Power Optimizer

For North America

P730 / P850 / P800p

POWEROPTIMIZER

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)
- Use with two PV modules connected in parallel

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P730 / P850 / P800p

Optimizer Model (Typical Module Compatibility)	P730 (for 2 x high power 72-cell PV modules)	P850* (for 2x high power or bi-facial modules)	P800p (for 2x 96-cell 5" PV modules)	
INPUT				
Rated Input DC Power[1]	730	850	800	W
Connection type	Single input for series connected modules		Dual input for independently connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	125	120	83	Vdc
MPPT Operating Range	12.5 - 105		12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	11	12.5	14	Adc
Maximum Short Circuit Current per input (Isc)	N/A		7	Adc
Maximum DC Input Current	13.75	15.63	17.5	Adc
Maximum DC Input Current per input	N/A		8.75	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	15	18		Adc
Maximum Output Voltage	85			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[2]			
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3			
Safety	IEC62109-1 (class II safety), UL1741			
Material	UL94 V-0, UV Resistant			
RoHS	Yes			
INSTALLATION SPECIFICATIONS				
Compatible SolarEdge Inverters	Three phase inverters			
Maximum Allowed System Voltage	1000			Vdc
Dimensions (W x L x H)	129 x 153 x 49.5 / 5.1 x 6 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3	129 x 168 x 59 / 5.1 x 6.6 x 2.3	mm / in
Weight (including cables)	1064 / 2.34	1090 / 2.4	1064 / 2.34	gr / lb
Input Connector[3]	MC4		MC4 Dual Input[4]	
Output Wire Type / Connector	Double Insulated; MC4			
Output Wire Length	2.1 / 6.9	1.8 / 5	2.1 / 6	m / ft
Operating Temperature Range[5]	-40 - +85 / -40 - +185			°C / °F
Protection Rating	IP68 / NEMA6P			
Relative Humidity	0 - 100			%

[1] Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.
[2] NEC 2017 requires max combined input voltage be not more than 80V.
[3] For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf.
[4] In a case of odd number of PV modules in one string it is allowed to install one P730/P800p/P850 power optimizer connected to one PV module. When connecting a single module to the P800p seal the unused input connectors with the supplied pair of seals.
[5] For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Application Note for more details.

PV System Design Using a Solaredge Inverter[6]		Three Phase 208V		Three Phase 480V		
Compatible Power Optimizers		P730[7]	P800p, P850[7]	P730	P800p, P850	
Minimum String Length	Power Optimizers	8		13		
	PV Modules	16		26		
Maximum String Length	Power Optimizers	30		30		
	PV Modules	60		60		
Maximum Power per String		6000[8]	7200	12750[9]	15300	W
Parallel Strings of Different Lengths or Orientations		Yes				

[6] P800p and P850 can be mixed in the same string. It is not allowed to mix P730 with P800p/P850 in one string or to mix P730/P800p/P850 with P300/P320/P400/P405 in one string.
[7] P730/ P800p/ P850 design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification.
[8] For SE14.4KUS/SE43.2KUS: It is allowed to install up to 6,500W per string when 3 strings are connected to the inverter (3 strings per unit for SE43.2KUS) and when the maximum power difference between the strings is up to 1,000W.
[9] For SE30KUS/SE33.3KUS/SE66.6KUS/SE100KUS: It is allowed to install up to 15,000W per string when 3 strings are connected to the inverter (3 strings per unit for SE66.6KUS/SE100KUS) and when the maximum power difference between the strings is up to 2,000W.
* P850 replaced the P800s; they can be used interchangeably and can be connected in the same string.

CE RoHS