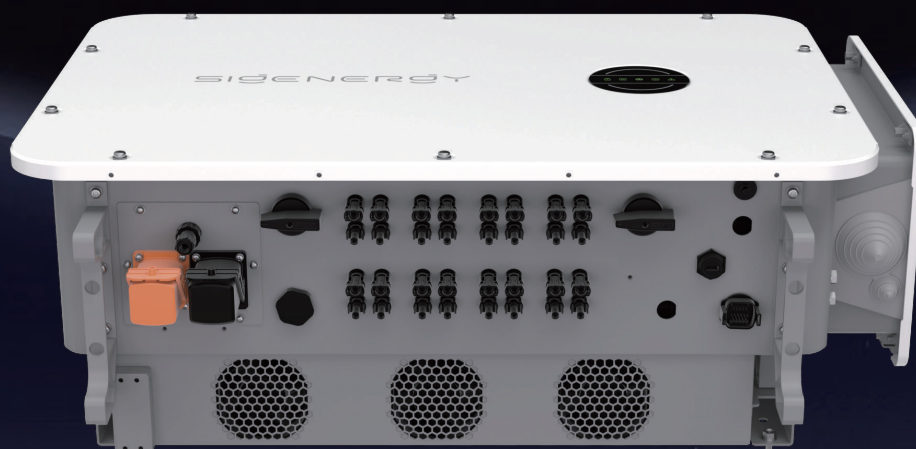


# Sigen Hybrid Inverter

50.0 / 60.0 / 80.0 / 100.0 / 110.0 / 125.0 kW



- Battery ready, easy upgrades to a PV + BESS at any time
- Smaller and lighter, easier installation and transportation
- Built-in EMS, supports 100 units in parallel without data logger
- Industry-leading 600m AFCI, top-tier safety across applications
- Fully networked communication, enabling rapid commissioning
- IP66 protection rating, ensuring worry-free outdoor deployment

# Sigen Hybrid Inverter 50.0 / 60.0 / 80.0 / 100.0 / 110.0 / 125.0 kW

| Sigen PV                                         | 50M1-HYA                                                                                                                                                                                                                                                                           | 60M1-HYA  | 80M1-HYA  | 100M1-HYA | 110M1-HYA | 125M1-HYA       | Units |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------------|-------|
| DC Input (PV)                                    |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Max. PV input power                              | 100,000                                                                                                                                                                                                                                                                            | 120,000   | 160,000   | 200,000   | 220,000   | 220,000         | Wp    |
| Max. DC input voltage <sup>1</sup>               | 1,100                                                                                                                                                                                                                                                                              |           |           |           |           |                 | V     |
| Nominal DC input voltage                         | 600                                                                                                                                                                                                                                                                                |           |           |           |           |                 | V     |
| Start-up voltage                                 | 180                                                                                                                                                                                                                                                                                |           |           |           |           |                 | V     |
| MPPT voltage range                               | 160 ~ 1,000                                                                                                                                                                                                                                                                        |           |           |           |           |                 | V     |
| Number of MPP trackers                           | 4                                                                                                                                                                                                                                                                                  | 5         | 6         | 8         | 8         | 8               |       |
| Number of PV strings per MPPT                    | 2                                                                                                                                                                                                                                                                                  |           |           |           |           |                 |       |
| Max. input current per MPPT                      | 40                                                                                                                                                                                                                                                                                 |           |           |           |           |                 | A     |
| Max. short-circuit current per MPPT              | 60                                                                                                                                                                                                                                                                                 |           |           |           |           |                 | A     |
| DC Input (Battery)                               |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Battery module models                            | SigenStack BAT 12.0                                                                                                                                                                                                                                                                |           |           |           |           |                 |       |
| System configuration quantity range <sup>2</sup> | 4 ~ 21                                                                                                                                                                                                                                                                             |           |           |           |           |                 | pcs   |
| Max. charge power <sup>3</sup>                   | 55,000                                                                                                                                                                                                                                                                             | 66,000    | 88,000    | 110,000   | 121,000   | 137,500         | W     |
| Max. discharge power                             | 55,000                                                                                                                                                                                                                                                                             | 66,000    | 88,000    | 110,000   | 121,000   | 137,500         | W     |
| Max. operating current                           | 180                                                                                                                                                                                                                                                                                |           |           |           |           |                 | A     |
| AC Output                                        |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Nominal output active power                      | 50,000                                                                                                                                                                                                                                                                             | 60,000    | 80,000    | 100,000   | 110,000   | 125,000         | W     |
| Max. output apparent power                       | 55,000                                                                                                                                                                                                                                                                             | 66,000    | 88,000    | 110,000   | 121,000   | 137,500         | VA    |
| Max. output active power (cosΦ=1)                | 55,000                                                                                                                                                                                                                                                                             | 66,000    | 88,000    | 110,000   | 121,000   | 137,500         | W     |
| Nominal output current @380 Vac                  | 76.0                                                                                                                                                                                                                                                                               | 91.2      | 121.5     | 151.9     | 167.1     | 189.9           | A     |
| Nominal output current @400 Vac                  | 72.5                                                                                                                                                                                                                                                                               | 87.0      | 115.9     | 144.9     | 159.4     | 181.2           | A     |
| Max. output current @380/400 Vac                 | 83.6                                                                                                                                                                                                                                                                               | 100.3     | 133.7     | 167.1     | 183.8     | 208.9           | A     |
| Nominal output voltage                           | 380 / 400, 3W+(N)+PE                                                                                                                                                                                                                                                               |           |           |           |           |                 | Vac   |
| Nominal grid frequency                           | 50 / 60                                                                                                                                                                                                                                                                            |           |           |           |           |                 | Hz    |
| Power factor                                     | 0.8 leading ~ 0.8 lagging                                                                                                                                                                                                                                                          |           |           |           |           |                 |       |
| Total current harmonic distortion                | THDi < 3%                                                                                                                                                                                                                                                                          | THDi < 3% | THDi < 2% | THDi < 2% | THDi < 2% | THDi < 2%       |       |
| Efficiency                                       |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Max. efficiency                                  | 98.6%                                                                                                                                                                                                                                                                              |           |           |           |           |                 |       |
| European efficiency                              | 98.3%                                                                                                                                                                                                                                                                              | 98.3%     | 98.3%     | 98.4%     | 98.4%     | 98.3%           |       |
| Protection                                       |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Safety protection feature                        | DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter, AC overcurrent/overvoltage/short-circuit protection, Type II DC surge protection (Type I + II optional), Type II AC surge protection, Anti-islanding protection |           |           |           |           |                 |       |
| General Data                                     |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Dimensions (W / H / D)                           | 918 / 640 / 340                                                                                                                                                                                                                                                                    |           |           |           |           | 999 / 668 / 340 | mm    |
| Weight                                           | 72                                                                                                                                                                                                                                                                                 | 75        | 75        | 78        | 78        | 95              | kg    |
| Nighttime power consumption                      | < 3.5                                                                                                                                                                                                                                                                              |           |           |           |           | < 4             | W     |
| Storage temperature range                        | -40 ~ 70                                                                                                                                                                                                                                                                           |           |           |           |           |                 | °C    |
| Operating temperature range                      | -30 ~ 60                                                                                                                                                                                                                                                                           |           |           |           |           |                 | °C    |
| Relative humidity range                          | 0% ~ 100%                                                                                                                                                                                                                                                                          |           |           |           |           |                 |       |
| Max. operating altitude                          | 5,000 (Derating at 4,000 m)                                                                                                                                                                                                                                                        |           |           |           |           |                 | m     |
| PV connection type                               | MC4 / H4 Pro (Max. 6 mm²)                                                                                                                                                                                                                                                          |           |           |           |           |                 |       |
| AC connection type                               | OT / DT terminal (Max. 240 mm²)                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Cooling                                          | Smart air cooling                                                                                                                                                                                                                                                                  |           |           |           |           |                 |       |
| Ingress protection rating                        | IP66                                                                                                                                                                                                                                                                               |           |           |           |           |                 |       |
| Communication                                    | WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)                                                                                                                                                                                                                            |           |           |           |           |                 |       |
| Standard Compliance                              |                                                                                                                                                                                                                                                                                    |           |           |           |           |                 |       |
| Standard <sup>4</sup>                            | IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-2                                                                                                                                                                                                         |           |           |           |           |                 |       |

- The inverter will initiate protection if the input voltage exceeds the MPPT operating voltage range.
- The requirements for the PV string open-circuit voltage in a PV+ESS DC coupling system are as follows: 1) When the system is configured with ≥19 battery modules, the string open-circuit voltage should meet the following minimum requirements: 1.1) If configured with 21 battery modules, the string open-circuit voltage should be > 935 V; 1.2) If configured with 20 battery modules, the string open-circuit voltage should be > 870 V; 1.3) If configured with 19 battery modules, the string open-circuit voltage should be > 805 V. 2) When the system is configured with 4 to 18 battery modules, the string open-circuit voltage has no special requirements.
- This represents the combined input from PV DC and rectified AC sources, while actual power depends on site configuration and operating condition.
- For all standards refer to the certificates category on the Sigenergy website.
- The information in this document reflects the current state of technology and is subject to change without notice. For the latest updates, please refer to the Sigenergy

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