

# SG350HX-US

Multi-MPPT String Inverter for 1500 Vdc System



## HIGH YIELD

- Up to 16 MPPTs with max. efficiency 99%
- 20A per string, compatible with 500Wp+ module
- Data exchange with tracker system, improving yield



## LOW COST

- Q at night function, save investment
- Power line communication (PLC)



## GRID SUPPORT

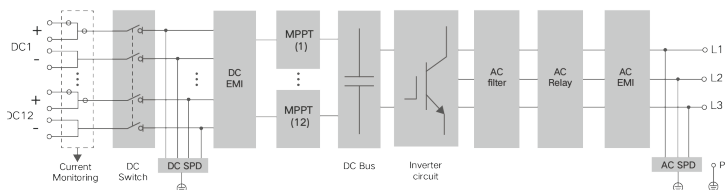
- $SCR \geq 1.15$  stable operation in extremely weak grid
- Reactive power response time <30ms



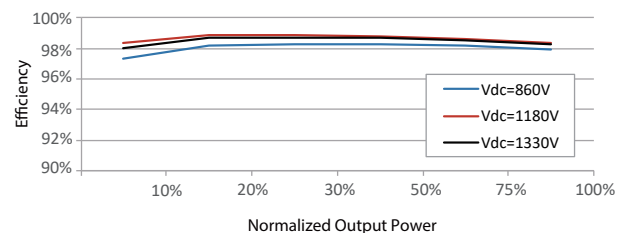
## PROVEN SAFETY

- 2 strings per MPPT, no fear of string reverse connection
- 24h real-time AC and DC insulation monitoring

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



| Type designation                                        | SG350HX-US                                                                                                                    |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                       |                                                                                                                               |
| Max. PV input voltage                                   | 1500 V                                                                                                                        |
| Min. PV input voltage / Startup input voltage           | 500 V / 550 V                                                                                                                 |
| Nominal PV input voltage                                | 1180 V                                                                                                                        |
| MPP voltage range                                       | 500 V – 1500 V                                                                                                                |
| Full power MPP voltage range @ 40 °C                    | 860 V – 1330 V *                                                                                                              |
| No. of independent MPP inputs                           | 12 ( Optional : 16 )                                                                                                          |
| Max. number of input connector per MPPT                 | 2                                                                                                                             |
| Max. PV input current                                   | 12 * 40 A ( Optional: 16 * 30 A )                                                                                             |
| Max. DC short-circuit current per MPPT                  | 60 A                                                                                                                          |
| <b>Output (AC)</b>                                      |                                                                                                                               |
| AC output power                                         | 352 kVA @ 30°C / 320 kVA @ 40 °C                                                                                              |
| Max. AC output current                                  | 254 A                                                                                                                         |
| Nominal AC voltage                                      | 3 / PE, 800 V                                                                                                                 |
| AC voltage range                                        | 704 V – 880 V                                                                                                                 |
| Nominal grid frequency / Grid frequency range           | 60 Hz / 55 Hz – 65 Hz                                                                                                         |
| THD                                                     | < 3 % ( at nominal power )                                                                                                    |
| DC current injection                                    | < 0.5 % In                                                                                                                    |
| Power factor at nominal power / Adjustable power factor | > 0.99 / 0.8 leading – 0.8 lagging                                                                                            |
| Feed-in phases / Connection phases                      | 3 / 3                                                                                                                         |
| <b>Efficiency</b>                                       |                                                                                                                               |
| Max. efficiency / CEC efficiency                        | 99.02 % / 98.5 %                                                                                                              |
| <b>Protection</b>                                       |                                                                                                                               |
| DC reverse connection protection                        | Yes                                                                                                                           |
| AC short circuit protection                             | Yes                                                                                                                           |
| Leakage current protection                              | Yes                                                                                                                           |
| Grid monitoring                                         | Yes                                                                                                                           |
| Ground fault monitoring                                 | Yes                                                                                                                           |
| DC switch / AC switch                                   | Yes / No                                                                                                                      |
| PV string current monitoring                            | Yes                                                                                                                           |
| Q at night function                                     | Yes                                                                                                                           |
| Anti-PID and PID recovery function                      | Optional ( MVS3200-US / MVS4480-US )                                                                                          |
| Surge protection                                        | DC Type II / AC Type II                                                                                                       |
| <b>General data</b>                                     |                                                                                                                               |
| Dimensions ( W * H * D )                                | 1165 mm * 870 mm * 361 mm ( 45.9" * 34.3" * 14.2" )                                                                           |
| Weight                                                  | ≤ 122 kg ( ≤ 269 lbs )                                                                                                        |
| Isolation method                                        | Transformerless                                                                                                               |
| Degree of protection                                    | IP66 ( NEMA 4X )                                                                                                              |
| Power consumption at night                              | < 6 W                                                                                                                         |
| Operating ambient temperature range                     | -30 °C – 60 °C ( -22 °F – 140 °F )                                                                                            |
| Allowable relative humidity range                       | 0 % – 100 %                                                                                                                   |
| Cooling method                                          | Smart forced air cooling                                                                                                      |
| Max. operating altitude                                 | 4000 m ( > 3000 m derating ) / 13123 ft ( > 9843 ft derating )                                                                |
| Display                                                 | LED, Bluetooth+APP                                                                                                            |
| Communication                                           | RS485 / PLC                                                                                                                   |
| DC connection type                                      | MC4 ( Max. 10AWG, optional 8AWG )                                                                                             |
| AC connection type                                      | Support OT / DT terminal ( Max. 750 Kcmil )                                                                                   |
| Compliance                                              | UL 1741, UL 62109-1, CSA C22.2 No.107.1-16, IEEE 1547-2018, IEEE 1547.1-2020, UL 1741 SA/SB, California Rule21, HECO SRD V2.0 |
| Grid Support                                            | Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control, Q-U control, P-f control        |

\* Full power MPP range is temperature dependent, check the characteristic curve of the inverter for more information.