Vertex S

BACKSHEET MONOCRYSTALLINE MODULE

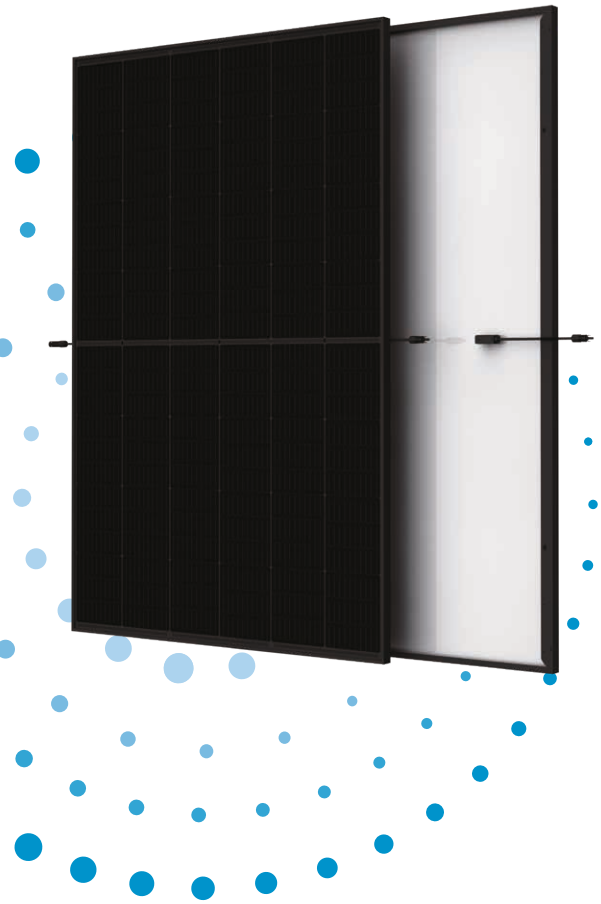
PRODUCT: TSM-DE09R.05

POWER RANGE: 405-425 W

425 W+
MAXIMUM POWER OUTPUT

0/+5 W
POSITIVE POWER TOLERANCE

21.3 %
MAXIMUM EFFICIENCY



Outstanding Visual Appearance

- Designed with aesthetics in mind
- Ultra-thin, virtually invisible busbars
- Excellent cell color control by machine selection

Small in size, big on power

- Generates up to 425 W, 21.3 % module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping, lower series resistance, improved current collection and enhanced reliability
- Excellent low light performance (IAM) with cell process and module material optimization

Optimal solution for residential rooftops

- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling. Optimized transportation cost
- Reduces installation cost with higher power bin and efficiency
- Flexible installation solutions for system deployment

High Reliability

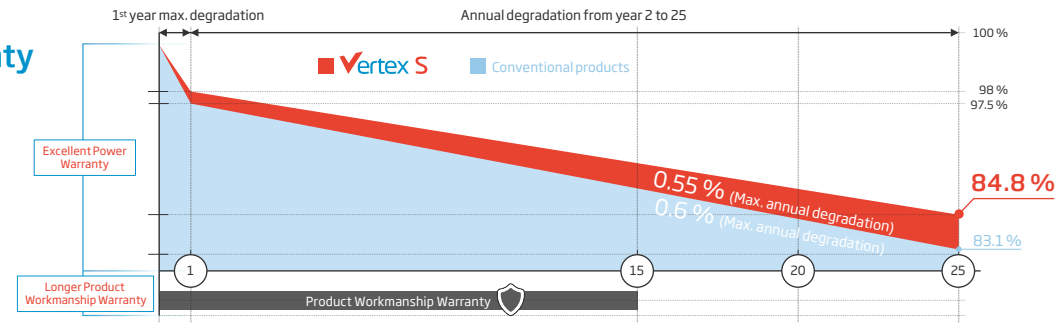
- Positive load up to 6,000 Pa (snow)
- Negative load up to 4,000 Pa (wind)

Extended Vertex S Warranty

2 %
1st year max. degradation

0.55 %
Max. annual degradation from year 2 to 25

15 Years
Product Workmanship Warranty



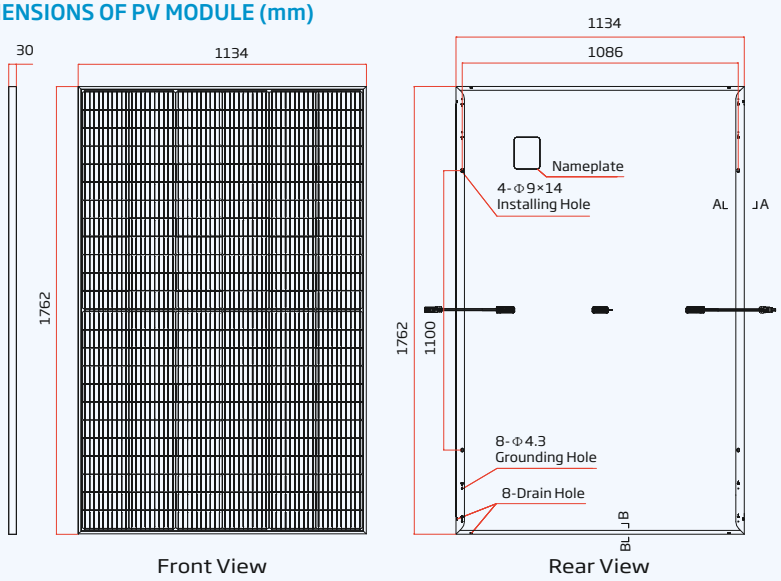
Comprehensive Product and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

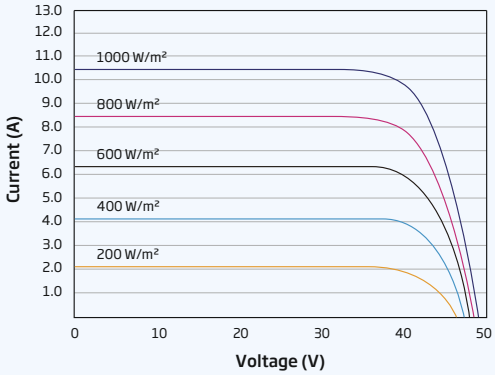
Trinasolar

Vertex S

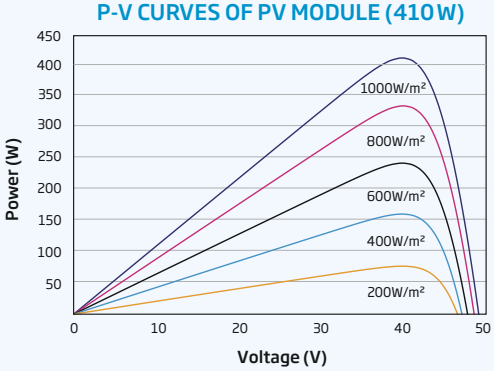
DIMENSIONS OF PV MODULE (mm)



I-V CURVES OF PV MODULE (410W)



P-V CURVES OF PV MODULE (410W)



ELECTRICAL DATA (STC)

	TSM-405 DE09R.05	TSM-410 DE09R.05	TSM-415 DE09R.05	TSM-420 DE09R.05	TSM-425 DE09R.05
Peak Power Watts-PMAX (Wp)*	405	410	415	420	425
Power Tolerance-PMAX (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-VMPP (V)	40.6	40.8	41.0	41.3	41.5
Maximum Power Current-IMPP (A)	9.99	10.05	10.11	10.17	10.24
Open Circuit Voltage-VOC (V)	49.0	49.2	49.4	49.7	49.9
Short Circuit Current-ISC (A)	10.52	10.58	10.64	10.69	10.74
Module Efficiency η m (%)	20.3	20.5	20.8	21.0	21.3

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5 *Measuring tolerance: ±3%

ELECTRICAL DATA (NOCT)

	TSM-405 DE09R.05	TSM-410 DE09R.05	TSM-415 DE09R.05	TSM-420 DE09R.05	TSM-425 DE09R.05
Maximum Power-PMAX (Wp)	306	310	313	317	321
Maximum Power Voltage-VMPP (V)	38.2	38.3	38.5	38.8	39.1
Maximum Power Current-IMPP (A)	8.03	8.08	8.13	8.17	8.21
Open Circuit Voltage-VOC (V)	46.1	46.3	46.5	46.7	46.9
Short Circuit Current-ISC (A)	8.48	8.53	8.58	8.62	8.66

NOCT: Irradiance at 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	144 cells
Module Dimensions	1762×1134×30 mm
Weight	21.8 kg
Glass	3.2 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Backsheet	Black-White
Frame	30 mm Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm² Landscape: 1100/1100 mm Portrait: 280/350 mm*
Connector	TS4/MC4 EVO2*

*Special order only

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43 °C (±2 K)
Temperature Coefficient of PMAX	-0.34 %/K
Temperature Coefficient of VOC	-0.25 %/K
Temperature Coefficient of ISC	0.04 %/K

MAXIMUM RATINGS

Operational Temperature	-40 to +85 °C
Maximum System Voltage	1500 V DC (IEC)
Max Series Fuse Rating	20 A

WARRANTY

15 Year product workmanship warranty
25 Year power warranty
2 % First year degradation
0.55 % Annual power degradation

(Please refer to the applicable limited warranty for details)

PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40' container	936 pieces

Trinasolar

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

Version number: TSM_EN_2022_PA1

www.trinasolar.com

Three Phase Inverter

SE3K - SE10K

INVERTERS

Specifically designed to work with power optimizers

- Noise level suitable for residential environments – No external fan
- Superior efficiency (98%)
- Small, lightest in its class, and easy to install
- Built-in module-level monitoring
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Internet connection through Ethernet or Wireless (Wi-Fi, ZigBee Gateway, Cellular)
- IP65 – Outdoor and indoor installation
- Fixed voltage inverter for longer strings
- Smart Energy Management control

/ Three Phase Inverter

SE3K-SE10K[1]

	SE3K[2][3]	SE4K[2]	SE5K	SE6K[2]	SE7K	SE8K	SE9K	SE10K	UNITS
Applicable to inverters with part number	SEXXK-XXXTXBXX4								
OUTPUT									
Rated AC Power Output	3000	4000	5000	6000	7000	8000	9000	10000	VA
Maximum AC Power Output	3000	4000	5000	6000	7000	8000	9000	10000	VA
AC Output Voltage - Line to Line / Line to Neutral (Nominal)	380 / 220 ; 400 / 230								Vac
AC Output Voltage - Line to Neutral Range	184 - 264.5								Vac
AC Frequency	50/60 ± 5								Hz
Maximum Continuous Output Current (per Phase)	5	6.5	8	10	11.5	13	14.5	16	A
Grids Supported - Three Phase	3 / N / PE (WYE with Neutral)								
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes								
INPUT									
Maximum DC Power (Module STC)	4050[4]	5400	6750	8100	9450	10800	12150	13500	W
Transformer-less, Ungrounded	Yes								
Maximum Input Voltage	900								Vdc
Nominal DC Input Voltage	750								Vdc
Maximum Input Current	5	7	8.5	10	12	13.5	15	16.5	Adc
Reverse-Polarity Protection	Yes								
Ground-Fault Isolation Detection	700kΩ Sensitivity								
Maximum Inverter Efficiency	98								%
European Weighted Efficiency	96.7	97.3	97.3	97.3	97.4	97.6	97.5	97.6	%
Nighttime Power Consumption	< 2.5								W
ADDITIONAL FEATURES									
Supported Communication Interfaces[5]	RS485, Ethernet, ZigBee (optional), Wi-Fi (requires antenna)[6], Cellular (optional)								
Smart Energy Management	Export Limitation, Home Energy Management (Device Control)								
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection								
STANDARD COMPLIANCE									
Safety	IEC-62103 (EN50178), IEC-62109								
Grid Connection Standards[7]	VDE 0126-1-1, VDE-AR-N-4105, AS-4777, G83 / G59								
Emissions	IEC61000-6-2, IEC61000-6-3 , IEC61000-3-11, IEC61000-3-12, FCC part15 class B								
RoHS	Yes								
INSTALLATION SPECIFICATIONS									
AC Output	Cable Gland - diameter 15-21								mm
DC Input	2 MC4 pairs								
Dimensions (HxWxD)	540 x 315 x 191								mm
Weight	16.4								kg
Operating Temperature Range	-40 to +60[8]								˚C
Cooling	Internal Fan								
Noise	< 40								dBA
Protection Rating	IP65 - Outdoor and Indoor								
Mounting	Bracket Provided								

[1] For higher power models refer to: https://www.solaredge.com/sites/default/files/se-three-phase-inverter-extended-power-datasheet.pdf
[2] Available in some countries; refer to Certifications category in Downloads page: http://www.solaredge.com/groups/support/downloads
[3] SE3K-RW010BNN4 is dedicated for connection of exactly 10 P404/P405/P485/P505 optimizers.
[4] Maximum allowed DC power is 3700W with SE3K-RW010BNN4
[5] Refer to Datasheets -> Communications category in Downloads page for specifications of optional communication options: http://www.solaredge.com/groups/support/downloads
[6] Wi-Fi connectivity requires an external antenna. For more information refer to: https://www.solaredge.com/sites/default/files/se-wifi-zigbee-antenna-datasheet.pdf
[7] For all standards refer to Certifications category in Downloads page: http://www.solaredge.com/groups/support/downloads
[8] For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf

CE

Commercial Offering for Solar Investors & System Owners

About SolarEdge

About us

In 2006, SolarEdge invented an intelligent inverter solution that has changed the way power is harvested and managed in PV systems. Today, we are a global leader in smart energy technology. By deploying world-class engineering capabilities and with a relentless focus on innovation, we create smart energy products and solutions that power our lives and drive future progress.

Vision

We believe that continuous improvement in the ways we produce and consume energy will lead to a better future for us all

Bankability

- SolarEdge has been audited and approved by major banks and financial institutions for projects and funds worldwide
- SolarEdge (SEDG) is traded on NASDAQ
- Our financial strength and stability, combined with our cutting-edge technology, has propelled us to become one of the largest inverter manufacturers in the world

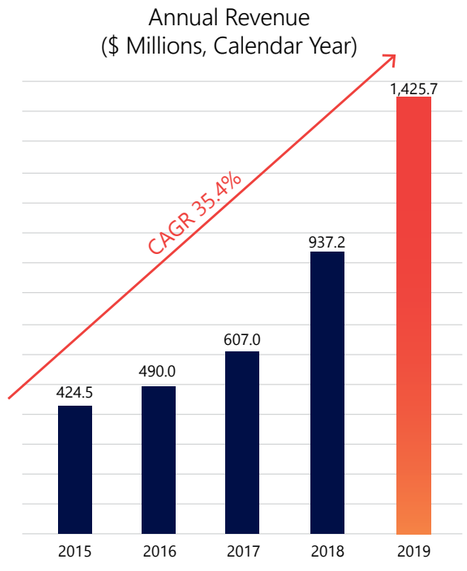
Global reach

- Systems installed in over 130 countries across five continents
- Sales via leading integrators and distributors
- Follow the sun call centers
- Local teams of sales, service, marketing, and training experts
- Global manufacturing capabilities with tier 1 electronic manufacturing service companies

Received nearly 30 awards from prestigious organisations including Red Herring, Frost & Sullivan, Intersolar, the Stratus Award, and the Edison Awards™

Shipping since 2010

- Over 2.5 million inverters and 60 million power optimisers shipped worldwide
- SolarEdge's monitoring platform continuously tracks over a million installations across the globe



Corporate social responsibility

- As an industry leader in renewable energy technologies, SolarEdge strives to limit the harmful effects of traditional energy sources by promoting the spread of clean, sustainable energy around the world
- SolarEdge is in full compliance with international standards on quality and control, ethical conduct and environmental protection

Patents

SolarEdge has a vast portfolio of intellectual property, with hundreds of awarded patents and patent applications

Product reliability

- 25-year power optimiser warranty and 12-year inverter warranty, extendable to 20 years
- SolarEdge products and components undergo rigorous testing, and have been evaluated in accelerated life chambers
- Reliability strategy includes proprietary application specific ICs (ASIC)

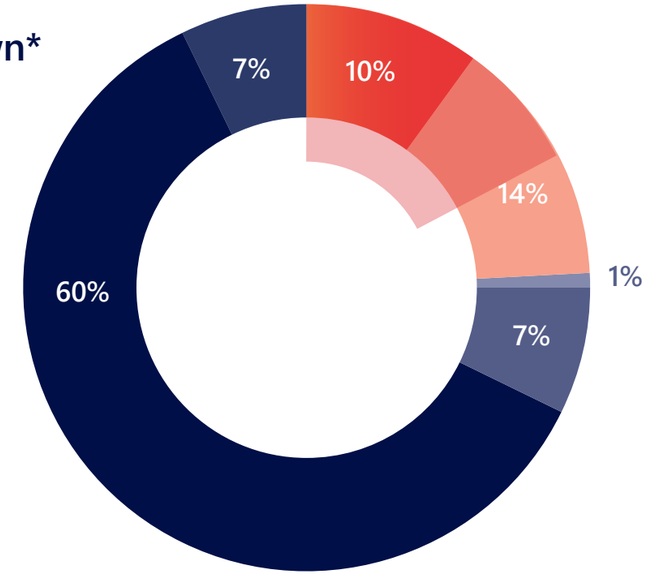
The Importance of Inverter Selection

Commercial rooftop installation cost breakdown*

Inverters account for less than 10% of the system cost but,

- Manage 100% of system production
- Influence up to 20% of system cost
- Control O&M expenses through PV asset management solutions

Therefore, the inverter selection is critical for the long term financial performance of a PV system as it can maximise energy production and reduce lifetime costs.

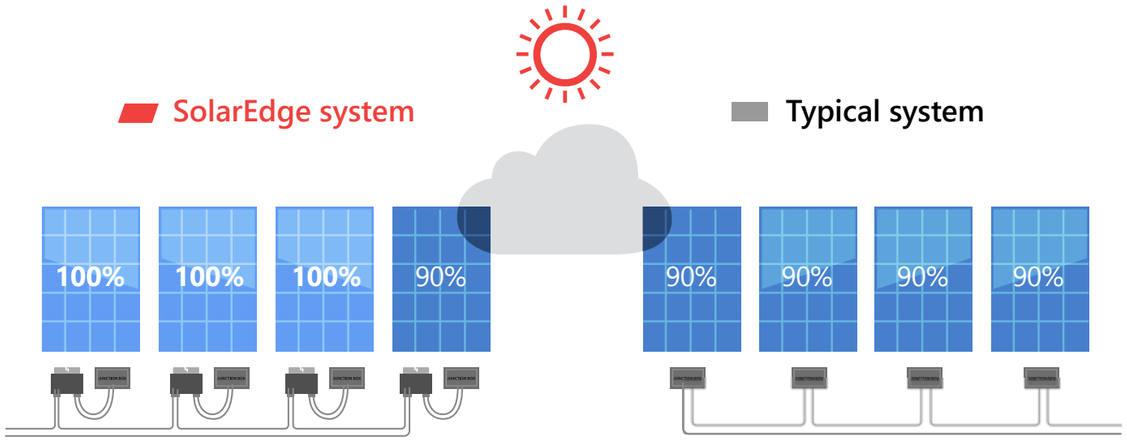


* Based on SolarEdge market analysis, assuming total cost of ~€1/Wp

Increased Revenue

Maximum energy from each panel

In a PV system, each panel has an individual maximum power point. Differences between panels are unavoidable in commercial installations. With traditional inverters, the weakest panel reduces the performance of all panels. **With SolarEdge, each panel produces the maximum energy, and mismatch-related power losses are eliminated**.



- Maximum power produced and tracked from each panel individually
- 2%-10% more energy from the PV system

- Weak panels reduce the performance of all panels in the string or are bypassed
- Power losses due to panel mismatch

Power losses can result from multiple factors, including:

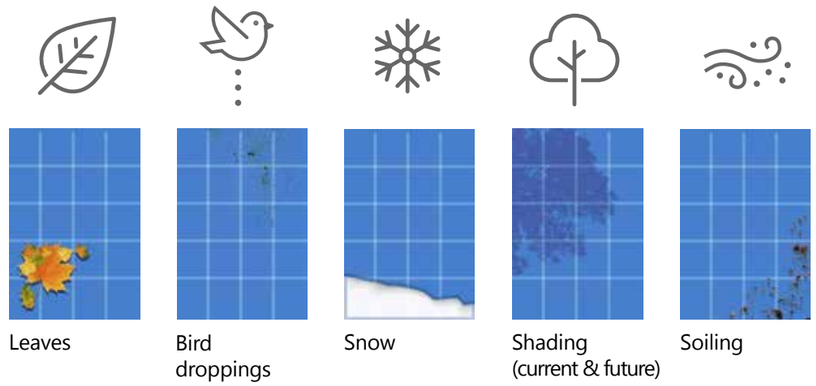
Manufacturing tolerance mismatch

The warranted output power range for PV panels received from a manufacturing plant may vary greatly. A standard deviation of ±3% is sufficient to result in ~2% energy loss.

Guaranteed power output from panel manufacturers
0~+3%

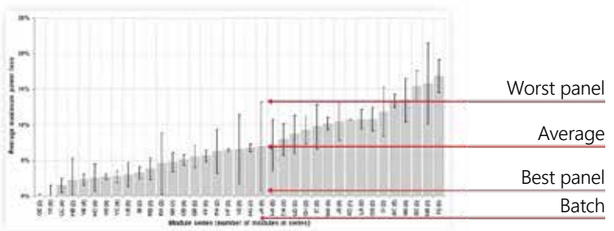
Soiling, shading and leaves

Panel soiling, from dirt, bird droppings or snow, contributes to mismatch between panels and strings. While there may be no obstructions during site design, throughout a system's lifetime, a tree may grow or a structure may be erected that creates uneven shading.

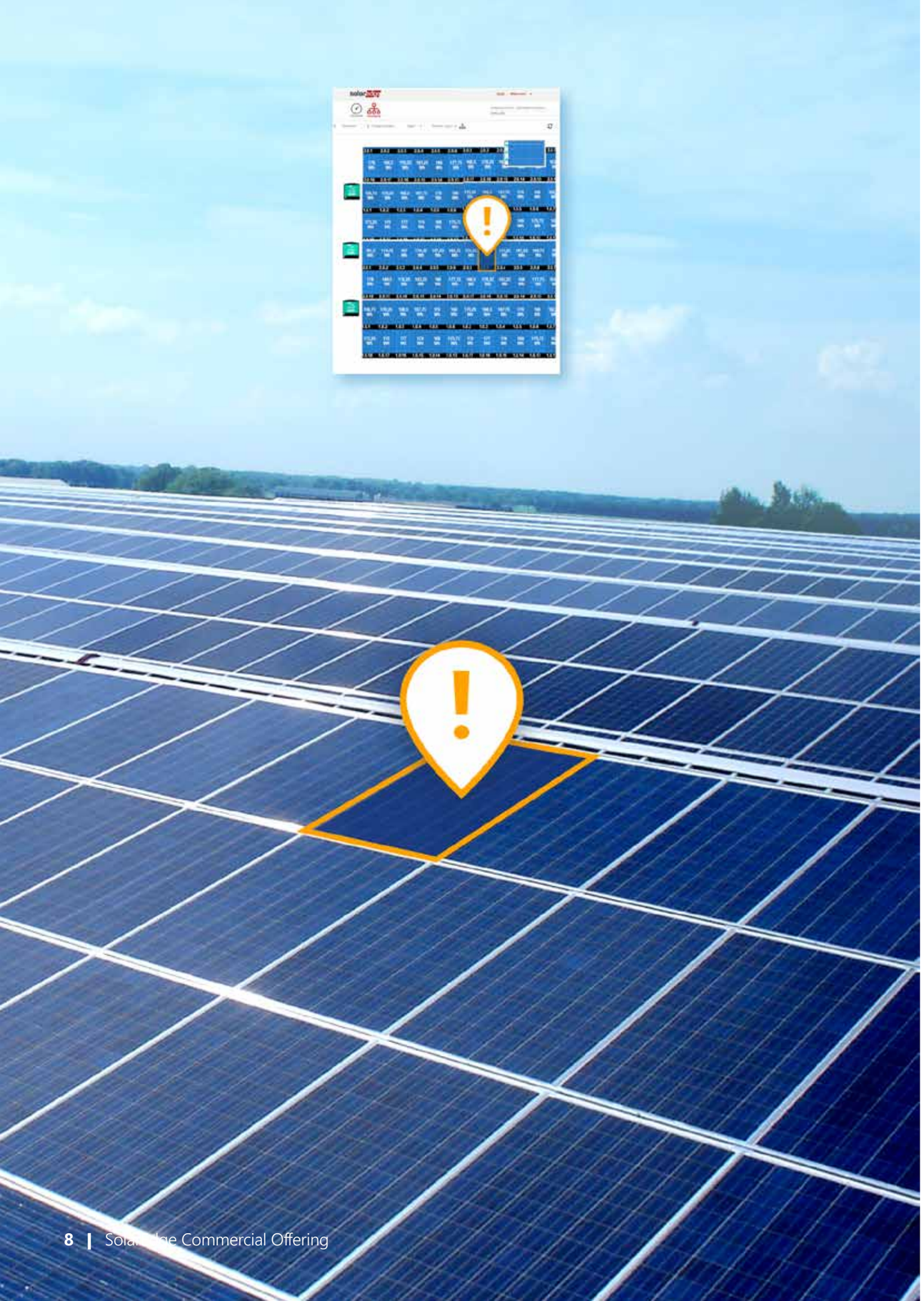


Uneven panel aging

Panel performance can degrade up to 20% over 20 years, however, each panel ages at a different rate, causing aging mismatch, which increases over time.



Source: A. Skoczek et. al., "The results of performance measurements of field-aged c-Si photovoltaic panels", Prog. Photovolt: Res. Appl. 2009; 17:227–240



Advanced Asset Management

Full visibility of your system's performance

- Full visibility into your assets through panel-level monitoring – free for 25 years
- Automatic alerts on system issues, pinpointed on a virtual site map

Anytime, anywhere

- Complete system status on your mobile device (iOS or Android)

Future compatibility and warranty

- 25-year power optimiser warranty; 12-year inverter warranty; Low cost warranty extension to 20 years
- A variety of panel models can be used for future replacement and extension
- For agricultural areas – products are certified for ammonia resistance

For system lifetime

- Automatic performance reports
- Remote troubleshooting and enhanced maintenance capabilities

Superior Safety

With millions of photovoltaic (PV) systems installed worldwide, this technology is designed to be relatively safe and reliable. However, as traditional PV installations can reach voltages as high as 1,500VDC, precautions should be taken to ensure the safety of people and assets. With traditional inverters, shutting down the inverter or the grid connection will terminate current flow, but DC voltage in the string cables will stay high for as long as the sun is shining. In addition, electrical arcs, which can result in a fire, create a threat to people and assets in the vicinity of the PV system.

The SolarEdge system provides a superior safety solution for both electrocution and fire risks.

SafeDC™

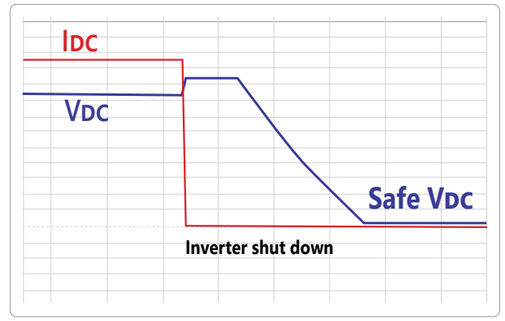
SafeDC™ is a built-in panel-level safety feature which minimises electrocution risk.
To maintain string voltage below risk levels, power optimisers are designed to automatically switch into safety mode, in which the output voltage of each panel will be reduced to 1V in either of these cases:

- During installation, when string is disconnected from the inverter, or the inverter is turned off
- During maintenance or emergency, when the inverter or AC connection is shut down
- When the thermal sensors of the power optimisers detect a temperature above 85 ˚C

The SolarEdge SafeDC™ feature is certified in Europe as a DC disconnect according toIEC/EN 60947-1 and IEC/EN 60947-3 and to the safety standards VDE AR 2100-712 and OVE R-11-1.

Arc fault detection and interruption

SolarEdge inverters have a built-in protection designed to mitigate the effects of some arcing faults that may pose a risk of fire, in compliance with the UL1699B arc detection standard. Currently there is no comparable arc detection standard in the EU and therefore non-US SolarEdge inverters can detect and interrupt arcs as defined by the UL1699B standard. In addition to manual restart, a mechanism for auto-reconnect can be enabled during system commissioning.



This graph represents an automatic string shutdown.

As demonstrated, the current is shut down immediately once AC power or Inverter is turned off. The string voltage is reduced to safe voltage.

The SolarEdge safety solution also meets FM Global DS 1-15 engineering requirements.

21GW of Systems Shipped Worldwide

Ground mounts

Industrial rooftops

Farms and agriculture

Public buildings

Carports, floating systems and safety

Ground Mounts

Turkey, 5MW

Denmark, 2MW

Ground and roof mounted

France, 2.7MW

Ground and roof mounted

FL, United States, 1MW

Industrial Rooftops

The Netherlands, 2MW

ZONNEGILDE
Duurzame energie op maat

Italy, 1.3MW

ELETTRONORD

United Kingdom, 1.63MW

Western International Market, London, The installation won the 2015 Annual European Energy Service Awards for 'Best Energy Project'

Sunstruck Energy

NJ, United States, 525kW

amberjack solar energy

Agricultural Rooftops

Denmark, 1.22MW

The Netherlands, 303kW

Israel, 700kW

South Africa, 250kW

Carports

The Netherlands, 3MW
39 Electric Car Charging Stations

FASTNED

Germany, 1MW
Carport of TSG Hoffenheim Stadium, Sinsheim

WIRSOL

OH, United States, 335kW
Honda Motorcars, Ohio

DOVETAIL Solar and Wind

United Kingdom, 150kW
John Lewis car park, Exeter

SunGift ENERGY

Schools

Singapore, 1MW

American School

The Netherlands, 303kW

De Meerwaarde, Barneveld

United Kingdom, 250kW

United Kingdom, 250kW

United States, 756kW

Farmington Central School District #265, Illinois

Fire Stations

United Kingdom, 700kW on 15 sites

Hampshire Fire and Rescue Service

"Fire precautions and revenue reduction are important factors for all Hampshire County Council projects. We have standardised our Solar PV solution for the whole estate in order to isolate the PV energy in fire alarm events"

> Paul Roebuck MIET, Engineering Manager, Hampshire County Council

United States, 42kW

Putnam Lake Fire Department, New York

"I am truly proud of this installation, Putnam Lake Fire Department & New York State Solar Farm Inc. have set the standard of what is possible in a community that wants to take control of its energy future using quality products and a great local installer. The best part is that this fire station will be a training facility for other first responders about PV safety."

> Anthony Sicari Jr., CEO of New York State Solar Farm Inc.

Petrol Stations

Israel, multiple 50kW

Petrol stations

"We have been working with the SolarEdge solution for commercial systems for a long time, and when we were asked as advisors for Dor Alon petrol stations to recommend a PV solution, SolarEdge was the obvious choice, not only for the added yields it provides, but also because of the comprehensive safety solution it offers, which is particularly important in this kind of installation."

> Eyal Baharav, Owner, Golan Solar

South Africa, 20kW

Port Elizabeth

"Without SolarEdge's SafeDC™ technology, the installation would not have been approved and we would have missed out on this important business opportunity."

> Barry Davis, Director, Kwikelec

Health Care

South Africa, 100kW

3 NHC health care centers

United States, 220kW

Kuakini hospital, Hawaii

United Kingdom, 32kW

Birds Hill nursing home

Floatovoltaic Systems

The Netherlands, 780kW

De Krim Holiday Resort, Texel Island

"De Krim Resort invested in a solar PV system to be environmentally friendly and generate our own electricity. Thanks to asset reuse, high performance, and a positive impact on water quality, the floating installation is expected to far exceed the estimated return on our investment."

> Iwan Groothuis, Managing Director, De Krim Resort

The Netherlands, 232kW

Everstekoog Sewage Treatment Plant, De Koog

"The use of floating solar PV at water treatment facilities that have available water bodies and need to use electricity for water treatment operations is gaining traction. The floating solar park at the Everstekoog water treatment site powers all public street lamps (LED) on Texel Island."

> Nicol Schermer, Manager, Texel4trading

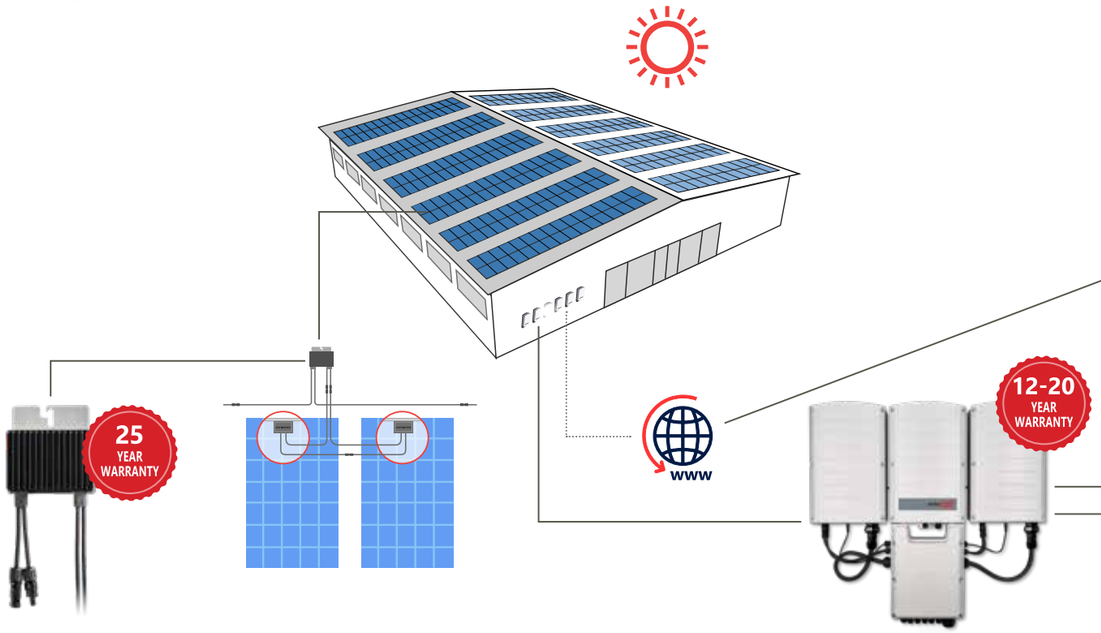
United States, 386kW

Far Niente Winery, California

The 386kW installation, partially ground-mounted and partially floating on pontoons atop the winery's irrigation pond, has become a net-zero energy establishment. The floating system enables the winery to preserve nearly an acre of vineyard land, and helps to reduce the amount of water lost to evaporation by shading the previously uncovered pond.

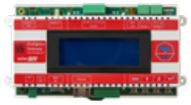
Commercial System Diagram

The SolarEdge solution consists of inverters, power optimisers, and a monitoring platform. The technology provides superior power harvesting and panel management by connecting power optimisers at the panel level. The ability to connect two or four panels to just one power optimiser, combined with DC to AC conversion and grid interaction being centralised at a simplified PV inverter, maintains a competitive cost structure.



Monitoring platform

- Full visibility of system performance
- Access via browser or any Android, iOS smart phone or tablet
- Automatic performance and alert reports

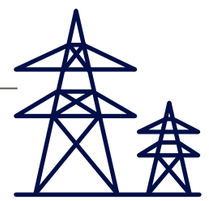


Firefighter gateway

- Can be added to the PV system to provide centralised safety management
- Gives real-time indication of the system's DC voltage

Performance monitoring

Calculate site performance ratio and measure environmental conditions, using environmental sensors or a satellite-based service.



Grid interaction

Supports power control, e.g. zero export limitation, local and remote active/reactive power control, inverter AC relay control for secondary grid protection; low voltage and frequency ride through

2:1 power optimiser configurations

- Panel-level MPPT - no mismatch power losses
- Strings of uneven lengths, panels on multiple azimuths and tilts
- Compatible with SolarEdge inverters SE15K and larger
- SafeDC™ - automatic panel-level safety shutdown

15kVA - 100kVA inverters

- Specifically designed to work with power optimisers
- High efficiency
- Simple and reliable

UK Council Testimonials

"Fire precautions and revenue reduction are important factors for all Hampshire County Council projects. We have standardised our Solar PV solution for the whole estate, and are able to automatically isolate the PV energy outside of the building on the roof if a Fire Alarm event occurs. This ensures the internal electrical services can be safely turned off for fire fighting saving buildings quickly.

"Hampshire County Council can reassure the Fire Service that the building is safe for their activity using the fire alarm interface and the Firefighters gateway supported with diagrams of where the PV is fitted.

"The interfacing of the Inverters to standby generators is critical in the event of power supply failure where a generator may start and electrically damage inverters in both generator and PV.

The online monitoring and ability to view individual panels means that PV performance and yield can be clearly seen, and maintenance (if needed) targeted at the right time. Hampshire County Council haven't cleaned any panels yet, we check for the next rain cloud !

If the PV should be accidentally turned off or stop working, we get an Email so we can get the PV generating again fast. The "on line" interface also provides the ability to view the generation meter reading saving another phone call or a visit.

Low maintenance and staff support means low revenue cost and more generation efficiency".

"Wycombe District Council installed 99.9 kWp of solar panels on our Council Offices with SolarEdge Technology in October 2015. The system has been running successfully since that date, without any problems. The major benefit is the on-line monitoring system that allows us to monitor the performance. An added safety benefit that is really important to us is the ability to shut down the system to a safe voltage for maintenance and firefighting purposes".

"Bridgend County Borough Council have specified SolarEdge on a number of projects which include their Civic Centre Offices in the centre of Bridgend and a number of In House designed Primary Schools under the 21st Century for Schools Programme.

"When specifying Photovoltaic systems the designer chose to include power optimisers connected to the panels which would alleviate the risks associated with generating DC voltages, maximise the systems efficiencies whilst offering remote monitoring which will assist in the systems future operation and maintenance".

"Safety is of high priority when it comes to public buildings that Exeter City Council are responsible for, this is also the case when connecting Solar PV. Sungift Solar, who have installed all our PV systems, specify SolarEdge inverters which provide exceptional quality and safety benefits. Including, a 12 year warranty as standard, improved output and panel optimisation, excellent monitoring platform and importantly the ability to significantly reduce the risks of electrocution. The Safety benefits, including being able to Isolate the high DC voltage coming from the solar panels, are very important to us when it comes to safety of the public. We are reassured and confident by having SolarEdge we can isolate the DC coming from the solar panels on the roof at an accessible point. We take safety very seriously as solar installations become more frequent. Exeter City Council chooses SolarEdge for the added performance and the monitoring system that's included. This reduces maintenance costs for the life of the system which can be expensive, and together with the safe DC function makes SolarEdge our preferred choice of inverter selection".

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimised inverter maximises power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

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Cautionary Note Regarding Market Data and Industry Forecasts: This brochure may contain market data and industry forecasts from certain third-party sources. This information is based on industry surveys and the preparer's expertise in the industry and there can be no assurance that any such market data is accurate or that any such industry forecasts will be achieved. Although we have not independently verified the accuracy of such market data and industry forecasts, we believe that the market data is reliable and that the industry forecasts are reasonable.

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SMILE-T10-HV

RESIDENTIAL SERIES

POWER

10 kW inverter

CAPACITY

8.2 kWh modular
expandable to 49.2 kWh

+

- **Three Phase Output**
- **Low-weight Inverter**
- **More PV Generation**
- **UPS Ability**
- **Modular Design**
- **High Compatibility**
- **24/7 Online Monitor**
- **Safe and Reliable(LFP ONLY)**
- **Easy Installation and Expansion**

SMILE-T10-HV

Model	SMILE-T10-HV		
System Specification			
Nominal Output Power	10000 W		
Capacity Range	8.2 ~ 49.2 kWh (95% DoD)		
Battery Chemistry	LFP (LiFePO4)		
IP Protection	IP65(Outdoor) / IP21(Indoor)		
Warranty	5 Year Product Warranty, 10 Year Performance Warranty		
Inverter Technical Specification			
Model	SMILE-T10-HV-INV	Rated Voltage	380 / 400 V
Max. PV Input Power	16000 W	Phase	Three phase
Max. PV Input Current	2 x 26 A	Backup	UPS
Max. PV Input Voltage	1000 V	Communication	Ethernet / WiFi / 4G
MPPT Number/ Max. input strings number per MPPT	2/2	Start Up Voltage	160 V
MPPT Voltage Range	200 ~ 850 V	Humidity	15% ~ 85% (No Condensing)
Max. PV Short-circuit Current	2 x 39 A	Dimension (W x D x H)	580 x 230 x 606 mm
Max. Charging / Discharging Current	40 A	Weight	30 kg
Rated Voltage	10000 W	Safety	IEC 62109, IEC 62040
Rated Frequency	50 / 60 Hz	EMC	EN61000-6-1/-2/-3/-4
Grid Regulation	VDE-AR-N 4105, EN 50549, C10/11, NC RfG, G98, G100, TOR Erzeuger, AS4777.2, PEA		
Battery Technical Specification			
Module Model	SMILE-BAT-8.2 PH		
Module Capacity	8.2 kWh		
Usable Capacity	7.8 kWh		
Depth of Discharge (DoD)	95%		
Nominal Voltage	256 V		
Max. Charging/Discharging Current	32 A		
Operating Temperature Range	-10 °C ~ 50 °C*		
Cycle Life	10000**		
Battery Modules Connection	1 ~ 6 in parallel		

* When the temperature is below 0 °C or above 40 °C, the performance will be limited.
** Under specific test conditions

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