

# 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			
<b>Input</b>				
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 %			
Overtoltage category	II			
<b>Output</b>				
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 %			
<b>Communication</b>				
Communication Method	MBUS			
<b>Standard Compliance</b>				
Safety	IEC62109-1 (class II safety)			
RoHS	Yes			
<b>General Data</b>				
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, 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	SUN2000-30-40KTL-M3
Minimum optimizer number per string <sup>7</sup>	4	6	6	6
Maximum optimizer number per string	25	35	35	25
Maximum DC power per string <sup>8</sup>	6,000 W	10,000 W	12,000 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.