Power Optimizer

S1100

25 YEAR WARRANTY

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

▌ Higher Energy Yields

- ▌ Superior efficiency (99.5%)
- ▌ Compatible with high input current and bifacial PV modules
- ▌ Module-level MPPT that mitigates module mismatch power losses for all module types, including bifacial

▌ Built-in, Advanced Safety

- ▌ Automatic module-level voltage shutdown with SafeDC™, ensuring maximum protection of people and property
- ▌ Electric arc prevention with patented SafeConnect™ technology*:
  - ▌ Initiates system shutdown when abnormal PV connector behavior is detected
  - ▌ Installers automatically notified via module-level alerts

* Functionality subject to inverter model and firmware version

▌ Lower BoS Costs

- ▌ Up to 50% less cables, fuses and combiner boxes, over 2x longer string lengths possible
- ▌ Fast installations with single bolt assembly and easy cable management
- ▌ Supports connection to two PV modules in series
- ▌ Flexible system design enables fewer strings and maximum space utilization

▌ Simpler O&M

- ▌ Full visibility of system performance with remote, module-level monitoring
- ▌ Time-saving troubleshooting with pinpointed fault detection and actionable alerts
- ▌ Flexible module replacement/expansion, as old modules can be utilized in the same string with new ones

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/ Power Optimizer
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	S1100	Unit
INPUT		
Rated Input DC Power[(1)]	1100	W
Absolute Maximum Input Voltage (Voc)	125	Vdc
MPPT Operating Range	12.5-105	Vdc
Maximum Short Circuit Current (Isc) of connected PV Module	15	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	
OUTPUT DURING OPERATION		
Maximum Output Current	20	Adc
Maximum Output Voltage	80	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)		
Safety Output Voltage per Power Optimizer	1	Vdc
STANDARD COMPLIANCE		
EMC	FCC Part15, IEC 61000-6-2, and IEC 61000-6-3 - Class B, EN 55011	
Safety	IEC62109-1 (class II safety)	
Material	UL94 V-0, UV Resistant	
RoHS	Yes	
Fire Safety	VDE-AR-E 2100-712:2013-05	
INSTALLATION SPECIFICATIONS		
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	129 x 155 x 59 / 5.08 x 6.10 x 2.32	mm / in
Weight (including cables)	1064 / 2.3	gr / lb
Input Connector	MC4[(2)]	
Input Wire Length	0.1 / 0.32	m / ft
Output Connector	MC4	
Output Wire Length	(+) 4.7, (-) 0.10 / (+) 15.42, (-) 0.32	m / ft
Operating Temperature Range[(3)]	-40 to +85	°C
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%
Clearance requirement[(4)]	Heat sink back: 12.7 / 0.5	mm / in
	Left / Right / Top / Bottom: 10 / 0.4	
	Bracket plate: 0 / 0	

(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 contact SolarEdge
(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details
(4) Not keeping clearance requirement may void warranty, refer to Power Optimizers Clearance Application Note for in-detail instructions

PV System Design Using a SolarEdge Inverter[(5)(6)(7)(8)(9)]		230/400V Grid SE16K, SE17K, 25K*	230/400V Grid SE27.6K*	230/400V Grid SE30K*	230/400V Grid SE33.3K*	230/480V Grid SE33.3K*, SE40K*	
Compatible Power Optimizers		S1100					
Minimum String Length	Power Optimizers	14	14	15	14	14	
	PV Modules	27	27	29	27	27	
Maximum String Length	Power Optimizers	30	30	30	30	30	
	PV Modules	60	60	60	60	60	
Maximum Continuous Power per String		15000	15500	17000	15000	17000	W
Maximum Allowed Connected Power per String[(8)] (Permitted only when the difference in connected power between strings is 2,000W or less)		1 string - 17250	1 string - 17750	1 string – 19250	2 strings or less - 17250	2 strings or less - 19250	W
		2 strings or more - 20000	2 strings or more - 20500	2 strings or more - 22000	3 strings or more - 20000	3 strings or more 22000	
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
(5) S1100 can be mixed in one string only with S1100
(6) For each string, a Power Optimizer may be connected to a single PV module if 1) each Power Optimizer is connected to a single PV module or 2) it is the only Power Optimizer connected to a single PV module in the string
(7) For SE16K and above, the minimum STC DC connected power should be 11KW
(8) To connect more STC power per string, design your project using SolarEdge Designer
(9) It is not allowed to mix S-series and P-series power optimizers in new installations

CE **RoHS**