Everything required for a high quality Photovoltaic Solution...

SOLFEX energy systems – a clear choice for photovoltaic installers

For nearly a decade energy efficiency installers have trusted SOLFEX energy systems to deliver their renewable energy products, photovoltaic components and systems. As part of the Travis Perkins PLC group of companies we offer our customers a solid reliable distribution platform and photovoltaic expertise from a dedicated sales division.

Trusted brands from the world’s leading manufacturers

We offer our customers a wide selection of top quality modules, inverters & monitoring solutions for on-grid connected systems, mounting structures and componentry from the world’s leading manufacturers. Not only do we offer the best products at the most competitive prices, we ensure your supply chain and service is a pleasant experience.

Harmonisation with our manufacturers

SOLFEX energy systems product management, technical team & procurement operate alongside our manufacturing partners and have a homogeneous approach to product quality and service, every component is carefully selected on its technical performance, longevity and warranty prior to being accepted within our portfolio of products.

Expert client consultation

Customer service and added value are at the top of our priority list. SOLFEX energy systems dedicated technical photovoltaic sales team will offer each customer a bespoke service, with a personal account manager who is dedicated to providing expert technical solutions to any photovoltaic scheme you may encounter such as...

- Mounting systems statically calculated & verified
- Inverter string configuration reports
- Product specifications & recommendations
- Yield calculation projection
- In house indemnified photovoltaic system designs

...just add the installer.
### Case Study

**Derwent Court, Lancaster**

<table>
<thead>
<tr>
<th>Installation</th>
<th>Photovoltaic System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Property Type:</strong> Sheltered Accommodation Block</td>
<td><strong>Module Type:</strong> Kioto Photovoltaic 205wp poly</td>
</tr>
<tr>
<td><strong>Client:</strong> Herbert T Forrest &amp; Johnnie Johnson Housing</td>
<td><strong>PV System Size:</strong> 35.67 KWP</td>
</tr>
<tr>
<td><strong>Consulting Engineer:</strong> Preston Lee Chambers</td>
<td><strong>Inverter Type:</strong> Power-One</td>
</tr>
<tr>
<td><strong>Property Location:</strong> Lancaster, Lancashire</td>
<td><strong>Mounting System:</strong> SOLFEX energy systems ALPHA on-roof</td>
</tr>
<tr>
<td><strong>Roof Orientation:</strong> South</td>
<td><strong>Generation Per Annum:</strong> 28,335 KwH</td>
</tr>
</tbody>
</table>
**KIOTO Solar**

KIOTO Solar modules surpass all the quality standards stipulated in European markets. The products are manufactured exclusively in Austria using the very latest equipment. KIOTO’s extensive product range allows to respond to a variety of individual customer’s requirements. High-quality raw materials guarantee a long-life-cycle as well as a beautiful design.

**Manufacturing certifications**


**Available modules**

- **KPV PE NEC**
  - 210 – 260 wp poly full black
- **KPV ME NEC**
  - 260 – 278 wp mono full black

**Connectors used on module**

Original TYCO SOLARLOK SYSTEM with 2m module cable

**Linear performance warranty**

• 25 year linear performance warranty.
• Guaranteed performance of at least 93.2% of the original stated power output after 25 years.

**Product certifications**

- EC 61215 (with extended mechanical load test up to 5400Pa) & 61730, BAE, MCS PV0025
- EC 61215 (with extended mechanical load test up to 5400Pa) & 61730, BAE, MCS PV0025

For further product information about KIOTO Photovoltaics GmbH please refer to www.kioto.com, for current stock availability please consult the SOLFEX energy systems sales team.

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**Conergy UK Ltd**

Conergy is one of the world’s leading PV solution and service providers, partnering with property owners, developers and installers to deliver reliable technology, design and engineering across the British Isles.

With over 15 years’ experience, Conergy has worked on some of Britain’s most pioneering projects, including the first 3MW solar farm and a wave-shaped rooftop installation at Nationwide Building Society headquarters. To date Conergy UK have supplied over 30MW of top-quality, reliable and respected modules to the UK domestic and commercial markets.

The company is owned by Miami-based Kawa Capital Management, Inc., an independent asset management firm with over $500 million of assets under management.

**Manufacturing certifications**


**Available modules**

- **Conergy Power Plus CPP**
  - 250P Noir, Poly, black frame with black back sheet
- **Conergy Power Plus CPP**
  - 260M Noir, Mono, black frame with black back sheet

**Connectors used on module**

Huber and Suhner plug connectors and RHI Junction Box. Protection class IP67

**Manufacturers product warranty**

- Standard 25 year warranty
- Standard 10 year warranty

**Linear performance warranty**

• 25 year linear performance warranty.
• Guaranteed performance of at least 92.6% of the original stated power output after 25 years.

**Product certifications**

- IEC/EN 61215 Ed. 2, IEC/EN 61730, CHSAS 18001, MCS, SCI, PV Cycle

For further product information about Conergy UK Ltd please refer to www.conergy.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.
Enhance Photovoltaics

Global Manufacturing Facilities
Germany, China, Taiwan & Malaysia

Enhance Photovoltaic Modules surpass all international recognised quality standards and are produced by one of the world’s leading fully vertical integrated photovoltaic module producers on the world’s most advanced European produced fully automated robotic production lines, this process ensures exceptionally high quality, reliability and performance, even in low light conditions.

By choosing highly efficient Enhance Photovoltaic Modules you are taking no risks, a fully bankable module with a market leading 10 year insurance backed product warranty with a 25 year linear performance warranty ensures total piece of mind for generations to come despite working under extreme climatic conditions.

Special features
- Module efficiency’s up to 16.2%
- Extended wind and snow load tests – 0+-3% positive tolerance
- Extended wind and snow load tests (5400 Pascal)
- Excellent weak light performance
- Corrosive Resistant (Salt Mist & Ammonia resistant)
- Anti-PID (Potential Induced Degradation Test Certified according to IEC 62804)

Connectors used on module
MC 4

Manufacturers product warranty
Standard 10 year warranty

Linear performance warranty
25 year linear performance warranty
Guaranteed performance of at least 81.2% of the original stated power output after 25 years.

Product certifications
MCS, TLV/VDE, UL, Salt Mist & Ammonia corrosion resistant, Anti-PID, Extended Wind / Snow Load

Manufacturing certifications
IEC61215, IEC 61701, IEC 61646, and QC288000

Available modules
Power 60-P 
(250-265wp)
Power 60-P Black Edition 
(250-265wp)
Power 60-M 
(250-265wp)
Power 60-M Black Edition 
(250-265wp)

Special features
- 3+-0% Output tolerance.
- Advanced Mechanical Test (5,400 Pa) Passed (IEC) / Mechanical Load Test (40 lbs/ft) Passed (UL)
- PV Cycle
- Ammonia Corrosion Resistance Test Passed
- IEC 61701 (Salt Mist Corrosion Test) Passed

Connectors used on module
YUKITA connector (YS-254/255)

Manufacturers product warranty
Standard 10 year warranty

Linear performance warranty
25 year linear performance warranty
Guaranteed performance of at least 80% of the original stated power output after 25 years.

Product certifications
MCS, TLV/VDE, Salt Mist & Ammonia corrosion resistant, PV Cycle

Hyundai Heavy Industries Co., Ltd.
Korea

Hyundai Heavy Industries was founded in 1972 and is a Fortune 500 company. The company employs more than 80,000 people, and has a global leading 7 business divisions with sales of 10.2 Billion USD in 2012. As one of the core businesses of the company, Hyundai Heavy Industries is committed to develop and invest heavily in the field of renewable energy.

Hyundai Solar is the largest and the longest standing PV cell and module manufacturer in South Korea. We have 1000MW of module production capacity and provide high-quality solar PV products to more than 3,000 customers worldwide. We strive for optimum efficiency through our R&D laboratory and have invested over 20 Million USD on innovative technologies.

For further product information about Enhance Photovoltaics please refer to www.enhance-photovoltaics.com, for current stock availability please consult the SOLFEX energy systems sales team.

For further product information about Hyundai Heavy Industries Co., Ltd please refer to www.hyundai.eu, for current stock availability please consult the SOLFEX energy systems sales team.

Currently under certification
Held with OEM

Available products
HiS-S250MG(BK) mono 250W full black
HiS-S260MG(BK) mono 260W full black
HiS-M250MG(BF) poly 250W black frame
HiS-M250MG(BK) poly 250W full black
Eco Future Manufacturer (Malaysia) Industry SDN.BHD

Malaysia

Eco Future is a manufacturer of solar modules, specializing in marketing and promoting the Sustainable and Renewable Green Energy. We work tirelessly to improve the efficiency of our photovoltaic modules as well as our system costs to provide our customers with world-class solar solutions and to ensure competitiveness of PV with conventional sources of electricity. With a 10-year product and a 25-year linear performance guarantee, backed by leading insurance companies, our goal is to be a customer-oriented, first-class PV manufacturing enterprise.

Special features
• Cost-effective standard solar modules for skylight, roofing and facades applications
• 0~1.5W positive tolerance for mainstream products
• Withstand high wind loads and snow loads (5400Pa)
• Anti-reflective highly transparent, low iron tempered glass
• Black frame modules are aesthetically pleasing
• Transmission rate 3.18%

Connectors used on module
MC4

Manufacturers product warranty
Standard 10 year warranty
Linear performance warranty
25 year linear performance warranty. Guaranteed performance of at least 90.2% of the original stated power output after 25 years.

Manufacturing certifications
ISO

Available products
ECO-250C60
ECO-250CB60
ECO-250P60

Product certifications
MCS, TUV, PV Cycle.

For further product information about Eco Future please refer to www.ecofuturemalaysia.com, for current stock availability please consult the SOLFEX energy systems sales team.

Tianwei New Energy (Yangzhou) Co., Ltd.

China

Tianwei New Energy (Yangzhou) Co., Ltd. is the exclusive solar module production base of TIANWEI GROUP which is an affiliate of China South Industries Group Corporation (CSGC), a global 500 company. Established in 1958, Tianwei has over 50 years experience in power equipment manufacturing industry. 25 years power output is a big promise for a young industry, but a practical one for a company with more than 50 years history. As a client, 25 year quality guaranteed from Tianwei is never too long to be recognized as the promise from a reliable business partner.

Special features
• High module efficiency and stable power output based on leading technology
• Outstanding electrical performance under high-temperature conditions or low-irradiance conditions
• Plus 5W output tolerance
• Full black module available as option; PV cycle member
• Pass fire testing, salt mist corrosion testing and ammonia corrosion testing

Connectors used on module
MC4 compatible

Manufacturers product warranty
Standard 10 year warranty
Linear performance warranty
25 year linear performance warranty.

Monocrystalline products:
Guaranteed performance of at least 83.5% of the original stated power output after 25 years.

Polycrystalline products:
Guaranteed performance of at least 83% of the original stated power output after 25 years.

Product certifications
MCS, TUV, UL, CE, fire testing. Salt mist corrosion testing, Ammonia corrosion testing, PV Cycle.

Manufacturing certifications
ISO, CHAS

Available modules
TWxxxM572
TWxxxM660
TWxxxP660
Full black module available as option.

For further product information about Tianwei New Energy please refer to www.twnesolar.com, for current stock availability please consult the SOLFEX energy systems sales team.
Yingli Green Energy

Yingli Green Energy Holding Company Limited (NYSE: YGE), known as “Yingli Solar,” is the world’s largest photovoltaic module manufacturer in terms of production capacity and shipments. With 2.45 GW of vertically-integrated annual nameplate production capacity, Yingli Green Energy’s manufacturing covers the photovoltaic value chain from ingot casting and wafering through solar cell production and module assembly. Headquartered in Baoding, China, Yingli Green Energy has more than 20 regional subsidiaries and branch offices and has distributed more than 7,000 MW PV modules to customers worldwide.

Yingli Green Energy is an official sponsor of the 2014 FIFA World Cup Brazil.

For more information please visit YingliSolar.com and join the conversation on LinkedIn, Facebook, Twitter, Instagram and the Yingli blog.

Special features

• High Power Density
• Ranked Top 3 at 2012 Photon Tests
• Ranked Top 2 at 2011 TÜV Energy Yield Test
• Low light performance
• Ammonia resistant
• Corrosion resistant
• 25 years power warranty

Connectors used on module
MC4 / IP67 or YT08-1 / IP67 or Amphenol H4/ IP68

Manufacturers product warranty
Standard 10 year warranty

Linear performance warranty
25 year linear performance warranty.

Monocrystalline products:
Guaranteed performance of at least 80% of the original stated power output after 25 years.

Poly crystalline products:
Guaranteed performance of at least 82% of the original stated power output after 25 years.

Product certifications
MCS, IEC 61215, IEC 61730, Ammonia Resistance, Salt Mist Corrosion Resistance, EC Declaration of Conformity, PV Cycle

Manufacturing certifications
ISO 9001, ISO 14001, BS CHSAS 18001, SA 8000

Available modules
Polycrystalline YGE 60 Cell Series
YL250P-29b
YL255P-29b

Monocrystalline Panda 60 Cell Series
YL250C-30b
YL265C-30b
YL270C-30b
YL275C-30b

Yingli Green Energy

Suntech Power Co., Ltd

Suntech Power Co., Ltd. produces solar products for residential, commercial, industrial, and utility applications. Suntech has gigawatt-scale manufacturing and has delivered over 7GWs of solar panels (by end year 2012) to over a thousand customers in more than 80 countries. Suntech’s pioneering R&D creates customer-centric innovations that are designed to drive solar to grid parity against fossil fuels. Suntech’s mission is to provide everyone with reliable access to nature’s cleanest and most abundant energy source.

For further product information about Suntech Power please refer to www.suntech-power.com, for current stock availability please consult the SOLFEX energy systems sales team.

Special features

• Output tolerance: 0/+5% 
• Snow loads: 5400pa
• Wind loads: 3800pa
• Excellent weak light performance: <4% reduction of efficiency from an irradiance of 1000W/m² to 200W/m²
• Suntech current sorting process
• Withstanding harsh environment
• Cell efficiency: Poly cell up to 17.9% and mono cell up to 18.9%
• Member of PV cycle

Connectors used on module
MC4 connectors for W series products
H4 connectors for V series products

Manufacturers product warranty
Standard 10 year warranty

Linear performance warranty
25 year linear performance warranty.

Guaranteed performance of at least 80.2% of the original stated power output after 25 years.

Product certifications
IEC61215, IEC61730, MCS, Salt Mist, Ammonia test, sand blowing test, PV Cycle.

Connectors used on module
MC4 connectors for V series products
H4 connectors for V series products

Manufacturing certifications
ISO9001, ISO 14001, CHSAS 18001, SA8000

Available modules
W Series
Wdb Mono
V Series
## Case Study

### Refrigerated Cold Store Facility

<table>
<thead>
<tr>
<th>Installation</th>
<th>Photovoltaic System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Type:</td>
<td>Refrigerated Cold Store Facility</td>
</tr>
<tr>
<td>Client:</td>
<td>Eco-SolarTec</td>
</tr>
<tr>
<td>Property Location:</td>
<td>Surrey</td>
</tr>
<tr>
<td>Roof Orientation:</td>
<td>South</td>
</tr>
<tr>
<td>Module Type:</td>
<td>Kioto Photovoltaic 235wp poly</td>
</tr>
<tr>
<td>PV System Size:</td>
<td>11.985 KWP</td>
</tr>
<tr>
<td>Inverter Type:</td>
<td>Power-One</td>
</tr>
<tr>
<td>Mounting System:</td>
<td>SOLFEX energy systems Tau Trapezoidal</td>
</tr>
<tr>
<td>Generation Per Annum:</td>
<td>10,782 Kwh</td>
</tr>
</tbody>
</table>

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Inverters

- SolarMax
- PowerOne
- SMA
- Solar Edge
- Samil Power
- Omnik New Energy
- Enphase
SolarMax
Switzerland

Sputnik Engineering AG was founded in 1991 with the objective of making solar energy commercially viable as a contribution to the protection of the environment. We have been focusing on the development and production of grid-connected solar inverters from the SolarMax brand right from the beginning. What was then just a small workshop has long since become a company operating internationally. At the same time we are and remain an owner-managed and self-financed company. Our intention is to further strengthen the strong position.

Special features
- UK technical support
- Low start up voltage resulting in increased yield in low irradiation
- Multi MPPT Inverter
- High Euro Efficiency Transformerless Inverter
- Built in Web Server
- Future proof - 2014 will see the introduction of retrofitable self consumption and battery storage modules.

Available products
- 2/3.66 KW GS3/2 Inverter
- 6/8/10/13/15 KW GS9 Inverter
- Also a full range of Central Inverters

Monitoring options:
- Free internet based monitoring service MaxView allows for easy remote yield monitoring.
- Free smartphone, tablet and desktop app MaxMonitoring gives portable performance monitoring.
- Commercial data logger MaxWeb XP allows the performance up to 150 devices to be monitored and analysed.

Manufacturers product warranty
- 5 year std, 10, 15, 20 and 25 year extensions

Product certifications
- MCS, G9E/G59
- Manufacturing certifications

PowerOne
USA/Italy

With its focus on Renewable Energy and “Green” power solutions, Power-One has recently established itself as the world’s second largest provider of solar inverters. Further, as one of the world’s top largest providers of power conversion and power management solutions, Power-One is one of the few companies with the product breadth to support every step in the refinement of utility-grade AC into the various DC voltages required to power high-availability infrastructure systems at the site, system, and semiconductor levels. In addition, we’re increasing the availability of our renewable energy solar and wind inverter products featuring industry-leading features and performance, while offering easier installation, better customer service, unmatched applications flexibility, and field-proven reliability.

Special features
- Reduced energy consumption.
- Improved energy harvesting in alternative-energy applications.
- Increased power densities.
- Better performance in elevated ambient-temperature environments.
- Less dissipated heat lowers system and site-level cooling costs.

Available products
- UNO-2.0-I, UNO-2.5-I
- PVI-3.0-OUTD / PVI-3.6
- PVI-10.0-OUTD / PVI-12.5-OUTD
- TRIO-20.0-TL, TRIO-27.6-TL
- MICRO-0.25-I, MICRO 0.3-I

Aurora CDD

Monitoring options:
- PM-AEC-EVO - The Easy Control data logger links Power-One inverters and balance-of-system components over the Internet to Power-One’s performance monitoring and management system Aurora Vision Prime.
- Aurora LOGGER - Data management system with serial and Ethernet ports to provide data logging.

Manufacturers product warranty
- 5yr standard, warranty extensions available

Product certifications
- RoHS, Deca-BDE, PFOS
- Manufacturing certifications
  - ISO 9001, ISO 14001

Available products
- UNO-2.0-I, UNO-2.5-I
- PVI-3.0-OUTD / PVI-3.6
- PVI-10.0-OUTD / PVI-12.5-OUTD
- TRIO-20.0-TL, TRIO-27.6-TL
- MICRO-0.25-I, MICRO 0.3-I

Monitoring options:
- PM-AEC-EVO - The Easy Control data logger links Power-One inverters and balance-of-system components over the Internet to Power-One’s performance monitoring and management system Aurora Vision Prime.
- Aurora LOGGER - Data management system with serial and Ethernet ports to provide data logging.

For further product information about SolarMax please refer to www.solarmax.com, for current stock availability please consult the SOLFEX energy systems sales team.

For further product information about PowerOne please refer to www.power-one.com, for current stock availability please consult the SOLFEX energy systems sales team.
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Special features

• Dedicated UK technical design support and after sales service team
• FREE PV plant design software with Sunny Design
• Large power and voltage range
• Flexible and innovative communications and monitoring tools
• High yielding inverter efficiency
• FREE training courses at the UK SMA Solar Academy
• FREE consumer marketing tools for installers

Manufacturers product warranty

All SMA inverters come complete with a standard 5 years manufacturer product warranty with a range of options to extend up to 25 years

Product certifications

CE, VDE0126-1-1, VDE-AR-N-4105, UTE C13-712, C13/11, RDI 69.1, RDE661, PPD5, FPC, CE3/1-1, CE5/2, EN 50438-1, IEC 61727, PEA A5-4777, CEI C8-21

Manufacturing certifications

ISO 9001, ISO 14001, ISO 14064-1 zero carbon scope 2 manufacture

Available products

SMA SUNNY BOY
Single phase inverters

SMA SUNNY TRIPOWER
Three phase inverters
STP1000TL-2, STP1000TL-2, STP1000TL-2, STP1500TL-3, STP1500TL-3, STP1500TL-3, STP1500TL-3, STP2000TL-4, STP2000TL-4

Monitoring options:

Sunny View, Sunny Webbox, Sunny Sensobox, Sunny Home Manager, Sunny Portal, Webconnect, Bluetooth, RS485 interface.

SMA Solar Technology

Germany

SMA Solar Technology is the global leader in the development, production and sales of PV inverters. As an energy management group, it offers innovative key technologies for future power supply structures. SMA is represented in all important PV markets, including 21 countries on four continents.

SMA has an extensive range of products that offers the right inverter for all module types and plant sizes, from small residential arrays to large-scale plants and grid-connected installations to stand-alone and backup systems all over the world. Plant monitoring and visualisation products, as well as energy management solutions, complete the SMA product portfolio.

SafeDC™ mechanism for installers, maintenance personnel and firefighters through the unique level monitoring. Another benefit is the guaranteed automatic DC shutdown and enhanced maintenance and accurate troubleshooting through module-level MPPT, optimal roof utilization through constraint free design of SolarEdge solutions which allow maximum power production through module-level MPPT, optimal roof utilisation through constraint free design and enhanced maintenance and accurate troubleshooting through module-level monitoring. Another benefit is the guaranteed automatic DC shutdown for installers, maintenance personnel and firefighters through the unique SafeDC™ mechanism.

ISO14064-1 zero carbon scope 2 manufacture

Manufacturing certifications

AS 4777, CEI 0-21, G83/1, G83/2, G59/2, EN 50438-1, IEC 61727, PEA, C15-712, C10/11, RD1699, RD661, PPDS, PPC, CE, VDE0126-1-1, VDE-AR-N 4105, UTE

Range of options to extend up to 25 years

All SMA inverters come complete with a standard 5 years manufacturer product warranty with a range of options to extend up to 25 years

Inverters – 12 years standard warranty, extendable to 20/25 years at a low cost

Power optimizers – 25 years warranty

SE5000, SE6000, SE5k, SE7k, SE8k, SE9k, SE10k, SE12k, SE15k, SE16k, SE17k

Power optimizers – 25 years warranty

SE5k, SE6k, SE5k, SE7k, SE8k, SE9k, SE10k, SE12k, SE15k, SE16k, SE17k

Monitoring options:

Full system monitoring, including inverter and module-level real time data.

Inverters and module-level visualizations including layout, playback, charts.

Historical data access;

Web based portal access + Smartphone and tablet mobile access.

Reports generator & Alerting mechanism

For further product information about SMA Solar please refer to www.sma-uk.com, for current stock availability please consult the SOLFEX energy systems sales team.

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SolarEdge Technologies

United Kingdom/Israel

SolarEdge provides an end-to-end distributed solar power harvesting and PV monitoring solution, maximizing the power generation of residential, commercial and large-scale PV system installations by up to 25%, for a later return on investment.

Module manufacturers, installers and system owners enjoy the benefits of SolarEdge solutions which allow maximum power production through module-level MPPT, optimal roof utilisation through constraint free design and enhanced maintenance and accurate troubleshooting through module-level monitoring. Another benefit is the guaranteed automatic DC shutdown for installers, maintenance personnel and firefighters through the unique SafeDC™ mechanism.

For further product information about SolarEdge Technologies please refer to www.solaredge.com, for current stock availability please consult the SOLFEX energy systems sales team.
Samil Power

United Kingdom/China

Samil Power specializes in PV grid-tied inverter development, manufacture, sales/marketing and service. Samil has developed into one of the largest inverter manufacturers with two inverter factories, two R&D centres, six subsidiary companies and seven service centres worldwide. Samil manufactures grid-tied inverters with cutting-edge technology from 1.1kW to 1.0MW power - offering a standard 10 year warranty with up to a 25 year extension. Samil is committed to provide local warehouses and services worldwide to ensure their customers enjoy on-time service.

Omnik New Energy

China/Germany

Omnik is the only Sino-German joint venture in China which is under the Germany quality standard to constantly develop cutting-edge technologies. Omnik is the FIRST Chinese solar inverter manufacturer to offer standard integrated WIFI monitoring solution and launch the dual MPPT inverter from 36kW to 20kW. Omnik has become one of the largest inverter exporters according to the Chinese customs monthly data and occupied nearly 40% share of the Netherlands market. Omnik opens branches in Germany and Netherlands, and its after-sales service centre in the UK with professional local engineers provides the greatest convenience and best service to the customers, combining of the warehouses in Southampton and Felixtowe.
Enphase Energy

Enphase Energy is the world’s leading manufacturer of microinverter technology for the solar industry, with over 4 million units shipped to date.

Our system increases energy production, simplifies design and installation, improves system uptime and reliability, reduces fire safety risk and provides a platform for intelligent energy management.

The Enphase® Microinverter System will give your customers a solar system that is smarter and more efficient. Each microinverter integrates with advanced networking technology and Enlighten, Enphase’s web-based monitoring software, allowing system owners to visualize their solar array’s clean energy production via the Internet.

Special features

- UK service team
- 20 year Warranty
- Increased Energy Harvest
- Class leading monitoring
- All AC - safer solar
- Over 4 million units shipped worldwide

Manufacturers product warranty

20 years standard warranty

Product certifications

CSA/UL and UL1741

Manufacturing certifications


Available products

M215 Microinverter
Envoy Communications gateway
Engage cabling
Enlighten Monitoring

Case Study

National House Builder Bovis Homes

Installation

Property Type: 51 houses & 5 Apartment blocks
Client: Bovis Homes
Property Location: Cambridge
Roof Orientation: Various
Installer: HBS Group Southern

Photovoltaic System

Module Type: SOLFEX energy systems Eco-Future
PV System Size: Multiple 1KWP
Inverter Type: Samil Power
Mounting System: In-Roof
Generation Per Annum: 956.81 KWH

For further product information about Enphase Energy please refer to www.enphase.com, for current stock availability please consult the SOLFEX energy systems sales team.
Case Study

Summerton House

<table>
<thead>
<tr>
<th>Installation</th>
<th>Photovoltaic System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Type: Summerton House</td>
<td>Module Type: Kioto Photovoltaic 205wp poly Q cells</td>
</tr>
<tr>
<td>Client: Eco-Living</td>
<td>PV System Size: 29,93KWP</td>
</tr>
<tr>
<td>Property Location: Somerset</td>
<td>Inverter Type: Power-One</td>
</tr>
<tr>
<td>Roof Orientation: South West</td>
<td>Mounting System: SOLFEX energy systems ALPHA on-roof</td>
</tr>
<tr>
<td></td>
<td>Generation Per Annum: 29,029 KwH</td>
</tr>
</tbody>
</table>

Case Study
Mounting Systems GmbH

Germany

The base for solar power

Mounting Systems GmbH has been one of the largest and most experienced manufacturers of photovoltaic substructures over the past 20 years. The engineering department in Rangsdorf is working continuously to further improve our fastening systems. That enables Mounting Systems to quickly develop and deliver project-specific solutions to customers around the globe. The comprehensive product range includes fastening systems and their components for PV and solar thermal energy systems for framed and unframed modules.

Mounting Systems GmbH stands for:

• 20 years’ experience in the development and production of PV mounting systems
• Best price-performance ratio and excellent quality and durability for all products
• Maximum pre-assembly for maximum ease of installation
• Project-specific solutions
• Reliable systems delivered on time

Certificates and accreditations

DIN ISO 9001
CE marking according to EN 1090

Fastening components with the Quickstone nut are certified by the German Institute of Civil Engineering (Z-14.4.459)

Worldwide delivery

Offices

DE • Headquarters + Production Site
Mounting Systems GmbH, Rangsdorf / Berlin
US • Company subsidiary + Production Site
Mounting Systems, Inc., West Sacramento
JP • Office
Mounting Systems Japan, Tokyo
UK • Office
Mounting Systems UK, London
FR • Office
Mounting Systems France, Lyon

Worldwide track record
Delivery routes

For further product information about Mounting Systems GmbH please refer to www.mounting-systems.com, for current stock availability please consult the SOLFEX energy systems sales team.

Alpha+ - On-roof PV mounting system

With the Alpha+, photovoltaic modules can be easily mounted on pitched roofs of varying types. The system with the new clickstone technology has been specifically designed to reduce installation time. The optimized system is simple: just click in, position, and fix. The clickstone is smart and easy to use thanks to its symmetrical appearance. The newly designed rails are lighter making them more cost effective. All components of the Alpha+ are optimized and work harmoniously together. The Alpha+ can be fitted to most pitched roofs.

Tau+ - On-roof PV mounting system

The Tau+ with the new clickstone technology was especially developed for easy and quick installation of modules on all current types of trapezoidal metal sheet roofs. The system is highly adjustable and all components were designed with the end user in mind. One of the key advancements of the Tau+ is the newly developed short rail, which was specifically designed for landscape installations. To speed up installation, two screws are drilled through the base of the rail directly onto the corrugated sheet. The specially designed module clamps featuring clickstone technology ensure that modules are fixed securely.
Theta - In-roof PV mounting system

The Theta was developed for the integration of framed and unframed PV modules into the roof skin. This visually attractive mounting system is specifically designed for pitched roofs. The use of approved specialist roofing materials ensures a rain-proof installation regardless of the existing roof covering. In combination with the flexible Quickstone technology, the system offers a maximum of reliability and ease of assembly. This system has been tested and approved for the use in European climate conditions.

Lambda - Flat roof PV mounting system

The Lambda roof system can be individually adapted to the customer’s requirements thanks to a variable tilt angle and several anchoring options, such as ballasting or fixation with roof penetration. Module rows of up to twelve metre length are possible for both portrait and landscape installation. The Lambda takes advantage of using the same module fastening as the well known Alpha system. With the help of excellent support provided by our project team, it can be adjusted to fit even difficult roof conditions.

Lambda Light - Flat roof PV mounting system

Optimal performance and minimal ballasting: The Lambda Light is a flat roof system without the need for roof penetrations. Aerodynamic testing was conducted to establish the best geometric shape to reduce ballast to a minimum. The system is composed of several interconnected module rows in landscape orientation. Please note that the larger the connected module area is, the less ballast is required.

Omega - Open terrain

The Omega was especially designed for application in difficult ground and soil conditions, e.g. landfill or disposal areas. The modules can be arranged in any number of rows and columns on the module table within an area of up to 45m². Made of aluminium, the Omega is an extremely low-maintenance system during its entire life span.
Sigma I - Open terrain

The Sigma I is a single pole ground-mount system, especially designed to reduce cost. It is suitable for both laminates and framed modules. The use of ramming posts eliminates the need for additional excavation work. It makes the Sigma I aesthetically pleasing and very economical - ideal for large solar plants. Adjusted to the respective project, different module layouts are available.

Sigma II - Open terrain

The Sigma II provides the advantage that several rows of modules can be arranged in vertical or horizontal position. Depending on project requirements, the Sigma II is connected to the ground using ramming posts, screw foundations or foot plates. The system is characterized by a simple, functional design and reduced use of tools during assembly on site. Specially suitable for large solar plants.

Ubbink UK Ltd

United Kingdom / Netherlands

Ubbink UK Ltd is part of Ubbink/Centortherm, listed as part of the Centrotec Sustainable AG group, one of Europe’s leading manufacturers of solutions for building and construction.

Ubbink prides itself on manufacturing not only some of the most sustainable building and roofing products, but also some of the easiest products to handle, install and commission. With over 30 years technical expertise in roofing products, Ubbink UK offer a technical advice line to support the full product portfolio.

Special features

- No roof penetration
- Low ballast
- Low inclination at 15°, allowing more modules per m²
- Short installation time – 20% less than comparable systems

Manufacturers product warranty

10 year warranty

Manufacturing certifications

ISO9001

Available products

FR560

The FR560 flat roof mounting system is suitable for PV modules with dimensions from 700 x 800 mm up to 1037 – 1700 mm covering a frame thickness range between 35 – 55 mm.

For further product information about Ubbink UK Ltd please refer to www.ubbink.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.
Schueco – System solutions for windows, doors, facades and solar products.

Together with its worldwide network of partners, architects, specifiers and investors, Schüco creates sustainable building envelopes which focus on people and their needs in harmony with nature and technology. The highest demands for design, comfort and security can be met, whilst simultaneously reducing CO2 emissions through energy efficiency, thereby conserving natural resources. The company and its Metal, PVC-U and New Energies divisions deliver tailored products for newbuilds and renovations, designed to meet individual user needs in all climate zones. With 5,000 employees and 12,000 partner companies, Schüco is active in 78 countries and achieved a turnover of 1.8 billion euros in 2012.

Special features
- Different mounting rails with different structural properties
- Attractive appearance with no visible module fixing
- OneTurn technology for quick installation
- Simple, project-specific planning and implementation
- For all standard roof coverings with an angle up to 60°
- Choice of on-roof, flat-roof and in-roof installation
- Exclusive use of stainless steel and aluminium means long service

Manufacturers product warranty
10 Years Standard Warranty

Product certifications
- Flat roof system
  Cost-effective installation with OneTurn flat-roof brackets mounting PV modules in an elevated position on flat roofs is a fast and economical installation method for large PV installations.

Schüco MSE 210 trapezoidal installation
For special applications, three special mounting rails with perfectly tailored components, such as cruciform and trapezoidal retaining clamps, are available for fast and secure installation.

Schüco mounting system MSE 210 Aeroflat-roof
The Schüco mounting system MSE 210 Aero flat-roof is extremely flexible in its configuration. If there are obstacles on the roof, the rails can be “moved” on either side of the obstacle to ensure efficient coverage of the entire area.

Available products
- Flat roof system
- Schüco MSE 210 trapezoidal installation
- Schüco mounting system MSE 210 Aeroflat-roof
**Immersun**

United Kingdom

The Professional Solution For Self Consumption

Anyone with a microgen system knows that the majority of self-generated energy is exported to the grid, but this doesn’t have to be the case.

The immerSUN is a specialist eco gadget that works in tandem with solar PV or wind turbines to help users save money, reduce utility bills and protect the environment.

Installed into over 10,000 homes across the UK, the innovative energy controller monitors self-generated energy and diverts surplus power (that would normally be exported to the grid) to an immersion, storage, space or electric underfloor heater.

This means that homeowners can lower utility bills by up to £250 annually and reduce their reliance on mains supply, simply by effectively using green energy within the home.

Covered by a three-year warranty, users simply fit and forget, safe in the knowledge that the intelligent immerSUN is saving money and protecting natural resources!

**Earthwise Products Ltd**

United Kingdom

The award winning SOLiC 200 automatically provides free hot water from new and existing PV panels. The SOLiC 200 is the most efficient device of its kind on the market as it operates with a zero export threshold and it checks for excess solar power 20 times a second. The SOLiC 200 includes an exclusive 10-year return-to-base guarantee.

**How the SOLiC 200 works**

The SOLiC 200 automatically converts energy generated by existing PV panels into free hot water by diverting excess solar power to the immersion heater before it's exported to the national grid.

**Key features**

- Provides free hot water from panels
- Saves up to £250 annually on energy bills
- Returns on investment in less than 3 years – depending on hot water usage
- Complies with CE and British Standards
- Reduces CO2 emissions
- Requires no plumbing alterations
- Installs quickly and easily
- Engineered to last 25 years

**GA-500 Large Public Display Board**

United Kingdom

The GA 500 displays live information of your photovoltaic arrays performance through a modern designed LCD with a glass front, it is perfectly suited for corporate reception areas, schools & colleges are just some examples.

**Key features**

- 25mm digits, readable up to 8m
- LCD silver display, 3x6 digits reflective with 7 segments
- 5mm security glass
- Measures (BxHxT): 500x400x40mm
- Easy wall fastening with stainless steel wall mount
- Power consumption only ca. 1 watts
- Impulse standard interface

**Green Energy Options**

United Kingdom

For every customer and every question, geo has the answer

geo provide an end-to-end energy management experience. From in-home displays to online appliance control, geo give everyone the power to shape their energy consumption – helping homeowners to save the world (and their wallets).

Products include the Solo PV Solo II PV and the Chorus PV

**Key features**

- Full colour display
- Live generation levels
- Encourage efficient use of generated electricity
- Installs in minutes (easy to retrofit)
- Free web service
- Plus many more...

For further product information about Green Energy Options please refer to www.greenenergyoptions.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.

**For further product information about Immersun please refer to www.immersun.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.**

For further product information about Earthwise Products please refer to www.earthwiseproducts.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.
Eland Cables

United Kingdom

Eland has been supplying cables for more than 35 years, and places huge emphasis on the quality of its products. Cables are approved to British, European and International standards such as BS, UL, IEC, and CSA. Cables are batch tested in Eland’s state-of-the-art laboratory against top industry standards and key performance variables, to ensure the highest quality is always met.

Eland provides complete cabling solutions for your solar project, from medium voltage cables for grid protection to DC and solar cables for panel connection. Our solar specialists can assist you with specifying cables, taking into consideration the size and environmental complexities of your project to offer you the best product solutions.

Key features

• Cables to British and international standards
• PV cable tested to last 25 years
• UV rated cables
• Cables with rodent protection

Product Certifications

TÜV, IEC, VDE, BASEC, ingress Protection

Company Certifications

Eland Cables is ISO 9001, 14001 and 18001 Certified

Kraus & Naimer

Austria/United Kingdom

Kraus & Naimer has more than 100 years of experience in the manufacture of electrical switchgear. The extensive range of switch disconnectors are designed and manufactured in accordance with the requirements of BS EN 60947-3, which is listed in table 53.4 of BS7671 as being an appropriate standard for isolation.

Key features

• IP66/67 Protection
• Padlockable handle
• Insulated enclosure, grey, RAL7035
• Earth terminal
• Switch interlocked with lid to prevent opening in ‘ON’ position
• Class II compliant
• Rated for use in ambient temperatures of 50°C

Products

AC Switch Disconnectors - Single & Three Phase
AC-21A (25 - 40A)

DC Switch Disconnectors - Single & Two String
DC-21B (11 - 60A)

Case Study

Open Terrain - Farm

<table>
<thead>
<tr>
<th>Installation</th>
<th>Photovoltaic System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Type: Open Terrain - Farm</td>
<td>Module Type: Kioto Photovoltaic 200wp poly Q cells</td>
</tr>
<tr>
<td>Client: Eco-Exmoor Devon</td>
<td>PV System Size: 4KWP</td>
</tr>
<tr>
<td>Property Location: Devon</td>
<td>Inverter Type: Power-One</td>
</tr>
<tr>
<td>Roof Orientation: South</td>
<td>Mounting System: SOLFEX energy systems SIGMA I</td>
</tr>
<tr>
<td>Generation Per Annum: 3944.4 KwH</td>
<td></td>
</tr>
</tbody>
</table>

For further product information about Eland Cables please refer to www.eland.co.uk, for current stock availability please contact the SOLFEX energy systems sales team.

For further product information about Kraus & Naimer please refer to www.krausnaimer.co.uk, for current stock availability please consult the SOLFEX energy systems sales team.
Photovoltaic Home Power Packs

All our Photovoltaic Home Power Packs are pre-designed with the professional PV installers’ requirements in mind; inverter string configurations are determined & mounting systems are already generically verified.

Only market leading components are used giving unparalleled system performance and warranties offering total peace of mind. All Photovoltaic Home Power Packs are delivered with all the necessary components such as the requested modules, grid connected inverter, requested mounting system, and electrical installations pack which includes cabling, isolators, energy meter, connectors, electrical safety labelling sheet. The complete Photovoltaic Home Power Pack can be delivered direct to site ensuring a swift installation.

Photovoltaic Commercial Power Packs

Off-the-shelf or bespoke Photovoltaic Commercial Power Packs are available from 10-50KW plus utilising any photovoltaic product within our entire product portfolio, our specialist photovoltaic sales division will provide you with inverter string configuration detail & mounting systems will be statically verified according to your requirements. All our packaged solutions and technical added value are fully covered by our professional indemnity insurance.

Example Home Power Pack

Competitively Priced Photovoltaic Products & Packages

SOLFEX energy systems will not only supply you with the best photovoltaic product range from market leading global suppliers, our products will also be very competitively priced within the market and we can also offer our customers (subject to status) favourable credit terms to enable schemes of any size to be realised.

- Total packaged solution
- Unrivalled products from leading global manufactures
- PV engineering already verified & fully indemnified
- Credit terms available subject to status
- Next day delivery to site

Example Home Power Pack
Energy Arena
Units 3-5
Charnley Fold Industrial Estate
Bamber Bridge
Preston
Lancashire
PR5 6PS

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www.solfex.co.uk