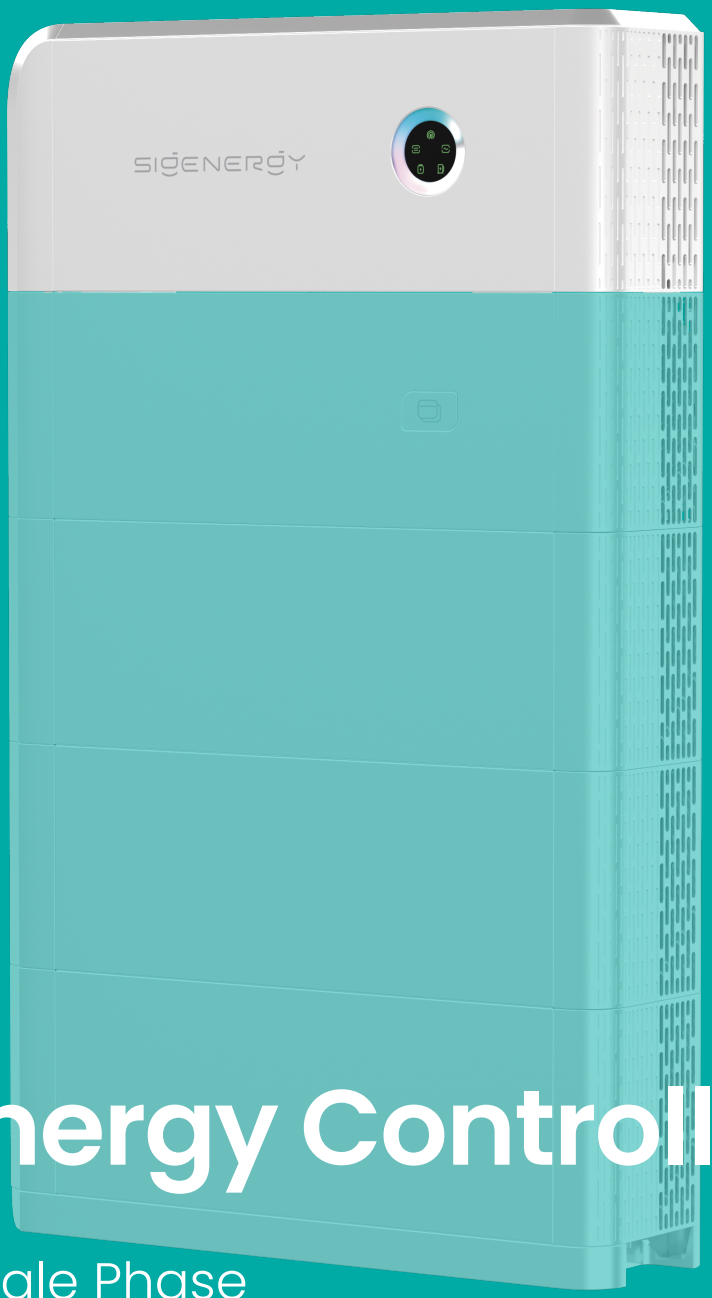





# Sigen Energy Controller

**3.0 - 6.0 kW** Single Phase

- EMS inside for precise control
- DC ground-fault protection
- Multi-source black start
- On & off-grid compatibility
- DC/AC ratio up to 2
- IP66 system protection rating

# **Sigen Energy Controller** 3.0-6.0 kW Single Phase

| SigenStor EC | 3.0 SP | 3.6 SP | 4.0 SP | 4.6 SP | 5.0 SP | 6.0 SP | Units |
|---|---|---|---|---|---|---|---|
| **DC Input (from PV)** | | | | | | | |
| Max. PV power | 6000 | 7360 | 8000 | 9200 | 10000 | 12000 | W |
| Max. DC input voltage | 600 | | | | | | V |
| Nominal DC input voltage | 350 | | | | | | V |
| Start-up voltage | 100 | | | | | | V |
| MPPT voltage range | 50 ~ 550 | | | | | | V |
| Number of MPP. trackers | 2 | | | | | | |
| Number of PV strings per MPPT | 1 | | | | | | |
| Max. input current per MPPT | 16 | | | | | | A |
| Max. short-circuit current per MPPT | 20 | | | | | | A |
| **AC Output (on-grid)** | | | | | | | |
| Nominal output power | 3000 | 3680 | 4000 | 4600 | 5000 | 6000 | W |
| Max. output apparent power | 3300 | 3680 | 4400 | 5000 | 5500 | 6600 | VA |
| Nominal output current | 13.6 | 16.0 | 18.2 | 20.9 | 22.7 | 27.3 | A |
| Max. output current | 15.0 | 16.0 | 20.0 | 22.7 | 25.0 | 30.0 | A |
| Nominal output voltage | 220 / 230 / 240 | | | | | | V |
| Nominal grid frequency | 50 / 60 | | | | | | Hz |
| Power factor | 0.8 leading ~ 0.8 lagging | | | | | | |
| Total current harmonic distortion | THDi < 2% | | | | | | |
| **Efficiency** | | | | | | | |
| Max. efficiency | 98.0% | | | | | | |
| European efficiency | 97.0% | 97.1% | 97.2% | 97.3% | 97.4% | 97.4% | |
| **AC Output (backup)** | | | | | | | |
| Peak output power (10 seconds) | 4500 | 5520 | 6000 | 6900 | 7500 | 9000 | W |
| Nominal output voltage | 220 / 230 / 240 | | | | | | V |
| Nominal output frequency | 50 / 60 | | | | | | Hz |
| Power factor | 0.8 leading ~ 0.8 lagging | | | | | | |
| Total voltage harmonic distortion | THDv < 2% | | | | | | |
| Disruption time of backup switch [1] | 0 | | | | | | ms |
| **Battery Connection** | | | | | | | |
| Battery module models | SigenStor BAT 5.0 / 8.0 | | | | | | |
| Number of modules per controller | 1 ~ 6 | | | | | | pcs |
| Battery module voltage range | 300 ~ 600 | | | | | | V |
| **Protection** | | | | | | | |
| Safety protection feature | DC ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Type II DC/AC surge protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection. | | | | | | |
| **General Data** | | | | | | | |
| Dimensions (W / H / D) | 700 / 300 / 245 | | | | | | mm |
| Weight | 18 | | | | | | kg |
| Storage temperature range | -40 ~ 70 | | | | | | °C |
| Operating temperature range | -30 ~ 60 | | | | | | °C |
| Relative humidity range | 0% ~ 95% | | | | | | |
| Max. operating altitude | 4000 | | | | | | m |
| Cooling | Natural convection | | | | | | |
| System ingress protection rating | IP66 | | | | | | |
| Communication | WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G) | | | | | | |
| **Standard Compliance** | | | | | | | |
| Standard [2] | IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2 | | | | | | |

1. This refers to the load-side disruption time, to achieve this functionality Sigen Energy Gateway needs to be used together with Sigen Energy Controller and Sigen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Sigen Energy Controller is higher than the total power of the home loads.
2. For all standards refer to the certificates category in the Sigenergy website.

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VDH SOLAR
Distributeur: VDH Solar Groothandel B.V.
Finlandlaan 1, 2391 PV Hazerswoude-Dorp, Holland | +31 (0)172 235 990 | info@vdh-solar.nl | www.vdh-solar.nl