

SOLARLOK Connectivity Systems for PV Installers

Simple and Reliable Interconnection of Solar Systems

Market expansion of the formerly regulated energy supply sector, increased global environmental awareness and governments committing themselves to more stringent environmental targets have opened up new opportunities for the photovoltaic industry.

Having served a niche market in the past, the photovoltaics industry now has the opportunity to move into mass production, realizing economies of scale and gaining a greater market share of the world's energy mix. TE has contributed to the establishment of this environmentally-friendly technology with the introduction of its SOLARLOK connector system.

The SOLARLOK connector system delivers a flexible system solution for easy and reliable interconnections from photovoltaic modules to the DC/AC converter. The entire system concept is based on cost-effective and reliable processing of individual interconnection system components. This significantly reduces installation costs of the solar energy system.

The junction box concept is based on a flexible, open system structure, which allows serial as well as parallel interconnection via direct wire connect or separable connectors. Within the junction box, up to six termination places rails are available for photovoltaic foil connection. If required by the customer, the junction box can be delivered pre-configured with diodes, jumpers, plug connectors, and solar cable pigtails.

The male and female cable couplers were designed for high voltage and high current carrying capacity in addition to the well established IP 67 sealing requirement in the photovoltaic industry. Mating safety is provided by polarity keyed housings, fully shrouded contacts, reliable high cycle life, and a squeeze to release connection system. In addition, a wide temperature range and fulfillment of worldwide standards for photovoltaic connection systems complement the robust product specification.

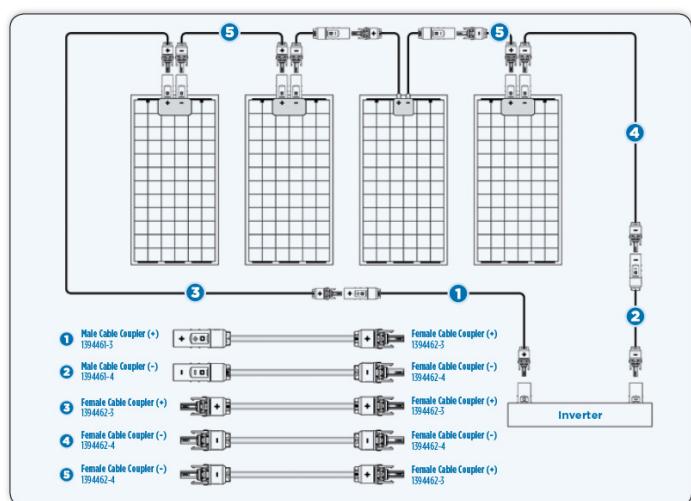
The SOLARLOK Product Concept





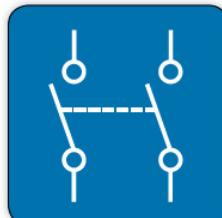
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Wiring Example with Extension Cables



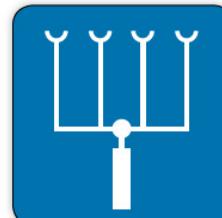
Field Wiring, Switching and Protection

Switching



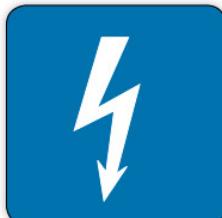
- One-/two-pole switches
- Main switch function
- Lockable
- Current up to 60 A DC
- Voltage up to 1,000 V DC

Collecting



- 2 to 6 strings input
- Cable cross section up to 6 mm²
- SOLARLOK connectors
- Current up to 60 A DC
- Voltage up to 1,000 V DC

Collecting



- Lighting protection

Configuration Example at 4.0 mm²

System Features

Junction Box	Cable Couplers	Solar Cable
<p>Junction Box</p> <ul style="list-style-type: none"> • Variable wiring options • Simple, fast and cost-effective assembly • Flat, low profile design • High current carrying capacity • Good thermal balance • Connectorize or direct wire configurations • Up to four outputs possible • Up to six internal rails • Customer-specific solutions • TÜV and UL approved 	<p>Cable Couplers</p> <ul style="list-style-type: none"> • Simple on-site processing • Mating safety provided by keyed housings • Semi-automatic assembly capability possible • Multiple plugging and unplugging cycles • Accommodates solar cable with different insulation diameters • High current carrying capacity • Wide temperature operating range • TÜV and UL approved 	<p>Solar Cable</p> <ul style="list-style-type: none"> • Dual wall insulation • Electron beam cross-linked • Excellent resistance to U.V., water, ozone, fluids, salt, general weathering • Excellent resistance to abrasion • Halogen free, flame retardant, low toxicity • Very low smoke emissions • Excellent flexibility and stripping performance • Temperature Rating : -40°C up to +125°C • Nominal Voltage : Vo/V 1800/3000 VAC, 2600 VDC • Test Voltage : 6KV, 50Hz, 5min • Bending Radius : ≥ 5 x outer diameter • TÜV and UL approved

TE Connectivity – SOLARLOK Installation Products

TE Connectivity has a full line of solar installation products ranging from connectors to cable to our newest addition the SOLARLOK 5-string combiner box. This revolutionary product offers 30-second, error-proof terminations through factory pre-wired TE SOLARLOK polarized connectors. The TE SOLARLOK line also includes our ZKLA Global Cable. ZKLA is flexible, dual wall, halogen free and cross linked solar wire that offers long term stability with both TÜV and UL approvals. The TE SOLARLOK line also includes grounding products, such as the stainless steel grounding bolt (6-12 AWG) and ground clip (10-12 AWG). Both of these products offer quick and easy grounding solutions for your installations. To learn more about our product offerings, please see our full line of installation products in our Installers Catalog.

www.te.com/industry/solar

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