

Y
SOL[®]

Junction Boxes
and Cable Connectors
for Silicon Wafer and
Thin Film Modules

Y-SOL[®]

UNIVERSAL J-BOX FOR SILICON WAFER MODULES

Featuring SMD diode technology, the Y-Sol[®] Universal J-Box shows approx. 40% less heat development compared to J-Boxes with conventional radial diodes. Automated assembly in an assembly line is possible, either by spring or soldering connection. It is one of the flattest Silicon Wafer J-Boxes on the market (<27mm height) and features integrated cable holders.



Pat. Pend. on contact design

TF J-BOX FOR THIN FILM MODULES

The Y-Sol[®] Thin Film J-Box can be easily assembled either manually or in an automatic assembly process.

Contacting to the PV Module is realised by spring loaded contacts in the J-Box lid.

One bypass diode can be integrated optionally as per customer requirements.

It is one of the flattest Thin Film J-Boxes on the market (<13mm height).



Pat. Pend.
on contact design

CUSTOMER ADVANTAGES FOR J-BOXES

- ✓ Time-saving assembly and automated contacting due to spring contacts.
- ✓ Material cost savings because resin filling of the J-Box is not required due to the sealing material in the J-Box lid.
- ✓ Space-saving installation due to one of the flattest designs on the market today.
- ✓ Configuration according to customer requirements and delivered as complete pre-assembled system with cables and connectors

CABLE ASSEMBLIES

Y-SOL[®]

Y-SOL[®] CABLE CONNECTORS Y-SOL3 AND Y-SOL4

OVERMOLDED CABLE ASSEMBLY FOR WIRING OF TF OR SILICON MODULES

Y-Sol3 and Y-Sol4 are ready-made solar cable assemblies, "ready-to-plug" in your PV installation. For long life and highest possible weather resistance, we use cross linked cables as standard.



Y-SOL3

Ø 3mm contacts without locking



Y-SOL4

Ø 4mm contacts with locking



Opening tool for Y-SOL4



Y-SOL3 T-JUNCTION



Ø 3mm overmolded cable harness for connection of PV Panels in parallel configuration.




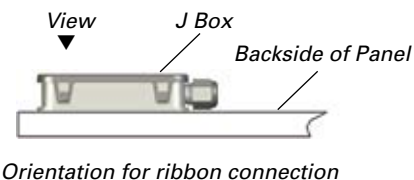
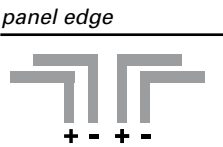
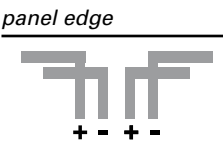

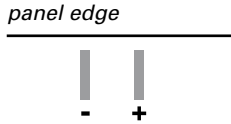
CUSTOMER ADVANTAGES FOR Y-SOL3 / Y-SOL4

- ✓ Easy handling due to ready-made solar cable assembly.
- ✓ Safe power transmission due to high-quality contacts

Y-SOL3 AND Y-SOL4 STANDARD PRODUCTS FOR READY-TO-PLUG OVERMOLDED CONNECTORS

Product	Technical Details	Part Number Details
 Y-SOL3 Assembly	Cable Type: 2 x 4mm ² PV wire Cable Length: 1,000mm (Male/Female) Connectors: overmolded Y-Sol3 Certified: acc. to EN50521 (TÜV) acc. to UL 1703	Y-SOL3AOV-M1-4U-1000-GMA Y-SOL3AOV-F1-4U-1000-GMA
 Y-SOL4 Assembly	Cable Type: 2 x 1.5mm ² PV wire Cable Length: 1,000mm (Male/Female) Cable Type: 2 x 4.0mm ² PV wire Cable Length: 1,000mm (Male/Female) Connectors: overmolded Y-Sol4 Certified: acc. to EN50521 (TÜV) Y-SOL4 snap locking connection release tool	Y-SOL4AOV-M1-1U-1000-GMA Y-SOL4AOV-F1-1U-1000-GMA Y-SOL4AOV-M1-4T-1000-GMA Y-SOL4AOV-F1-4T-1000-GMA Y-SOL4-RELEASE-TOOL-SR

STANDARD PRODUCTS FOR J-BOXES WITH CABLE ASSEMBLY

Product	Technical Details	Part Number Details
 Y-SOL Universal J-Box (Male) (Female)	Configuration: 4 Spring Contacts / 3 Diodes Cable Type: 2 x 4.0mm ² PV wire Cable Length: 1,000mm (Male/Female) Connectors: overmolded Y-Sol4 Certified: acc. to TÜV VDE 126-5  <p style="text-align: center;"><i>Orientation for ribbon connection</i></p>	Y-SOL4BSI34D14TM10F10GMA with double layer PCB configuration  <p style="text-align: right;"><i>Layout for ribbon connection</i></p> Y-SOL4BSI34S14TM10F10GMA with single layer PCB configuration  <p style="text-align: right;"><i>Layout for ribbon connection</i></p>
 Y-SOL Thin Film J-Box (Male) (Female)	Configuration: 2 Spring Contacts Cable Type: 2 x 1.5mm ² PV wire Cable Length: 600mm (Male) 800mm (Female) Connectors: overmolded Y-Sol4 Certified: acc. to TÜV VDE 126-5	Y-SOL4BTFL121UM06F08GMA with Diode Y-SOL4BTFL021UM06F08GMA without Diode  <p style="text-align: right;"><i>Layout for ribbon connection</i></p>

Product Specifications

Universal J-Box



Dimensions (LxWxH)	111 x 140 x 26,5
Mechanical rating	IP67
Protection class	II
Number of diodes	Optional with up to 6 bypass diodes
Number of ribbons	2 - 8
Ribbon width	max. 7.5mm
Conductor cross section	2.5mm ² , 4.0mm ² and 6.0mm ²
Voltage rating	1.000V DC
Current rating	up to 20A depending on J-Box configuration

Thin Film J-Box



Dimensions (L x W x H)	Short Type: 60 x 70 x 12 Long Type: 68 x 70 x 12
Mechanical rating	IP65
Protection class	II
Number of diodes	Optional with one bypass diode
Number of ribbons	2
Ribbon width	max. 10mm
Conductor cross section	1.5mm ² , 2.5mm ² and 4.0mm ²
Voltage rating	1.000V DC
Current rating	up to 7A depending on J-Box configuration

Y-SOL3



Y-SOL3 T-Junction



Y-SOL4



	Y-SOL3	Y-SOL3, T-Junction	Y-SOL4
Diameter (Y-SOL3) / Height (Y-SOL4)	Ø13.5mm	Ø17mm	Height = 12mm
Mechanical rating	IP68 (plugged) and IP20 (unplugged)	IP68 (plugged) and IP20 (unplugged)	IP68 (plugged) and IP20 (unplugged)
Protection class	II	II	II
Conductor cross section	1.5mm ² , 2.5mm ² or 4.0mm ²	6.0mm ²	1.5mm ² , 2.5mm ² or 4.0mm ²
Contact resistance	< 5mΩ (typ. value 1mΩ up to 3mΩ)	< 5mΩ (typ. value 1mΩ up to 3mΩ)	< 5mΩ (typ. value 1mΩ up to 3mΩ)
Voltage rating	1,000 V DC acc. to TÜV EN50521 600 V DC acc. to UL 1703	1,000 V DC acc. to TÜV EN50521	1,000 V DC acc. to TÜV EN50521
Current rating	30A (based on 4mm ² cross section)	30A (based on 6mm ²)	30A (based on 4mm ² cross section)
Extraction force	≥ 89 Newton	≥ 89 Newton	≥ 89 Newton
Cable pull-out force	≥ 350 Newton	≥ 350 Newton	≥ 350 Newton