



Power Optimizer

P320 / P370 / P400 / P405 / P505



POWER OPTIMIZER

PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Compliant with arc fault protection and rapid shutdown NEC requirements (when installed as part of the SolarEdge system)
- Module-level voltage shutdown for installer and firefighter safety



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OPTIMIZER MODEL (typical module compatibility)	P320 (for high-power 60-cell modules)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	P505 (for higher current modules)	
INPUT						
Rated Input DC Power ⁽¹⁾	320	370	400	405	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48	60	80	125	83	Vdc
MPPT Operating Range	8 - 48	8 - 60	8 - 80	12.5 - 105	12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	11		10.1		14	Adc
Maximum DC Input Current	13.75		12.63		17.5	Adc
Maximum Efficiency				99.5		%
Weighted Efficiency	98.8					%
Overvoltage Category				II		
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)						
Maximum Output Current				15		Adc
Maximum Output Voltage	60			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		
RoHS				Yes		
INSTALLATION SPECIFICATIONS						
Maximum Allowed System Voltage				1000		Vdc
Compatible inverters				All SolarEdge Single Phase and Three Phase inverters		
Dimensions (W x L x H)	128 x 152 x 28 / 5 x 5.97 x 1.1	128 x 152 x 36 / 5 x 5.97 x 1.42	128 x 152 x 50 / 5 x 5.97 x 1.96	128 x 152 x 59 / 5 x 5.97 x 2.32		mm / in
Weight (including cables)	630 / 1.4	750 / 1.7	845 / 1.9	1064 / 2.3		gr / lb
Input Connector				MC4 ⁽²⁾		
Output Wire Type / Connector				Double Insulated; MC4		
Output Wire Length	0.95 / 3.0				1.2 / 3.9	m / ft
Operating Temperature Range				-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 other connector types please contact SolarEdge

PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER ⁽³⁾⁽⁴⁾	SINGLE PHASE HD-WAVE		SINGLE PHASE	THREE PHASE 208V	THREE PHASE 480V	
	P320, P370, P400 P405 / P505					
Minimum String Length (Power Optimizers)		8		10	18	
Maximum String Length (Power Optimizers)		25		25	50 ⁽⁵⁾	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400- US)	5250	6000	12750	W
Parallel Strings of Different Lengths or Orientations				Yes		

⁽³⁾ For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf.

⁽⁴⁾ It is not allowed to mix P405/P505 with P320/P370/P400/P600/P700/P800 in one string.

⁽⁵⁾ A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement



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