ind. / cap.                                                                                                                                                                                                         |                     |                     |                     |                     |                     |
| General data | Dimensions (height x width x depth)                                             | mm              | 725 x 510 x 225                                                                                                                                                                                                         |                     |                     |                     |                     |                     |
|              | Weight (inverter/with packaging)                                                | kg              | 35.4/38.4                                                                                                                                                                                                               |                     | 35.4/38.4           |                     | 41.96/44.96         |                     |
|              | Protection class                                                                |                 | IP 66                                                                                                                                                                                                                   |                     | IP 66               |                     | IP 66               |                     |
|              | Safety class                                                                    |                 | 1                                                                                                                                                                                                                       |                     | 1                   |                     | 1                   |                     |
|              |                                                                                 |                 | DC                                                                                                                                                                                                                      | AC                  | DC                  | AC                  | DC                  | AC                  |
|              | Overvoltage category (DC/AC) <sup>3</sup>                                       |                 | 2                                                                                                                                                                                                                       | 3                   | 2                   | 3                   | 2                   | 3                   |
|              | Night consumption                                                               | W               | <1                                                                                                                                                                                                                      |                     | <1                  |                     | <1                  |                     |
|              | Inverter concept                                                                |                 | Transformerless                                                                                                                                                                                                         |                     |                     |                     |                     |                     |
|              | Cooling                                                                         |                 | Active Cooling technology                                                                                                                                                                                               |                     |                     |                     |                     |                     |
|              | Installation                                                                    |                 | Indoor and outdoor installation                                                                                                                                                                                         |                     |                     |                     |                     |                     |
|              | Ambient temperature range                                                       | °C              | -25 - +60                                                                                                                                                                                                               |                     | -25 - +60           |                     | -25 - +60           |                     |
|              | Permissible humidity                                                            | %               | 0–100                                                                                                                                                                                                                   |                     | 0–100               |                     | 0–100               |                     |
|              |                                                                                 |                 | unrestricted / restricted voltage range                                                                                                                                                                                 |                     |                     |                     |                     |                     |
|              | Max. altitude above sea level                                                   | m               | 2,000/3,400                                                                                                                                                                                                             |                     | 2,000/3,400         |                     | 2,000/3,400         |                     |
|              | DC connection technology                                                        | mm <sup>2</sup> | 6x DC+ and 6x DC screw terminals 2.5 - 16 mm <sup>2</sup>                                                                                                                                                               |                     |                     |                     |                     |                     |
|              | AC connection technology                                                        | mm <sup>2</sup> | 5-pin AC screw terminals 2.5 - 16mm2                                                                                                                                                                                    |                     |                     |                     |                     |                     |
|              | Certificates and compliance with standards                                      |                 | IEC 62109-1/-2, IEC 62116, IEC 61727, VDE 0126-1-1/A1, VDE AR-N 4105, G98/1, G99/1, AS/NZS 4777.2, UNE 206007-1, CEI 0-21, CEI 0-16, NRS 097-2-1, TOR Erzeuger Typ A, VDE AR-N 4110, EN 50549-1/-2, IEC 61683, IEC60068 |                     |                     |                     |                     |                     |
|              | Country of manufacture                                                          |                 | Austria                                                                                                                                                                                                                 |                     |                     |                     |                     |                     |

<sup>1</sup> 14.0 A at voltages < 420 V

<sup>2</sup>  $I_{sc\ pv} = I_{sc\ max.} \geq I_{sc\ (STC)} \times 1.25$  according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>3</sup> In line with IEC 62109-1. DIN rail for optional surge protection device type 1 + 2 or type 2 present.

For further information on the availability of the inverters in your country, please visit [www.fronius.com](http://www.fronius.com).

|                    |                                                          |   | Symo Advanced                                                  |          |          |
|--------------------|----------------------------------------------------------|---|----------------------------------------------------------------|----------|----------|
|                    |                                                          |   | 10.0-3-M                                                       | 12.5-3-M | 15.0-3-M |
| Efficiency         | Max. efficiency                                          | % | 97.8                                                           | 97.8     | 97.9     |
|                    | Europ. efficiency (ηEU)                                  | % | 97.1                                                           | 97.4     | 97.6     |
|                    | MPP adaptation efficiency                                | % | > 99.9                                                         | > 99.9   | > 99.9   |
| Protection devices | Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard) |   | Integrated                                                     |          |          |
|                    | DC isolation measurement                                 |   | Integrated                                                     |          |          |
|                    | Overload performance                                     |   | Operating point shift, power limiter                           |          |          |
|                    | DC disconnect                                            |   | Integrated                                                     |          |          |
|                    | Reverse polarity protection                              |   | Integrated                                                     |          |          |
|                    | RCMU                                                     |   | Integrated                                                     |          |          |
| Interfaces         | WLAN / Ethernet LAN                                      |   | Fronius Solarweb, Modbus TCP SunSpec, Fronius Solar API (JSON) |          |          |
|                    | 6 inputs and 4 digital inputs/outputs                    |   | Connection to ripple control receiver                          |          |          |
|                    | USB (type A socket) <sup>4</sup>                         |   | Datalogging, inverter updating using a USB thumb drive         |          |          |
|                    | 2x RS422 (RJ45 socket) <sup>4</sup>                      |   | Fronius Solar Net                                              |          |          |
|                    | Message output <sup>4</sup>                              |   | Energy management (potential-free relay output)                |          |          |
|                    | Datalogger and web server                                |   | Integrated                                                     |          |          |
|                    | External input <sup>4</sup>                              |   | SO-Meter Interface / Input for overvoltage protection          |          |          |
|                    | RS485                                                    |   | Modbus RTU SunSpec or meter connection                         |          |          |

<sup>4</sup> Also available in a light version.

# Technical data

## 17.5 / 20.0 kW

|              |                                                                                 |                 | Symo Advanced                                                                                                                                                                                                           |                     |                     |                     |
|--------------|---------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|
|              |                                                                                 |                 | 17.5-3-M                                                                                                                                                                                                                |                     | 20.0-3-M            |                     |
| Input data   | Number of MPP trackers                                                          |                 | 2                                                                                                                                                                                                                       |                     | 2                   |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               |
|              | Max. input current (I <sub>dc max</sub> )                                       | A               | 33.0                                                                                                                                                                                                                    | 27.0                | 33.0                | 27.0                |
|              | Max. usable input current (I <sub>dc max</sub> MPPT 1+2)                        | A               | 51.0                                                                                                                                                                                                                    |                     | 51.0                |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               |
|              | Max. array short circuit current MPPT1/MPPT2 (I <sub>sc pv</sub> ) <sup>2</sup> | A               | 68                                                                                                                                                                                                                      | 55.7                | 68                  | 55.7                |
|              | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )             | V               | 200–1000                                                                                                                                                                                                                |                     | 200–1000            |                     |
|              | Feed-in start-up input voltage (U <sub>dc start</sub> )                         | V               | 200                                                                                                                                                                                                                     |                     | 200                 |                     |
|              | Usable MPP voltage range                                                        | V               | 370–800                                                                                                                                                                                                                 |                     | 420–800             |                     |
|              |                                                                                 |                 | MPPT1                                                                                                                                                                                                                   | MPPT2               | MPPT1               | MPPT2               |
|              | Number of DC connections                                                        |                 | 3                                                                                                                                                                                                                       | 3                   | 3                   | 3                   |
|              | Max. PV generator output (P <sub>dc max</sub> )                                 | kWp             | 26,300                                                                                                                                                                                                                  |                     | 30,000              |                     |
|              |                                                                                 |                 |                                                                                                                                                                                                                         |                     |                     |                     |
| Output data  | AC nominal output (P <sub>ac,r</sub> )                                          | W               | 17,500                                                                                                                                                                                                                  |                     | 20,000              |                     |
|              | Max. output power / rated apparent power                                        | VA              | 17,500                                                                                                                                                                                                                  |                     | 20,000              |                     |
|              |                                                                                 |                 | 380 V <sub>ac</sub>                                                                                                                                                                                                     | 400 V <sub>ac</sub> | 380 V <sub>ac</sub> | 400 V <sub>ac</sub> |
|              | AC output current (I <sub>ac nom</sub> )                                        | A               | 26.5                                                                                                                                                                                                                    | 25.3                | 30.3                | 28.9                |
|              | Grid connection (voltage range)                                                 |                 | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %)                                                                                                                                                              |                     |                     |                     |
|              | Frequency (frequency range)                                                     | Hz              | 50 / 60 (45 - 65)                                                                                                                                                                                                       |                     | 50 / 60 (45 - 65)   |                     |
|              | Total harmonic distortion                                                       | %               | < 1.5                                                                                                                                                                                                                   |                     | < 1.25              |                     |
|              | Power factor (cos φ <sub>ac,r</sub> )                                           |                 | 0–1 ind. / cap.                                                                                                                                                                                                         |                     |                     |                     |
|              |                                                                                 |                 |                                                                                                                                                                                                                         |                     |                     |                     |
| General data | Dimensions (height x width x depth)                                             | mm              | 725 x 510 x 225                                                                                                                                                                                                         |                     |                     |                     |
|              | Weight (inverter/with packaging)                                                | kg              | 41.96/44.96                                                                                                                                                                                                             |                     | 41.96/44.96         |                     |
|              | Protection class                                                                |                 | IP 66                                                                                                                                                                                                                   |                     | IP 66               |                     |
|              | Safety class                                                                    |                 | 1                                                                                                                                                                                                                       |                     | 1                   |                     |
|              |                                                                                 |                 | DC                                                                                                                                                                                                                      | AC                  | DC                  | AC                  |
|              | Overvoltage category (DC/AC) <sup>3</sup>                                       |                 | 2                                                                                                                                                                                                                       | 3                   | 2                   | 3                   |
|              | Night consumption                                                               | W               | <1                                                                                                                                                                                                                      |                     | <1                  |                     |
|              | Inverter concept                                                                |                 | Transformerless                                                                                                                                                                                                         |                     |                     |                     |
|              | Cooling                                                                         |                 | Active Cooling technology                                                                                                                                                                                               |                     |                     |                     |
|              | Installation                                                                    |                 | Indoor and outdoor installation                                                                                                                                                                                         |                     |                     |                     |
|              | Ambient temperature range                                                       | °C              | -25 - +60                                                                                                                                                                                                               |                     | -25 - +60           |                     |
|              | Permissible humidity                                                            | %               | 0–100                                                                                                                                                                                                                   |                     | 0–100               |                     |
|              |                                                                                 |                 | unrestricted / restricted voltage range                                                                                                                                                                                 |                     |                     |                     |
|              | Max. altitude above sea level                                                   | m               | 2,000/3,400                                                                                                                                                                                                             |                     | 2,000/3,400         |                     |
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|              | Country of manufacture                                                          |                 | Austria                                                                                                                                                                                                                 |                     |                     |                     |

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|                    |                                                          |   | 17.5-3-M                                                        | 20.0-3-M |
| Efficiency         | Max. efficiency                                          | % | 97.9                                                            | 97.9     |
|                    | Europ. efficiency ( $\eta_{EU}$ )                        | % | 97.6                                                            | 97.6     |
|                    | MPP adaptation efficiency                                | % | > 99.9                                                          | > 99.9   |
| Protection devices | Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard) |   | Integrated                                                      |          |
|                    | DC isolation measurement                                 |   | Integrated                                                      |          |
|                    | Overload performance                                     |   | Operating point shift, power limiter                            |          |
|                    | DC disconnect                                            |   | Integrated                                                      |          |
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|                    | Datalogger and web server                                |   | Integrated                                                      |          |
|                    | External input <sup>4</sup>                              |   | SO-Meter Interface / Input for overvoltage protection           |          |
|                    | RS485                                                    |   | Modbus RTU SunSpec or meter connection                          |          |

<sup>4</sup> Also available in a light version.

Further information: [www.fronius.com/commercial-inverters](http://www.fronius.com/commercial-inverters)

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