

Smart PV Optimizer



One-Fits-All Optimizer
Easier Business



<5s Module Auto-Mapping



Arc Fault Pinpoint
Positioning

Technical Specification	SUN2000-450W-P
-------------------------	----------------

Input	
Rated Input DC Power ¹	450 W
Absolute maximum input voltage	80 V
MPPT operating voltage range	8 - 80 V
Maximum Short Circuit Current (Isc)	13 A
Max. efficiency	99.5 %
Weighted efficiency	99.0 %
Overvoltage category	II

Output	
Max. output voltage	80 V ²
Max. output current	15 A
Output bypass ³	Yes
Shutdown output voltage per optimizer ⁴	0 V
Shutdown output impedance per optimizer	1k ohm ± 10 %

Communication	
Communication Method	MBUS

Standard Compliance	
Safety	IEC62109-1 (class II safety)
RoHS	Yes

General Data	
Dimension (W x H x D)	71 x 138 x 25 mm (2.8 x 5.4 x 1.0 inch)
Weight (including cables)	0.55 kg (1.2 lb.)
Installation part(optional)	Frame Mounting Bracket / T-shaped Bolt ⁵
Input connector	Staubli MC4
Output connector	Staubli MC4
Input wire length	0.15 m (0.5 ft.)
Output wire length	1.2 m (3.9 ft.) ⁵
Operating temperature / humidity range	-40 °C ~ 85 °C ⁵ / 0 %RH ~ 100 %RH
Degree of protection	IP68
Compatible product	SUN2000-2/3/4/4.6/5/6KTL-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	SUN2000-5-10KTL-M1	SUN2000-8-20KTL-M2	SUN2000-29.9-40KTL-M3
Minimum optimizer number per string	4	6	6	6
Maximum optimizer number per string	25	50	50	25
Maximum DC power per string	5,000 W	10,000 W	10,000 W	10,000 W

^{*1} Rated power of the module at STC shall not exceed "Rated Input DC Power" of power optimizer. Modules with power up to +5% power tolerance are acceptable.

^{*2} Due to the optimizer working logic, the optimizer output voltage would be lower than the module output voltage.

^{*3} Power optimizer is bypassed in the string connected to an operating inverter when it fails to work

^{*4} Power optimizer output 0Vdc when disconnecting to the inverter or inverter is shutdown.

^{*5} Allow PV module frame installation / extruded aluminum profile installation

^{*6} Fits PV module in landscape and portrait installation.

^{*7} Full power capability refers to online smart design tool.