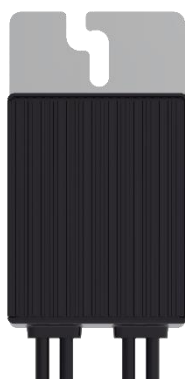


# Smart PV Optimizer



One-Fits-All Optimizer  
Easier Business



<5s Module Auto-Mapping



Arc Fault Pinpoint Positioning  
Along PV Cable

| Technical Specification                          |                                                                                                      | SUN2000-600W-P                                                                                         |                    |                     |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------|---------------------|
|                                                  |                                                                                                      | Input                                                                                                  |                    |                     |
| Rated Input DC Power <sup>1</sup>                |                                                                                                      | 600 W                                                                                                  |                    |                     |
| Absolute maximum input voltage                   |                                                                                                      | 80 V                                                                                                   |                    |                     |
| MPPT operating voltage range                     |                                                                                                      | 10 - 80 V                                                                                              |                    |                     |
| Maximum Short Circuit Current (Isc)              |                                                                                                      | 14.5 A                                                                                                 |                    |                     |
| Max. efficiency                                  |                                                                                                      | 99.5 %                                                                                                 |                    |                     |
| Weighted efficiency                              |                                                                                                      | 99.0 %                                                                                                 |                    |                     |
| Overvoltage category                             |                                                                                                      | II                                                                                                     |                    |                     |
|                                                  |                                                                                                      | Output                                                                                                 |                    |                     |
| Max. output voltage <sup>2</sup>                 | $V_{MOD\ MAX}$ (the Voc of the PV modules connected, corrected for the lowest operating temperature) |                                                                                                        |                    |                     |
| Max. output current                              |                                                                                                      | 15 A                                                                                                   |                    |                     |
| Output bypass <sup>4</sup>                       |                                                                                                      | Yes                                                                                                    |                    |                     |
| Shutdown output voltage per optimizer            |                                                                                                      | 0 V                                                                                                    |                    |                     |
| Shutdown output impedance per optimizer          |                                                                                                      | 1k ohm $\pm$ 10 %                                                                                      |                    |                     |
|                                                  |                                                                                                      | Communication                                                                                          |                    |                     |
| Communication Method                             |                                                                                                      | MBUS                                                                                                   |                    |                     |
|                                                  |                                                                                                      | Standard Compliance                                                                                    |                    |                     |
| Safety                                           |                                                                                                      | IEC62109-1 (class II safety)                                                                           |                    |                     |
| RoHS                                             |                                                                                                      | Yes                                                                                                    |                    |                     |
|                                                  |                                                                                                      | General Data                                                                                           |                    |                     |
| Dimension (W x H x D)                            |                                                                                                      | 75 x 140 x 28 mm (3.0 x 5.5 x 1.1 inch)                                                                |                    |                     |
| Weight (including cables)                        |                                                                                                      | 0.6 kg (1.3 lb.)                                                                                       |                    |                     |
| Installation part (optional)                     |                                                                                                      | Frame Mounting Bracket / T-shaped Bolt <sup>5</sup>                                                    |                    |                     |
| Input connector                                  |                                                                                                      | MC4                                                                                                    |                    |                     |
| Input wire length                                |                                                                                                      | 0.15m                                                                                                  |                    |                     |
| Output connector                                 |                                                                                                      | MC4                                                                                                    |                    |                     |
| Output wire length                               |                                                                                                      | 1.3 m (4.3 ft.) <sup>6</sup>                                                                           |                    |                     |
| Operating temperature / humidity range           |                                                                                                      | -40 °C ~ 85 °C <sup>6</sup> / 0 %RH ~ 100 %RH                                                          |                    |                     |
| Degree of protection                             |                                                                                                      | IP68                                                                                                   |                    |                     |
| Compatible product                               |                                                                                                      | SUN2000-5/6KTL-L1, SUN2000-5/6/8/10KTL-M1,<br>SUN2000-8/10/12/15/17/20KTL-M2, SUN2000-29.9/36/40KTL-M3 |                    |                     |
| Long String Design (Full Optimizer)              |                                                                                                      | SUN2000-2-6KTL-L1                                                                                      | SUN2000-3-10KTL-M1 | SUN2000-12-20KTL-M2 |
| Minimum optimizer number per string <sup>7</sup> |                                                                                                      | 4                                                                                                      | 6                  | 6                   |
| Maximum optimizer number per string              |                                                                                                      | 25                                                                                                     | 35                 | 25                  |
| Maximum DC power per string <sup>8</sup>         |                                                                                                      | 6,000 W                                                                                                | 10,000 W           | 12,000 W            |

<sup>\*1</sup> In the STC environment, The rated power of the module shall not exceed 1.05 times of the optimizer rated input power.

<sup>\*2</sup> The power optimizer has the output voltage equal to or less than its input voltage, being the output voltage of the PV module it connects to. Refer to AS/NZS 5033:2021 Clause 4.2.1.2 for the calculation of  $V_{MOD\ MAX}$ .

<sup>\*3</sup> Power optimizer is bypassed in the string connected to an operating inverter when it fails to work.

<sup>\*4</sup> Power optimizer output 0Vdc when disconnecting to the inverter or inverter is shutdown.

<sup>\*5</sup> Allow PV module frame installation / extruded aluminum profile installation.

<sup>\*6</sup> Fits PV module in landscape and portrait installation.

<sup>\*7</sup> Require standard 60 cells module to meet the inverter minimum startup voltage

<sup>\*8</sup> Full power capability refers to online smart design tool.