Power Optimizer
For Ground Mount Installations

M1600

25
YEAR
WARRANTY

PV power optimization at the module-level
The most cost effective solution for ground mount and large field installations

▌ Specifically designed to work with SolarEdge commercial inverters SE25K and above

▌ A single optimizer supports up to four modules with 2 MPP trackers

▌ Up to 25% more energy

▌ 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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M1600 (for 4 x 60 & 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)		
Fire Safety	VDE-AR-E 2100-712: 2013-05		
RoHS	Yes		
INSTALLATION SPECIFICATIONS[2]			
Compatible SolarEdge Inverters	Three phase inverters SE25K & 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 / 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 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 Application Note for more details

PV System Design Using a SolarEdge Inverter[6][7]		Three Phase for 400V Grid in combination with 60/120 cell modules	Three Phase for 480V Grid in combination with 60 /120 cell modules	
Minimum String Length with 60 Cell Modules (Power Optimizers / Modules)	**Module Power Bins**			
	300W-349W	10 / 40	11 / 44	
	350W-399W	10 / 40	N / A	
	400W-449W	N / A	N / A	
		Three Phase for 400V Grid in combination with 72/144 cell modules	**Three Phase for 480V Grid in combination with 72/144 cell modules**	
Minimum String Length with 72 Cell Modules (Power Optimizers / Modules)	**Module Power Bins**			
	350W-399W	9 / 35	10 / 39	
	400W-449W	9 / 34	10 / 38	
	450W	8 / 32	9 / 36	
Maximum String Length with 60 or 72 Cell Modules (Power Optimizers / Modules)		15 / 60		
Maximum Power per String		15000[8]	17000[9]	W
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 400V grid: up to 17,250W per string may be installed with 2 strings and 20,000W when 3 strings are connected to the inverter. Maximum power difference between each string is 2,000W
(9) 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**