



Designed to empower.



Fronius Symo
GEN24 and
GEN24 Plus

Product Advantages

- 01 Backup Power for Every Situation
- 02 Built-in Freedom
- 03 Versatility as Standard
- 04 Sustainably Future-proof
- 05 Maximum Independence

The Heart of the Photovoltaic System



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 the energy management functions of the Fronius GEN24 and Fronius GEN24 Plus, you 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 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.

* The Full Backup power function is not available for the Fronius Symo GEN24 3.0-5.0 Plus.

** Available in the Fronius webshop in select countries.

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The Fronius GEN24 is
available in two versions:

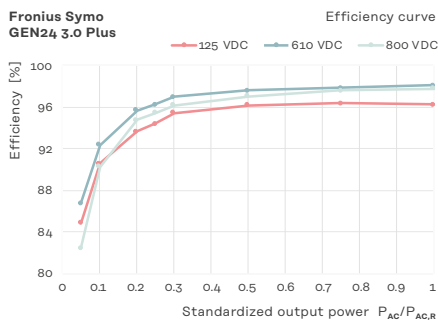
- As an inverter: **Fronius GEN24**
integrated backup power function
- As a hybrid inverter: **Fronius GEN24 Plus**
battery connection
two backup power options

Impressive Power Data

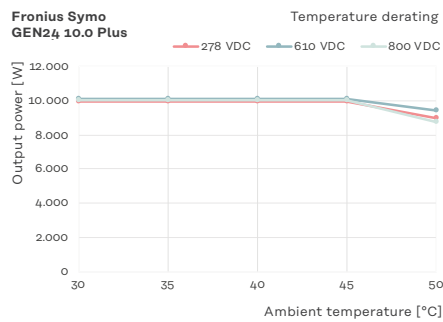
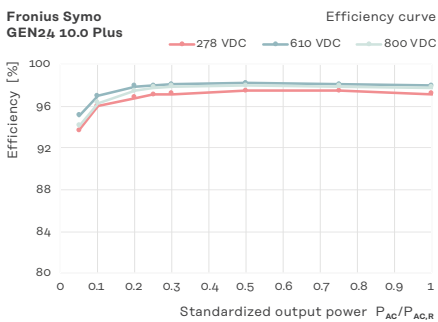
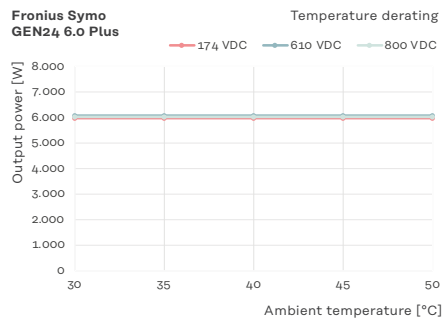
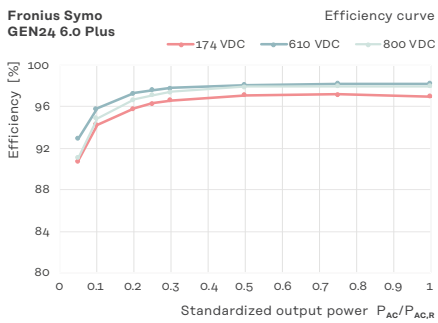
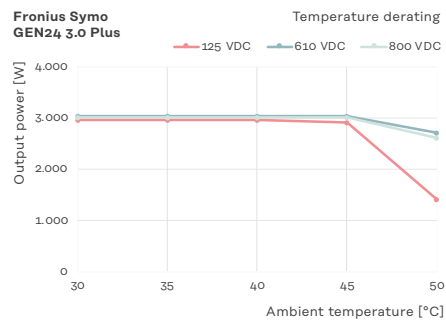
The Fronius GEN24 and Fronius GEN24 Plus impress with premium efficiency and maximum power at high temperatures.



Efficiency



Power derating



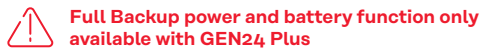
Technical data

3.0/4.0/5.0 kW

| | | | Symo GEN24/GEN24 Plus | | | | | | | | |
|--------------------------|--|-------|-----------------------|-------|------------|-------|------------|-------|-------|-------|-------|
| | | | 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 | | | | |
| | Nominal 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 | 125 - 800 | | 170 - 800 | | 210 - 800 | | | | |
| | | | MPPT1 | MPPT2 | MPPT1 | MPPT2 | MPPT1 | MPPT2 | | | |
| | Max. usable input current (I _{dc} max) | A | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | | | |
| | Max. array short circuit current (I _{sc} pv) ¹ | A | 20 | 20 | 20 | 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 _{peak} | 4,500 | 4,500 | 4,500 | 6,000 | 6,000 | 6,000 | 6,500 | 6,500 | 7,500 | |

| | | | | | | | | |
|---------------------------------------|--|---------------------|--|---------|---------|---------|---------|---------|
| Output data | AC rated power (P _{ac,r}) | 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 |
| | Nom. AC output current | A | 4.5 | 4.3 | 6.1 | 5.8 | 7.6 | 7.2 |
| | 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 | % | < 3.0 | | < 3.0 | | < 3.0 | |
| Power factor (cos φ _{ac,r}) | | 0.7 - 1 ind. / cap. | | | | | | |

| | | | | | | | | |
|----------------------|----------------------------|------|----------------|--|-------|--|-------|--|
| Output data PV Point | Nom. output power PV Point | VA | 3,000 | | 3,000 | | 3,000 | |
| | Grid connection PV Point | V | 1~ NPE 220/230 | | | | | |
| | Switching time | sec. | < 23 | | < 23 | | < 23 | |



| | | | Symo GEN24 Plus | | | | | |
|--------------------------------------|-------------------------------|------|---|--|-----|--|-----|--|
| | | | 3.0 | | 4.0 | | 5.0 | |
| Output data Full Backup ² | Nom. output power Full Backup | VA | The Full Backup power function is available for the Symo GEN24 6.0-10.0 Plus. | | | | | |
| | Grid connection Full Backup | V | | | | | | |
| | Switching time | sec. | | | | | | |

| | | | | | | | | |
|--------------------|--|---|---|--|-----------|--|-----------|--|
| Battery connection | Number of DC inputs | | 1 | | 1 | | 1 | |
| | Max. input current (I _{dc} max) | A | 12,5 | | 12,5 | | 12,5 | |
| | DC input voltage range (U _{dc} min - U _{dc} max) | V | 160 - 531 | | 160 - 531 | | 160 - 531 | |
| | DC battery connection technology | | 1 × BATT+ and 1 × BATT- push-in spring terminals 2.5 - 10 mm ² | | | | | |
| | Max. DC input/output power ³ | W | 3,150 | | 4,180 | | 5,200 | |
| | Max. charging power for AC coupling ³ | W | 3,000 | | 4,000 | | 5,000 | |
| | Compatible batteries ⁴ | | BYD Battery-Box Premium HVS/HVM & LG FLEX ⁵ | | | | | |

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

² The Full Backup option is available for the Symo GEN24 6.0-10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

³ Depending on connected battery

⁴ Depending on the country-specific certification and availability

⁵ Excluding BYD Battery-Box Premium, HVS 12.8, HVM 8.3

| | | | Symo GEN24/GEN24 Plus | | |
|------------------------|---|--|--|------------|------------|
| | | | 3.0 | 4.0 | 5.0 |
| General data | Dimensions (height × width × depth) | mm | 530 × 474 × 165 | | |
| | Weight (inverter/with packaging) | kg | 15.6/19,4 | 15.6/19,4 | 15.6/19,4 |
| | Protection class | | IP 66 | IP 66 | IP 66 |
| | Safety class | | 1 | 1 | 1 |
| | Night consumption | W | < 10 | < 10 | < 10 |
| | Overvoltage category (DC/AC) ⁶ | | 2/3 | 2/3 | 2/3 |
| | Inverter concept | | Transformerless | | |
| | 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 ² | | |
| | AC connection technology | | 5-pin AC push-in spring terminals 1.5 - 10 mm ² 3-pin backup power push-in spring terminals 1.5 - 10 mm ² 5 × PPE screw terminals 2.5 - 16 mm ² | | |
| | Certificates and compliance with standards ⁷ | | IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25 | | |
| Backup power functions | | PV Point | | | |
| Life cycle analysis | | In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM) | | | |
| Efficiency | Max. efficiency | % | 98.1 | 98.2 | 98.2 |
| | Euro. efficiency (η _{EU}) | % | 96.7 | 97.2 | 97.5 |
| | MPP adaptation efficiency | % | > 99.9 | > 99.9 | > 99.9 |
| Protection devices | DC isolation measurement | | Integrated | | |
| | Overload performance | | Operating point shift, power limiter | | |
| | DC disconnecter | | Integrated | | |
| | Reverse polarity protection | | Integrated | | |
| Interfaces | WLAN/2 × Ethernet LAN | | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON) | | |
| | 6 digital inputs 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 (GEN24 Plus), Fronius Ohmpilot | | |

⁶ 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

⁷ You can find the current certificates under www.fronius.com/symo-gen24-plus-cert

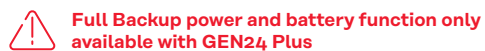
Technical data

6.0/8.0/10.0 kW

| | | | Symo GEN24/GEN24 Plus | | | | | | | | |
|--------------------------|--|-------|-----------------------|-------|--------|------------|--------|--------|------------|--------|--------|
| | | | 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 | | |
| | Nominal 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 | 174 - 800 | | | 224 - 800 | | | 278 - 800 | | |
| | | | MPPT1 | MPPT2 | | MPPT1 | MPPT2 | | MPPT1 | MPPT2 | |
| | Max. usable input current (I _{dc} max) | A | 25 | 12.5 | | 25 | 12.5 | | 25 | 12.5 | |
| | Max. array short circuit current (I _{sc} pv) ¹ | 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 | 6,220 | 6,000 | 6,220 | 8,260 | 6,000 | 8,260 | 10,300 | 6,000 | 10,300 |
| Max. PV generator output | W _{peak} | 7,500 | 6,500 | 9,000 | 10,000 | 7,000 | 12,000 | 12,500 | 7,500 | 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 |
| | Nom. 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 (frequency range f _{min} - f _{max}) | Hz | 50/60 (45 - 65) | | | | | | | |
| | Total harmonic distortion | % | < 3 | | | < 3 | | | < 3 | |
| Power factor (cos φ _{ac,r}) | | 0.7 - 1 ind. / cap. | | | | | | | | |

| | | | | | | | | | | |
|----------------------|----------------------------|------|----------------|--|--|-------|--|--|-------|--|
| Output data PV Point | Nom. output power PV Point | VA | 3,000 | | | 3,000 | | | 3,000 | |
| | Grid connection PV Point | V | 1~ NPE 220/230 | | | | | | | |
| | Switching time | sec. | < 23 | | | < 23 | | | < 23 | |



Full Backup power and battery function only available with GEN24 Plus

| | | | Symo GEN24 Plus | | | | | | | |
|--------------------------------------|---------------------------------|------|----------------------------------|--|--|-------|--|--|--------|--|
| | | | 6.0 | | | 8.0 | | | 10.0 | |
| Output data Full Backup ² | Nom. output power Full Backup | VA | 6,000 | | | 8,000 | | | 10,000 | |
| | Nominal Full Backup phase power | VA | 3,680 | | | 3,680 | | | 3,680 | |
| | Grid connection Full Backup | V | 3~ NPE 400/230 or 3~ NPE 380/220 | | | | | | | |
| | Switching time | sec. | < 35 | | | < 35 | | | < 35 | |

| | | | | | | | | | | |
|--------------------|--|---|---|--|--|-----------|--|--|-----------|--|
| 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 - 531 | | | 160 - 531 | | | 160 - 531 | |
| | DC battery connection technology | | 1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm ² | | | | | | | |
| | Max. DC input/output power ³ | W | 6,220 | | | 8,260 | | | 10,300 | |
| | Max. charging power for AC coupling ³ | W | 6,000 | | | 8,000 | | | 10,000 | |
| | Compatible batteries ⁴ | | BYD Battery-Box Premium HVS/HVM & LG FLEX ⁵ | | | | | | | |

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

² The Full Backup option is available for the Symo GEN24 3.0–6.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

³ Depending on connected battery

⁴ Depending on the country-specific certification and availability

⁵ Excluding BYD Battery-Box Premium, HVS 12.8, HVM 8.3

| | | | Symo GEN24/GEN24 Plus | | |
|-------------------------------------|---|--|--|------------|-----------|
| | | | 6.0 | 8.0 | 10.0 |
| General data | Dimensions (height × width × depth) | mm | 595 × 529 × 180 | | |
| | Weight (inverter/with packaging) | kg | 23.4/28.5 | 23.4/28.5 | 23.4/28.5 |
| | Protection class | | IP 66 | IP 66 | IP 66 |
| | Safety class | | 1 | 1 | 1 |
| | Night consumption | W | < 10 | < 10 | < 10 |
| | Overvoltage category (DC/AC) ⁶ | | 2/3 | 2/3 | 2/3 |
| | Inverter concept | | Transformerless | | |
| | Cooling | | Active Cooling technology | | |
| | Installation | | Indoor and outdoor installation | | |
| | Ambient temperature range | °C | -25 to +60 | -25 to +60 | to |
| | 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 ² | | |
| | AC connection technology | | 5-pin AC push-in spring terminals 1.5 - 10 mm ² 3-pin backup power push-in spring terminals 1.5 - 10 mm ² 5 × PPE screw terminals 2.5 - 16 mm ² | | |
| | Certificates and compliance with standards ⁷ | | IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25 | | |
| Backup power functions ⁸ | | PV Point or Full Backup | | | |
| Life cycle analysis | | In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM) | | | |
| Efficiency | Max. efficiency | % | 98.2 | 98.2 | 98.2 |
| | Euro. efficiency (η _{EU}) | % | 97.7 | 97.8 | 97.9 |
| | MPP adaptation efficiency | % | > 99.9 | > 99.9 | > 99.9 |
| Protection devices | DC isolation measurement | | Integrated | | |
| | Overload performance | | Operating point shift, power limiter | | |
| | DC disconnecter | | Integrated | | |
| | Reverse polarity protection | | Integrated | | |
| Interfaces | WLAN/2 × Ethernet LAN | | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON) | | |
| | 6 digital inputs 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 (GEN24 Plus), Fronius Ohmpilot | | |

⁶ 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

⁷ You can find the current certificates under www.fronius.com/symo-gen24-plus-cert

⁸ Full Backup power ist only available with GEN24 Plus.

Fronius Symo GEN24 and GEN24 Plus



Designed to empower.

For further information, please visit

www.fronius.com/gen24-residential

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