



Power Optimizer

for North America
P600 / P700



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

P600 / P700

Optimizer model (typical module compatibility)	P600 (for 2 x 60-cell PV modules)	P700 (for 2 x 72-cell PV modules)	
INPUT			
Rated Input DC Power ⁽¹⁾	600	700	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	96	125	Vdc
MPPT Operating Range	12.5 - 80	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)		10.1	Adc
Maximum DC Input Current		12.65	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		15	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			
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 152 x 43 / 5 x 5.97 x 1.69	128 x 152 x 50 / 5 x 5.97 x 1.96	mm / in
Weight (including cables)	994 / 2.2	1064 / 2.34	gr / lb
Input Connector	MC4 Compatible		
Output Wire Type / Connector	Double Insulated; MC4 Compatible		
Output Wire Length	1.8 / 5.9	2.1 / 6.9	m / ft
Operating Temperature Range ⁽²⁾	-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⁾ 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 ⁽³⁾⁽⁴⁾		THREE PHASE 208V	THREE PHASE 480V
Compatible Power Optimizers		P600, P700 ⁽⁵⁾	P600, P700
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 ⁽⁶⁾	12750 ⁽⁷⁾
Parallel Strings of Different Lengths or Orientations		Yes	

⁽³⁾ P600, P700 can be mixed in one string. It is not allowed to mix P600/P700 with P300/P320/P400/P405 in one string.

⁽⁴⁾ In a case of odd number of PV modules in one string it is allowed to install one P600/P700 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⁾ P700 design with three phase 208V inverters is limited. Use the SolarEdge Site Designer for verification.

⁽⁶⁾ 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.

⁽⁷⁾ For 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.

