Power Optimizer Frame-Mounted

P370 / P401 / P404 / P500



POWER OPTIMIZER

Fast mount power optimizers with module-level optimization

- Specifcally 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 COMPATIBILTY)	P370 (FOR HIGH-POWER 60-CELL AND FOR 72-CELL MODULES)	P401 (FOR HIGH POWER 60/72-CELL MODULES)	P404 (FOR 60-CELL AND 72-CELL, SHORT STRINGS)	P500 (FOR 96-CELL MODULES)		
INPUT				1	'	
Rated Input DC Power ⁽¹⁾	370	420	405	500	W	
Absolute Maximum Input Voltage (Voc at lowest temperature)	60 80				Vdc	
MPPT Operating Range	8 -	12.5 - 80	8 - 80	Vdc		
Maximum Short Circuit Current (Isc)	11	12.5	11	10.1	Adc	
Maximum Efficiency	99.5					
Weighted Efficiency	98.8					
Overvoltage Category	П					
OUTPUT DURING OPERATION (POWE	R OPTIMIZER CONNECTED	TO OPERATING SOLA	REDGE INVERTER)			
Maximum Output Current	15					
Maximum Output Voltage	60 85 60					
OUTPUT DURING STANDBY (POWER O	PTIMIZER DISCONNECTED FF	ROM SOLAREDGE INVE	RTER OR SOLAREDG	E INVERTER OI	F)	
Safety Output Voltage per Power Optimizer	1 ± 0.1					
STANDARD COMPLIANCE						
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					
INSTALLATION SPECIFICATIONS						
Maximum Allowed System Voltage	1000					
Dimensions (W x L x H)	139 x 165 x 40 / 5.5 x 6.5 x 1.6	129 x 153 x 29.5 / 5.08 x 6.02 x 1.16	139 x 165 x 48 / 5.5 x 6.5 x 1.9		mm / in	
Weight (including cables)	775 / 1.7	655 / 1.5	895 / 2.0	870 / 1.9	gr / lb	
Input Connector	MC4 ⁽²⁾					
Input Wire Length	0.16 / 0.52					
Output Connector	MC4					
Output Wire Length	1.2 / 3.9					
Operating Temperature Range ⁽³⁾	-40 to +85 / -40 to +185					
Protection Rating	IP68 / NEMA6P					
Relative Humidity	0 - 100					

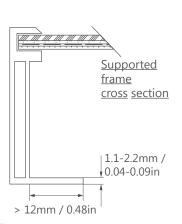
⁽¹⁾ Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% Power tolerance are allowed

⁽²⁾ For other connector types please contact SolarEdge
(3) 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 SOLAREDGE INVERTER ⁽⁴⁾		SINGLE PHASE HD-WAVE	SINGLE PHASE	THREE PHASE	THREE PHASE FOR 277/480V GRID	
Minimum String Length (Power Optimizers)	P370/ P401/ P500 ⁽⁵⁾	8		16	18	
	P404	6		14 (13 with SE3K) ⁽⁶⁾	14	
Maximum String Length (Power Optimizers)		25		50	50	
Maximum Nominal Power per String		5700 ⁽⁷⁾	5250(7)	11250(8)	12750	W
Parallel Strings of Different Lengths or Orientations		Yes				

⁽⁴⁾ It is not allowed to mix P404 with P370/P401/P500 in one string

⁽⁸⁾ 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



⁽⁵⁾ The P370/P401/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to Three Phase Inverter SE3K-SE10K datasheet)

⁽⁶⁾ Exactly 10 when using SE3K-RW010BNN4

⁽⁷⁾ If the inverters rated AC power < maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power Refer to: https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf