



# GEN24 SC



Fronius Symo GEN24 SC  
& GEN24 Plus SC 3.0 - 12.0 kW

# Product advantages

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## **01 Backup power for every situation**

A reliable energy supply: the Fronius GEN24 offers just that with an integrated basic backup power function, the PV Point. With the Fronius GEN24 Plus, you can choose between the PV Point and the Full Backup option, which provides backup power for the entire home.

## **02 Built-in freedom**

The Fronius GEN24 and Fronius GEN24 Plus have open interfaces. This makes it easy to integrate components from Fronius or third-party suppliers for a tailor-made photovoltaic system.

## **03 Versatility as standard**

More functions. More control. More power. Thanks to their energy management functions, the Fronius GEN24 and Fronius GEN24 Plus continuously save time and money. What's more, the integrated active cooling extends the service life of the inverter, protecting your investment for many years to come.

## **04 Sustainably future-proof**

For those who don't want to decide right away: Thanks to the Fronius UP.storage\* software upgrade, your device can be retrofitted with the battery connection and therefore the Full Backup power supply at any time.

## **05 Maximum independence**

By combining the Fronius GEN24 Plus with a battery, you can get even more out of your photovoltaic system, even at night. Use more of your own electricity and become more independent of electricity providers and prices.

\* Available in the Fronius webshop in selected countries.



# Sustainable, reliable, future-proof:

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With our Fronius GEN24 SC inverter at the heart of the photovoltaic system, energy can be generated flexibly and inexpensively. The Fronius GEN24 Plus SC hybrid inverter even allows a battery storage system to be connected, so the solar energy generated can be used for electricity, heating, cooling, and e-mobility even at night. Full solar power for the private energy revolution with the Fronius GEN24 SC and the Fronius GEN24 Plus SC.

# Technical data

3.0 / 4.0 / 5.0 kW

|            |                                                                      |                   | Symo GEN24 SC / GEN24 Plus SC |       |       |            |       |       |            |       |       |
|------------|----------------------------------------------------------------------|-------------------|-------------------------------|-------|-------|------------|-------|-------|------------|-------|-------|
|            |                                                                      |                   | 3.0                           |       |       | 4.0        |       |       | 5.0        |       |       |
| Input data | Number of MPP trackers                                               |                   | 2                             |       |       | 2          |       |       | 2          |       |       |
|            | DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )               | V                 | 80 - 1,000                    |       |       | 80 - 1,000 |       |       | 80 - 1,000 |       |       |
|            | Rated input voltage ( $U_{dc,r}$ )                                   | V                 | 610                           |       |       | 610        |       |       | 610        |       |       |
|            | Feed-in start-up input voltage ( $U_{dc\ start}$ )                   | V                 | 80                            |       |       | 80         |       |       | 80         |       |       |
|            | Usable MPP voltage range                                             | V                 | 80 - 800                      |       |       | 80 - 800   |       |       | 80 - 800   |       |       |
|            | MPP voltage range (at rated power) ( $U_{mpp\ min} - U_{mpp\ max}$ ) | V                 | 115 - 800                     |       |       | 150 - 800  |       |       | 190 - 800  |       |       |
|            |                                                                      |                   | MPPT1                         | MPPT2 |       | MPPT1      | MPPT2 |       | MPPT1      | MPPT2 |       |
|            | Max. usable input current ( $I_{dc\ max}$ )                          | A                 | 14                            |       |       | 14         |       |       | 14         |       |       |
|            | Max. array short circuit current ( $I_{sc\ pv}$ ) <sup>1</sup>       | A                 | 20                            |       |       | 20         |       |       | 20         |       |       |
|            | Number of DC connections                                             |                   | 2                             |       | 1     | 2          |       | 1     | 2          |       | 1     |
|            |                                                                      |                   | MPPT1                         | MPPT2 | Total | MPPT1      | MPPT2 | Total | MPPT1      | MPPT2 | Total |
|            | Max. usable DC power                                                 | W                 | 3,150                         | 3,150 | 3,150 | 4,180      | 4,180 | 4,180 | 5,200      | 5,200 | 5,200 |
|            | Max. PV generator output                                             | W <sub>peak</sub> | 4,500                         | 4,500 | 4,500 | 6,000      | 6,000 | 6,000 | 6,500      | 6,500 | 7,500 |

| Output data | AC rated power (P <sub>ac,r</sub> )                              | W  | 3,000                                        |         | 4,000   |         | 5,000   |         |
|-------------|------------------------------------------------------------------|----|----------------------------------------------|---------|---------|---------|---------|---------|
|             | Apparent power                                                   | VA | 3,000                                        |         | 4,000   |         | 5,000   |         |
|             | Max. output power                                                | VA | 3,000                                        |         | 4,000   |         | 5,000   |         |
|             |                                                                  |    | 380 Vac                                      | 400 Vac | 380 Vac | 400 Vac | 380 Vac | 400 Vac |
|             | Rated AC output current                                          | A  | 4.5                                          | 4.3     | 6.1     | 5.8     | 7.6     | 7.2     |
|             | Grid connection (U <sub>ac,r</sub> )                             | V  | 3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%) |         |         |         |         |         |
|             | Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> ) | Hz | 50/60 (45 - 65)                              |         |         |         |         |         |
|             | Total harmonic distortion                                        | %  | < 3.5                                        |         | < 3.5   |         | < 3.5   |         |
|             | Power factor (cos φ <sub>ac,r</sub> )                            |    | 0.7 - 1 ind. / cap.                          |         |         |         |         |         |

|                         |                             |      |                |       |       |
|-------------------------|-----------------------------|------|----------------|-------|-------|
| Output data<br>PV Point | Rated output power PV Point | VA   | 3,000          | 3,000 | 3,000 |
|                         | Grid connection PV Point    | V    | 1~ NPE 220/230 |       |       |
|                         | Switching time              | sec. | ~15            | ~15   | ~15   |



**Full Backup power and battery function only available with GEN24 Plus SC.**

| <div> Full Backup power and battery function only available with GEN24 Plus SC.</div> |                                 |      | Symo GEN24 Plus SC                                                                  |     |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------|-------------------------------------------------------------------------------------|-----|-----|
|                                                                                                                                                                          |                                 |      | 3.0                                                                                 | 4.0 | 5.0 |
| Output data Full Backup <sup>2</sup>                                                                                                                                     | Rated output power Full Backup  | VA   | The Full Backup power supply function is available for Symo GEN24 6.0-12.0 Plus SC. |     |     |
|                                                                                                                                                                          | Nominal Full Backup phase power | VA   |                                                                                     |     |     |
|                                                                                                                                                                          | Grid connection Full Backup     | V    |                                                                                     |     |     |
|                                                                                                                                                                          | Switching time                  | sec. |                                                                                     |     |     |

|                    |                                                                     |   |                                                                |           |           |
|--------------------|---------------------------------------------------------------------|---|----------------------------------------------------------------|-----------|-----------|
| Battery connection | Number of DC inputs                                                 |   | 1                                                              | 1         | 1         |
|                    | Max. input current (I <sub>dc max</sub> )                           | A | 14                                                             | 14        | 14        |
|                    | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> ) | V | 160 - 700                                                      | 160 - 700 | 160 - 700 |
|                    | DC battery connection technology                                    |   | 1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²    |           |           |
|                    | Max. DC input/output power <sup>3</sup>                             | W | 3,300                                                          | 4,300     | 5,300     |
|                    | Max. charging power for AC coupling <sup>3</sup>                    | W | 3,000                                                          | 4,000     | 5,000     |
|                    | Compatible batteries <sup>4</sup>                                   |   | Fronius Reserva & BYD Battery-Box HVS/HVM, HVS+/HVM+ & LG FLEX |           |           |

<sup>1</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>2</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>3</sup> Depending on connected battery

<sup>4</sup> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)

|                    |                                                         |        | Symo GEN24 SC / GEN24 Plus SC                                                                                                                                                          |             |             |
|--------------------|---------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|
|                    |                                                         |        | 3.0                                                                                                                                                                                    | 4.0         | 5.0         |
| General data       | Dimensions (height × width × depth)                     | mm     | 530 x 474 x 165                                                                                                                                                                        |             |             |
|                    | Weight (inverter/with packaging)                        | kg     | 15.3 / 19.1                                                                                                                                                                            | 15.3 / 19.1 | 15.3 / 19.1 |
|                    | Protection class                                        |        | IP 66                                                                                                                                                                                  | IP 66       | IP 66       |
|                    | Safety class                                            |        | 1                                                                                                                                                                                      | 1           | 1           |
|                    | Night consumption                                       | W      | <10                                                                                                                                                                                    | <10         | <10         |
|                    | Overvoltage category (DC/AC) <sup>5</sup>               |        | 2/3                                                                                                                                                                                    | 2/3         | 2/3         |
|                    | Cooling                                                 |        | Active Cooling technology                                                                                                                                                              |             |             |
|                    | Installation                                            |        | Indoor and outdoor installation                                                                                                                                                        |             |             |
|                    | Ambient temperature range                               | °C     | -25 to +60                                                                                                                                                                             | -25 to +60  | -25 to +60  |
|                    | Permissible humidity                                    | %      | 0 - 100                                                                                                                                                                                | 0 - 100     | 0 - 100     |
|                    | Noise emissions                                         | dB (A) | < 36                                                                                                                                                                                   | < 36        | < 36        |
|                    | Max. altitude above sea level                           | m      | 3,000/4,000 (unrestricted/restricted voltage range)                                                                                                                                    |             |             |
|                    | DC connection technology PV                             |        | 3 × DC+ and 3 × DC- push-in spring terminals 2.5 - 10 mm <sup>2</sup>                                                                                                                  |             |             |
|                    | AC connection technology                                |        | 5-pin AC push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>3-pin backup power push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>5 × PPE screw terminals 2.5 - 16 mm <sup>2</sup> |             |             |
|                    | Certificates and compliance with standards <sup>6</sup> |        | IEC 62109, IEC 62116, IEC 61727, IEC 62909,<br>VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25                                                                              |             |             |
|                    | Backup power functions <sup>7</sup>                     |        | PV Point (Comfort)                                                                                                                                                                     |             |             |
| Efficiency         | Max. efficiency                                         | %      | 98.1                                                                                                                                                                                   | 98.1        | 98.1        |
|                    | Euro. efficiency (η <sub>EU</sub> )                     | %      | 96.7                                                                                                                                                                                   | 97.2        | 97.5        |
|                    | MPP adaptation efficiency                               | %      | > 99.9                                                                                                                                                                                 | > 99.9      | > 99.9      |
| Protection devices | DC isolation measurement                                |        | Integrated                                                                                                                                                                             |             |             |
|                    | DC disconnect                                           |        | Integrated                                                                                                                                                                             |             |             |
|                    | Reverse polarity protection                             |        | Integrated                                                                                                                                                                             |             |             |
|                    | Arc Detection<br>Arc Guard Technology                   |        | Integrated                                                                                                                                                                             |             |             |
| Interfaces         | WLAN/2 × Ethernet LAN                                   |        | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)                                                                                                                        |             |             |
|                    | 6 digital inputs<br>6 digital inputs/outputs            |        | Connection to ripple control receiver, energy management                                                                                                                               |             |             |
|                    | Emergency shut-off (WSD)                                |        | Integrated                                                                                                                                                                             |             |             |
|                    | Datalogger and web server                               |        | Integrated                                                                                                                                                                             |             |             |
|                    | 2 × RS485                                               |        | Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter,<br>battery, Fronius Ohmpilot                                                                                            |             |             |

<sup>5</sup> In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK

<sup>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.



# Technical data

6.0 / 8.0 / 10.0 kW

|            |                                                                      |                   | Symo GEN24 SC / GEN24 Plus SC |       |       |            |       |        |            |       |        |
|------------|----------------------------------------------------------------------|-------------------|-------------------------------|-------|-------|------------|-------|--------|------------|-------|--------|
|            |                                                                      |                   | 6.0                           |       |       | 8.0        |       |        | 10.0       |       |        |
| Input data | Number of MPP trackers                                               |                   | 2                             |       |       | 2          |       |        | 2          |       |        |
|            | DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )               | V                 | 80 - 1,000                    |       |       | 80 - 1,000 |       |        | 80 - 1,000 |       |        |
|            | Rated input voltage ( $U_{dc,r}$ )                                   | V                 | 610                           |       |       | 610        |       |        | 610        |       |        |
|            | Feed-in start-up input voltage ( $U_{dc\ start}$ )                   | V                 | 80                            |       |       | 80         |       |        | 80         |       |        |
|            | Usable MPP voltage range                                             | V                 | 80 - 800                      |       |       | 80 - 800   |       |        | 80 - 800   |       |        |
|            | MPP voltage range (at rated power) ( $U_{mpp\ min} - U_{mpp\ max}$ ) | V                 | 148 - 800                     |       |       | 197 - 800  |       |        | 246 - 800  |       |        |
|            |                                                                      |                   | MPPT1                         |       | MPPT2 | MPPT1      |       | MPPT2  | MPPT1      |       | MPPT2  |
|            | Max. usable input current ( $I_{dc\ max}$ )                          | A                 | 28                            |       | 14    | 28         |       | 14     | 28         |       | 14     |
|            | Max. array short circuit current ( $I_{sc\ pv}$ ) <sup>1</sup>       | A                 | 40                            |       | 20    | 40         |       | 20     | 40         |       | 20     |
|            | Number of DC connections                                             |                   | 2                             |       | 1     | 2          |       | 1      | 2          |       | 1      |
|            |                                                                      |                   | MPPT1                         | MPPT2 | Total | MPPT1      | MPPT2 | Total  | MPPT1      | MPPT2 | Total  |
|            | Max. usable DC power                                                 | W                 | 6,180                         | 6,180 | 6,180 | 8,240      | 8,240 | 8,240  | 10,300     | 8,600 | 10,300 |
|            | Max. PV generator output                                             | W <sub>peak</sub> | 7,500                         | 7,500 | 9,000 | 10,000     | 8,500 | 12,000 | 12,500     | 9,000 | 15,000 |

| Output data | AC rated power ( $P_{ac,r}$ )                         | W  | 6,000                                        |         | 8,000   |         | 10,000  |         |
|-------------|-------------------------------------------------------|----|----------------------------------------------|---------|---------|---------|---------|---------|
|             | Apparent power                                        | VA | 6,000                                        |         | 8,000   |         | 10,000  |         |
|             | Max. output power                                     | VA | 6,000                                        |         | 8,000   |         | 10,000  |         |
|             |                                                       |    | 380 Vac                                      | 400 Vac | 380 Vac | 400 Vac | 380 Vac | 400 Vac |
|             | Rated AC output current                               | A  | 9.1                                          | 8.7     | 12.1    | 11.6    | 15.2    | 14.5    |
|             | Grid connection ( $U_{ac,r}$ )                        | V  | 3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%) |         |         |         |         |         |
|             | Frequency<br>(frequency range $f_{min}$ - $f_{max}$ ) | Hz | 50/60 (45 - 65)                              |         |         |         |         |         |
|             | Total harmonic distortion                             | %  | < 3.5                                        |         | < 3.5   |         | < 3.5   |         |
|             | Power factor ( $\cos \varphi_{ac,r}$ )                |    | 0.7 - 1 ind. / cap.                          |         |         |         |         |         |

|                         |                             |      |                |       |       |
|-------------------------|-----------------------------|------|----------------|-------|-------|
| Output data<br>PV Point | Rated output power PV Point | VA   | 3,000          | 3,000 | 3,000 |
|                         | Grid connection PV Point    | V    | 1~ NPE 220/230 |       |       |
|                         | Switching time              | sec. | ~15            | ~15   | ~15   |



**Full Backup power and battery function only available with GEN24 Plus SC.**

| <div> Full Backup power and battery function only available with GEN24 Plus SC.</div> |                                 |      | Symo GEN24 Plus SC               |       |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------|----------------------------------|-------|--------|
|                                                                                                                                                                          |                                 |      | 6.0                              | 8.0   | 10.0   |
| Output data<br>Full Backup <sup>2</sup>                                                                                                                                  | Rated output power Full Backup  | VA   | 6,000                            | 8,000 | 10,000 |
|                                                                                                                                                                          | Nominal Full Backup phase power | VA   | 4,225                            | 4,225 | 4,225  |
|                                                                                                                                                                          | Grid connection Full Backup     | V    | 3~ NPE 400/230 or 3~ NPE 380/220 |       |        |
|                                                                                                                                                                          | Switching time                  | sec. | ~10                              | ~10   | ~10    |

|                    |                                                        |   |                                                                |           |           |
|--------------------|--------------------------------------------------------|---|----------------------------------------------------------------|-----------|-----------|
| Battery connection | Number of DC inputs                                    |   | 1                                                              | 1         | 1         |
|                    | Max. input current ( $I_{dc\ max}$ )                   | A | 22                                                             | 22        | 22        |
|                    | DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ ) | V | 160 - 700                                                      | 160 - 700 | 160 - 700 |
|                    | DC battery connection technology                       |   | 1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²    |           |           |
|                    | Max. DC input/output power <sup>3</sup>                | W | 6,220                                                          | 8,260     | 10,300    |
|                    | Max. charging power for AC coupling <sup>3</sup>       | W | 6,000                                                          | 8,000     | 10,000    |
|                    | Compatible batteries <sup>4</sup>                      |   | Fronius Reserva & BYD Battery-Box HVS/HVM, HVS+/HVM+ & LG FLEX |           |           |

<sup>1</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>2</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>3</sup> Depending on connected battery

<sup>4</sup> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)

|                    |                                                         |        | Symo GEN24 SC / GEN24 Plus SC                                                                                                                                                          |             |             |
|--------------------|---------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|
|                    |                                                         |        | 6.0                                                                                                                                                                                    | 8.0         | 10.0        |
| General data       | Dimensions (height × width × depth)                     | mm     | 595 × 529 × 180                                                                                                                                                                        |             |             |
|                    | Weight (inverter/with packaging)                        | kg     | 22.8 / 28.0                                                                                                                                                                            | 22.8 / 28.0 | 22.8 / 28.0 |
|                    | Protection class                                        |        | IP 66                                                                                                                                                                                  | IP 66       | IP 66       |
|                    | Safety class                                            |        | 1                                                                                                                                                                                      | 1           | 1           |
|                    | Night consumption                                       | W      | <10                                                                                                                                                                                    | <10         | <10         |
|                    | Overvoltage category (DC/AC) <sup>5</sup>               |        | 2/3                                                                                                                                                                                    | 2/3         | 2/3         |
|                    | Cooling                                                 |        | Active Cooling technology                                                                                                                                                              |             |             |
|                    | Installation                                            |        | Indoor and outdoor installation                                                                                                                                                        |             |             |
|                    | Ambient temperature range                               | °C     | -25 to +60                                                                                                                                                                             | -25 to +60  | -25 to +60  |
|                    | Permissible humidity                                    | %      | 0 - 100                                                                                                                                                                                | 0 - 100     | 0 - 100     |
|                    | Noise emissions                                         | dB (A) | < 47                                                                                                                                                                                   | < 47        | < 47        |
|                    | Max. altitude above sea level                           | m      | 3,000/4,000 (unrestricted/restricted voltage range)                                                                                                                                    |             |             |
|                    | DC connection technology PV                             |        | 3 × DC+ and 3 × DC- push-in spring terminals 2.5 - 10 mm <sup>2</sup>                                                                                                                  |             |             |
|                    | AC connection technology                                |        | 5-pin AC push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>3-pin backup power push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>5 × PPE screw terminals 2.5 - 16 mm <sup>2</sup> |             |             |
|                    | Certificates and compliance with standards <sup>6</sup> |        | IEC 62109, IEC 62116, IEC 61727, IEC 62909,<br>VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25                                                                              |             |             |
|                    | Backup power functions <sup>7</sup>                     |        | PV Point (Comfort) or Full Backup                                                                                                                                                      |             |             |
| Efficiency         | Max. efficiency                                         | %      | 98.3                                                                                                                                                                                   | 98.3        | 98.3        |
|                    | Euro. efficiency (η <sub>EU</sub> )                     | %      | 97.9                                                                                                                                                                                   | 98          | 98,1        |
|                    | MPP adaptation efficiency                               | %      | > 99.9                                                                                                                                                                                 | > 99.9      | > 99.9      |
| Protection devices | DC isolation measurement                                |        | Integrated                                                                                                                                                                             |             |             |
|                    | DC disconnect                                           |        | Integrated                                                                                                                                                                             |             |             |
|                    | Reverse polarity protection                             |        | Integrated                                                                                                                                                                             |             |             |
|                    | Arc Detection<br>Arc Guard Technology                   |        | Integrated                                                                                                                                                                             |             |             |
| Interfaces         | WLAN/2 × Ethernet LAN                                   |        | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)                                                                                                                        |             |             |
|                    | 6 digital inputs<br>6 digital inputs/outputs            |        | Connection to ripple control receiver, energy management                                                                                                                               |             |             |
|                    | Emergency shut-off (WSD)                                |        | Integrated                                                                                                                                                                             |             |             |
|                    | Datalogger and web server                               |        | Integrated                                                                                                                                                                             |             |             |
|                    | 2 × RS485                                               |        | Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter, battery, Fronius Ohmpilot                                                                                               |             |             |

<sup>5</sup> In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK

<sup>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.

# Technical data

## 12.0 kW

|            |                                                                      |                   | Symo GEN24 SC / GEN24 Plus SC |       |        |
|------------|----------------------------------------------------------------------|-------------------|-------------------------------|-------|--------|
|            |                                                                      |                   | 12.0                          |       |        |
| Input data | Number of MPP trackers                                               |                   | 2                             |       |        |
|            | DC input voltage range ( $U_{dc \min} - U_{dc \max}$ )               | V                 | 80 - 1,000                    |       |        |
|            | Rated input voltage ( $U_{dc,r}$ )                                   | V                 | 610                           |       |        |
|            | Feed-in start-up input voltage ( $U_{dc \text{ start}}$ )            | V                 | 80                            |       |        |
|            | Usable MPP voltage range                                             | V                 | 80 - 800                      |       |        |
|            | MPP voltage range (at rated power) ( $U_{mpp \min} - U_{mpp \max}$ ) | V                 | 295 - 800                     |       |        |
|            |                                                                      |                   |                               |       |        |
|            |                                                                      |                   | MPPT1                         |       | MPPT2  |
|            | Max. usable input current ( $I_{dc \max}$ )                          | A                 | 28                            |       | 14     |
|            | Max. array short circuit current ( $I_{sc \text{ pv}}^1$ )           | A                 | 40                            |       | 20     |
|            | Number of DC connections                                             |                   | 2                             |       | 1      |
|            |                                                                      |                   | MPPT1                         | MPPT2 | Total  |
|            | Max. usable DC power                                                 | W                 | 12,360                        | 8,600 | 12,360 |
|            | Max. PV generator output                                             | W <sub>peak</sub> | 14,000                        | 9,000 | 18,000 |

|             |                                                    |    |                                              |  |         |
|-------------|----------------------------------------------------|----|----------------------------------------------|--|---------|
| Output data | AC rated power ( $P_{ac,r}$ )                      | W  | 12,000                                       |  |         |
|             | Apparent power                                     | VA | 12,000                                       |  |         |
|             | Max. output power                                  | VA | 12,000                                       |  |         |
|             |                                                    |    | 380 Vac                                      |  | 400 Vac |
|             | Rated AC output current                            | A  | 18.2                                         |  | 17.4    |
|             | Grid connection ( $U_{ac,r}$ )                     | V  | 3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%) |  |         |
|             | Frequency (frequency range $f_{\min} - f_{\max}$ ) | Hz | 50/60 (45 - 65)                              |  |         |
|             | Total harmonic distortion                          | %  | < 3.5                                        |  |         |
|             | Power factor ( $\cos \varphi_{ac,r}$ )             |    | 0.7 - 1 ind. / cap.                          |  |         |

|                         |                             |      |                |  |  |
|-------------------------|-----------------------------|------|----------------|--|--|
| Output data<br>PV Point | Rated output power PV Point | VA   | 3,000          |  |  |
|                         | Grid connection PV Point    | V    | 1~ NPE 220/230 |  |  |
|                         | Switching time              | sec. | ~15            |  |  |



**Full Backup power and battery function only available with GEN24 Plus SC.**

|                                         |                                 |      | Symo GEN24 Plus SC               |  |  |
|-----------------------------------------|---------------------------------|------|----------------------------------|--|--|
|                                         |                                 |      | 12.0                             |  |  |
| Output data<br>Full Backup <sup>2</sup> | Rated output power Full Backup  | VA   | 12,000                           |  |  |
|                                         | Nominal Full Backup phase power | VA   | 4,225                            |  |  |
|                                         | Grid connection Full Backup     | V    | 3~ NPE 400/230 or 3~ NPE 380/220 |  |  |
|                                         | Switching time                  | sec. | ~10                              |  |  |

|                    |                                                        |   |                                                                         |  |  |
|--------------------|--------------------------------------------------------|---|-------------------------------------------------------------------------|--|--|
| Battery connection | Number of DC inputs                                    |   | 1                                                                       |  |  |
|                    | Max. input current ( $I_{dc \max}$ )                   | A | 22                                                                      |  |  |
|                    | DC input voltage range ( $U_{dc \min} - U_{dc \max}$ ) | V | 160 - 700                                                               |  |  |
|                    | DC battery connection technology                       |   | 1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm <sup>2</sup> |  |  |
|                    | Max. DC input/output power <sup>3</sup>                | W | 11,682                                                                  |  |  |
|                    | Max. charging power for AC coupling <sup>3</sup>       | W | 11,682                                                                  |  |  |
|                    | Compatible batteries <sup>4</sup>                      |   | Fronius Reserva & BYD Battery-Box HVS/HVM, HVS+/HVM+ & LG FLEX          |  |  |

<sup>1</sup>  $I_{sc \text{ pv}} = I_{sc \max} \geq I_{sc} \text{ (STC)} \times 1,25$  according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>2</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>3</sup> Depending on connected battery

<sup>4</sup> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)



|                    |                                                         |        | Symo GEN24 SC / GEN24 Plus SC                                                                                                                                                          |
|--------------------|---------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                         |        | 12.0                                                                                                                                                                                   |
| General data       | Dimensions (height × width × depth)                     | mm     | 595 × 529 × 180                                                                                                                                                                        |
|                    | Weight (inverter/with packaging)                        | kg     | 22.8 / 28.0                                                                                                                                                                            |
|                    | Protection class                                        |        | IP 66                                                                                                                                                                                  |
|                    | Safety class                                            |        | 1                                                                                                                                                                                      |
|                    | Night consumption                                       | W      | <10                                                                                                                                                                                    |
|                    | Overvoltage category (DC/AC) <sup>5</sup>               |        | 2/3                                                                                                                                                                                    |
|                    | Cooling                                                 |        | Active Cooling technology                                                                                                                                                              |
|                    | Installation                                            |        | Indoor and outdoor installation                                                                                                                                                        |
|                    | Ambient temperature range                               | °C     | -25 to +60                                                                                                                                                                             |
|                    | Permissible humidity                                    | %      | 0 - 100                                                                                                                                                                                |
|                    | Noise emissions                                         | dB (A) | < 47                                                                                                                                                                                   |
|                    | Max. altitude above sea level                           | m      | 3,000/4,000 (unrestricted/restricted voltage range)                                                                                                                                    |
|                    | DC connection technology PV                             |        | 3 × DC+ and 3 × DC- push-in spring terminals 2.5 - 10 mm <sup>2</sup>                                                                                                                  |
|                    | AC connection technology                                |        | 5-pin AC push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>3-pin backup power push-in spring terminals 1.5 - 10 mm <sup>2</sup><br>5 × PPE screw terminals 2.5 - 16 mm <sup>2</sup> |
|                    | Certificates and compliance with standards <sup>6</sup> |        | IEC 62109, IEC 62116, IEC 61727, IEC 62909,<br>VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25                                                                              |
|                    | Backup power functions <sup>7</sup>                     |        | PV Point or Full Backup                                                                                                                                                                |
| Efficiency         | Country of manufacture                                  |        | Austria                                                                                                                                                                                |
|                    | Life cycle analysis                                     |        | In accordance with ÖNORM EN ISO 14040 and 14044<br>(checked by employees from Fraunhofer IZM)                                                                                          |
|                    |                                                         |        |                                                                                                                                                                                        |
| Efficiency         | Max. efficiency                                         | %      | 98.2                                                                                                                                                                                   |
|                    | Euro. efficiency (η <sub>EU</sub> )                     | %      | 97.9                                                                                                                                                                                   |
|                    | MPP adaptation efficiency                               | %      | > 99.9                                                                                                                                                                                 |
| Protection devices | DC isolation measurement                                |        | Integrated                                                                                                                                                                             |
|                    | DC disconnect                                           |        | Integrated                                                                                                                                                                             |
|                    | Reverse polarity protection                             |        | Integrated                                                                                                                                                                             |
|                    | Arc Detection<br>Arc Guard Technology                   |        | Integrated                                                                                                                                                                             |
| Interfaces         | WLAN/2 × Ethernet LAN                                   |        | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)                                                                                                                        |
|                    | 6 digital inputs<br>6 digital inputs/outputs            |        | Connection to ripple control receiver, energy management                                                                                                                               |
|                    | Emergency shut-off (WSD)                                |        | Integrated                                                                                                                                                                             |
|                    | Datalogger and web server                               |        | Integrated                                                                                                                                                                             |
|                    | 2 × RS485                                               |        | Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter,<br>battery, Fronius Ohmpilot                                                                                            |

<sup>5</sup> In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK

<sup>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.



# One-stop-shop

Fronius now offers all the components for 24 hours of sun - a complete PV system from a single source. Electricity, heating, cooling, e-mobility – everything is possible with GEN24 Plus SC, even at night. The battery-enabled inverter is perfectly matched to the Fronius storage solution, Reserva, and makes you even more independent.



## The Fronius storage solution

Make yourself independent and utilise solar energy around the clock. The Fronius Reserva is a high-voltage battery with DC coupling that guarantees particularly effective and efficient energy transfer. With capacities from 6.3 to 15.8 kWh, it adapts flexibly to your needs.



## Backup power for every eventuality

With the Fronius Backup Controller & Backup Switch, you can switch to full backup power operation either automatically or manually. These cost-effective switching components can be installed in the control cabinet to save space and eliminate the need for additional hardware such as switch boxes.



## Charge electric cars cost-effectively

With PV-optimised wallboxes such as the Fronius Wattpilot Flex, you can charge intelligently and flexibly. The Wattpilot Flex is available in two versions: The Home version is ideal for private households, while the Pro version, with a MID-compliant meter, enables precise kilowatt-hour billing – perfect for company cars.

For further information, please visit: [www.fronius.com/en/solar-energy](http://www.fronius.com/en/solar-energy)

**Fronius International GmbH**  
Froniusplatz 1  
4600 Wels  
Austria  
pv-sales-austria@fronius.com  
www.fronius.com

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