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# Power Optimizer

## Frame-Mounted

P300 / P370 / P404 / P500



# POWER OPTIMIZER

## Fast mount power optimizers with module-level optimization

- Specifically designed to work with SolarEdge inverters
- Quicker installation - Power optimizers can be mounted in advance saving installation time
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Next generation maintenance with module level monitoring
- Module-level voltage shutdown for installer and firefighter safety

# / Power Optimizer

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OPTIMIZER MODEL (TYPICAL MODULE COMPATIBILITY)	P300 (FOR 60-CELL MODULES)	P370 (FOR HIGH-POWER 60-CELL AND FOR 72-CELL MODULES)	P404 (FOR 60-CELL AND 72-CELL, SHORT STRINGS)	P500 (FOR 96-CELL MODULES)	
<b>INPUT</b>					
Rated Input DC Power <sup>(1)</sup>	300	370	405	500	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48	60	80		Vdc
MPPT Operating Range	8 - 48	8 - 60	12.5 - 80	8 - 80	Vdc
Maximum Short Circuit Current (Isc)	11		10.1		Adc
Maximum Efficiency	99.5				%
Weighted Efficiency	98.8				%
Overvoltage Category	II				
<b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)</b>					
Maximum Output Current	15				Adc
Maximum Output Voltage	60		85	60	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				
RoHS	Yes				
Fire Safety	VDE-AR-E 2100-712:2013-05				
<b>INSTALLATION SPECIFICATIONS</b>					
Maximum Allowed System Voltage	1000				Vdc
Dimensions (W x L x H)	139 x 165 x 40 / 5.5 x 6.5 x 1.6		139 x 165 x 48 / 5.5 x 6.5 x 1.9		mm / in
Weight (including cables)	750 / 1.65	775 / 1.7	895 / 2.0	870 / 1.9	gr / lb
Input Connector	MC4 <sup>(2)</sup>				
Input Wire Length	0.16 / 0.52				m / ft
Output Connector	MC4				
Output Wire Length	0.9 / 2.95	1.2 / 3.9			m / ft
Operating Temperature Range <sup>(3)</sup>	-40 - +85 / -40 - +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

<sup>(1)</sup> Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% Power tolerance are allowed.

<sup>(2)</sup> For other connector types please contact SolarEdge.

<sup>(3)</sup> For ambient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV SYSTEM DESIGN USING A SOLAREEDGE INVERTER <sup>(4)</sup>		SINGLE PHASE HD-WAVE	SINGLE PHASE	THREE PHASE	THREE PHASE FOR 277/480V GRID	
Minimum String Length (Power Optimizers)	P300/ P370/ P500 <sup>(5)</sup>	8		16	18	
	P404	6		14 (13 with SE3K)	14	
Maximum String Length (Power Optimizers)		25		50	50	
Maximum Power per String		5700	5250	11250 <sup>(6)</sup>	12750	W
Parallel Strings of Different Lengths or Orientations		Yes				

<sup>(4)</sup> It is not allowed to mix P404 with P300/P370/P500 in one string

<sup>(5)</sup> The P300/P370/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to Three Phase Inverter SE3K-SE10K datasheet).

<sup>(6)</sup> For SE27.6K, SE55K, SE82.8K: 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

