
Power Optimizer

For North America

P1101



POWER OPTIMIZER

PV power optimization at the module-level

The most cost-effective solution for commercial and large field installations

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Balance of System cost reduction; 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- Fast installation with a single bolt
- Advanced maintenance with module-level monitoring
- Module-level voltage shutdown for installer and firefighter safety
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)

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Power Optimizer Model (Typical Module Compatibility)	P1101 (for up to 2 x high power or bi- facial modules)	
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INPUT		
Rated Input DC Power ⁽¹⁾	1100	W
Connection Method	Single input for series connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	125	Vdc
MPPT Operating Range	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	14.1	Adc
Maximum Short Circuit Current per Input (Isc)	-	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.6	%
Overvoltage Category	II	

OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)		
Maximum Output Current	18	Adc
Maximum Output Voltage	80	Vdc

OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)		
Safety Output Voltage per Power Optimizer	1 ± 0.1	Vdc

STANDARD COMPLIANCE		
Photovoltaic Rapid Shutdown System	Compliant with NEC 2014, 2017, 2020	
EMC	FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3	
Safety	IEC62109-1 (class II safety), UL1741, UL3741	
Material	UL94 V-0, UV resistant	
RoHS	Yes	

INSTALLATION SPECIFICATIONS		
Compatible SolarEdge Inverters	All commercial three phase inverters	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	129 x 162 x 59 / 5.1 x 6.4 x 2.32	mm / in
Weight	1064 / 2.34	gr / lb
Input Connector	MC4 ⁽²⁾	
Input Wire Length Options	1	1.6 / 5.2
	2	
	3	
Output Wire Type / Connector	Double insulated; MC4	
Output Wire Length	2.4 / 7.8	m / ft
Operating Temperature Range ⁽³⁾	-40 to +85 / -40 to +185	
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

(1) Rated power of the module at STC will not exceed the Power Optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.

(2) For other connector types please refer to: <https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf>.

(3) For ambient temperature above +70°C / +158°F, power de-rating is applied. Refer to the Power Optimizers Temperature De-Rating Application Note for more details.

PV System Design Using a SolarEdge Inverter		208V Grid SE17.3K*	277/480V Grid SE30K	277/480V Grid SE40K*	
Compatible Power Optimizers		P1101	P1101	P1101	
Minimum String Length	Power Optimizers	10	14	14	
	PV Modules	19	27	27	
Maximum String Length	Power Optimizers	30	30	30	
	PV Modules	60	60	60	
Maximum Continuous Power per String		8820	15300	15300	W
Maximum Allowed Connected Power per String ⁽⁴⁾ (Permitted only when the difference in connected power between strings is up to 2,000W for the 277/480V grid, or 1,000W for the 208V grid)		1 string - 10020	1 string - 17550	2 strings or less - 17550	W
		2 strings or more - 10620	2 strings or more - 20300	3 strings or more - 20300	
Parallel Strings of Different Lengths or Orientations		Yes			

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter.

(4) To connect more STC power per string, design your project using [SolarEdge Designer](#).