



# Sigen Energy Controller

5.0 – 30.0 kW    Three Phase

- EMS inside for precise control
  - Up to 4 MPP. trackers
  - Multi-source black start
- On & off-grid compatibility
  - DC/AC ratio up to 1.6
  - IP66 system protection rating

## Sigen Energy Controller 5.0–30.0 kW Three Phase Australia

| SigenStor EC                                  | 5.0 TP                                                                                                                                                                                                                                          | 10.0 TP | 15.0 TP | 20.0 TP | 25.0 TP | 30.0 TP | Units |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|-------|
| DC Input (from PV)                            |                                                                                                                                                                                                                                                 |         |         |         |         |         |       |
| Max. PV power                                 | 8000                                                                                                                                                                                                                                            | 16000   | 24000   | 32000   | 40000   | 48000   | 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       | 3       | 4       | 4       | 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                                                                                                                                                                                                                                            | 9999    | 15000   | 20000   | 25000   | 29900   | W     |
| Max. output apparent power                    | 5500                                                                                                                                                                                                                                            | 9999    | 15000   | 22000   | 27500   | 29900   | VA    |
| Nominal output current                        | 7.6                                                                                                                                                                                                                                             | 14.4    | 21.7    | 30.4    | 38.0    | 43.3    | A     |
| Max. output current                           | 8.4                                                                                                                                                                                                                                             | 14.4    | 21.7    | 33.4    | 41.8    | 43.3    | 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%                                                                                                                                                                                                                                           | 98.3%   | 98.3%   | 98.3%   | 98.3%   | 98.4%   |       |
| European efficiency                           | 96.1%                                                                                                                                                                                                                                           | 97.5%   | 97.9%   | 97.9%   | 98.0%   | 98.0%   |       |
| AC Output (backup)                            |                                                                                                                                                                                                                                                 |         |         |         |         |         |       |
| Nominal output power                          | 5000                                                                                                                                                                                                                                            | 10000   | 15000   | 20000   | 25000   | 30000   | W     |
| Max. output apparent power                    | 5500                                                                                                                                                                                                                                            | 11000   | 16500   | 22000   | 27500   | 33000   | W     |
| Peak output power (10 seconds)                | 7500                                                                                                                                                                                                                                            | 15000   | 22500   | 30000   | 30000   | 36000   | W     |
| Nominal output current                        | 7.6                                                                                                                                                                                                                                             | 15.2    | 22.8    | 30.4    | 38.0    | 45.6    | A     |
| Max. output current                           | 8.4                                                                                                                                                                                                                                             | 16.7    | 25.1    | 33.4    | 41.8    | 50.1    | A     |
| Peak output current (10 seconds)              | 11.4                                                                                                                                                                                                                                            | 22.8    | 34.2    | 45.6    | 45.6    | 54.7    | A     |
| 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 <sup>1</sup> | 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 reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter <sup>2</sup> , AC overcurrent/overvoltage/short-circuit protection. Type II DC/AC surge protection, Anti-islanding protection |         |         |         |         |         |       |
| General Data                                  |                                                                                                                                                                                                                                                 |         |         |         |         |         |       |
| Dimensions (W / H / D)                        | 700 / 300 / 260                                                                                                                                                                                                                                 |         |         |         |         |         | mm    |
| Weight                                        | 36                                                                                                                                                                                                                                              | 36      | 36      | 36      | 36      | 38      | 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 <sup>3</sup>                         | 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.

This is an optional feature only supported in certain models, please contact Sigenenergy for more information.

3.

For all standards refer to the certificates category on the Sigenenergy website.