



# 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
- High efficiency with module-level MPPT, for maximized system energy production and revenue, and fast project ROI
- 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)	
<b>INPUT</b>			
Rated Input DC Power <sup>(1)</sup>	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	
<b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>			
Maximum Output Current		15	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 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 <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
		P600, P700 <sup>(5)</sup>	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 <sup>(6)</sup>	12750 <sup>(7)</sup>
Parallel Strings of Different Lengths or Orientations		Yes	

<sup>(3)</sup> P600, P700 can be mixed in one string. It is not allowed to mix P600/P700 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 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.

<sup>(5)</sup> P700 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 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.

