



Sigen Energy Controller

5.0 – 25.0 kW Three Phase

- EMS inside for precise control
- DC ground-fault protection
- Multi-source black start
- On & off-grid compatibility
- DC/AC ratio up to 1.6
- IP66 system protection rating

Sigen Energy Controller 5.0–25.0 kW Three Phase

| SigenStor EC | 5.0 TP | 6.0 TP | 8.0 TP | 10.0 TP | 12.0 TP | 15.0 TP | 17.0 TP | 20.0 TP | 25.0 TP | Units | |
|---|--|--------|--------|---------|---------|---------|---------|---------|---------|---------------------------|-----|
| DC Input (from PV) | | | | | | | | | | | |
| Max. PV power | 8000 | 9600 | 12800 | 16000 | 19200 | 24000 | 27200 | 32000 | 40000 | W | |
| Max. DC input voltage | | | | | | | | | | 1100 | V |
| Nominal DC input voltage | | | | | | | | | | 600 | V |
| Start-up voltage | | | | | | | | | | 180 | V |
| MPPT voltage range | | | | | | | | | | 160 ~ 1000 | V |
| Number of MPP. trackers | 2 | | | 3 | | | 4 | | | | |
| 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 | 5000 | 6000 | 8000 | 10000 | 12000 | 15000 | 17000 | 20000 | 25000 | W | |
| Max. output apparent power | 5500 | 6600 | 8800 | 11000 | 13200 | 16500 | 18700 | 22000 | 27500 | VA | |
| Nominal output current | 7.6 | 9.1 | 12.2 | 15.2 | 18.2 | 22.8 | 25.8 | 30.4 | 38.0 | A | |
| Max. output current | 8.4 | 10.0 | 13.4 | 16.7 | 20.1 | 25.1 | 28.4 | 33.4 | 41.8 | A | |
| Nominal output voltage | | | | | | | | | | 380 / 400 | V |
| Nominal grid frequency | | | | | | | | | | 50 / 60 | Hz |
| Power factor | | | | | | | | | | 0.8 leading ~ 0.8 lagging | |
| Total current harmonic distortion | | | | | | | | | | THDi < 2% | |
| Efficiency | | | | | | | | | | | |
| Max. efficiency | 98.1% | 98.2% | 98.3% | 98.3% | 98.3% | 98.3% | 98.3% | 98.3% | 98.3% | | |
| European efficiency | 96.1% | 96.6% | 97.1% | 97.5% | 97.7% | 97.9% | 97.9% | 97.9% | 98.0% | | |
| AC Output (backup) | | | | | | | | | | | |
| Peak output power (10 seconds) | 7500 | 9000 | 12000 | 15000 | 18000 | 22500 | 25500 | 30000 | 30000 | W | |
| Nominal output voltage | | | | | | | | | | 380 / 400 | 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 | | | | | | | | | | 600 ~ 900 | 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 / 260 | mm |
| Weight | | | | | | | | | | 36 | kg |
| Storage temperature range | | | | | | | | | | -40 ~ 70 | °C |
| Operating temperature range | | | | | | | | | | -30 ~ 60 | °C |
| Relative humidity range | | | | | | | | | | 0% ~ 95% | |
| Max. operating altitude | | | | | | | | | | 4000 | m |
| Cooling | | | | | | | | | | Smart air cooling | |
| 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 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 Sigenenergy website.

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