



# Power Optimizer

for North America  
P730 / P800p / P850



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 shutdown for installer and firefighter safety
- Compliant with arc fault protection and rapid shutdown NEC requirements (when installed as part of the SolarEdge system)
- Use with two PV modules connected in series or in parallel



# Power Optimizer for North America

P730 / P800p / P850

Optimizer model (typical module compatibility)	P730 (for 2 x high power 72-cell PV modules)	P800p (for parallel connection of 2x 96-cell 5" PV modules)	P850* (for 2x high power or bi-facial modules)	
<b>INPUT</b>				
Rated Input DC Power <sup>(1)</sup>	730	800	850	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	125	83	120	Vdc
MPPT Operating Range	12.5 - 105	12.5 - 83	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	11	14	12.5	Adc
Maximum DC Input Current	13.75	17.5	15.63	Adc
Maximum Efficiency		99.5		%
Weighted Efficiency		98.6		%
Overvoltage Category		II		
<b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>				
Maximum Output Current	15		18	Adc
Maximum Output Voltage		85		Vdc
<b>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)</b>				
Safety Output Voltage per Power Optimizer		1 ± 0.1		Vdc
<b>STANDARD COMPLIANCE</b>				
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3			
Safety	IEC62109-1 (class II safety), UL1741			
Material	UL-94 (5-VA), UV Resistant			
RoHS	Yes			
<b>INSTALLATION SPECIFICATIONS</b>				
Compatible SolarEdge Inverters	Three phase inverters			
Maximum Allowed System Voltage	1000			Vdc
Dimensions (W x L x H)	128 x 152 x 50 / 5 x 5.97 x 1.96	128 x 158 x 59 / 5 x 6.22 x 2.32	128 x 152 x 59 / 5 x 5.97 x 2.32	mm / in
Weight (including cables)	1064 / 2.34	1090 / 2.4	1064 / 2.34	gr / lb
Input Connector	MC4 Compatible			
Output Wire Type / Connector	Double Insulated; MC4 Compatible			
Output Wire Length	2.1 / 6.9	1.8 / 5.9	2.1 / 6.9	m / ft
Operating Temperature Range <sup>(2)</sup>	-40 - +85 / -40 - +185			°C / °F
Protection Rating	IP68 / NEMA6P			
Relative Humidity	0 - 100			%

<sup>(1)</sup> Rated STC power of the module. Module of up to +5% power tolerance allowed.

<sup>(2)</sup> 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 SOLAREEDGE INVERTER <sup>(3)(4)</sup>		THREE PHASE 208V		THREE PHASE 480V	
Compatible Power Optimizers		P730 <sup>(5)</sup>	P800p, P850 <sup>(5)</sup>	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 <sup>(6)</sup>	7200	12750 <sup>(7)</sup>	15300
Parallel Strings of Different Lengths or Orientations		Yes			

<sup>(3)</sup> P800p and P850 can be mixed in one 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.

<sup>(4)</sup> 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.

<sup>(5)</sup> P730/ P800p/ P850 design with three phase 208V inverters is limited. Use the SolarEdge Site Designer for verification.

<sup>(6)</sup> 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.

<sup>(7)</sup> 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.

