Power Optimizer

Frame-Mounted For Austalia

P401



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



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OPTIMIZER MODEL (TYPICAL MODULE COMPATIBILTY)	P401 (FOR HIGH POWER 60/72-CELL MODULES)	
INPUT		\
Rated Input DC Power ⁽¹⁾	400	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	Vdc
MPPT Operating Range	8 - 60	Vdc
Maximum Short Circuit Current (Isc)	11.75	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	П	
OUTPUT DURING OPERATION (POWER OPTIF	MIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)	
Maximum Output Current	15	Adc
Maximum Output Voltage	60	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZE	R DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERT	ER 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 29.5 / 5.08 x 6.02 x 1.16	mm / ir
Weight (including cables)	655 / 1.5	gr / lb
Input Connector	MC4 ⁽²⁾	
Input Wire Length	0.16 / 0.52	m/ft
Output Connector	MC4	
Output Wire Length	1.2/3.9	m/ft
Operating Temperature Range ⁽³⁾	-40 to +85 / -40 to +185	°C / °F
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 - 100	%

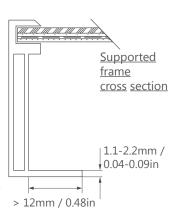
⁽¹⁾ Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% Power tolerance are allowed

⁽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		SINGLE PHASE HD-WAVE	SINGLE PHASE	THREE PHASE	THREE PHASE FOR 277/480V GRID	
Minimum String Length (Power Optimizers)	P401 ⁽⁴⁾	8		16	18	
Maximum String Length (Power Optimizers)		25		50	50	
Maximum Nominal Power per String		5700 ⁽⁵⁾	5250 ⁽⁵⁾	11250(6)	12750	W
Parallel Strings of Different Lengt or Orientations	:hs	Yes				

⁽⁴⁾ The P401 cannot be used with the SE3K three phase inverter (available in some countries; refer to Three Phase Inverter SE3K-SE10K datasheet)
(5) 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

⁽⁶⁾ 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



⁽²⁾ For other connector types please contact SolarEdge