Power Optimizer
For North America

P860 / P960 / P1101

25 YEAR WARRANTY

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 OptimizerModel (Typical Module Compatibility)	P860 (for 2 x 72 cell modules)	P960 (for 2 x 72 cell modules)	P1101 (for up to 2 x high power or bi-facial modules)	
INPUT				
Rated Input DC Power[1]	860	960	1100	W
Connection Method	Dual input for independently connected modules[2]		Single input for series connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	60		125	Vdc
MPPT Operating Range	12.5 - 60		12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	22	23.2	14.1	Adc
Maximum Short Circuit Current per Input (Isc)	11	11.6	-	Adc
Maximum Efficiency	99.5			%
Weighted Efficiency	98.6			%
Overvoltage Category	II			
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)				
Maximum Output Current	18			Adc
Maximum Output Voltage	80			Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE 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		IEC62109-1 (class II safety), UL1741, UL3741	
Material	UL94 V-0, UV resistant			
RoHS	Yes			
INSTALLATION SPECIFICATIONS				
Compatible SolarEdge Inverters	Three phase inverters		SE30K & larger	
Maximum Allowed System Voltage	1000			Vdc
Dimensions (W x L x H)	129 x 169 x 59 / 5.1 x 6.65 x 2.32	129 x 169 x 72 / 5.1 x 6.65 x 2.83	129 x 162 x 59 / 5.1 x 6.4 x 2.32	mm / in
Weight	1340 / 2.95	1410 / 3.1	1064 / 2.34	gr / lb
Input Connector	MC4[3]			

Input Wire Length Options	Input #1	Input #2	Input #1	Input #2	-	
1	(-) 0.16 / 0.52, (+) 0.16 / 0.52	(-) 0.16 / 0.52, (+) 0.16 / 0.52	(-) 1.6 / 5.2, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2	1.6 / 5.2	m / ft
2	(-) 1.6 / 5.2, (+) 0.16 / 0.52	(-) 0.16 / 0.52, (+) 1.6 / 5.2				
3	(-) 1.6 / 5.2, (+) 1.6 / 5.2	(-) 1.6 / 5.2, (+) 1.6 / 5.2				

Output Wire Type / Connector	Double insulated; MC4				
Output Wire Length	2.3 / 7.5		2.3 / 7.5	2.4 / 7.8	m / ft
Operating Temperature Range[4]	-40 to +85 / -40 to +185				°C / °F
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) In the event of an odd number of PV modules in one string, installation of one P860 /P960 Power Optimizer connected to one PV module is allowed. When connecting a single module to the P860/ P960, seal the unused input connectors with the supplied pair of seals
(3) For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf
(4) 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[5][6]		208V Grid SE14.4K*	208V Grid SE17.3K*	277/480V Grid SE20K, 30K	277/480V Grid SE33.3K*, SE40K*	
Compatible Power Optimizers		P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	P860, P960, P1101	
Minimum String Length	Power Optimizers	8	10	14	14	
	PV Modules	15	19	27	27	
Maximum String Length	Power Optimizers	30	30	30	30	
	PV Modules	60	60	60	60	
Maximum Continuous Power per String		7200	8820	15300	15300	W
Maximum Allowed Connected Power per String[7] (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 - 8400	1 string - 10020	1 string - 17550	2 strings or less - 17550	W
		2 strings or more - 9000	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
(5) P860/P960 can be mixed in one string only with P860/P960
(6) P860/P960 design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification
(7) To connect more STC power per string, design your project using SolarEdge Designer

RoHS