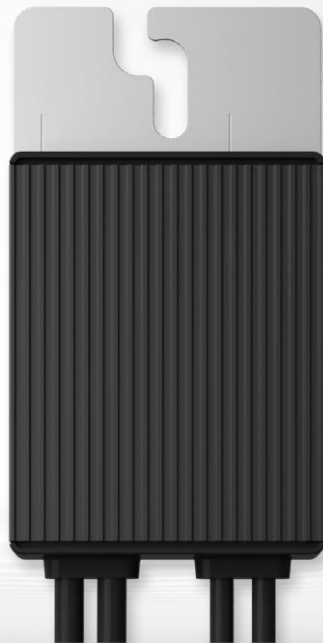


SMART MODULE CONTROLLER

SUN2000-450W-P2/SUN2000-600W-P



Higher Yields
Module-level Optimization
Increase System Energy
Yield by 5% to 30%



Active Safety
Firefighting and O&M
Safety with Module-level
Rapid Shutdown



Flexible Design
Easier Module Layout
and 30% Higher Installed
Capacity on Average



Smart O&M
Module-level
Visibility and Refined
Management

SUN2000-450W-P2/SUN2000-600W-P Technical Specification

| Technical Specification | SUN2000-450W-P2 | SUN2000-600W-P |
|--|--|----------------|
| Input | | |
| Rated input DC power ¹ | 450 W | 600 W |
| Absolute max. input voltage | 80 V | |
| MPPT operating voltage range | 10 ~ 80 V | |
| Max. short-circuit current (Isc) | 14.5 A | |
| Max. efficiency | 99.5% | |
| Weighted efficiency | 99.0% | |
| Overtoltage category | II | |
| Output | | |
| Max. output voltage | 80 V | |
| Max. output current | 15 A | |
| Output bypass ² | Yes | |
| Output voltage during standby ³ | 0 V | |
| Output impedance during standby | 1 kΩ ± 10% | |
| Communication | | |
| Communication protocol | MBUS | |
| Standards Compliance | | |
| Safety | IEC62109-1 (class II safety) | |
| RoHS | Yes | |
| Fire Safety | VDE-AR-E 2100-712:2018-12 | |
| General Specifications | | |
| Dimensions (W x H x D) | 75 mm x 140 mm x 28 mm (3.0 in. x 5.5 in. x 1.1 in.) | |
| Weight (including cables) | 0.6 kg (1.3 lb.) | |
| Installation part (optional) | Frame mounting bracket/T-shaped bolt ⁴ | |
| Input connector | Staubli MC4 | |
| Input wire length | 0.15 m (0.49 ft) | |
| Output connector | Staubli MC4 | |
| Output wire length | 1.3 m (4.3 ft) | |
| Operating temperature/humidity range | -40°C to +85°C ⁵ /0%-100% | |
| IP rating | IP68 | |
| Compatible inverters | SUN2000-12K/15K/17K/20K/25K-MB0, SUN2000-8K/10K-LC0, SUN2000-2/3/3.68/4/4.6/5/6KTL-L1, SUN2000-3/4/5/6/8/10KTL-M1, SUN2000-12/15/17/20/25KTL-M5, SUN2000-30/36/40-M3 | |

| PV System Design ⁶ | SUN2000-2-6KTL-L1 | SUN2000-8K/10K-LC0 | SUN2000-3~10KTL-M1 | SUN2000-12~25KTL-M5 | SUN2000-12K/15K/17K/20K/25K-MB0 | SUN2000-30K/36K/40K-M3 |
|---------------------------------------|-------------------|--------------------|--------------------|---------------------|---------------------------------|------------------------|
| Min. string length (power optimizers) | 4 | 4 | 6 | 6 | 6 | 6 |
| Max. string length (power optimizers) | 25 | 25 | 35 | 35 | 35 | 25 |
| Max. DC power per string | 6,000 W | 6,000 W | 10,000 W | 12,000 W | 12,000 W | 12,000 W |

*1 The maximum power of PV module at STC shall NOT exceed the "Rated Input DC Power" of the power optimizer. PV modules with up to +5% power tolerance are allowed.

*2 Any power optimizer, which is connected to an operating inverter in a PV string, will be bypassed when it fails.

*3 Once the power optimizer stops working, its output voltage is reduced to 0 V.

*4 It is for PV module frame/extruded aluminum profile racking system installation.

*5 When the operating temperature of the SUN2000-450W-P2/600W-P reaches 70 °C to 85 °C, it may shut down due to over-temperature protection and report an over-temperature alarm. After the temperature decreases, it can automatically resume working without causing any damage.

*6 SUN2000-450W-P2/600W-P and MERC-1100/1300W-P can NOT be used in mixture under the same Smart Energy/PV Controller.

Disclaimer: the preceding values are measured by an internal laboratory of Huawei in a specific environment. The actual values may vary with products, software versions, usage conditions, and environmental factors.