## Power Optimizer For Residential Installations For Europe



## POWER OPTIMIZER

## **Enabling PV power optimization at the module level**

- Specifically designed to work with SolarEdge residential inverters
- High efficiency (99.5%)
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Faster installations with simplified cable management and easy assembly using a single bolt
- Detects abnormal PV connector behavior, preventing potential safety issues\*
- Module-level voltage shutdown for installer and firefighter safety
- Flexible system design for maximum space utilization
- Compatible with bifacial PV modules



<sup>\*</sup> Functionality subject to inverter model and firmware version

## / Power Optimizer for Residential Installations For Europe

S440, S500

	S440	\$500	UNIT
Rated Input DC Power <sup>(1)</sup>	440	500	W
Absolute Maximum Input Voltage (Voc)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5		Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		
Overvoltage Category	ll l		
OUTPUT DURING OPERATION			
Maximum Output Current	15		
Maximum Output Voltage	60		
OUTPUT DURING STANDBY (POWER OPTIMIZER DIS	CONNECTED FROM INVERTER OR IN	NVERTER OFF)	
Safety Output Voltage per Power Optimizer	1		
STANDARD COMPLIANCE			
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3, CISPR11, EN-55011		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL94 V-0, UV Resistant		
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 30		mm
Weight (including cables)	655 / 1.5		gr / lb
Input Connector	MC4 <sup>(2)</sup>		
Input Wire Length	0.1		m
Output Connector	MC4		
Output Wire Length	(+) 2.3, (-) 0.10		
Operating Temperature Range <sup>(3)</sup>	-40 to +85		
Protection Rating	IP68 / NEMA6P		
Relative Humidity	0 - 100		

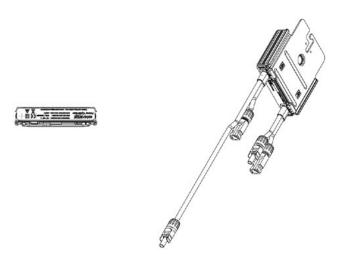
<sup>(1)</sup> Rated power of the module at STC will not exceed the Power Optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed

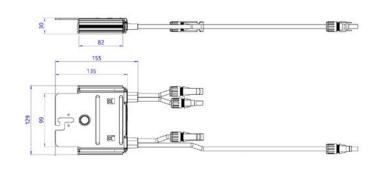
<sup>(2)</sup> For other connector types please contact SolarEdge
(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details

PV System Design Usir Inverter	ng a SolarEdge	Single Phase HD-Wave	Single Phase	Three Phase	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	S440, S500	8		16	18	
Maximum String Length (Power Optimizers)		25	25		50	
Maximum Nominal Power per S	String <sup>(4)</sup>	5700	5250	11250(5)	12750(6)	W
Parallel Strings of Different Lengths or Orientations  Yes						

<sup>(4)</sup> 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

<sup>(7)</sup> It is not allowed to mix S-series and P-series Power Optimizers in new installations





power Refer to: https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf
(5) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W
(6) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W