## 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. 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 ($U_{dc\ start}$) | 200 V | | | | |
| Nominal input voltage ($U_{dc,r}$) | 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 | | | | |

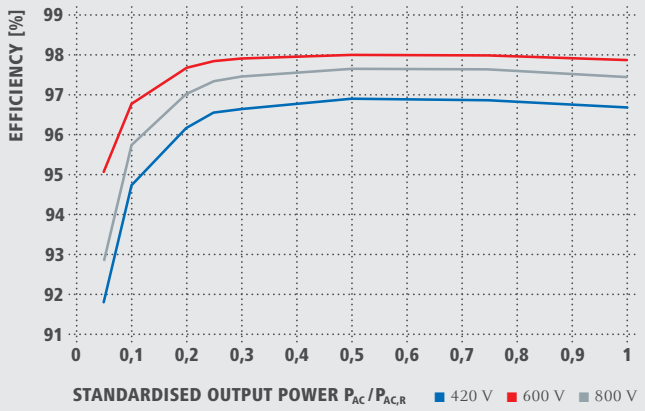
| OUTPUT DATA | SYMO 10.0-3-M | SYMO 12.5-3-M | SYMO 15.0-3-M | SYMO 17.5-3-M | SYMO 20.0-3-M |
|---|---|---|---|---|---|
| AC nominal output ($P_{ac,r}$) | 10,000 W | 12,500 W | 15,000 W | 17,500 W | 20,000 W |
| Max. output power | 10,000 VA | 12,500 VA | 15,000 VA | 17,500 VA | 20,000 VA |
| Max. output current ($I_{ac\ max}$) | 16 A | 19.9 A | 23.9 A | 27.9 A | 31.9 A |
| Grid connection ($U_{ac,r}$) | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V | | | | |
| 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 | < 2 % | | | | |
| Power factor (cos $\varphi_{ac,r}$) | 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 % | | | | |
| 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 | | | | |

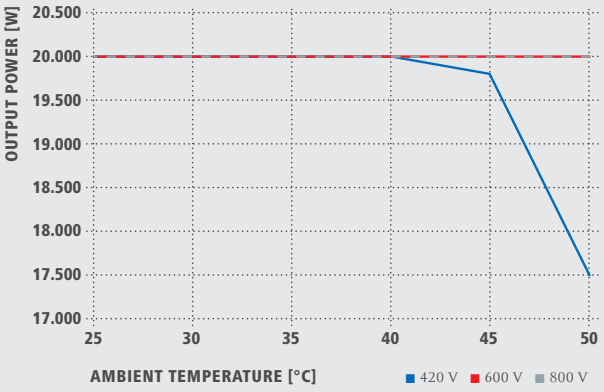
[1] 14.0 A for voltages < 420 V

[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 (ηEU) | 97.5 % | 97.6 % | 97.8 % | 97.8 % | 97.9 % |
| η at 5 % Pac.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 % Pac.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 % Pac.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 % Pac.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 % Pac.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 % Pac.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 % Pac.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 % Pac.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 disconnector | Yes | | | | |
| Reverse polarity protection | Yes | | | | |

| INTERFACES | 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 |
|---|---|---|---|---|---|
| WLAN / Ethernet LAN[2] | Fronius Solar.web / Fronius Solar.web. Modbus TCP. JSON | | | | |
| 6 inputs or 4 digital inputs/outputs[2] | Interface to ripple control receiver | | | | |
| USB (A socket[3] | For USB-Sticks | | | | |
| 2x RS422 (RJ45-socket)[3] | Fronius Solar Net. interface protocol | | | | |
| Signalling output[3] | Energy management (potential-free relay output) | | | | |
| Datalogger und Webserver[2] | Included | | | | |
| External input | S0-Meter Interface / Input for overvoltage protection | | | | |

[1] and at $U_{mpp\ min}$ / $U_{dc.r}$ / $U_{mpp\ max}$
[2] not included in the light version, retrofit optional
[3] also available in the light version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SHIFTING THE LIMITS

# FRONIUS SYMO

/ Smarter, lighter, more flexible.

/ PC board replacement process

/ SnapINverter technology

/ Integrated data communication

/ SuperFlex Design

/ Dynamic Peak Manager

/ Smart Grid Ready

/ The Fronius Symo's ability to communicate with the user, the PV system and the grid makes it one of the smartest inverters available. With the Fronius SnapINverter design it is also one of the lightest and easiest to install. The wide input voltage range and two MPP trackers ensure super design flexibility. 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.

## 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)

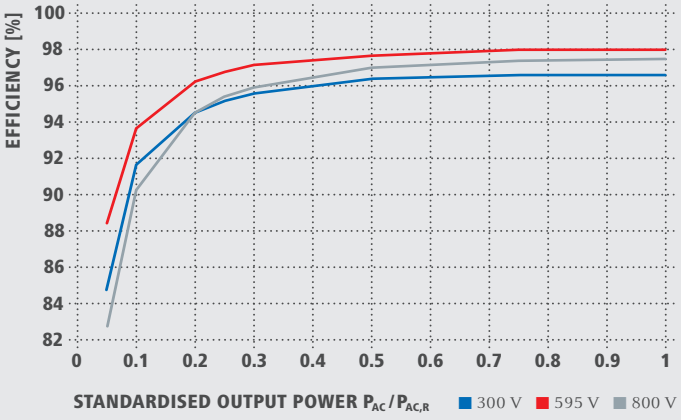
| INPUT DATA | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|---|---|---|---|---|---|---|
| Max. input current ($I_{dc\ max\ 1}$ / $I_{dc\ max\ 2}$ [1]) | 16.0 A / - | | | 16.0 A / 16.0 A | | |
| Max. array short circuit current ($MPP_1$/$MPP_2$ [1]) | 24.0 A / - | | | 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 | | |

| 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 |
| Max. output current ($I_{ac\ max}$) | 4.8 A | 5.9 A | 7.2 A | 4.8 A | 5.9 A | 7.2 A |
| Grid connection ($U_{ac,r}$) | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V | | | | | |
| 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 ($\cos \varphi_{ac,r}$) | 0.70 - 1 ind. / cap. | | | 0.85 - 1 ind. / cap. | | |

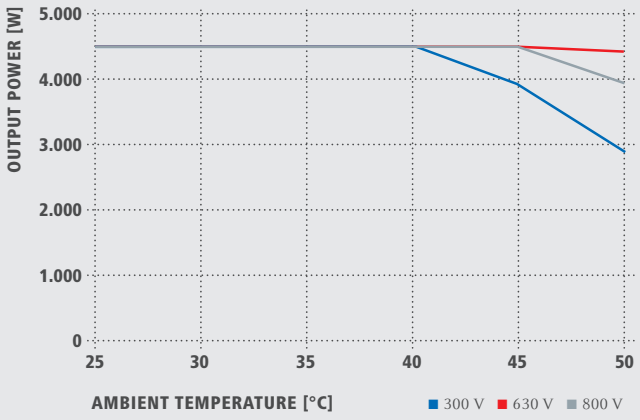
| GENERAL DATA | SYMO 3.0-3-S | SYMO 3.7-3-S | SYMO 4.5-3-S | SYMO 3.0-3-M | SYMO 3.7-3-M | SYMO 4.5-3-M |
|---|---|---|---|---|---|---|
| Dimensions (height x width x depth) | 645 x 431 x 204 mm | | | | | |
| Weight | 16.0 kg | | | 19.9 kg | | |
| Degree of protection | IP 65 | | | | | |
| Protection 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 % | | | | | |
| DC connection technology | 3x DC+ and 3x DC- screw terminals 2.5 - 16 mm² | | | 4x DC+ and 4x DC- screw terminals 2.5 - 16mm² [3] | | |
| Mains connection technology | 5-pole AC screw terminals 2.5 - 16 mm² | | | 5-pole AC screw terminals 2.5 - 16mm² [3] | | |
| 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, UNE 206007-1, SI 4777 [1], CEI 0-21 [1] | | | | | |

[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 (ηEU) | 96.2 % | 96.7 % | 97.0 % | 96.5 % | 96.9 % | 97.2 % |
| η at 5 % Pac.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 % Pac.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 % Pac.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 % Pac.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 % Pac. [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 % Pac.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 % Pac.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 % Pac.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 $U_{mpp\ min}$ / $U_{dc.r}$ / $U_{mpp\ max}$

| 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 disconnector | 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[2] | Fronius Solar.web / Fronius Solar.web, Modbus TCP, JSON | | | | | |
| 6 inputs or 4 digital in/out[2] | Interface to ripple control receiver | | | | | |
| USB (A socket)[3] | For USB sticks | | | | | |
| 2x RS422 (RJ45 socket)[3] | Fronius Solar Net, interface protocol | | | | | |
| Signalling output[3] | Energy management (potential-free relay output) | | | | | |
| Datalogger and Webserver[2] | Included | | | | | |
| External input | S0-Meter Interface / Input for overvoltage protection | | | | | |

[2] not included in the light version, retrofit optional
[3] 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)

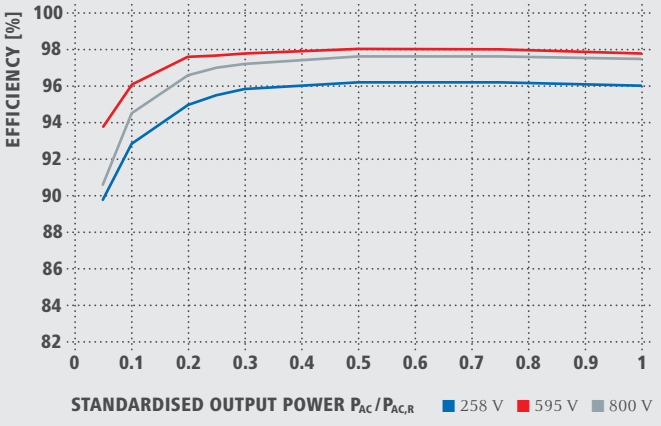
| INPUT DATA | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|---|---|---|---|---|
| Max. input current ($I_{dc\ max\ 1}$ / $I_{dc\ max\ 2}$) | 16.0 A / 16.0 A | | | |
| Max. array short circuit current ($MPP_1$/$MPP_2$) | 24.0 A / 24.0 A | | | |
| Min. input voltage ($U_{dc\ min}$) | 150 V | | | |
| Feed-in start voltage ($U_{dc\ start}$) | 200 V | | | |
| Nominal input voltage ($U_{dc,r}$) | 595 V | | | |
| Max. input voltage ($U_{dc\ max}$) | 1,000 V | | | |
| Usable MPP voltage range ($U_{mpp\ min}$ – $U_{mpp\ max}$) | 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 | | | |

| 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 ($P_{ac,r}$) | 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 |
| Max. output current ($I_{ac\ max}$) | 8.0 A | 9.6 A | 11.2 A | 13.1 A |
| Grid connection ($U_{ac,r}$) | 3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V | | | |
| 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 $\varphi_{ac,r}$) | 0.85 - 1 ind. / cap. | | | |

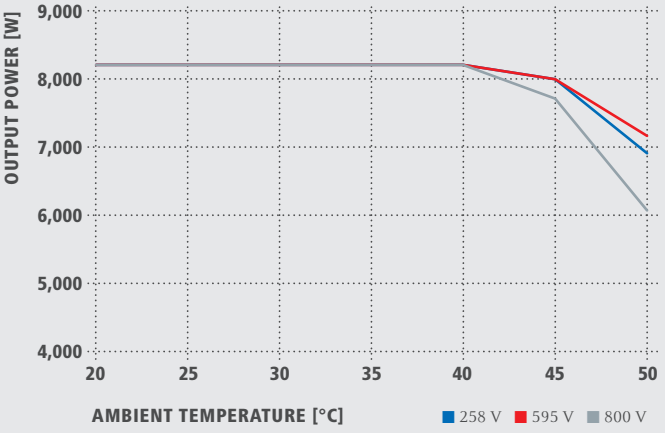
| GENERAL DATA | SYMO 5.0-3-M | SYMO 6.0-3-M | SYMO 7.0-3-M | SYMO 8.2-3-M |
|---|---|---|---|---|
| Dimensions (height x width x depth) | 645 x 431 x 204 mm | | | |
| Weight | 19.9 kg | | 21.9 kg | |
| Degree of protection | IP 65 | | | |
| Protection class | 1 | | | |
| Overvoltage category (DC / AC) [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 % | | | |
| DC connection technology | 4x DC+ and 4x DC- Screw terminals 2.5 - 16mm² [2] | | | |
| Mains connection technology | 5-pole AC Screw terminals 2.5 - 16mm² [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, UNE 206007-1, SI 4777, CEI 0-21 | | | |

[1] according to IEC 62109-1.
[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 (ηEU) | 97.0 % | 97.2 % | 97.3 % | 97.5 % |
| η at 5 % Pac,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 % Pac,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 % Pac,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 % Pac,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 % Pac, [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 % Pac,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 % Pac,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 % Pac,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 disconnector | 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[2] | Fronius Solar.web / Fronius Solar.web, Modbus TCP, JSON | | | |
| 6 inputs or 4 digital in/out[2] | Interface to ripple control receiver | | | |
| USB (A socket)[3] | For USB-Sticks | | | |
| 2x RS422 (RJ45 socket)[3] | Fronius Solar Net, Interface Protokoll | | | |
| Signalling output[3] | Energy management (potential-free relay output) | | | |
| Datalogger and Webserver[2] | Included | | | |
| External input | S0-Meter Interface / Input for overvoltage protection | | | |

[2] not included in the light version, retrofit optional
[3] also available in the light version