
Power Optimizer Frame-Mounted For Australia

P401



25
YEAR
WARRANTY

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

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OPTIMIZER MODEL (TYPICAL MODULE COMPATIBILITY)	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	II	
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)		
Maximum Output Current	15	Adc
Maximum Output Voltage	60	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE 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 29.5 / 5.08 x 6.02 x 1.16	mm / in
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

(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 SOLAREEDGE 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 Lengths or Orientations		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

