Rugged and durable, IP67-sealed, SolarSpec™ DC connectors with simple snap-lock mating and internal locking mechanism for superior safety are designed for direct connection to solar junction boxes, field installations and photovoltaic grid wiring and deliver quality and value to module manufacturers, installers and distributors.

The in-house design and manufacture of SolarSpec™ DC connectors will enable Molex to deliver a superior quality, reliable and lower-cost solution to the market. Customers will benefit from exclusive Molex design features including molded surface ribs and the lowest contact resistance over competitive connector versions.

Molex can supply a service tool to release the internal safety locking mechanism together with a one-hand ratchet-design crimp tool for easy termination. Molex also manufactures standard and custom length cable assemblies for solar applications. For further information on all Molex SolarSpec™ products visit: www.molex.com/link/solardcconnectors.html

FEATURES AND BENEFITS

- SolarSpec™ DC connectors are dual-qualified by TÜV and UL
- Reliable, robust connectors for solar applications
- Compliant with most recent stringent quality standards to ensure long life in harsh environments
- Product is globally accepted and marketable
- Simple snap-lock mating
- Quick and easy factory or field assembly
- Polarisation and an audible click ensure successful mating of the connectors
- Internal locking mechanism protected by latch guards; requires a tool to unlock
- Prevents accidental and unauthorised decoupling of connectors
- Ensures reliable connection and safe handling
- Touch-proof safety design
- Protection from electrical current even when connectors are unmated
- IP67-sealing protection against dust and water; resistant to UV and ozone damage
- Rugged, durable connectors for use in solar applications
- Connectors feature exclusive moulded surface ribs
- Allows for secure gripping, especially with work gloves
- Contact resistance < 0.5mΩ
- Lowest contact resistance compared with competitor products for greatest efficiency
- Strain relief
- Ensures strong, secure, enduring cable connections
- Meets NEC 2008 (690.33) and NFPA 70
- US-code compliant; no requirement for added protection sleeve
- Accommodate 2.50mm² and 4.00 to 6.00mm² (14 and 12 to 10 AWG) cable
- Multiple cable options that meet customer requirements

MARKETS, APPLICATIONS AND DESCRIPTIONS OF TYPICAL CUSTOMERS

- Applications for DC connectors:
  - PV power plants
  - PV grid arrays
  - Inverter cable attachments
- DC connectors, terminated to cables, are used to link solar junction boxes and PV panels in a serial grid array (parallel arrangements are also possible)
- Applications for solar silicon photovoltaic (PV) panels:
  - Stadiums
  - Home installations
  - Public buildings
  - Solar farms
## SPECIFICATIONS

### Reference Information
- Packaging: Bulk
- UL File No.: E341346
- CSA C22.1: caUs #E341346
- TÜV File No.: 21156060 002

### Mechanical
- Contact Insertion Force: 30N
- Contact Retention to Housing: 20N
- Mating Force: 50N
- Unmating Force: 5.0N
- Durability (min.): 50 Cycles

### Physical
- Housing: Unfilled PC - Black
- Contact: Copper Alloy
- Plating:
  - Contact Area — Selectively silver-plated
  - Underplating — Nickel (Ni)
- Operating Temperature: -40 to +85°C

### Electrical
- Voltage (max.): 1000V DC
- Current (max.): 30.0A
- Contact Resistance: 5 Milliohms Max.
- Dielectric Withstanding Voltage: 2200V DC
- Insulation Resistance: 1000 Megohms Min.

### Connectors

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Pin / Socket Connectors</th>
<th>Packaging Information</th>
<th>Wire Gauge mm²</th>
<th>Wire Gauge AWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>130244-0201</td>
<td>Socket (Female)</td>
<td>Bulk Packaging</td>
<td>4.00 to 6.00</td>
<td>10 to 12</td>
</tr>
<tr>
<td>130244-0203</td>
<td>Pin (Male)</td>
<td>Bulk Packaging</td>
<td>4.00 to 6.00</td>
<td>10 to 12</td>
</tr>
</tbody>
</table>

Connectors supplied as kits for servicing requirements

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
<th>Packaging Information</th>
<th>Wire Gauge mm²</th>
<th>Wire Gauge AWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>130244-1201</td>
<td>Socket Assembly Kit</td>
<td>Female Housing Assembly with Socket Contact (5 per pack)</td>
<td>4.00 to 6.00</td>
<td>10 to 12</td>
</tr>
<tr>
<td>130244-1203</td>
<td>Pin Assembly Kit</td>
<td>Male Housing Assembly with Pin Contact (5 per pack)</td>
<td>4.00 to 6.00</td>
<td>10 to 12</td>
</tr>
</tbody>
</table>

### Contacts

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Pin / Socket Contact</th>
<th>Packaging Information</th>
<th>Wire Gauge mm²</th>
<th>Wire Gauge AWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>130197-0347</td>
<td>Socket Strip</td>
<td></td>
<td>2.50</td>
<td>14</td>
</tr>
<tr>
<td>130197-0346</td>
<td>Socket Loose</td>
<td></td>
<td>2.50</td>
<td>14</td>
</tr>
<tr>
<td>130197-0336</td>
<td>Pin Strip</td>
<td></td>
<td>2.50</td>
<td>14</td>
</tr>
<tr>
<td>130197-0325</td>
<td>Pin Loose</td>
<td></td>
<td>2.50</td>
<td>14</td>
</tr>
</tbody>
</table>

### Tooling

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
<th>Packaging Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>130203-1250</td>
<td>Service Tool</td>
<td>Bulk</td>
</tr>
<tr>
<td>130203-1290</td>
<td>Service Tool</td>
<td>Bagged (4 per pack)</td>
</tr>
<tr>
<td>63823-6400</td>
<td>Hand Tool</td>
<td>Individual</td>
</tr>
</tbody>
</table>
SolarSpec™ DC cable assemblies, with proven long life cycle and optimum weather resistance, meet the demands of harsh and outdoor solar wiring applications and deliver quality and value to module manufacturers, installers and distributors.

The 4.00mm² (12AWG) SolarSpec™ DC cable assemblies from Molex are available for use in serial and parallel solar applications. The range includes single-ended cordsets for use with solar junction boxes and double-ended configurations for array and field installations.

The specified cables are double-insulated with electron beam, cross-linked, jacket insulation material to ensure long life cycles and to meet the demands of harsh, outdoor solar applications. All cable is produced by Molex approved vendors. For further information visit: www.molex.com/link/solardcconnectors.html

**FEATURES AND BENEFITS**

- SolarSpec™ DC cable assemblies featuring SolarSpec™ DC connectors
  - Rugged, durable and sealed to IP67 for use in solar applications
  - Designed and assembled in-house by Molex
- Available in 4.00mm² (12AWG) cable
  - For use in both series and parallel wiring configurations
- Available in single- or double-ended configurations and a range of standard or custom cable lengths
  - Suitable for field installations, PV grid wiring and for direct connection to solar junction boxes
  - Ordering options for most typical applications
- Specified cable types are UV- and ozone-resistant, single conductor, double insulated with electron beam, cross-linked jacket insulation material
  - High temperature resistance and cold temperature flexibility
  - Long life-cycle and optimum weather resistance; suitable for outdoor and harsh environments
- SolarSpec™ DC cable assemblies are available dual-qualified by TÜV and UL
  - Compliant with most recent stringent quality standards
  - Product is globally accepted and marketable
- Cables include a flame-retardant agent (self-extinguishing) with low smoke emissions
  - Suitable for home applications

**ADDITIONAL PRODUCT FEATURES**

**Single-ended, male assembly**

- Cables used in cordsets are single-conductor, double-insulated with fine-wire copper strands. Cable jacket insulation material is UV- and ozone-resistant and chemically cross-linked which makes them suitable for outdoor and rugged environments
- Cables include a flame retardant agent (self-extinguishing) with low smoke emissions and are therefore suitable for home applications
- Molex DC cable assemblies are designed to connect to other products in the SolarSpec™ range

*Cable Length – See Ordering Information*
ORDERING INFORMATION

DC Cable Assemblies

Example: DC Cable Assembly Order Number

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Cable Type</th>
<th>Connector Type</th>
<th>Cable Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>93307-3101</td>
<td>BIZLINK PV (TÜV and UL – TY-2100)</td>
<td>SINGLE-ENDED</td>
<td>0.90m</td>
</tr>
</tbody>
</table>

How to Select Cable Assembly:

1. Choose preferred cable type from Table 1
2. Choose DC connector types required from Table 2
3. Choose cable length required from Table 3.
4. Create part number by substituting the appropriate numbers for XXXX

**Base Part Number** 93307-XXXX

**DIGIT 6: Cable Type (Table 1)**

<table>
<thead>
<tr>
<th>Digit</th>
<th>Table 1: Cable Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LEONI STÜDER BETAFLAM (TÜV 224803)</td>
</tr>
<tr>
<td>2</td>
<td>LEONI STÜDER BETAFLAM (TÜV and UL 224780)</td>
</tr>
<tr>
<td>3</td>
<td>BIZLINK PV (TÜV and UL – TY-2100)</td>
</tr>
</tbody>
</table>

**DIGIT 7: Connector Type (Table 2)**

<table>
<thead>
<tr>
<th>Digit</th>
<th>Table 2: Connector Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SINGLE-ENDED MALE (PIN)</td>
</tr>
<tr>
<td>2</td>
<td>SINGLE-ENDED FEMALE (SOCKET)</td>
</tr>
<tr>
<td>3</td>
<td>DOUBLE-ENDED MALE - FEMALE</td>
</tr>
</tbody>
</table>

**DIGITS 8 and 9: Cable Length (Table 3)**

<table>
<thead>
<tr>
<th>Digits</th>
<th>Table 3: Cable Length Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>0.90m</td>
</tr>
<tr>
<td>02</td>
<td>1.00m</td>
</tr>
<tr>
<td>03</td>
<td>1.50m</td>
</tr>
<tr>
<td>04</td>
<td>3.00m</td>
</tr>
<tr>
<td>05</td>
<td>5.00m</td>
</tr>
<tr>
<td>06</td>
<td>10.00m</td>
</tr>
<tr>
<td>07</td>
<td>20.00m</td>
</tr>
</tbody>
</table>

Other options available on request include non-standard lengths with lug attachments and alternative wire gauges (volume dependent)

For further information and more detailed ordering information please refer to SD-93307-001

APPLICATIONS