

# Smart PV Optimizer



One-Fits-All Optimizer  
Easier Business



<1.5 min Pairing with Inverter



<5s Module Auto-Mapping



Arc Fault Pinpoint  
Positioning

Technical Specification	SUN2000-450W-P
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Input	
Rated Input DC Power <sup>1</sup>	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
Max. output current	15 A
Output bypass <sup>2</sup>	Yes
Shutdown output voltage per optimizer <sup>3</sup>	0 V
Shutdown output impedance per optimizer	1k ohm ± 10 %

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)	Grounding Plate, Grounding Lug, PV Module Frame Plate
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.) <sup>4</sup>
Operating temperature / humidity range	-40 °C ~ 85 °C <sup>5</sup> / 0 %RH ~ 100 %RH
Degree of protection	IP68
Compatible product	SUN2000-2/3/3.68/4/4.6/5/6KTL-L1, SUN2000-3/4/5/6/8/10KTL-M1, SUN2000-12/15/17/20KTL-M2, SUN2000-30/36/40KTL-M3 <sup>6</sup>

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	4	6	6	6
Maximum optimizer number per string	25	50	50	26
Maximum DC power per string	5,000 W	10,000 W	10,000 W	10,000 W

<sup>\*1</sup> 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.

<sup>\*2</sup> Power optimizer is bypassed in the string connected to an operating inverter when it fails to work

<sup>\*3</sup> Power optimizer output 0Vdc when disconnecting to the inverter or inverter is shutdown.

<sup>\*4</sup> Fits PV module in landscape and portrait installation.

<sup>\*5</sup> Full power capability refers to online smart design tool.

<sup>\*6</sup> SUN2000-30/36/40KTL-M3 is compatible with optimizer from 2021/03