Power Optimizer Module Add-On

For Ground Mount Installations

For North America

M1600

POWEROPTIMIZER

PV power optimization at the module-level

The most cost effective solution for commercial and ground mount installations

- Specifically designed to work with SolarEdge commercial inverters SE30K and above
- A single optimizer supports up to four modules with 2 MPP trackers
- High efficiency with module-level MPPT, for maximized system energy production and revenue, and fast project ROI
- Superior efficiency (99.5%)
- Extremely long string length for excellent balance of system cost
- Module-level voltage shutdown for installer and firefighter safety
- Advanced maintenance with module-level monitoring
- Fast installation with a single bolt

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/ Power Optimizer Module Add-On

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	M1600 (for 4 x 72-cell PV modules)	
INPUT		
Number of Inputs	2	
Connection Method	2 modules in series per input	
Number of MPP Trackers	2 (1 per Input)	
Rated Input DC Power per Input[1]	900 (1800)	W
Absolute Maximum Input Voltage per Input (Voc at lowest temperature)	125	Vdc
MPPT Operating Range per Input	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	12.5	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	20	Adc
Maximum Output Voltage	160	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)		
Safety Output Voltage per Power Optimizer	2 ± 0.1	Vdc
STANDARD COMPLIANCE		
EMC	FCC Part15 Class A, IEC61000-6-2, IEC61000-6-3	
Safety	IEC62109-1 (class II safety), UL1741	
Material	UL94 V-0, UV Resistant	
RoHS	Yes	
INSTALLATION SPECIFICATIONS[2]		
Compatible SolarEdge Inverters	Three phase inverters SE30K & larger	
Maximum Allowed System Voltage	1000	Vdc
Dimensions[3] (W x L x H)	108.5 x 157 x 81.5 / 4.27 x 6.18 x 3.2	mm / in
Weight	1.3 / 2.9	kg / lb
Input Connector	MC4[3]	
Input Wire Length	0.16 / 0.52	m / ft
Output Connector	MC4	
Output Wire Length	1.2 / 3.9 (portrait installation) / 2.2 / 7.2 (landscape installation)	m / ft
Operating Temperature Range[5]	-40 - +85 / -40 - +185	˚C / ˚F
Protection Rating	IP68 / Type 6P	
Relative Humidity	0 - 100	%

(1) Rated power of the module at STC will not exceed the optimizer Rated Input DC Power value. Modules with up to +5% power tolerance are allowed.
(2) or installation and supported configurations please refer to: Application Note: Connecting Multiple PV Modules to SolarEdge Power Optimizers.
(3) Dimensions without bracket
(4) For other connector types please refer to: https://www.solaredge.com/sites/default/files/optimizer-input-connector-compatibility.pdf
(5) For ambient temperature above 149°F / 65°C power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

		Three Phase for 480V Grid in combination with 72/144 cell modules	
Minimum String Length with 72 Cell Modules (Power Optimizers / Modules)	**Modul Power Bins**		
	350W-399W	10 / 39	
	400W-449W	10 / 38	
	450W	9 / 36	
Maximum String Length (Power optimizers / modules)		15 / 60	
Maximum Power per String		17,000[8]	
Parallel Strings of Different Lengths or Orientations		Yes	

(6) It is not allowed to mix M1600 with any other optimizer models in any string, connected to the same inverter.
(7) In case the number of PV modules in the string is not a multiple of 4, it is allowed to install one M1600 power optimizer connected to one, two or three PV modules. Do not leave M1600 primary inputs unconnected.
(8) For the 480V grid: up to 19,250W per string may be installed with 2 strings and 22,000W when 3 strings are connected to the inverter. Maximum power difference between each string is 2,000W.

CE RoHS