

Designed to empower.

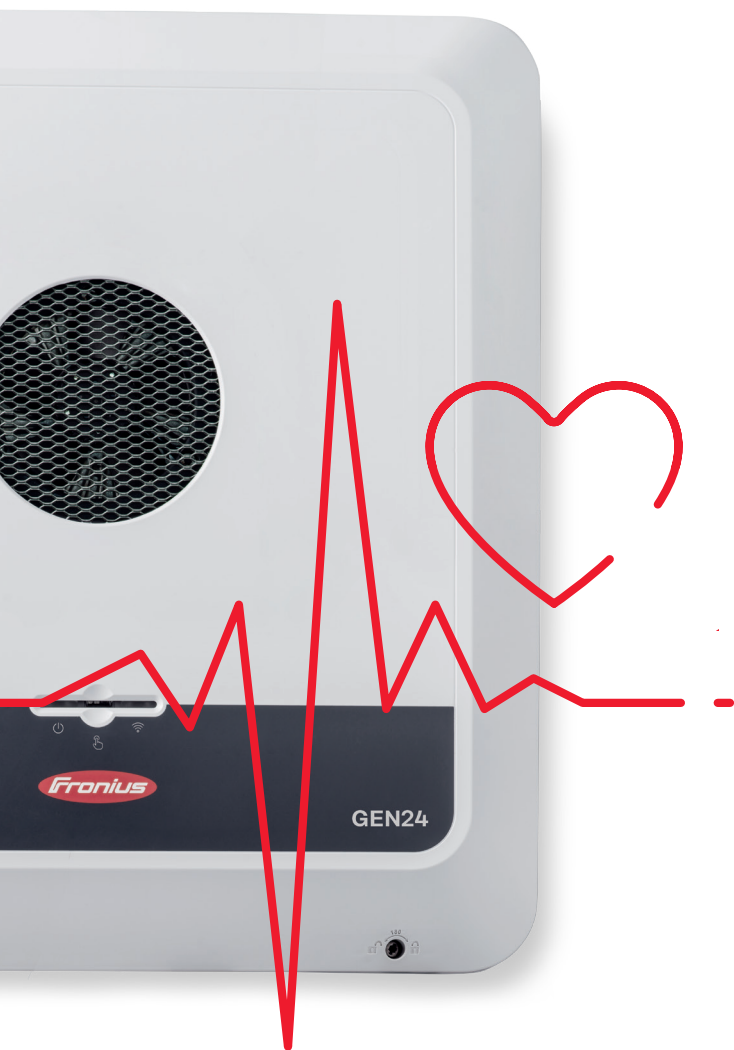


Fronius Primo
GEN24 208-240 &
GEN24 208-240 Plus

Product advantages

- 01 Integrated shade management
- 02 Backup power for your needs
- 03 Maximum independence
- 04 Flexibility for greater potential
- 05 Built-in longevity

The heart of the photovoltaic system



01 Integrated shade management

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

02 Backup power for your needs

Reliable energy supply: The Fronius GEN24 provides an integrated basic backup power function. "PV Point" is a outlet that supplies connected devices with backup power, as long as the sun is shining.

With the Fronius GEN24 Plus, you can choose between the PV Point and an essential backup option which provides backup power up to the output power of the inverter as long as enough PV production or battery supply power is available.

03 Maximum independence

Sustainable self-sufficiency with 24 hours of sun: 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.

04 Flexibility for greater potential

Thanks to the SuperFlex Design, the Fronius GEN24 and Fronius GEN24 Plus is ideally equipped for complex roof situations. With the ability to align PV modules in different orientations and strings from 3 modules on, your installer has the flexibility to design your solar system tailored to your needs.

05 Built-in longevity

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

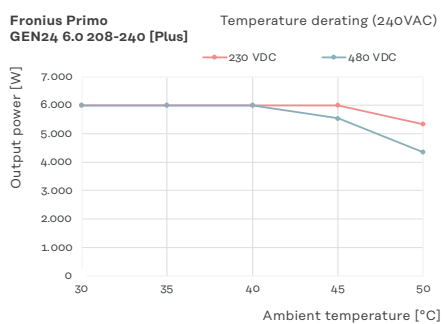
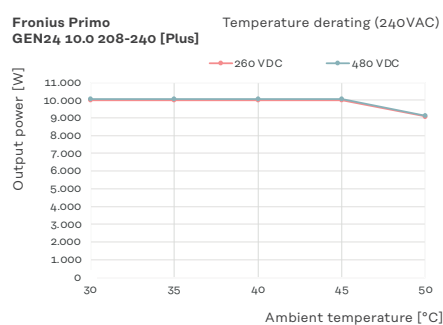
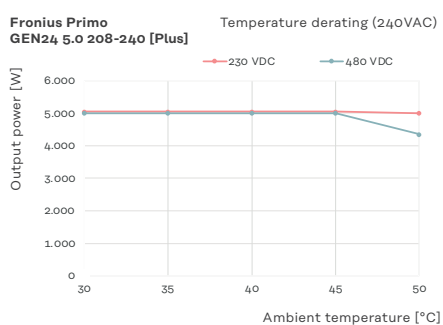
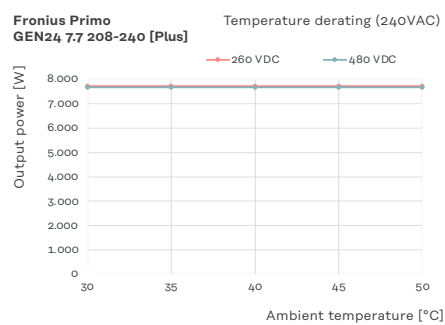
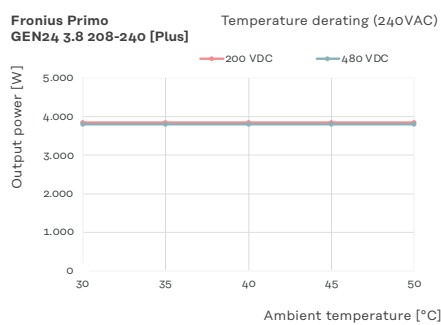
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Available in two single phase variants

- **Fronius Primo GEN24** | 3.8-10 kW
integrated basic backup power PV Point
- **Fronius Primo GEN24 Plus** | 3.8-10 kW
two backup power options, battery connection

Impressive power data

The Fronius Primo GEN24 208-240 & GEN24 208-240 Plus 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 | | | |
| | DC input voltage range (U _{dc min} - U _{dc max}) | V | 65 - 600 | | | | | | | | | |
| | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | |
| | Rated input voltage (U _{dc,r}) | V | 360 | 380 | 400 | 360 | 380 | 400 | 360 | 380 | 400 | |
| | Feed-in start voltage (U _{dc start}) | V | 80 | | | 80 | | | 80 | | | |
| | Usable MPP voltage range | V | 65-530 | | | 65-530 | | | 65-480 | | | |
| | MPP voltage range (at rated power) | V | 200-480 | | | 230-480 | | | 230-480 | | | |
| | | | MPPT1 | | MPPT2 | | MPPT1 | | MPPT2 | | MPPT1 | |
| | Max. usable input current (I _{dc max}) | A | 22 | | 12 | | 22 | | 12 | | 22 | |
| | Max. short circuit current per MPPT (I _{sc pv}) ¹ | A | 36 | | 19 | | 36 | | 19 | | 36 | |
| | Number of DC connections | | 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 | 5760 | 6,190 | |
| | Max. PV generator output | W _{peak} | 5,700 | 5,700 | 5,700 | 7,500 | 6,800 | 7,500 | 8,000 | 6,800 | 9,000 | |

| | | | | | | | | | | | |
|-------------|--|----|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Output data | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | AC rated power (P _{ac,r}) | 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 _{ac,r}) | V | 1~NPE 208 V / 220 V / 240 V (-12 / +10%) | | | | | | | | |
| | Frequency (frequency range f _{min} - f _{max}) | 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 _{ac} | | | | | | | | |
| | Rated Output power PV Point | VA | 1,560 | | | | | | | | |
| | Rated AC voltage PV Point | V | 1~NPE 120 V / 220 V / 240 V | | | | | | | | |
| | Switching time | sec. | ~17 | | | | | | | | |

 **Essential backup power and battery function only available with Fronius Primo GEN24 Plus**

| | | | Primo GEN24 208-240 Plus | | | | | |
|---|-------------------------------------|------|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | | | 3.8 | | 5.0 | | 6.0 | |
| Output data essential backup ² | | | 220 V _{ac} | 240 V _{ac} | 220 V _{ac} | 240 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | Rated Output power essential backup | VA | 3,800 | 3,800 | 5,000 | 5,000 | 6,000 | 6,000 |
| | Mains connection essential backup | V | 1~NPE 220 V / 240 V | | | | | |
| | Switching time | sec. | ~17 | | | | | |

| | | | | | |
|--------------------|---|---|--|-------|-------|
| Battery connection | Number of DC inputs | | 1 | | |
| | Max. Input current (Idc max) | A | 22 | | |
| | DC input voltage range (Udc min - Udc max) ³ | 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 ⁴ | W | 3,800 | 5,000 | 6,000 |
| | Compatible batterie | | BYD Battery-Box Premium HVM US | | |

¹ I_{sc} (STC) of the strings multiplied by 1.25 must be less or equal than ISC PV according to NEC 2023. This value needs to be divided by the amount of strings connected to the MPPT.

² For the essential backup, additional external components are required for grid separation.
A Fronius solution (Essential Backup Load Unit) will be available in Q2 2025.

³ AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher.

⁴ 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. / 16.13 kg | | | | | | | | |
| | Protection class | | NEMA 4X | | | | | | | | |
| | Protection class | | 1 | | | | | | | | |
| | Night consumption | W | <10 | | | | | | | | |
| | Overvoltage category (DC/AC) ⁵ | | 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 Backup power spring-type terminals: AWG 16-8 | | | | | | | | |
| | Certificates and standard compliance | | UL 1741 Third Edition (incl. UL1741 Supplement SA and SB), UL 1741 CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring), IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003 incl. IEEE 1547.1:2005, HECO Rule 14H, California Rule 21, and ISO NE ANSI/IEEE C62.41, FCC Part 15 A & B, CSA C22. 2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA C22.2 No.330-23, CSA C22.3 No.9:20 UL1699B:2024; SunSpec Modbus UL 9540 Ed. 3 (only for Primo GEN24 208-240 Plus) - certification | | | | | | | | |
| Country of manufacture | | Austria | | | | | | | | | |
| Efficiency | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | Max. Efficiency | % | 97.4 | 97.4 | 97.6 | 97.4 | 97.4 | 97.6 | 97.4 | 97.4 | 97.6 |
| | CEC (ηCEC) | % | 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 / Ethernet LAN | | Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON), SunSpec Modbus | | | | | | | | |
| | 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) | | | | | | | | |

⁵ 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 | | | | | | | |
| | DC input voltage range ($U_{dc\ min} - U_{dc\ max}$) | V | 65–600 | | | | | | | |
| | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | | |
| | Rated input voltage (U _{dc,r}) | V | 365 | 365 | 385 | 365 | 365 | 385 | | |
| | Feed-in start voltage (U _{dc start}) | V | 80 | | | | | | | |
| | Usable MPP voltage range | V | 65–480 | | | 65–480 | | | | |
| | MPP voltage range (at rated power) | V | 260–480 | | | 260–480 | | | | |
| | | | MPPT1 | | MPPT2 | | MPPT1 | | MPPT2 | |
| | Max. usable input current (I _{dc max}) | A | 22 | | 22 | | 22 | | 22 | |
| | Max. short circuit current per MPPT (I _{sc pv}) ¹ | A | 41.25 | | 36 | | 41.25 | | 36 | |
| | Number of DC connections | | 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 _{peak} | 11,520 | 11,520 | 11,520 | 13,500 | 13,000 | 15,000 | | |

| | | | | | | | | |
|-------------|--|----|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| Output data | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | AC rated power ($P_{ac,r}$) | 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 ($U_{ac,r}$) | V | 1~NPE 208 V / 220 V / 240 V (-12 / +10%) | | | | | |
| | Frequency (frequency range $f_{min} - f_{max}$) | Hz | 50 Hz / 60 Hz (45 Hz–66 Hz) | | | | | |
| | Distortion factor | % | < 3% | | | | | |
| | Adjustable power factor | | 0.8–1 ind. / cap. | | | | | |

| | | | | | | | | |
|-------------------------|-----------------------------|------|-----------------------------|--|--|--|--|--|
| Output data PV Point | | | 120 V _{ac} | | | | | |
| | Rated Output power PV Point | VA | 1,560 | | | | | |
| | Rated AC voltage PV Point | V | 1~NPE 120 V / 220 V / 240 V | | | | | |
| | Switching time | sec. | ~22 | | | | | |

 **Essential backup power and battery function only available with Fronius Primo GEN24 Plus**

| | | | Primo GEN24 208-240 Plus | | | |
|---|-------------------------------------|------|--------------------------|---------------------|---------------------|---------------------|
| | | | 7.7 | | 10.0 | |
| Output data essential backup ² | | | 220 V _{ac} | 240 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | Rated Output power essential backup | VA | 7,680 | 7,680 | 10,000 | 10,000 |
| | Mains connection essential backup | V | 1~NPE 220 V / 240 V | | | |
| | Switching time | sec. | ~17 | | | |

| | | | | |
|--------------------|---|---|---|--------|
| Battery connection | Number of DC inputs | | 1 | |
| | Max. Input current (Idc max) | A | 22 | |
| | DC input voltage range (Udc min - Udc max) ³ | 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 ⁴ | W | 7,680 | 10,000 |
| | Compatible batteries | | BYD Battery-Box Premium HVM US | |

¹ I_{sc} (STC) of the strings multiplied by 1.25 must be less or equal than ISC PV according to NEC 2023. This value needs to be divided by the amount of strings connected to the MPPT.

² For the essential backup, additional external components are required for grid separation.
A Fronius solution (Essential Backup Load Unit) will be available in Q2 2025.

³ AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher.

⁴ 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 | 49.05 lbs. / 22.25 kg | | | | | |
| | Protection class | | NEMA 4X | | | | | |
| | Protection class | | 1 | | | | | |
| | Night consumption | W | <10 | | | | | |
| | Overvoltage category (DC/AC) ⁵ | | 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 12-6 Backup power spring-type terminals: AWG 16-8 | | | | | |
| Certificates and standard compliance | | UL 1741 Third Edition (incl. UL1741 Supplement SA and SB), UL 1741 CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring), IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003 incl. IEEE 1547.1:2005 ANSI/IEEE C62.41, FCC Part 15 A & B, CSA C22. 2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA C22.2 No.330-23, CSA C22.3 No.9:20 UL1699B:2024; SunSpec Modbus UL 9540 Ed. 3 (only for Primo GEN24 208-240 Plus) - certification | | | | | | |
| Country of manufacture | | Austria | | | | | | |
| Efficiency | | | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} | 208 V _{ac} | 220 V _{ac} | 240 V _{ac} |
| | 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 / Ethernet LAN | | Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON), SunSpec Modbus | | | | | |
| | 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) | | | | | |

⁵ According to UL 1741.

Fromius Primo GEN24 208-240 & GEN24 208-240 Plus



Designed to empower.

For more information about the product, visit:

www.fronius.mx/gen24

www.fronius.ca/gen24

Fronius Canada Ltd.
2875 Argenta Road Units 4, 5 & 6
Mississauga, ON L5N 8G6
Canada
info.canada@fronius.com
www.fronius.ca

Fronius México S.A. de C.V.
Carretera Monterrey Saltillo 3279
Privadas de Santa Catarina
Santa Catarina, NL. 66367
México
pv-sales-mexico@fronius.com
www.fronius.mx

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