

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS

FRONIUS SYMO

/ Smarter, Lighter, More Flexible



/ SnapInverter technology



/ Integrated data communication



/ SuperFlex Design



/ Smart Grid Ready



/ PC board replacement



/ Zero feed-in



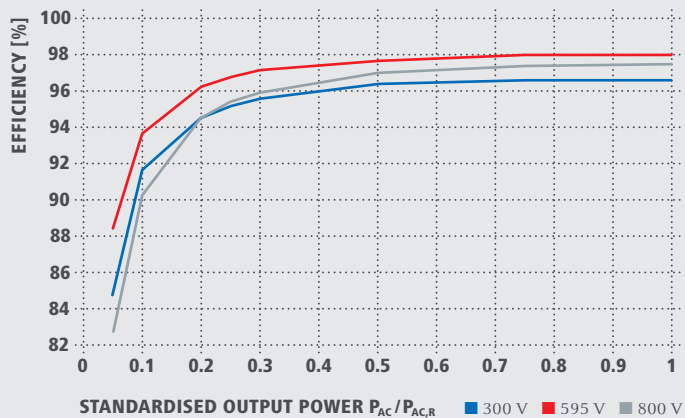
/ Boasting power categories ranging from 3.0 to 20.0 kW, the transformerless Fronius Symo is the three-phase inverter for systems of every size. Owing to the SuperFlex Design, the Fronius Symo is the perfect answer to irregularly shaped or multi-oriented roofs. The standard interface to the internet via WLAN or Ethernet and the ease of integration of third-party components make the Fronius Symo one of the most communicative inverters on the market.

TECHNICAL DATA FRONIUS SYMO (3.0-3-S, 3.7-3-S, 4.5-3-S, 3.0-3-M, 3.7-3-M, 4.5-3-M)

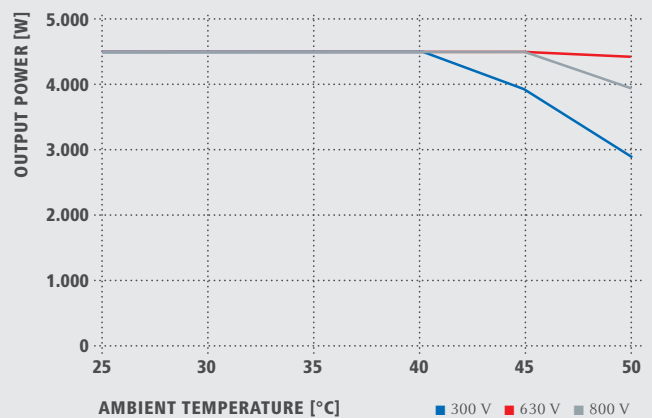
| INPUT DATA | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|--|---|------------------------|------------------------|---|------------------------|------------------------|
| Max. input current ($I_{dc\ max\ 1} / I_{dc\ max\ 2}^{1)}$) | | | 16.0 A / 16.0 A | | | |
| Max. array short circuit current (MPP ₁ /MPP ₂ ¹⁾) | | | 24.0 A / 24.0 A | | | |
| Min. input voltage ($U_{dc\ min}$) | | | 150 V | | | |
| Feed-in start voltage ($U_{dc\ start}$) | | | 200 V | | | |
| Nominal input voltage ($U_{dc,r}$) | | | 595 V | | | |
| Max. input voltage ($U_{dc\ max}$) | | | 1,000 V | | | |
| Usable MPP voltage range ($U_{mpp\ min} - U_{mpp\ max}$) | | | 150V - 800V | | | |
| MPP voltage range at nominal power ($U_{mpp\ min} - U_{mpp\ max}$) | 200 - 800 V | 250 - 800 V | 300 - 800 V | | 150 - 800 V | |
| Number MPP trackers | | 1 | | | 2 | |
| Number of DC connections | | 3 | | | 2+2 | |
| Max total PV array size ($P_{dc\ max}$) | 6.0kW _{peak} | 7.4 kW _{peak} | 9.0 kW _{peak} | 6.0 kW _{peak} | 7.4 kW _{peak} | 9.0 kW _{peak} |
| OUTPUT DATA | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
| AC nominal output ($P_{ac,r}$) | 3,000 W | 3,700 W | 4,500 W | 3,000 W | 3,700 W | 4,500 W |
| Max. output power | 3,000 VA | 3,700 VA | 4,500 VA | 3,000 VA | 3,700 VA | 4,500 VA |
| AC output current ($I_{ac\ max}$) | 4.3 A | 5.3 A | 6.5 A | 4.3 A | 5.3 A | 6.5 A |
| Grid connection ($U_{ac,r}$) | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %) | | | | | |
| Min. output voltage ($U_{ac\ min}$) | 260 / 150 V | | | | | |
| Max. output voltage ($U_{ac\ max}$) | 485 / 280 V | | | | | |
| Frequency (f_r) | 50 Hz / 60 Hz (45 - 65 Hz) | | | | | |
| Frequency range ($f_{min} - f_{max}$) | 45 - 65 Hz | | | | | |
| Total harmonic distortion | < 3 % | | | | | |
| Power factor ($\cos\ \varphi_{ac,r}$) | 0.70 - 1 ind. / cap. | | | 0.85 - 1 ind. / cap. | | |
| GENERAL DATA | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
| Dimensions (height x width x depth) | 645 x 431 x 204 mm | | | | | |
| Weight | 16.0 kg | | | 19.9 kg | | |
| Degree of protection | IP 65 | | | | | |
| Protection class | 1 | | | | | |
| Overvoltage category (DC / AC) ²⁾ | 2 / 3 | | | | | |
| Night time consumption | < 1 W | | | | | |
| Inverter design | Transformerless | | | | | |
| Cooling | Regulated air cooling | | | | | |
| Installation | Indoor and outdoor installation | | | | | |
| Ambient temperature range | -25 - +60 °C | | | | | |
| Permitted humidity | 0 - 100 % | | | | | |
| Max. altitude | 2,000 m / 3,400 m (unrestricted / restricted voltage range) | | | | | |
| DC connection technology | 3x DC+ and 3x DC- screw terminals 2.5 - 16 mm ² | | | 4x DC+ and 4x DC- screw terminals 2.5 - 16mm ² ³⁾ | | |
| Mains connection technology | 5-pole AC screw terminals 2.5 - 16 mm ² | | | 5-pole AC screw terminals 2.5 - 16mm ² ³⁾ | | |
| Certificates and compliance with standards | ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G83/2, UNE 206007-1, SI 4777 ¹⁾ CEI 0-211), NRS 097 | | | | | |

¹⁾ This applies to Fronius Symo 3.0-3-M, 3.7-3-M and 4.5-3-M. ²⁾ According to IEC 62109-1. ³⁾ 16 mm² without wire end ferrules

FRONIUS SYMO 4.5-3-S EFFICIENCY CURVE



FRONIUS SYMO 4.5-3-S TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (3.0-3-S, 3.7-3-S, 4.5-3-S, 3.0-3-M, 3.7-3-M, 4.5-3-M)

| EFFICIENCY | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Max. efficiency | 98.0 % | | | | | |
| European efficiency (η_{EU}) | 96.2 % | 96.7 % | 97.0 % | 96.5 % | 96.9 % | 97.2 % |
| η at 5 % $P_{AC,r}$ ¹⁾ | 80.3 / 83.6 / 79.1 % | 83.4 / 86.4 / 80.6 % | 84.8 / 88.5 / 82.8 % | 79.8 / 85.1 / 80.8 % | 81.6 / 87.8 / 82.8 % | 83.4 / 90.3 / 85.0 % |
| η at 10 % $P_{AC,r}$ ¹⁾ | 87.8 / 91.0 / 86.2 % | 90.1 / 92.5 / 88.7 % | 91.7 / 93.7 / 90.3 % | 86.5 / 91.6 / 87.7 % | 87.9 / 93.6 / 90.5 % | 89.2 / 94.1 / 91.2 % |
| η at 20 % $P_{AC,r}$ ¹⁾ | 92.6 / 95.0 / 92.6 % | 93.7 / 95.7 / 93.6 % | 94.6 / 96.3 / 94.5 % | 90.8 / 95.3 / 93.0 % | 91.9 / 96.0 / 94.1 % | 92.8 / 96.5 / 95.1 % |
| η at 25 % $P_{AC,r}$ ¹⁾ | 93.4 / 95.6 / 93.8 % | 94.5 / 96.4 / 94.7 % | 95.2 / 96.8 / 95.4 % | 91.9 / 96.0 / 94.2 % | 92.9 / 96.6 / 95.2 % | 93.5 / 97.0 / 95.8 % |
| η at 30 % $P_{AC,r}$ ¹⁾ | 94.0 / 96.3 / 94.5 % | 95.0 / 96.7 / 95.4 % | 95.6 / 97.2 / 95.9 % | 92.8 / 96.5 / 95.1 % | 93.5 / 97.0 / 95.8 % | 94.2 / 97.3 / 96.3 % |
| η at 50 % $P_{AC,r}$ ¹⁾ | 95.2 / 97.3 / 96.3 % | 96.9 / 97.6 / 96.7 % | 96.4 / 97.7 / 97.0 % | 94.3 / 97.5 / 96.5 % | 94.6 / 97.7 / 96.8 % | 94.9 / 97.8 / 97.2 % |
| η at 75 % $P_{AC,r}$ ¹⁾ | 95.6 / 97.7 / 97.0 % | 96.2 / 97.8 / 97.3 % | 96.6 / 98.0 / 97.4 % | 94.9 / 97.8 / 97.2 % | 95.0 / 97.9 / 97.4 % | 95.1 / 98.0 / 97.5 % |
| η at 100 % $P_{AC,r}$ ¹⁾ | 95.6 / 97.9 / 97.3 % | 96.2 / 98.0 / 97.5 % | 96.6 / 98.0 / 97.5 % | 95.0 / 98.0 / 97.4 % | 95.1 / 98.0 / 97.5 % | 95.0 / 98.0 / 97.6 % |
| MPP adaptation efficiency | > 99.9 % | | | | | |

¹⁾ and at $U_{mpp, min} / U_{dcr} / U_{mpp, max}$

| PROTECTIVE DEVICES | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|-----------------------------|---|--------------|--------------|--------------|--------------|--------------|
| DC insulation measurement | Yes | | | | | |
| Overload behaviour | Operating point shift, power limitation | | | | | |
| DC disconnecter | Yes | | | | | |
| Reverse polarity protection | Yes | | | | | |

| INTERFACES | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|--------------------------------------|---|--------------|--------------|--------------|--------------|--------------|
| WLAN / Ethernet LAN | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON) | | | | | |
| 6 inputs and 4 digital in/out | Interface to ripple control receiver | | | | | |
| USB (A socket) ²⁾ | Datalogging, inverter update via USB flash drive | | | | | |
| 2x RS422 (RJ45 socket) ²⁾ | Fronius Solar Net | | | | | |
| Signalling output ²⁾ | Energy management (potential-free relay output) | | | | | |
| Datalogger and Webservice | Included | | | | | |
| External input ²⁾ | S0-Meter Interface / Input for overvoltage protection | | | | | |
| RS485 | Modbus RTU SunSpec or meter connection | | | | | |

¹⁾ And at $U_{mpp, min} / U_{dcr} / U_{mpp, max}$.

²⁾ Also available in the light version.

TECHNICAL DATA FRONIUS SYMO (5.0-3-M, 6.0-3-M, 7.0-3-M, 8.2-3-M)

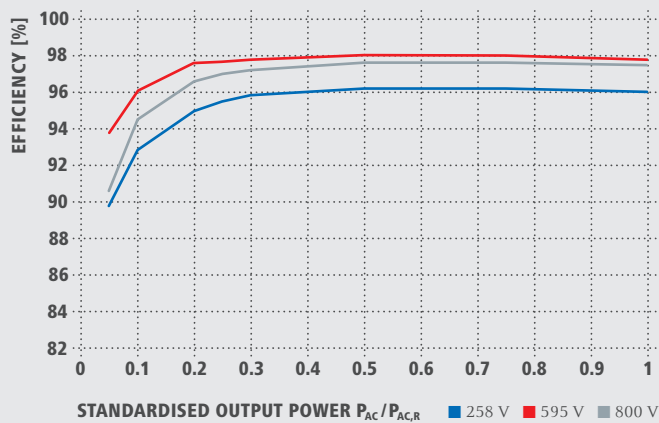
| INPUT DATA | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|--|--|--|------------------------|------------------------|
| Max. input current ($I_{dc \max 1} / I_{dc \max 2}$) | | | 16.0 A / 16.0 A | |
| Max. array short circuit current (MPP ₁ /MPP ₂) | | | 24.0 A / 24.0 A | |
| Min. input voltage ($U_{dc \min}$) | | | 150 V | |
| Feed-in start voltage ($U_{dc \text{ start}}$) | | | 200 V | |
| Nominal input voltage ($U_{dc \text{ r}}$) | | | 595 V | |
| Max. input voltage ($U_{dc \max}$) | | | 1,000 V | |
| Usable MPP voltage range ($U_{mpp \min} - U_{mpp \max}$) | | | 150 V - 800 V | |
| MPP voltage range at nominal power ($U_{mpp \min} - U_{mpp \max}$) | 163 – 800 V | 195 - 800 V | 228 – 800 V | 267 – 800 V |
| Number MPP trackers | | | 2 | |
| Number of DC connections | | | 2 + 2 | |
| Max total PV array size ($P_{dc \max}$) | 10.0kW _{peak} | 12.0kW _{peak} | 14.0kW _{peak} | 16.4kW _{peak} |
| OUTPUT DATA | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
| AC nominal output ($P_{ac \text{ r}}$) | 5,000 W | 6,000 W | 7,000 W | 8,200 W |
| Max. output power | 5,000 VA | 6,000 VA | 7,000 VA | 8,200 VA |
| AC output current ($I_{ac \max}$) | 7.2 A | 8.7 A | 10.1 A | 11.8 A |
| Grid connection ($U_{ac \text{ r}}$) | | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %) | | |
| Min. output voltage ($U_{ac \min}$) | | 260 / 150 V | | |
| Max. output voltage ($U_{ac \max}$) | | 485 / 280 V | | |
| Frequency (f_r) | | 50 Hz / 60 Hz | | |
| Frequency range ($f_{\min} - f_{\max}$) | | 45 - 65 Hz | | |
| Total harmonic distortion | | < 3 % | | |
| Power factor ($\cos \varphi_{ac \text{ r}}$) | | 0.85 - 1 ind. / cap. | | |
| GENERAL DATA | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
| Dimensions (height x width x depth) | | 645 x 431 x 204 mm | | |
| Weight | 19.9 kg | | | 21.9 kg |
| Degree of protection | | IP 65 | | |
| Protection class | | 1 | | |
| Overvoltage category (DC / AC) ¹⁾ | | 2 / 3 | | |
| Night-time consumption | | < 1 W | | |
| Inverter design | | Transformerless | | |
| Cooling | | Regulated air cooling | | |
| Installation | | Indoor and outdoor installation | | |
| Ambient temperature range | | -25 - +60 °C | | |
| Permitted humidity | | 0 - 100 % | | |
| Max. altitude | | 2,000 m / 3,400 m (unrestricted / restricted voltage range) | | |
| DC connection technology | | 4x DC+ and 4x DC- Screw terminals 2.5 - 16mm ^{2 2)} | | |
| Mains connection technology | | 5-pole AC Screw terminals 2.5 - 16mm ^{2 2)} | | |
| Certificates and compliance with standards | ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G83/2, UNE 206007-1, SI 4777, CEI 0-21, NRS 097 | | | |

¹⁾ according to IEC 62109-1.

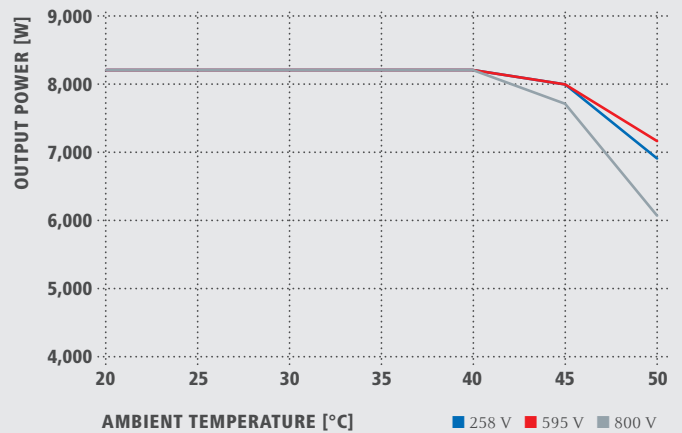
¹⁾ 16 mm² without wire end ferrules.

²⁾ 16 mm² without wire end ferrules

FRONIUS SYMO 8.2-3-M EFFICIENCY CURVE



FRONIUS SYMO 8.2-3-M TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (5.0-3-M, 6.0-3-M, 7.0-3-M, 8.2-3-M)

| EFFICIENCY | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|--|----------------------|----------------------|----------------------|----------------------|
| Max. efficiency | 98.0 % | | | |
| European efficiency (η_{EU}) | 97.3 % | 97.5 % | 97.6 % | 97.7 % |
| η at 5 % $P_{AC,r}$ ¹⁾ | 84.9 / 91.2 / 85.9 % | 87.8 / 92.6 / 87.8 % | 88.7 / 93.1 / 89.0 % | 89.8 / 93.8 / 90.6 % |
| η at 10 % $P_{AC,r}$ ¹⁾ | 89.9 / 94.6 / 91.7 % | 91.3 / 95.6 / 93.0 % | 92.0 / 95.9 / 94.7 % | 92.8 / 96.1 / 94.5 % |
| η at 20 % $P_{AC,r}$ ¹⁾ | 93.2 / 96.7 / 95.4 % | 94.1 / 97.1 / 95.9 % | 94.5 / 97.3 / 96.3 % | 95.0 / 97.6 / 96.6 % |
| η at 25 % $P_{AC,r}$ ¹⁾ | 93.9 / 97.2 / 96.0 % | 94.7 / 97.5 / 96.5 % | 95.1 / 97.6 / 96.7 % | 95.5 / 97.7 / 97.0 % |
| η at 30 % $P_{AC,r}$ ¹⁾ | 94.5 / 97.4 / 96.5 % | 95.1 / 97.7 / 96.8 % | 95.4 / 97.7 / 97.0 % | 95.8 / 97.8 / 97.2 % |
| η at 50 % $P_{AC,r}$ ¹⁾ | 95.2 / 97.9 / 97.3 % | 95.7 / 98.0 / 97.5 % | 95.9 / 98.0 / 97.5 % | 96.2 / 98.0 / 97.6 % |
| η at 75 % $P_{AC,r}$ ¹⁾ | 95.3 / 98.0 / 97.5 % | 95.7 / 98.0 / 97.6 % | 95.9 / 98.0 / 97.6 % | 96.2 / 98.0 / 97.6 % |
| η at 100 % $P_{AC,r}$ ¹⁾ | 95.2 / 98.0 / 97.6 % | 95.7 / 97.9 / 97.6 % | 95.8 / 97.9 / 97.5 % | 96.0 / 97.8 / 97.5 % |
| MPP adaptation efficiency | > 99.9 % | | | |

¹⁾ and at $U_{mpp\ min} / U_{dc,r} / U_{mpp\ max}$

| PROTECTIVE DEVICES | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|-----------------------------|---|--------------|--------------|--------------|
| DC insulation measurement | Yes | | | |
| Overload behaviour | Operating point shift, power limitation | | | |
| DC disconnecter | Yes | | | |
| Reverse polarity protection | Yes | | | |

| INTERFACES | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|--------------------------------------|---|--------------|--------------|--------------|
| WLAN / Ethernet LAN | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON) | | | |
| 6 inputs and 4 digital in/out | Interface to ripple control receiver | | | |
| USB (A socket) ²⁾ | Datalogging, inverter update via USB flash drive | | | |
| 2x RS422 (RJ45 socket) ²⁾ | Fronius Solar Net | | | |
| Signalling output ²⁾ | Energy management (potential-free relay output) | | | |
| Datalogger and Webservice | Included | | | |
| External input ²⁾ | S0-Meter Interface / Input for overvoltage protection | | | |
| RS485 | Modbus RTU SunSpec or meter connection | | | |

¹⁾ And at $U_{mpp\ min} / U_{dc,r} / U_{mpp\ max}$.

²⁾ Also available in the light version.

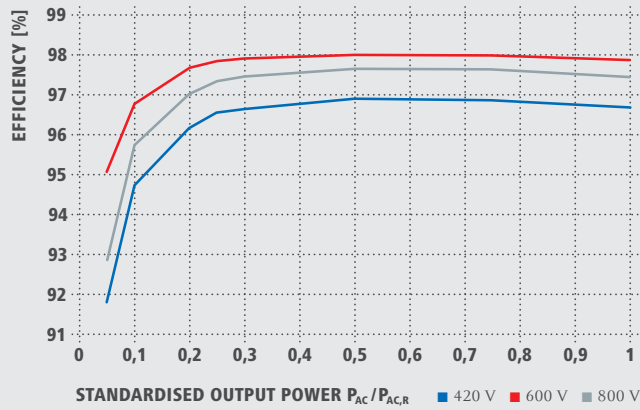
TECHNICAL DATA FRONIUS SYMO (10.0-3-M, 12.5-3-M, 15.0-3-M, 17.5-3-M, 20.0-3-M)

| INPUT DATA | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
|--|--|------------------------|-------------------------|-------------------------|-------------------------|
| Max. input current ($I_{dc \max 1} / I_{dc \max 2}$) | 27.0 A / 16.5 A ¹⁾ | | 33.0 A / 27.0 A | | |
| Max. usable input current total ($I_{dc \max 1} / I_{dc \max 2}$) | 43.5 A | | 51.0 A | | |
| Max. array short circuit current (MPP ₁ /MPP ₂) | 40.5 A / 24.8 A | | 49.5 A / 40.5 A | | |
| Min. input voltage ($U_{dc \min}$) | 200 V | | | | |
| Feed-in start voltage ($U_{dc \text{ start}}$) | 200 V | | | | |
| Nominal input voltage ($U_{dc \text{ r}}$) | 600 V | | | | |
| Max. input voltage ($U_{dc \max}$) | 1,000 V | | | | |
| Usable MPP voltage range ($U_{mpp \min} - U_{mpp \max}$) | 200 V - 800 V | | | | |
| MPP voltage range at nominal power ($U_{mpp \min} - U_{mpp \max}$) | 270 - 800 V | 320 - 800 V | | 370 - 800 V | 420 - 800 V |
| Number MPP trackers | 2 | | | | |
| Number of DC connections | 3+3 | | | | |
| Max total PV array size ($P_{dc \max}$) | 15.0 kW _{peak} | 18.8kW _{peak} | 22.5 kW _{peak} | 26.3 kW _{peak} | 30.0 kW _{peak} |
| OUTPUT DATA | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
| AC nominal output ($P_{ac \text{ r}}$) | 10,000 W | 12,500 W | 15,000 W | 17,500 W | 20,000 W |
| Max. output power | 10,000 VA | 12,500 VA | 15,000 VA | 17,500 VA | 20,000 VA |
| AC output current ($I_{ac \max}$) | 14.4 A | 18.0 A | 21.7 A | 25.3 A | 28.9 A |
| Grid connection ($U_{ac \text{ r}}$) | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %) | | | | |
| Min. output voltage ($U_{ac \min}$) | 260 / 150 V | | | | |
| Max. output voltage ($U_{ac \max}$) | 485 / 280 V | | | | |
| Frequency (f_r) | 50 Hz / 60 Hz | | | | |
| Frequency range ($f_{\min} - f_{\max}$) | 45 - 65 Hz | | | | |
| Total harmonic distortion | 1.8 % | 2.0 % | 1.5 % | 1.5 % | 1.3 % |
| Power factor ($\cos \varphi_{ac \text{ r}}$) | 0 - 1 ind. / cap. | | | | |
| GENERAL DATA | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
| Dimensions (height x width x depth) | 725 x 510 x 225 mm | | | | |
| Weight | 34.8 kg | | 43.4 kg | | |
| Degree of protection | IP 66 | | | | |
| Protection class | 1 | | | | |
| Overvoltage category (DC / AC) ¹⁾ | 2 / 3 | | | | |
| Night-time consumption | < 1 W | | | | |
| Inverter design | Transformerless | | | | |
| Cooling | Regulated air cooling | | | | |
| Installation | Indoor and outdoor installation | | | | |
| Ambient temperature range | -25 - +60 °C | | | | |
| Permitted humidity | 0 - 100 % | | | | |
| Max. altitude | 2,000 m / 3,400 m (unrestricted / restricted voltage range) | | | | |
| DC connection technology | 6x DC+ and 6x DC- screw terminals 2.5 - 16 mm ²⁾ | | | | |
| Mains connection technology | 5-pole AC screw terminals 2.5 - 16 mm ²⁾ | | | | |
| Certificates and compliance with standards | AS 4777-2, AS 4777-3, AS 3100, IEC 62109-1/-2, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62116, IEC 61727, CER 06-190, G83/2, G59/3, UNE 206007-1, SI 4777, CEI 0-16, CEI 0-21 | | | | |

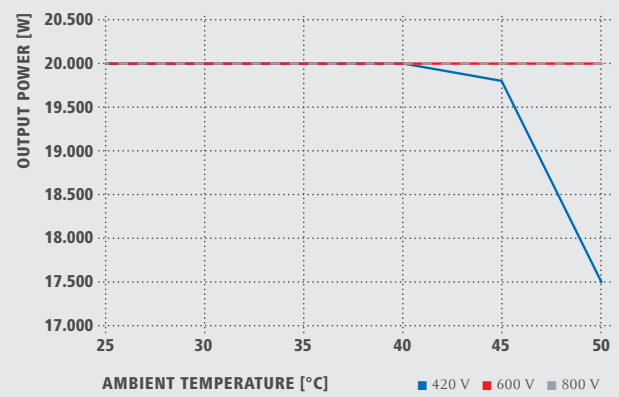
¹⁾ 14.0 A for voltages < 420 V

²⁾ According to IEC 62109-1. DIN rail for optional overvoltage protection (type 2) is included.

FRONIUS SYMO 20.0-3-M EFFICIENCY CURVE



FRONIUS SYMO 20.0-3-M TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (10.0-3-M, 12.5-3-M, 15.0-3-M, 17.5-3-M, 20.0-3-M)

| EFFICIENCY | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
|--|---|----------------------|----------------------|----------------------|----------------------|
| Max. efficiency | 98.0 % | | | 98.1 % | |
| European efficiency (η_{EU}) | 97.5 % | 97.6 % | 97.8 % | 97.8 % | 97.9 % |
| η at 5 % $P_{Ac,r}$ ¹⁾ | 87.9 / 92.5 / 89.2 % | 88.7 / 93.1 / 90.1 % | 91.2 / 94.8 / 92.3 % | 91.6 / 95.0 / 92.7 % | 91.9 / 95.2 / 93.0 % |
| η at 10 % $P_{Ac,r}$ ¹⁾ | 91.2 / 94.9 / 92.8 % | 92.9 / 96.1 / 94.6 % | 93.4 / 96.0 / 94.4 % | 94.0 / 96.4 / 95.0 % | 94.8 / 96.9 / 95.8 % |
| η at 20 % $P_{Ac,r}$ ¹⁾ | 94.6 / 97.1 / 96.1 % | 95.4 / 97.3 / 96.6 % | 95.9 / 97.4 / 96.7 % | 96.1 / 97.6 / 96.9 % | 96.3 / 97.8 / 97.1 % |
| η at 25 % $P_{Ac,r}$ ¹⁾ | 95.4 / 97.3 / 96.6 % | 95.6 / 97.6 / 97.0 % | 96.2 / 97.6 / 97.0 % | 96.4 / 97.8 / 97.2 % | 96.7 / 97.9 / 97.4 % |
| η at 30 % $P_{Ac,r}$ ¹⁾ | 95.6 / 97.5 / 96.9 % | 95.9 / 97.7 / 97.2 % | 96.5 / 97.8 / 97.3 % | 96.6 / 97.9 / 97.4 % | 96.8 / 98.0 / 97.6 % |
| η at 50 % $P_{Ac,r}$ ¹⁾ | 96.3 / 97.9 / 97.4 % | 96.4 / 98.0 / 97.5 % | 96.9 / 98.1 / 97.7 % | 97.0 / 98.1 / 97.7 % | 97.0 / 98.1 / 97.8 % |
| η at 75 % $P_{Ac,r}$ ¹⁾ | 96.5 / 98.0 / 97.6 % | 96.5 / 98.0 / 97.6 % | 97.0 / 98.1 / 97.8 % | 97.0 / 98.1 / 97.8 % | 97.0 / 98.1 / 97.7 % |
| η at 100 % $P_{Ac,r}$ ¹⁾ | 96.5 / 98.0 / 97.6 % | 96.5 / 97.8 / 97.6 % | 97.0 / 98.1 / 97.7 % | 96.9 / 98.1 / 97.6 % | 96.8 / 98.0 / 97.6 % |
| MPP adaptation efficiency | > 99.9 % | | | | |
| PROTECTIVE DEVICES | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
| DC insulation measurement | Yes | | | | |
| Overload behaviour | Operating point shift, power limitation | | | | |
| DC disconnecter | Yes | | | | |
| Reverse polarity protection | Yes | | | | |
| INTERFACES | PRIMO 5.0-1 | PRIMO 5.0-1 AUS | PRIMO 6.0-1 | PRIMO 8.2-1 | |
| WLAN / Ethernet LAN | Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON) | | | | |
| 6 inputs and 4 digital in/out | Interface to ripple control receiver | | | | |
| USB (A socket) ²⁾ | Datalogging, inverter update via USB flash drive | | | | |
| 2x RS422 (RJ45 socket) ²⁾ | Fronius Solar Net | | | | |
| Signalling output ²⁾ | Energy management (potential-free relay output) | | | | |
| Datalogger and Webservice | Included | | | | |
| External input ²⁾ | S0-Meter Interface / Input for overvoltage protection | | | | |
| RS485 | Modbus RTU SunSpec or meter connection | | | | |

¹⁾ And at $U_{mpp\ min} / U_{dc,r} / U_{mpp\ max}$.

²⁾ Also available in the light version.

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