

Power Optimiser

For Australia

S1500



POWER OPTIMISERS

SolarEdge's most powerful and cost-effective Power Optimiser for commercial and large field installations

- **Greater Energy Yields**
 - High efficiency (99.5%) with panel-level MPPT, for maximised system energy production and revenue, and fast project ROI
 - Supports up to 750W high power and 20A high current panels, including bifacial and G12 panels
- **Maximum Protection with Built-In Safety**
 - Designed to automatically reduce high DC voltage to touch-safe levels upon grid/inverter shutdown, with SafeDC™
 - Includes SolarEdge Sense Connect, for connector-level monitoring during production to detect overheating due to installation issues
- **Lower BoS Costs with Flexible Design**
 - More power with up to 30.4 kW per string for optimal usage of the installation area, enabling up to 2x longer and fewer strings, 50% fewer cables, fuses, and combiner boxes
 - Compact size and slimmer profile for simple cost-effective installations, especially in challenging spaces
 - Connects to two PV panels in a series
- **Simpler O&M**
 - Panel-level system monitoring enabling pinpointed fault detection
 - Remote, time-saving troubleshooting for fewer truck rolls and time on site

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S1500		Unit
INPUT⁽¹⁾		
Rated Input DC Power	1500	W
Absolute Maximum Input Voltage (Voc)	125	Vdc
MPPT Operating Range	12.5 – 105	Vdc
Maximum Continuous Input Current	20	Adc
Maximum Short Circuit Current (Isc) of Connected PV Panel ⁽²⁾	20	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	
Overcurrent Protection	20.75	
OUTPUT DURING OPERATION		
Maximum Output Current	24	Adc
Maximum Output Voltage	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, IEC 61000-6-2, and IEC 61000-6-3 - Class B, EN 55011 ⁽³⁾	
Safety	IEC 62109-1 (class II safety)	
Material	UL94 V-0, UV Resistant	
RoHS	Yes	
Fire Safety	VDE-AR-E 2100-712:2013-05	
INSTALLATION SPECIFICATIONS		
Compatible SolarEdge Inverters	Commercial inverters without integrated DC fuses ⁽⁴⁾	
Maximum Allowed System Voltage	1000	Vdc
Dimensions (W x L x H)	129 x 165 x 52	mm
Weight	1087	gr
Input Connector	MC4 ⁽⁵⁾	
Input Wire Length	Short Input Option: 0.1 Long Input Option: 1.8 ⁽⁶⁾	m
Output Connector	MC4	
Output Wire Length	(+) 5.7 (-) 0.10	m
Operating Temperature Range ⁽⁷⁾	-40 to +85	°C
Protection Rating	IP68 / NEMA6P	
Relative Humidity	0 – 100	%

(1) For detailed Power Optimiser/PV module compatibility guidelines, refer to the [Application Note – Power Optimizer Compatibility with PV Modules](#).

(2) Rated power of the panel at STC will not exceed the Power Optimiser Rated Input DC Power. Panels with up to +5% power tolerance are allowed.

(3) When using bifacial panels, consider only the front side Isc at STC (0% back side gain). For details, see the [Compatibility of Bifacial Modules with SolarEdge Power Optimizers](#) application note.

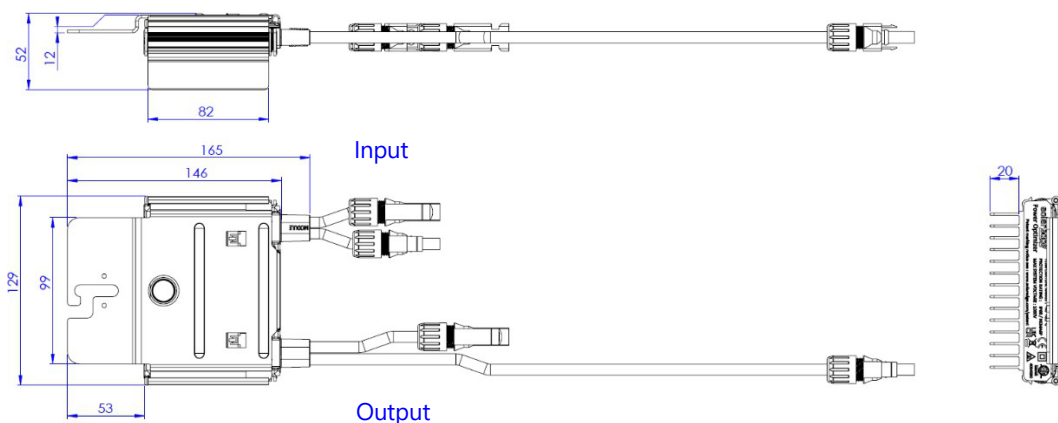
(4) S1500 is designed to be paired with inverters that do not have integrated DC fuses. Inverters with DC fuses must be manually adjusted, as described in [this](#) technical note.

(5) For other connector types please contact SolarEdge.

(6) For S-Series models with long input cables (1.8m), the Sense Connect feature is only enabled on the output cable connector.

(7) For ambient temperatures above +65°C power derating is applied.

S1500 Mechanical Drawing



* When installing SolarEdge power optimisers, maintaining clearance is required. For details, see the [Power Optimiser Clearance](#) application note.

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PV System Design Using a SolarEdge Inverter ⁽¹⁾⁽²⁾		230/400V Grid SE15K	230/400V Grid SE17K	230/400V Grid SE25K*	230/400V Grid SE33.3K*	Units
Compatible Power Optimizers		S1500				
Minimum String Length	Power Optimisers	14	14	14	14	
	PV Panels	27	27	27	27	
Maximum String Length	Power Optimisers	30	30	30	30	
	PV Panels	60	60	60	60	
Maximum Continuous Power per String		18,600	18,000	18,000	18,000	W
Maximum Allowed Connected Power per String ⁽³⁾		1 string or more – 28,600	1 string or more – 28,000	1 string – 20,250	1 string – 20,250	
				2 strings or more – 28,000	2 strings or more – 28,000	
Parallel Strings of Different Lengths or Orientations		Yes				
Maximum Difference in Number of Power Optimisers Allowed Between the Shortest and Longest String Connected to the Same Inverter Unit		5 Power Optimizers				

* The same rules apply for Synergy units of equivalent power ratings, that are part of the modular Synergy Technology inverter.

- For each string, a Power Optimiser may be connected to a single PV panel if:
 - each Power Optimiser is connected to a single PV panel or
 - it is the only Power Optimiser connected to a single PV panel in the string.
- For SE20K and above, the minimum STC DC connected power should be 11KW.
- To connect more STC power per string, design your project using [SolarEdge Designer](#).