



Power Optimizer

for North America

P860



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
- 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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Optimizer model (typical module compatibility)	P860 (for 2 x 72 cell modules)	
INPUT		
Rated Input DC Power ⁽¹⁾	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	
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)		
Maximum Output Current	18	Adc
Maximum Output Voltage	85	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE 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	UL-94 (5-VA), UV Resistant	
RoHS	Yes	
INSTALLATION SPECIFICATIONS		
Compatible SolarEdge Inverters	Three phase inverters	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	128 x 162 x 59 / 5 x 5.6 x 2.32	mm / in
Weight (including cables)	1064 / 2.34	gr / lb
Input Connector	MC4 Dual Input ⁽³⁾	
Output Wire Type / Connector	Double Insulated; MC4	
Output Wire Length	6.9 / 2.1	ft / m
Operating Temperature Range ⁽⁴⁾	-40 - +85 / -40 - +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

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

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

⁽³⁾ 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.

⁽⁴⁾ 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 ⁽⁵⁾		THREE PHASE 208V ⁽⁶⁾	THREE PHASE 480V
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		7200 ⁽⁷⁾	15300 ⁽⁸⁾
Parallel Strings of Different Lengths or Orientations		Yes	

⁽⁵⁾ 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.

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

⁽⁷⁾ 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.

⁽⁸⁾ 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.

