

# Designed to empower.



Fronius  
Primo GEN24

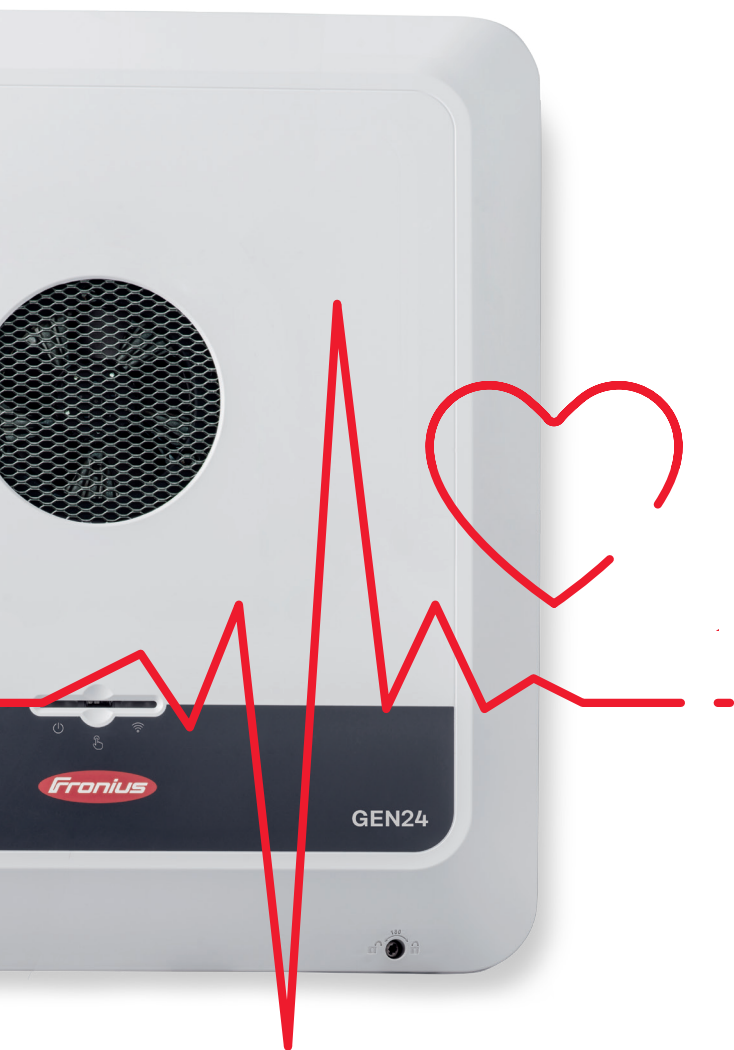
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## Product advantages

- 01 Integrated shade management
- 02 Backup power right from the start
- 03 Built-in longevity
- 04 Flexibility for greater potential
- 05 Sustainably future-proof

# The heart of the photovoltaic system

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## 01 Integrated shade management

Highest yields even in shade: That's what the Fronius GEN24 achieves with the Dynamic Peak Manager. The intelligent algorithm optimizes PV yields at the string level, eliminating the need for expensive module level optimization components.

## 02 Backup power right from the start

Harness backup power directly from the sun with the Fronius GEN24 equipped with PV Point. In the event of a power failure, energy is supplied via a designated socket with no need for a battery as long as the sun is shining.

## 03 Built-in longevity

The Active Cooling Technology effectively safeguards the electrical components, protecting them from heat development, therefore extending the service life of our inverters and securing the longevity of customers' investment.

## 04 Flexibility for greater potential

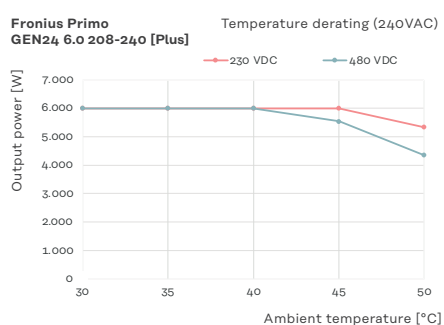
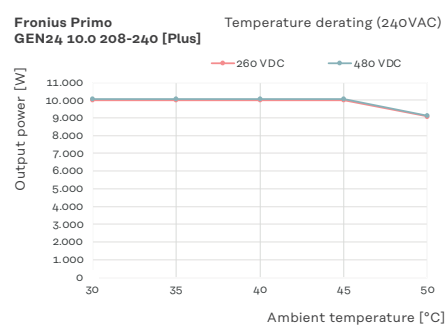
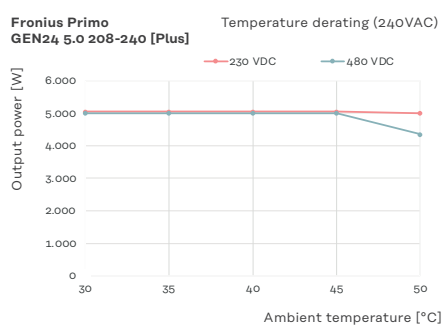
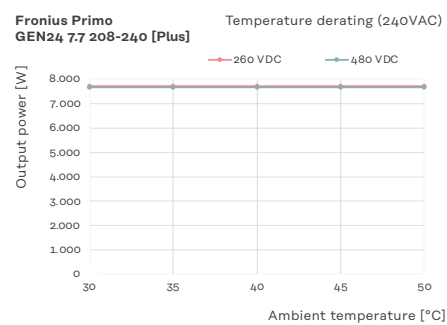
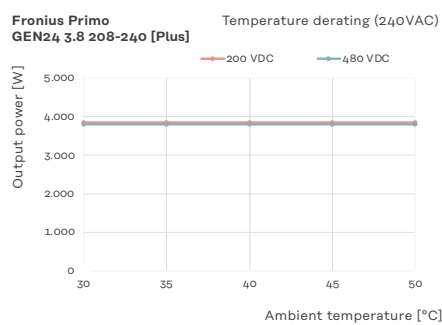
Thanks to the SuperFlex Design, the Fronius GEN24 is ideally equipped for complex roof situations. With the ability to align PV modules in different orientations and strings from 3 modules on, installers have the flexibility to design solar systems tailored to their customers' individual needs.

## 05 Sustainably future-proof

For those seeking a hybrid inverter solution, there's good news: Through an upcoming software upgrade, your device can be retrofitted with a battery connection, enabling the Full Backup power option so you have power even during a grid outage.

# Impressive power data

The Fronius GEN24 impresses with maximum power at high temperatures.



# Technical data

## 3.8/5.0/6.0 kW

3.8/5.0/6.0 kW

|            |                                                                     |                   | Primo GEN24 208-240 & GEN24 208-240 Plus |                     |                     |                     |                     |                     |                     |                     |                     |
|------------|---------------------------------------------------------------------|-------------------|------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|            |                                                                     |                   | 3.8                                      |                     |                     | 5.0                 |                     |                     | 6.0                 |                     |                     |
| Input data | Number of MPP trackers                                              |                   | 2                                        |                     |                     | 2                   |                     |                     | 2                   |                     |                     |
|            | Voltage withstand limit                                             | VDC               | 600                                      |                     |                     |                     |                     |                     |                     |                     |                     |
|            |                                                                     |                   | 208 V <sub>ac</sub>                      | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|            | Rated input voltage (U <sub>dc,r</sub> )                            | V                 | 360                                      | 380                 | 400                 | 360                 | 380                 | 400                 | 360                 | 380                 | 400                 |
|            | Feed-in start voltage (U <sub>dc start</sub> )                      | V                 | 80                                       |                     |                     | 80                  |                     |                     | 80                  |                     |                     |
|            | Operating voltage range                                             | V                 | 65–480                                   |                     |                     | 65–480              |                     |                     | 65–480              |                     |                     |
|            | MPP voltage range (at rated power)                                  | V                 | 200–480                                  |                     |                     | 230-480             |                     |                     | 230-480             |                     |                     |
|            |                                                                     |                   | MPPT1                                    |                     | MPPT2               | MPPT1               |                     | MPPT2               | MPPT1               |                     | MPPT2               |
|            | Max. short circuit current per MPPT (I <sub>sc</sub> ) <sup>1</sup> | A                 | 36                                       | 19                  |                     | 36                  | 19                  |                     | 36                  | 19                  |                     |
|            | Number of DC connections <sup>2</sup>                               |                   | 2                                        | 2                   |                     | 2                   | 2                   |                     | 2                   | 2                   |                     |
|            |                                                                     |                   | MPPT1                                    | MPPT2               | Total               | MPPT1               | MPPT2               | Total               | MPPT1               | MPPT2               | Total               |
|            | Max. usable DC power                                                | W                 | 3,940                                    | 3,940               | 3,940               | 5,150               | 5,150               | 5,150               | 6,190               | 6,190               | 6,190               |
|            | Max. PV generator output                                            | W <sub>peak</sub> | 5,700                                    | 5,700               | 5,700               | 7,500               | 6,800               | 7,500               | 8,000               | 6,800               | 9,000               |

|             |                                                                  |    |                                                 |                     |                     |                     |                     |                     |                     |                     |                     |
|-------------|------------------------------------------------------------------|----|-------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Output data |                                                                  |    | 208 V <sub>ac</sub>                             | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|             | AC rated power (P <sub>ac,r</sub> )                              | W  | 3,800                                           | 3,800               | 3,800               | 5,000               | 5,000               | 5,000               | 5,740               | 6,000               | 6,000               |
|             | Apparent power                                                   | VA | 3,800                                           | 3,800               | 3,800               | 5,000               | 5,000               | 5,000               | 5,740               | 6,000               | 6,000               |
|             | Max. Output power                                                | VA | 3,800                                           | 3,800               | 3,800               | 5,000               | 5,000               | 5,000               | 5,740               | 6,000               | 6,000               |
|             | Rated AC output current                                          | A  | 18.3                                            | 17.3                | 15.8                | 24                  | 22.7                | 20.8                | 27.6                | 27.3                | 25                  |
|             | Mains connection (U <sub>ac,r</sub> )                            | V  | Single phase 208 V / 220 V / 240 V (-12 / +10%) |                     |                     |                     |                     |                     |                     |                     |                     |
|             | Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> ) | Hz | 50 Hz / 60 Hz (45 Hz – 66 Hz)                   |                     |                     |                     |                     |                     |                     |                     |                     |
|             | Distortion factor                                                | %  | < 3.5                                           |                     |                     |                     |                     |                     |                     |                     |                     |
|             | Adjustable power factor                                          |    | 0.8 - 1 ind. / cap.                             |                     |                     |                     |                     |                     |                     |                     |                     |

|                      |                             |      |                                    |  |  |  |  |  |  |  |  |
|----------------------|-----------------------------|------|------------------------------------|--|--|--|--|--|--|--|--|
| Output data PV Point |                             |      | 120 V <sub>ac</sub>                |  |  |  |  |  |  |  |  |
|                      | Rated Output power PV Point | VA   | 1,560                              |  |  |  |  |  |  |  |  |
|                      | Rated AC voltage PV Point   | V    | Single phase 120 V / 220 V / 240 V |  |  |  |  |  |  |  |  |
|                      | Switching time              | sec. | < 23                               |  |  |  |  |  |  |  |  |

The Fronius GEN24 can be upgraded to a Fronius GEN24 Plus hybrid inverter in the future through the UP.storage software upgrade. This upgrade activates battery functionality, enabling the possibility of a Full Backup power solution. However, external grid switching devices are required for this functionality. The technical specifications for battery operation and Full Backup operation are detailed below:

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

|                                      |                                                                                  |      | Primo GEN24 208-240 Plus                                           |                     |                     |                     |                     |                     |
|--------------------------------------|----------------------------------------------------------------------------------|------|--------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                      |                                                                                  |      | 3.8                                                                |                     | 5.0                 |                     | 6.0                 |                     |
| Output data Full Backup <sup>3</sup> |                                                                                  |      | 220 V <sub>ac</sub>                                                | 240 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|                                      | Rated Output power Full Backup                                                   | VA   | 3,800                                                              | 3,800               | 5,000               | 5,000               | 6,000               | 6,000               |
|                                      | Mains connection Full Backup                                                     | V    | 1~NPE 220 V / 240 V                                                |                     |                     |                     |                     |                     |
|                                      | Switching time                                                                   | sec. | < 35                                                               |                     |                     |                     |                     |                     |
| Battery connection                   | Number of DC inputs                                                              |      | 1                                                                  |                     |                     |                     |                     |                     |
|                                      | Max. Input current (I <sub>dc max</sub> )                                        | A    | 22                                                                 |                     |                     |                     |                     |                     |
|                                      | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> ) <sup>4</sup> | V    | 150–455                                                            |                     |                     |                     |                     |                     |
|                                      | Connection technology DC battery                                                 |      | 1x DC+ and 1x DC- spring-type terminals for solid: copper AWG 12-8 |                     |                     |                     |                     |                     |
|                                      | Max. Charging power with AC coupling <sup>5</sup>                                | W    | 3,800                                                              |                     | 5,000               |                     | 6,000               |                     |

<sup>1</sup> The combined I<sub>sc</sub> of each string, multiplied by a factor of 1.25, must be less than or equal to the I<sub>sc</sub> of the respective MPPT.

<sup>2</sup> The maximum usable input current of the 3.8kW, 5.0kW, and 6.0kW is 22A for MPPT1 and 12A for MPPT2.

<sup>3</sup> For Full Backup, additional external components are required for grid separation.

<sup>4</sup> AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher.

<sup>5</sup> Depending on the connected battery.

|              |                                           |         | Primo GEN24 208-240 & GEN24 208-240 Plus                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |     |
|--------------|-------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
|              |                                           |         | 3.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5.0 | 6.0 |
| General data | Dimensions (height × width × depth)       | inch/mm | 20.4 x 18.7 x 6.5 / 518 x 474 x 164                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |     |
|              | Weight (inverter)                         | lbs./kg | 35.56 lbs. / 15.08 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |     |
|              | Protection class                          |         | Type 4X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |
|              | Protection class                          |         | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |     |
|              | Night consumption                         | W       | <10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |     |
|              | Overvoltage category (DC/AC) <sup>6</sup> |         | 2/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |     |
|              | Cooling                                   |         | Active Cooling Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     |
|              | Installation                              |         | Indoor and outdoor installation                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |
|              | Ambient temperature range                 | °F/°C   | -40 to +140 / -40 to +60                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |     |
|              | Permissible humidity                      | %       | 0–100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |     |
|              | Noise emissions                           | dB (A)  | < 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |     |
|              | Max. altitude                             | ft/m    | 13,123 / 4,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |
|              | Connection technology DC PV               |         | 2x DC+1, 2x DC+2 and 4x DC- spring-type terminals for solid: copper AWG 14-8                                                                                                                                                                                                                                                                                                                                                                                                           |     |     |
|              | Connection technology AC                  |         | Spring-type terminals for solid: copper stranded / fine stranded: copper: AWG 14-8<br>Backup power spring-type terminals: AWG 16-8                                                                                                                                                                                                                                                                                                                                                     |     |     |
|              | Certificates and standard compliance      |         | UL 1741 Third Edition (incl. UL1741 Supplement SA and SB),<br>UL CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA<br>UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring),<br>IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003<br>incl. IEEE 1547.1:2005<br>ANSI/IEEE C62.41, FCC Part 15 A & B,<br>CSA C22. 2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA<br>C22.2 No.330-23, CSA C22.3 No.9:20<br>UL1699B:2021 |     |     |
|              | Country of manufacture                    |         | Austria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |

|            |                           |   |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|------------|---------------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Efficiency |                           |   | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|            | Max. Efficiency           | % | 97.4                | 97.4                | 97.6                | 97.4                | 97.4                | 97.6                | 97.4                | 97.4                | 97.6                |
|            | CEC (η <sub>CEC</sub> )   | % | 96.5                | 96.5                | 96.5                | 97                  | 97                  | 97                  | 97                  | 97                  | 97                  |
|            | MPP adjustment efficiency | % | > 99.9              |                     |                     |                     |                     |                     |                     |                     |                     |

|                      |                                            |  |            |  |  |  |  |  |  |  |  |
|----------------------|--------------------------------------------|--|------------|--|--|--|--|--|--|--|--|
| Protective equipment | DC insulation measurement                  |  | Integrated |  |  |  |  |  |  |  |  |
|                      | DC disconnect                              |  | Integrated |  |  |  |  |  |  |  |  |
|                      | Reverse polarity protection                |  | Integrated |  |  |  |  |  |  |  |  |
|                      | Arc Fault Circuit Interruption (Arc Guard) |  | Integrated |  |  |  |  |  |  |  |  |

|            |                            |  |                                                          |  |  |  |  |  |  |  |  |
|------------|----------------------------|--|----------------------------------------------------------|--|--|--|--|--|--|--|--|
| Interfaces | WLAN / 2 × Ethernet LAN    |  | Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON)  |  |  |  |  |  |  |  |  |
|            | 6 digital inputs           |  | Connection to ripple control receiver, energy management |  |  |  |  |  |  |  |  |
|            | 6 digital inputs/outputs   |  | Integrated                                               |  |  |  |  |  |  |  |  |
|            | Emergency shutdown (WSD)   |  | Integrated                                               |  |  |  |  |  |  |  |  |
|            | Data logger and web server |  | Fronius Smart Meter WR / Modbus RTU (third-party)        |  |  |  |  |  |  |  |  |

<sup>6</sup> According to UL 1741.

# Technical data

## 7.7/10.0 kW

7.7/10.0 kW

|            |                                                                     |                   | Primo GEN24 208-240 & GEN24 208-240 Plus |                     |                     |                     |                     |                     |
|------------|---------------------------------------------------------------------|-------------------|------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|            |                                                                     |                   | 7.7                                      |                     |                     | 10.0                |                     |                     |
| Input data | Number of MPP trackers                                              |                   | 2                                        |                     |                     |                     |                     |                     |
|            | Voltage withstand limit                                             | VDC               | 600                                      |                     |                     |                     |                     |                     |
|            |                                                                     |                   | 208 V <sub>ac</sub>                      | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|            | Rated input voltage (U <sub>dc,r</sub> )                            | V                 | 365                                      | 365                 | 385                 | 365                 | 365                 | 385                 |
|            | Feed-in start voltage (U <sub>dc start</sub> )                      | V                 | 80                                       |                     |                     |                     |                     |                     |
|            | Operating voltage range                                             | V                 | 65–530                                   |                     |                     | 65–530              |                     |                     |
|            | MPP voltage range (at rated power)                                  | V                 | 260–480                                  |                     |                     | 260–480             |                     |                     |
|            |                                                                     |                   | MPPT1                                    | MPPT2               | MPPT1               | MPPT2               |                     |                     |
|            | Max. short circuit current per MPPT (I <sub>sc</sub> ) <sup>1</sup> | A                 | 41.25                                    | 36                  | 41.25               | 36                  |                     |                     |
|            | Number of DC connections <sup>2</sup>                               |                   | 2                                        | 2                   | 2                   | 2                   |                     |                     |
|            |                                                                     |                   | MPPT1                                    | MPPT2               | Total               | MPPT1               | MPPT2               | Total               |
|            | Max. usable DC power                                                | W                 | 8,000                                    | 8,000               | 8,000               | 10,250              | 10,250              | 10,250              |
|            | Max. PV generator output                                            | W <sub>peak</sub> | 11,520                                   | 11,520              | 11,520              | 13,500              | 13,000              | 15,000              |

|             |                                                                  |    |                                                 |                     |                     |                     |                     |                     |
|-------------|------------------------------------------------------------------|----|-------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Output data |                                                                  |    | 208 V <sub>ac</sub>                             | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|             | AC rated power (P <sub>ac,r</sub> )                              | W  | 7,680                                           | 7,680               | 7,680               | 9,450               | 10,000              | 10,000              |
|             | Apparent power                                                   | VA | 7,680                                           | 7,680               | 7,680               | 9,450               | 10,000              | 10,000              |
|             | Max. Output power                                                | VA | 7,680                                           | 7,680               | 7,680               | 9,450               | 10,000              | 10,000              |
|             | Rated AC output current                                          | A  | 36.9                                            | 34.9                | 32.0                | 45.45               | 45.45               | 41.7                |
|             | Mains connection (U <sub>ac,r</sub> )                            | V  | Single phase 208 V / 220 V / 240 V (-12 / +10%) |                     |                     |                     |                     |                     |
|             | Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> ) | Hz | 50 Hz / 60 Hz (45 Hz–66 Hz)                     |                     |                     |                     |                     |                     |
|             | Distortion factor                                                | %  | < 3.5                                           |                     |                     |                     |                     |                     |
|             | Adjustable power factor                                          |    | 0.8–1 ind. / cap.                               |                     |                     |                     |                     |                     |

|                      |                            |      |                                    |                     |                     |                     |                     |                     |
|----------------------|----------------------------|------|------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Output data PV Point |                            |      | 120 V <sub>ac</sub>                | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 120 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|                      | Nom. Output power PV Point | VA   | 1,560                              | 2,860               | 3,120               | 1,560               | 2,860               | 3,120               |
|                      | Rated AC voltage PV Point  | V    | Single phase 120 V / 220 V / 240 V |                     |                     |                     |                     |                     |
|                      | Switching time             | sec. | < 23                               |                     |                     |                     |                     |                     |

The Fronius GEN24 can be upgraded to a Fronius GEN24 Plus hybrid inverter in the future through the UP.storage software upgrade. This upgrade activates battery functionality, enabling the possibility of a Full Backup power solution. However, external grid switching devices are required for this functionality. The technical specifications for battery operation and Full Backup operation are detailed below:

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

|                                      |                                |      | Primo GEN24 208-240 Plus |                     |                     |                     |
|--------------------------------------|--------------------------------|------|--------------------------|---------------------|---------------------|---------------------|
|                                      |                                |      | 7.7                      |                     | 10.0                |                     |
| Output data Full Backup <sup>3</sup> |                                |      | 220 V <sub>ac</sub>      | 240 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|                                      | Rated Output power Full Backup | VA   | 7,680                    | 7,680               | 10,000              | 10,000              |
|                                      | Mains connection Full Backup   | V    | 1~NPE 220 V / 240 V      |                     |                     |                     |
|                                      | Switching time                 | sec. | < 45                     |                     |                     |                     |

|                    |                                                                                  |   |                                                                    |  |        |  |
|--------------------|----------------------------------------------------------------------------------|---|--------------------------------------------------------------------|--|--------|--|
| Battery connection | Number of DC inputs                                                              |   | 1                                                                  |  |        |  |
|                    | Max. Input current (I <sub>dc max</sub> )                                        | A | 22                                                                 |  |        |  |
|                    | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> ) <sup>4</sup> | V | 150–455                                                            |  |        |  |
|                    | Connection technology DC battery                                                 |   | 1x DC+ and 1x DC- spring-type terminals for solid: copper AWG 12-8 |  |        |  |
|                    | Max. Charging power with AC coupling <sup>5</sup>                                | W | 7,680                                                              |  | 10,000 |  |

<sup>1</sup> The combined I<sub>sc</sub> of each string, multiplied by a factor of 1.25, must be less than or equal to the ISC of the respective MPPT.

<sup>2</sup> The maximum usable input current of the 7.7kW and 10.0kW is 22A for MPPT1 and 22A for MPPT2.

<sup>3</sup> For Full Backup, additional external components are required for grid separation.

<sup>4</sup> AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher.

<sup>5</sup> Depending on the connected battery.

|                                      |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Primo GEN24 208-240 & GEN24 208-240 Plus                                                                                           |                     |                     |                     |                     |                     |
|--------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                      |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7.7                                                                                                                                |                     |                     | 10.0                |                     |                     |
| General data                         | Dimensions (height × width × depth)        | inch/mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 23.0 x 20.8 x 7.1 / 583 x 529 x 180                                                                                                |                     |                     |                     |                     |                     |
|                                      | Weight (inverter)                          | lbs./kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 45.97 lbs. / 20.85 kg                                                                                                              |                     |                     |                     |                     |                     |
|                                      | Protection class                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Type 4X                                                                                                                            |                     |                     |                     |                     |                     |
|                                      | Protection class                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1                                                                                                                                  |                     |                     |                     |                     |                     |
|                                      | Night consumption                          | W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <10                                                                                                                                |                     |                     |                     |                     |                     |
|                                      | Overvoltage category (DC/AC) °             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2/4                                                                                                                                |                     |                     |                     |                     |                     |
|                                      | Cooling                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Active Cooling Technology                                                                                                          |                     |                     |                     |                     |                     |
|                                      | Installation                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Indoor and outdoor installation                                                                                                    |                     |                     |                     |                     |                     |
|                                      | Ambient temperature range                  | °F/°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -40 to +140 / -40 to +60                                                                                                           |                     |                     |                     |                     |                     |
|                                      | Permissible humidity                       | %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0–100                                                                                                                              |                     |                     |                     |                     |                     |
|                                      | Noise emissions                            | dB (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | < 52                                                                                                                               |                     |                     |                     |                     |                     |
|                                      | Max. altitude                              | ft/m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 13,123 / 4,000                                                                                                                     |                     |                     |                     |                     |                     |
|                                      | Connection technology DC PV                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2x DC+1, 2x DC+2 and 4x DC- spring-type terminals for solid: copper stranded / fine stranded: copper AWG 14-8                      |                     |                     |                     |                     |                     |
|                                      | Connection technology AC                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Spring-type terminals for solid: copper stranded / fine stranded: copper: AWG 14-8<br>Backup power spring-type terminals: AWG 16-8 |                     |                     |                     |                     |                     |
| Certificates and standard compliance |                                            | UL 1741 Third Edition (incl. UL1741 Supplement SA and SB),<br>UL CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA<br>UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring),<br>IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003<br>incl. IEEE 1547.1:2005<br>ANSI/IEEE C62.41, FCC Part 15 A & B,<br>CSA C22. 2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA<br>C22.2 No.330-23, CSA C22.3 No.9:20<br>UL1699B:2021 |                                                                                                                                    |                     |                     |                     |                     |                     |
| Country of manufacture               |                                            | Austria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                    |                     |                     |                     |                     |                     |
| Efficiency                           |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 208 V <sub>ac</sub>                                                                                                                | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> | 208 V <sub>ac</sub> | 220 V <sub>ac</sub> | 240 V <sub>ac</sub> |
|                                      | Max. Efficiency                            | %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 97.2                                                                                                                               | 97.2                | 97.5                | 97.2                | 97.2                | 97.5                |
|                                      | CEC (ηCEC)                                 | %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 96.5                                                                                                                               | 96.5                | 97                  | 96.5                | 96.5                | 97                  |
|                                      | MPP adjustment efficiency                  | %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | > 99.9                                                                                                                             |                     |                     |                     |                     |                     |
| Protective equipment                 | DC insulation measurement                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
|                                      | DC disconnect                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
|                                      | Reverse polarity protection                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
|                                      | Arc Fault Circuit Interruption (Arc Guard) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
| Interfaces                           | WLAN / 2 x Ethernet LAN                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON)                                                                            |                     |                     |                     |                     |                     |
|                                      | 6 digital inputs                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Connection to ripple control receiver, energy management                                                                           |                     |                     |                     |                     |                     |
|                                      | 6 digital inputs/outputs                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
|                                      | Emergency shutdown (WSD)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Integrated                                                                                                                         |                     |                     |                     |                     |                     |
|                                      | Data logger and web server                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Fronius Smart Meter WR / Modbus RTU (third-party)                                                                                  |                     |                     |                     |                     |                     |

<sup>6</sup> According to UL 1741.

# Fronius Primo GEN24

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[www.fronius.us/gen24](http://www.fronius.us/gen24)

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