Power Optimizer

P300 / P370 / P404 / P405 / P500 / P505

25 YEAR WARRANTY

PV power optimization at the module level

- Specifically designed to work with SolarEdge inverters

- Up to 25% more energy

- Next generation maintenance with module-level monitoring

- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading

- Superior efficiency (99.5%)

- Flexible system design for maximum space utilization

- Module-level voltage shutdown for installer and firefighter safety

- Fast installation with a single bolt

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OPTIMIZER MODEL (typical module compatibilty)	P300 (for 60-cell modules)	P370 (for high power 60 and 72-cell modules)	P404 (for 60-cell and 72-cell, short strings)	P405 (for thin film modules)	P500 (for 96-cell modules)	P505 (for higher current modules)	UNIT
INPUT							
Rated Input DC Power[1]	300	370	405	405	500	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48	60	80	125	80	83	Vdc
MPPT Operating Range	8 - 48	8 - 60	12.5 - 80	12.5 - 105	8 - 80	12.5-83	Vdc
Maximum Short Circuit Current (Isc)	11		10.1			14	Adc
Maximum Efficiency	99.5						%
Weighted Efficiency	98.8						%
Overvoltage Category	II						
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)							
Maximum Output Current	15						Adc
Maximum Output Voltage	60		85		60	85	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE 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						
Fire Safety	VDE-AR-E 2100-712:2013-05						
INSTALLATION SPECIFICATIONS							
Maximum Allowed System Voltage	1000						Vdc
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1		129 x 153 x 42.5 / 5.1 x 6 x 1.7	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in
Weight (including cables)	630 / 1.4	655 / 1.5	775 / 1.7	845 / 1.9	750 / 1.7	1064 / 2.3	gr / lb
Input Connector	MC4[2]			Single or Dual MC4[3]	MC4[2]		
Input Wire Length	0.16 / 0.52						m / ft
Output Connector	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						
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.
(3) For dual version for parallel connection of two thin film modules use the P405. In the case of an odd number of PV modules in one string, installing one P405 dual version power optimizer connected to one PV module is supported. When connecting a single module, seal the unused input connectors using the supplied pair of seals.

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)	P300, P370, P500[5]	8		16	18	
	P404,P405,P505	6		13 (12 with SE3K)	14	
Maximum String Length (Power Optimizers)		25		50	50	
Maximum Power per String		5700	5250	11250	12750	W
Parallel Strings of Different Lengths or Orientations		Yes				

(4) It is not allowed to mix P404/P405/P505 with P300/P370/P500/P600/P650/P730/P800p/P850 in one string.
(5) The P300/P370/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to the three phase inverter SE3K-SE10K datasheet).

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