

SolarSpec™

INTERCONNECT SOLUTIONS FOR THE SOLAR INDUSTRY



molex®



SolarSpec™ Interconnect Solutions

Developed to address key applications within the global solar industry, our SolarSpec products are specifically designed to support efficient, reliable and flexible solar interconnections.



Mini-Fit H2O™



SolarSpec™ Junction Box

Molex offers custom design solutions that utilize many of our industry-leading mating interfaces. By leveraging these proven and reliable interfaces, we can help you design a cost-effective interconnect system to meet the needs of your application.

SolarSpec solutions are designed for unique applications and environments that have to meet the many energy and solar design requirements, including:

- UL 1703
- IEC
- IP67/IP68/IP69
- Weatherproof, environmental and sealed connectors
- NEC and NEC2008 requirements
- Long-term UV and ozone resistance
- RoHS compliance

The SolarSpec designation ensures that the unique requirements of solar applications are being addressed through the use of proven technology, solar-compliant materials and unmatched reliability in rugged environments.

We now offer solutions for photovoltaic panels, building integrated photovoltaics, tracking systems and inverters. For applications such as residential and commercial rooftops, utilities, public buildings and solar farms, we offer junction boxes and cable assemblies. For tracking system applications such as Concentrated Solar Power (CSP) and central receiver towers, we provide IP67 and UV-rated connectors and cordsets. And, for inverter applications, we offer custom interconnect products as well as a wide range of standard, off-the-shelf Molex products.

» Connectivity Solutions for Photovoltaic Panels

Because of the growing demand for renewable energy sources, the manufacture of solar cells and photovoltaic arrays has advanced dramatically in recent years.

To reach critical mass and realize economies of scale, the PV solar industry is now looking into new and innovative ways to increase manufacturing efficiency.

Equipment must also match customer warranties and maintain high standards of performance throughout its lifetime.

Working closely with leaders in the photovoltaic industry, Molex has

developed a comprehensive range of interconnect products that specifically addresses these issues.

Customized Solutions

When it comes to investing in research and development, Molex is the industry leader. We know that by leveraging our internal product technology, we can drive a continuous supply of innovation directly to you.

If you are faced with a specific challenge that cannot be solved through our existing portfolio of connectors and integrated products, let's work together and meet this challenge.





PV Panel Applications

SolarSpec Junction Boxes are critical components of each and every solar panel and are of great concern to panel manufacturers.

Despite rapidly evolving developments, crystalline technology maintains a strong market position with expectations for improved efficiencies when compared to other solar products.

Molex designed the SolarSpec Junction Box to address the specific needs of panel manufacturers by simplifying their production process and reducing manufacturing costs.

The innovative SolarSpec Junction Box from Molex simplifies the panel-assembly process and enables customers to employ cost-effective production techniques, thereby reducing assembly time and applied costs.

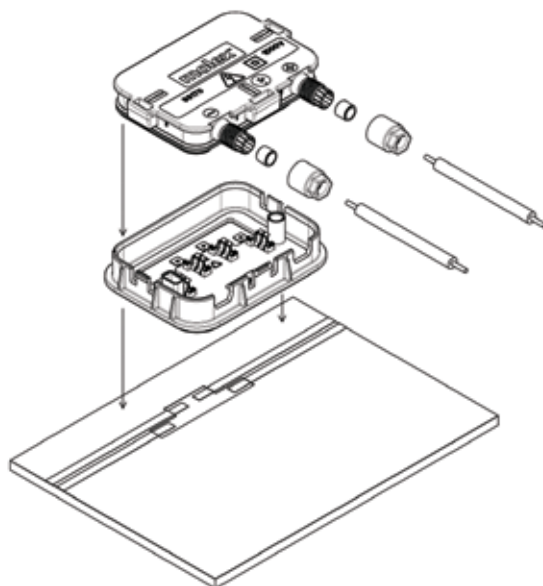
New generations of Junction Boxes for thin-film solar panels will have to embrace customer requirements for automated assembly and for much lower profiles. SolarSpec products are the perfect match for requirements specified by thin-film panel manufacturers.

SolarSpec Junction Box

- Allows for automated handling and assembly
- Solder Charge™ SMT technology facilitates high-speed assembly and eliminates hand-soldering of ribbon conductors
- Double-sided tape
- TÜV- and UL-certified
- High current rating
- Compact and lightweight design
- Excellent thermal stability
- Customer-specific solutions available

SolarSpec DC Connector

- IP67 protection against dust and water ingress
- Resistant to UV and ozone
- Added strain relief for strong cable connections
- Easy to assemble with simple snap-lock mating
- Accommodates multiple cable sizes
- Two locking features on all connectors
- UL- and TÜV-certified
- RoHS-compliant

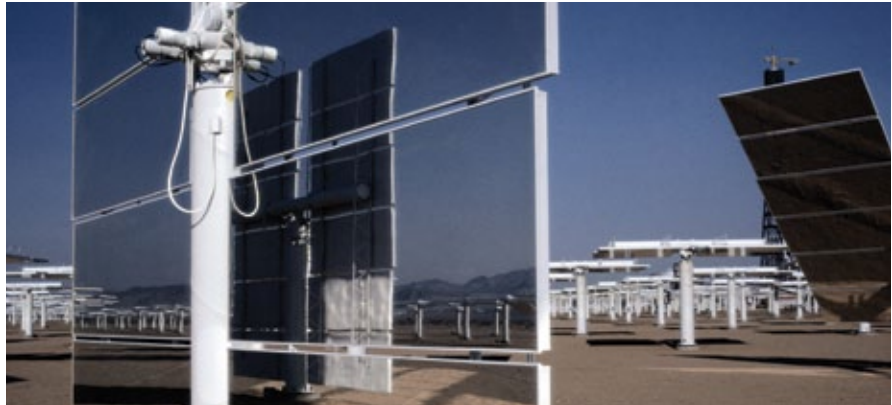


*SolarSpec™
Junction Box
Assembly*



*SolarSpec™
DC Connector*

► Connectivity Solutions for Solar Trackers and Concentrators



*Power Connectors
and Cordsets*



*Micro-Change®,
Mini-Change®,
Connectors and
Cordsets*



*Mini-Change
DeviceNet*
Cordsets*

More energy falls on Earth's deserts in six hours than the world consumes in a year. Huge tracking systems and parabolic mirrors will be located in giant solar power plants. Different technologies, such as photovoltaic and concentrated solar power, will provide green energy to end users around the world.

These systems are precisely managed by inclination and positioning sensors, measurement and control units, motors and security cameras. Molex provides all of the industrial I/O wiring systems and network communications for this equipment.

For more than 40 years, the Brad® range of products from Molex has served the market for quick-disconnect and soft wiring systems that reduce the time and expense associated with installation and maintenance. These products have a proven track record for durability and superior performance in the toughest outdoor conditions.

We have adapted our Brad cable assemblies and connector products to accommodate exposure to water, dust, heat and sunlight. The SolarSpec range consists of a mix of single- and double-ended cordsets, receptacles, field attachables and accessories from some of our most popular product families, including Micro-Change®, Ultra-Lock®, Mini-Change® and power connectors.

SolarSpec™ products include Brad® Micro-Change® M12 and Mini-Change® Connectors and Cordsets

- Rugged, reliable and resistant to temperature extremes, shock, vibration and corrosion
- Fast Ultra-Lock® connection system allows for simple, quick connects and disconnects
- Excellent resistance to UV, water, dust and heat makes it ideal for outdoor use
- IP67/68/69k-rated for harsh weather conditions
- Molex patented, anti-vibration feature prevents terminal back-outs and accidental disconnection

SolarSpec Power Connectors and Cordsets

- Suitable for outdoor use
- Excellent resistance to UV, heat and water/dust ingress (IP67)
- High durability and low contact resistance
- Superior corrosion resistance in harsh environments
- Wide operating temperature range
- TÜV- and UL-approved

* DeviceNet is a trademark of Open DeviceNet Vendor Association (ODVA).

➤ Connectivity Solutions for Solar Inverters

Customized Solutions

We offer custom solutions for specific applications and parameters. Most often, these are based on one of our proven and reliable mating interfaces. In addition, we provide many standard Molex products that are already available for use across the energy and solar industry.

When converting direct current (DC) from the photovoltaic array into alternating current (AC), solar inverters are often subjected to extreme environmental conditions. These applications typically call for waterproof/sealed interconnects, Molex offers a wide range of products for such applications.

Input/Output Connectors

- Molex is a market leader in both industry standard I/O interconnects and proprietary solutions
- For demanding industrial I/O applications, leverage our expertise in termination, shielding, signal integrity and other aspects key to a reliable I/O solution

Terminal Blocks

- Molex offers a wide variety of terminal blocks
- The most complete line of 600V PCB high-power Eurostyle terminal blocks in the industry with a range of 20.0 to 115.0A

Wire-to-Board/Wire-to-Wire Connectors

- Multiple product families cover a broad range of packaging requirements
- Pitches range from 0,4 to 5,08mm



Board-to-Board and FFC/FPC Connectors

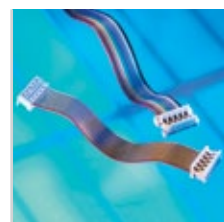
- Several product families provide proven reliability for high-density, microminiature application
- Board-to-Board pitches ranging from 0,4 to 2,54mm
- FFC/FPC pitches ranging from 0,3 to 1,5mm

Power Connectors

- Complete, versatile offering of power interconnect solutions for various electronic applications
- Current ratings up to 115.0A per circuit
- Many different configurations and sealed power connectors
- Available in modular, mixed layout and customizable configurations

Memory Card Connectors

- Molex is a market leader in memory card connectors for industry-standard applications



Picoflex®



Sabre™



Mini-Fit Jr.™

www.molex.com/industry/solar

www.molex.com

molex[®]
one company > a world of innovation