



SolarEdge Power Optimizer

Module Add-On For North America

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			98.6	%
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	
Minimum String Length (Power Optimizers)	P320, P370, P400 P405 / P505	8	10	18	
Maximum String Length (Power Optimizers)		6	8	14	
		25	25	50 ⁽⁵⁾	
Maximum Power per String	5700 (6000 with SE7600H-US, SE10000H-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

