Power Optimiser

For Australia

S440 / S500 / S500B

25 YEAR WARRANTY

PV power optimisation at the module level

- Specifically designed to work with SolarEdge 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 modules mismatch- loss, from manufacturing tolerance to partial shading

- Flexible system design and compatible with bifacial PV modules for maximum space utilisation

- Faster installations with simplified cable management and easy assembly using a single bolt

- Next generation maintenance with module safety

* Functionality subject to inverter model and firmware version

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/Power Optimiser
For Australia
S440 / S500

	S440	S500	S500B	Units
INPUT				
Rated Input DC Power[(1)]	440	500		W
Absolute Maximum Input Voltage (Voc)	60		125	Vdc
MPPT Operating Range	8 – 60		12.5 – 105	Vdc
Maximum Short Circuit Current (Isc) of connected PV Module	14.5	15		Adc
Maximum Efficiency	99.5			%
Weighted Efficiency	98.8			%
Overvoltage Category	II			
Input Overcurrent Protection	15			Adc
OUTPUT DURING OPERATION				
Maximum Output Current	15			Adc
Maximum Output Voltage	60		80	Vdc
OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM INVERTER OR INVERTER OFF)				
Safety Output Voltage per Power Optimiser	1 ± 0.1			Vdc
STANDARD COMPLIANCE				
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3			
Safety	IEC62109-1 (class II safety), UL1741			
RoHS	Yes			
Fire Safety	VDE-AR-E 2100-712:2018-12			
CATEGORY TABLE HEADER				
Maximum Allowed System Voltage	1000			Vdc
Dimensions (W x L x H)	129 x 155 x 30		129 x 155 x 45	mm
Weight	720		790	gr
Input Connector	MC4[(2)]			
Input Wire Length	0.1 / 0.9[(3)]			m
Output Connector	MC4			
Output Wire Length	(+) 2.3, (-) 0.10			m
Operating Temperature Range[(4)]	-40 to +85			°C
Protection Rating	IP68 / NEMA6P			
Relative Humidity	0 – 100			%

(1) Rated power of the module at STC will not exceed the Power Optimiser Rated Input DC Power. Modules with up to +5% power tolerance are allowed.
(2) For other connector types please contact SolarEdge. Please note that with other connector types, the wire length will be 0.16m. The Sense Connect feature will not detect thermal events on these connectors.
(3) The Sense Connect feature will not detect thermal events on input connectors when the input wire length is 0.9m.
(4) For ambient temperatures above +70°C / +158°F power de-rating is applied. Refer to Power Optimisers Temperature De-Rating Technical Note for more details.

PV System Design Using a SolarEdge Inverter		SolarEdge Home Genesis / SolarEdge Home Hub	Three Phase Residential	Three Phase Commercial	Units
Minimum String Length (Power Optimisers)	S440, S500	8	9	16	
	S500B	6	8	14	
Maximum String Length		25		50	
Maximum Nominal Power per String[(5)]		5700 (6000 with SE8250H / SE10000H)	5625	11250[(6)]	W

(5) If the inverter's 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 the Single String Design Guidelines Application Note for more details.
(6) When using more than a single string, it is allowed to install up to 13500W per string when the maximum power difference between each string is up to 2000W.
(7) It is not allowed to mix S-series and P-series Power Optimisers in new installations.

* 45mm for S500B

CE RoHS