## Power Optimizer For Residential Installations

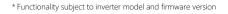
S440, S500



## Enabling PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Detects abnormal PV connector behavior, preventing potential safety issues\*
- Module-level voltage shutdown for installer and firefighter safety
- Superior 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
- Flexible system design for maximum space utilization
- Compatible with bifacial PV modules





## / Power Optimizer For Residential Installations S440, S500

	S440	S500	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	15	Adc	
Maximum Efficiency	99.5			
Weighted Efficiency	98.6		%	
Overvoltage Category	I			
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		Vdc	
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 155 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			

(1) 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 (2) 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 Us Inverter	ing a SolarEdge	Single Phase HD-Wave	Three Phase	Three Phase for 277/480V Grid	
Minimum String Length (Power Optimizers)	S440, S500	8	16	18	
Maximum String Length (Power Optimizers)		25	50		
Maximum Nominal Power per String <sup>(4)</sup>		5700	11250(5)	12750(6)	W
Parallel Strings of Different Lengths or Orientations			Ves		

(4) 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 (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

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

