Power Optimizer Frame-Mounted

P370 / P401 / 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 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							
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		11.75 10.1		Adc		
Maximum Efficiency	99.5						
Weighted Efficiency	98.8						
Overvoltage Category	II						
OUTPUT DURING OPERATION (POWER	R OPTIMIZER CONNECTED T	O OPERATING SOLA	REDGE INVERTER)				
Maximum Output Current	15						
Maximum Output Voltage	60 80 60						
OUTPUT DURING STANDBY (POWER O	PTIMIZER DISCONNECTED FR	OM SOLAREDGE INVE	RTER OR SOLAREDGE	INVERTER OF	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.	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

⁽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	THREE PHASE SExxK- RWB	THREE PHASE 230/400V	THREE PHASE 277/480V	
Minimum String Length (Power Optimizers)	P370/ P401/ P500 ⁽⁵⁾	8	9	16	18	
	P404	6	8	14 (15 with SE30K)	14	
Maximum String Length (Power Optimizers)		25		50	50	
Maximum Nominal Power per String		5700(6)	5625 ⁽⁶⁾	11250 ⁽⁷⁾	12750	W
Parallel Strings of Different Lengths or Orientations		Yes				

<u>Supported</u> frame cross section 1.1-2.2mm/ 0.04-0 > 12mm / 0.48in

⁽²⁾ For other connector types please contact SolarEdge

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

⁽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⁾ 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 $input DC\ power\ Refer\ to: https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf$

⁽⁷⁾ For The 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W (8) For The 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W