Power Optimizer

P600 / P650 / 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 voltage shutdown for installer and firefighter safety
- Use with two PV modules connected in series or in parallel

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Optimizer Model (Typical Module Compatibility)	P600 (for 2 x 60-cell PV modules)	P650 (for 2 x 60-cell PV modules)	P730[1] (for 2 x 72-cell PV modules)	P800p (for parallel connection of 2x 96-cell 5" PV modules)	P850[1] (for series connection of 2x high power or bi-facial modules)	
INPUT						
Rated Input DC Power[2]	600	650	730	800	850	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	96		125	83	120	Vdc
MPPT Operating Range	12.5 - 80		12.5 - 105	12.5 - 83	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	10.25	11	11	14	12.5	Adc
Maximum Efficiency	99.5					%
Weighted Efficiency	98.6					%
Overvoltage Category	II					
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)						
Maximum Output Current	15			18		Adc
Maximum Output Voltage	85					Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE 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)					
RoHS	Yes					
Fire Safety	VDE-AR-E 2100-712:2013-05					
INSTALLATION SPECIFICATIONS						
Compatible SolarEdge Inverters	Three phase inverters SE15K & larger		Three phase inverters SE16K & larger			
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 1.93	128 x 168 x 59 / 5 x 6.61 x 2.32	128 x 162 x 59 / 5 x 6.38 x 2.32	mm / in
Weight (including cables)	834 / 1.8		933 / 2.1	1019 / 2.2	1064 / 2.3	gr / lb
Input Connector[3][4]	MC4			MC4 Dual Input[7]	MC4	
Output Connector	MC4					
Output Wire Length	Portrait Orientation: 1.2 / 3.9 Landscape Orientation: 1.8 / 5.9		Portrait Orientation: 1.2 / 3.9 Landscape Orientation: 2.1 / 6.9	Portrait Orientation: 1.2 / 3.9 Landscape Orientation: 1.8 / 5.9	Portrait Orientation: 1.2 / 3.9 Landscape Orientation: 2.1 / 6.9	m / ft
Operating Temperature Range[5]	-40 - +85 / -40 - +185					°C / °F
Protection Rating	IP68 / NEMA6P					
Relative Humidity	0 - 100					%

[1] P730 replaced the P700; P850 replaced the P800s; each pair can be used interchangeably and can be connected in the same string.
[2] Rated STC power of the module. Module of up to +5% power tolerance allowed.
[3] For other connector types please contact SolarEdge.
[4] Longer inputs wire length (90 cm) are available for use with split junction box modules (Order P730-XXXLXXX or P850-XXXLXXX).
[5] 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[6][7]		Three Phase SE15K and larger		Three Phase SE16K and larger					Three Phase for MV grid					
Compatible Power Optimizers		P600	P650	P600	650	P730[4]	P800p	P850[4]	P600	650	P730[4]	P800p	P850[4]	
Minimum String Length	Power Optimizers	13												
	PV Modules	26												
Maximum String Length	Power Optimizers	30												
	PV Modules	60												
Maximum Power per String		11250[8]					13500		12750[9]			15300		W
Parallel Strings of Different Lengths or Orientations		Yes												

[6] P600, P650 and P730 can be mixed in one string. It is not allowed to mix P600/P650/P730 with P800p/P850 or to mix P600/P650/P730/P800p/P850 with P300/P370/P500/P404/P405/P505 in one string.
[7] In a case of odd number of PV modules in one string it is allowed to install one P600/P650/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.
[8] For SE27.6K: It is allowed to install up to 13,500W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 2,000W; inverter max DC power: 37,250W.
[9] For inverters for MV grid: It is allowed to install up to 15,000W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 2,000W; inverter max DC power: 45,000W.

CE RoHS