

# SolarEdge Large Scale PV Plants Solution



## Higher Energy Yield

- // Module-level MPPT with 99% weighted inverter efficiency
- // Up to 200% DC/AC oversizing
- // Module mismatch mitigation, also for bi-facial modules
- // Wide operating temperature range, suitable for hot environments

## Simpler O&M

- // Module-level remote troubleshooting with pinpointed visibility and actionable insights
- // Built-in Type 1 / Type 2 AC & DC surge protection devices to better withstand electrical surges; monitored and field-replaceable
- // Built-in AC & DC terminal block temp. sensors to prevent overheating

## Lower BoS Costs

- // Higher power per inverter - fewer units needed per system
- // Less cabling with long 80-module string lengths
- // Better utilization of solar trackers – fewer trackers for the same DC capacity

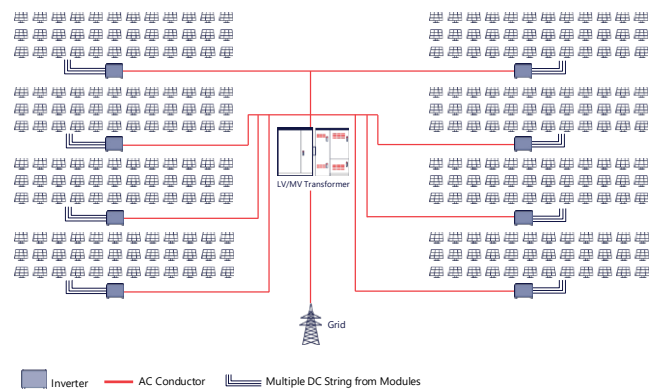
## Flexible Installations

- // Fits both distributed and virtual central deployments
- // Pre-commissioning for automated, early validation of system components and wiring, even prior to AC connection

# / Ideally Suited for All Deployment Topologies

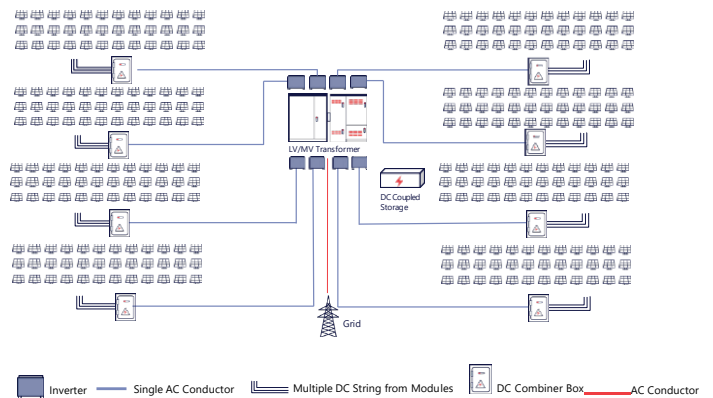
## Distributed topology advantages:

- / Inverters are located close to the modules
- / No need for combiner boxes
- / No need for a dedicated inverter structure



## Virtual central topology advantages:

- / Higher yield - no voltage drops between inverter and MV/LV transformer
- / Easier access for O&M
- / AC cabling costs' saving



## Boost your system flexibility with SolarEdge

SolarEdge supports both distributed and virtual central topologies while maintaining higher energy yield and enabling module-level monitoring capabilities without needing to add additional hardware.

### SolarEdge advantages: distributed topology

- / Higher yield with module-level MPPT
- / Lower installation costs
- / Fewer strings and less cabling

### SolarEdge advantages: virtual central topology

- / Higher yield with module-level MPPT
- / Lower installation costs
- / Fewer strings and less cabling
- / Module-level visibility eliminates the need for DC combiner box monitoring, leading to cost savings
- / Future-proofed for DC-coupled storage

# / Inverter Technical Specifications

## SE330K

		UNIT
<b>OUTPUT</b>		
Rated AC Active Output Power	330,000 @ 50C	W
Maximum Apparent AC Power Output	330,000 @ 50C	VA
AC Output Voltage - Line to Line (Nominal)	690	Vac
AC Output Voltage - Line to Line (Range)	587-759	Vac
AC Frequency	60 ± 5%	Hz
Maximum Continuous Output Current (per Phase) @Nominal Voltage	276.1	Aac
AC Output Line Connections	3W + PE	
Total Harmonic Distortion	≤3	%
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes	
Power Factor Range	0 - 1 / leading, lagging	
<b>INPUT</b>		
Max DC Power (Module STC)	660,000	W
Maximum Input Voltage DC+ to DC-	1500	Vdc
Nominal DC Input Voltage DC+ to DC-	1250	Vdc
Maximum Input Current	276.1	Adc
Module-Level Optimization	Yes	
<b>EFFICIENCY</b>		
Max Inverter Efficiency <sup>(5)</sup>	99.0	%
CEC Efficiency <sup>(5)</sup>	99.0	%
<b>PROTECTION FEATURES</b>		
DC Reverse Polarity Protection	Yes	
Ground Fault Isolation Detection	Yes	
AC Surge Protection	Type 2, monitored and field replaceable	
DC Surge Protection	Type 2, monitored and field replaceable	
RS485 Surge Protection	Optional	
DC Disconnect	Yes, integrated	
<b>ADDITIONAL FEATURES</b>		
Supported Communication Interfaces	CAN bus, RS485, Ethernet, WiFi, Cellular (optional)	
PID Protection	PID Rectifier	
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection	
Pre-Commissioning	Inverter activation and validation powered by PV modules	
VAR at Night	Yes	
<b>STANDARD COMPLIANCE<sup>(6)</sup></b>		
Safety	IEC62109, AS3100	
Grid Connection Standards	EN50549, BDEW, C10/11, EN50438, PO 12.3, AS 4777, G99, CEI-016, CEI-021, UTE C15-712, VDE0126-1-1	
Emissions	IEC60068	
Advanced Grid Support Capabilities	L/HFRT, L/HVRT, Volt-VAR, Volt/Watt, Frequency / Watt, Ramp Rate Control, Fixed Power Factor	
RoHS	Yes	
<b>GENERAL DATA</b>		
Dimensions (H x W x D)	42.9 x 35.6 x 16.1 / 1090 x 903 x 409	in / mm
Weight	342 / 155	lb / kg
Operating Temperature Range	-40 to +140 / -40 to +60 <sup>(1)</sup>	°F / °C
Cooling	Fans (field replaceable)	
Noise Emission	< 69	Hz
Protection Rating	IP66	
Mounting	Bracket provided	
Topology	Transformerless, ungrounded	
AC Connection <sup>(2)</sup>	2 Glands, Cable Diameter 38-66mm, Terminal Lugs, Max. 300mm <sup>2</sup> per wire, Al or Cu	
DC Connection <sup>(3)(4)</sup>	4 Glands, Cable Diameter 19-28mm, Terminal Lugs, Max. 300mm <sup>2</sup> per wire, Al or Cu	

(1) Power de-rating from 50C

(2) Two AC terminals per line are available

(3) Up to two DC terminals (+, -) are available

(4) A DC input with MC4 connectors supporting up to 20 strings is also available

(5) Preliminary

(6) Certification pending

# Power Optimizer Technical Specifications

## H1300

### H1300 (FOR CONNECTION TO TWO PV MODULES)

INPUT		
Rated Input DC Power <sup>(1)</sup>	1300	W
Connection Method	Single input for series connected modules	
Absolute Maximum Input Voltage (Voc at lowest temperature)	125	Vdc
MPPT Operating Range	12.5-105	Vdc
Maximum Short Circuit Current per Input (Isc)	15	Adc
Maximum Efficiency	99.5	%
Weighted Efficiency	98.8	%
Overvoltage Category	II	
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)		
Maximum Output Current	20	Adc
Maximum Output Voltage	75	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED TO OPERATING SOLAREEDGE)		
Safety Output Voltage per Power Optimizer	1 ± 0.1	Vdc
STANDARD COMPLIANCE		
EMC	FCC Part 15 Class A, IEC61000-6-2, IEC61000-6-3	
Safety	IEC62109-1 (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	SE330K	
Maximum Allowed System Voltage	1500	Vdc
Dimensions (W x L x H)	129 x 155 x 59 / 5.08 x 6.10 x 2.32	mm / in
Weight (including cables)	1170 / 2.6	g / lb
Input Connector	MC4-Evo2 <sup>(2)</sup>	
Input Wire Length	0.1, 1.7 / 0.32, 5.57	m / ft
Output Connector	MC4-Evo2	
Output Wire Length	Option 1: 0.1, 2.5 / 0.32, 8.2 Option 2: 0.1, 5.1 / 0.32, 16.73	m / ft
Operating Temperature Range <sup>(3)</sup>	-40 to 65 / -40 to 149	°C / °F
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 +65°C / 149°F power de-rating is applied. Refer to [Power Optimizers Temperature De-Rating Technical Note](#) for more details

### SE330K

	Module Power		
Minimum String Length <sup>(4)</sup> (Power Optimizers/Modules)	400 - 450W	27 / 54	
	455 - 550W	24 / 48	
	555 - 650W	22 / 44	
Maximum String Length (Power Optimizers / Modules)		45 / 90	
Maximum Continuous Power per String		25000	W
Maximum Allowed Connected Power per String <sup>(4)</sup> (Permitted only when the difference in connected power between strings is 2000W or less)		33000	W

(4) Design your project using [SolarEdge Designer](#), in order to use a lower minimum string length and/or connect more STC power per string