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# Power Optimizer For North America

P860



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

# Power Optimizer

## For North America

### P860

Optimizer Model (Typical Module Compatibility)	P860 (for 2 x 72 cell modules)	
<b>INPUT</b>		
Rated Input DC Power <sup>(1)</sup>	860	W
Connection type	Dual input for independently connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	Vdc
MPPT Operating Range	12.5 - 60	Vdc
Maximum Short Circuit Current (Isc)	22	Adc
Maximum Short Circuit Current per input (Isc)	11	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	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>		
Photovoltaic Rapid Shutdown System	Compliant with NEC 2014, 2017 <sup>(2)</sup>	
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	
<b>INSTALLATION SPECIFICATIONS</b>		
Compatible SolarEdge Inverters	Three phase inverters	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	128 x 168 x 59 / 5 x 6.61 x 2.32	mm / in
Weight (including cables)	1064 / 2.34	gr / lb
Input Connector	MC4 Dual Input <sup>(3)</sup>	
Output Wire Type / Connector	Double Insulated; MC4	
Output Wire Length	6.9 / 2.1	ft / m
Operating Temperature Range <sup>(4)</sup>	-40 - +85 / -40 - +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

<sup>(1)</sup> 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.

<sup>(2)</sup> NEC 2017 requires max combined input voltage be not more than 80V.

<sup>(3)</sup> In a case of odd number of PV modules in one string, it is allowed to install one P860 power optimizer connected to one PV module. When connecting a single module to P860, seal the unused input connectors with the supplied pair of seals.

<sup>(4)</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 SolarEdge Inverter <sup>(5)</sup>		Three Phase 208V <sup>(6)</sup>	Three Phase 480V
Minimum String Length	Power Optimizers	8	13
	PV Modules	16	26
Maximum String Length	Power Optimizers	30	
	PV Modules	60	
Maximum Power per String		7200	15300
Parallel Strings of Different Lengths or Orientations		Yes	

<sup>(5)</sup> It is not allowed to mix P860 with P730/P800p/P850 in one string or to mix with P300/P320/P400/P405 in one string.

<sup>(6)</sup> P860 design with three phase 208V inverters is limited. Use the SolarEdge Designer for verification.