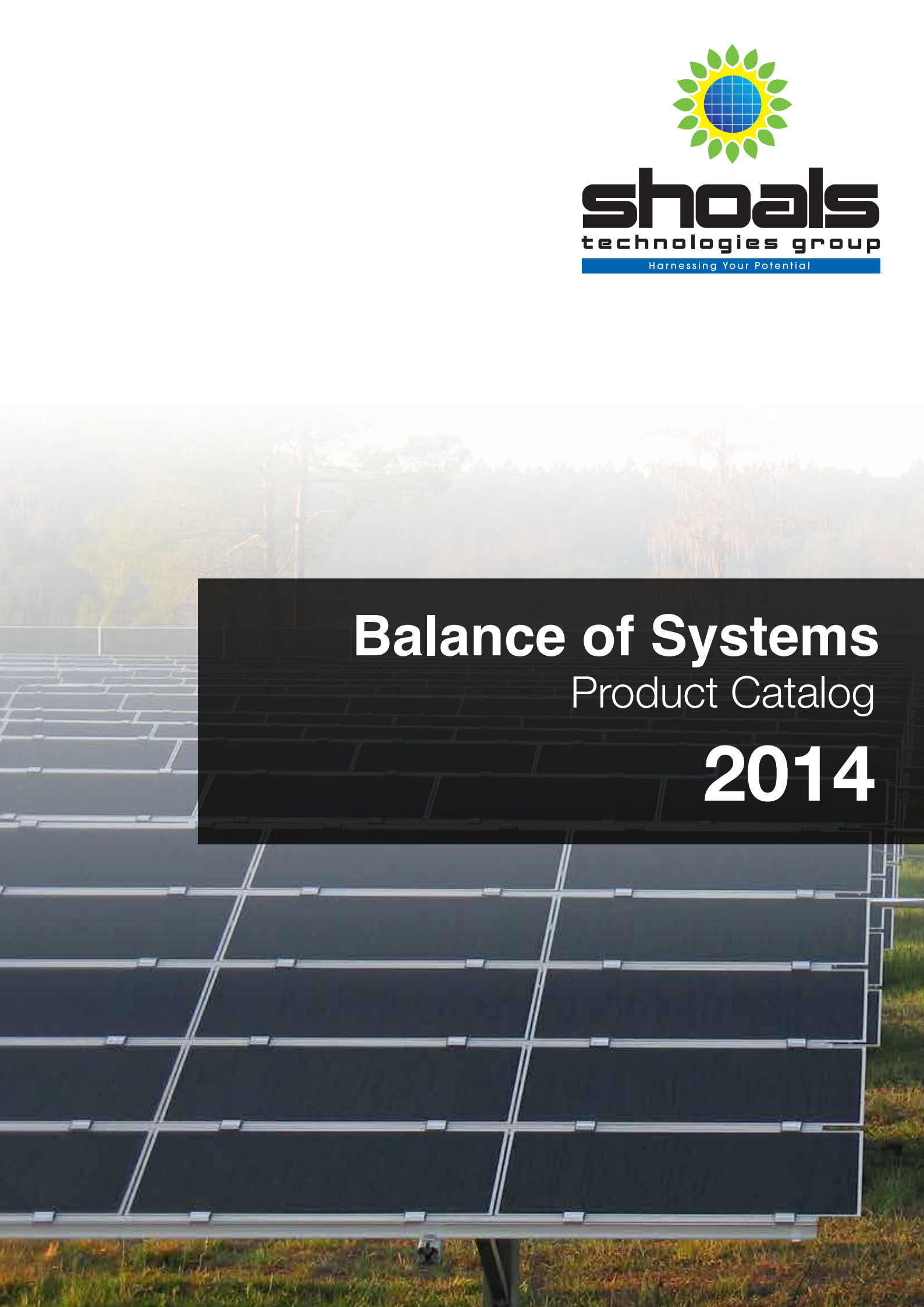
shoals
technologies group
Harnessing Your Potential



Balance of Systems

Product Catalog

2014

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Company Profile

Shoals Technologies Group
Headquarters - Portland, TN

COMPANY PROFILE

Shoals Technologies Group ("Shoals"), is a leading manufacturer of balance of systems solutions. Through innovation and diversification Shoals has grown exponentially since its founding in 1996. Shoals maintains a diverse portfolio of PV balance of systems ("BOS") products, including custom harness solutions, combiner/re-combiner boxes, master fuse boxes, junction boxes, PV wire, in-line fuses, racking and PV monitoring solutions.

CERTIFICATIONS

- TUV certified
- UL Certified: UL508A, UL1741, UL3730, UL4248, UL6703, UL9703
- ISO 9001:2008 certified
- ETL Certified: UL1741, CSA C22.2-107.1, UL6703, UL9703

QUICK FACTS

- STG currently produces over 1.5 million assemblies per week, offering our clients the expertise of distinguished design, and the flexibility of full, semi, and manual production modes.
- Shoals' state of the art facilities currently have the capacity to output over 16 MW per day.
- STG currently holds over 68 percent of the North American balance of systems market and a significant percentage internationally with customers in Canada, Germany, China, Spain, and India.

STANDARDS FOR EXCELLENCE

Shoals Technologies Group maintains the highest standards for excellence. It is this standard that has and continues to help Shoals establish relationships with many of the top integrators and project developers in the solar industry. With solutions second to none in the marketplace, Shoals has had the privilege to be part of some of the largest private and government PV projects to date.

Global Headquarters

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china@shoals.com

High-Current Combiner Boxes

Shoals' High-Current Combiner Boxes have the same standard features Shoals' Combiners are known for, but also feature built-in protection in the event of abnormally high current. These UL approved combiner boxes can be customized as needed or purchased off-the-shelf, in either metal or fiberglass, with as many fuses as needed for your PV installation.

Features

- Finger-safe fuse holders
- Reinforced, plated busbars
- Listed to UL1741
- Non-conductive NEMA 4X enclosure
- 5-year warranty standard on all models
- 600VDC UL Listed

Options

- Available in Metal or Fiberglass
- Customizable to meet installation requirements
- Available with SNAPShot™ Wireless Monitoring

Technical Information

	STG.CBRH.3	STG.CBRH.6	STG.CBRH.12
Voltage Rating (VDC)	600	600	600
Maximum DC Current (A)	90	132	240
Maximum Continuous Current (A)	57.7	84.5	154
Maximum Voltage (VDC)	600	600	600
Positive Output Wire Size (AWG)	6-250MCM	6-250MCM	6-300MCM
Negative Output Wire Size (AWG)	2/0-14	6-300MCM	6-300MCM
Input Wire Size (AWG)	6-14	6-14	6-14
Enclosure Rating	NEMA 4X	NEMA 4X	NEMA 4X
Number of Fuse Poles	3	6	12
Maximum Input Fuse Rating (A)	30	30	20
Operating Temperature (˚C)	-40 to 50	-40 to 50	-40 to 50

* Product design and specification subject to change or modification without notice.

UL listed combiner boxes with built-in protection in the event of abnormally high current

Combiner Dimensions

	STG.CBRH.3	STG.CBRH.6	STG.CBRH.12
A	202	210	304
B	202	240	304
C	116	99	133

* Units in mm

c UL us LISTED

5 year warranty

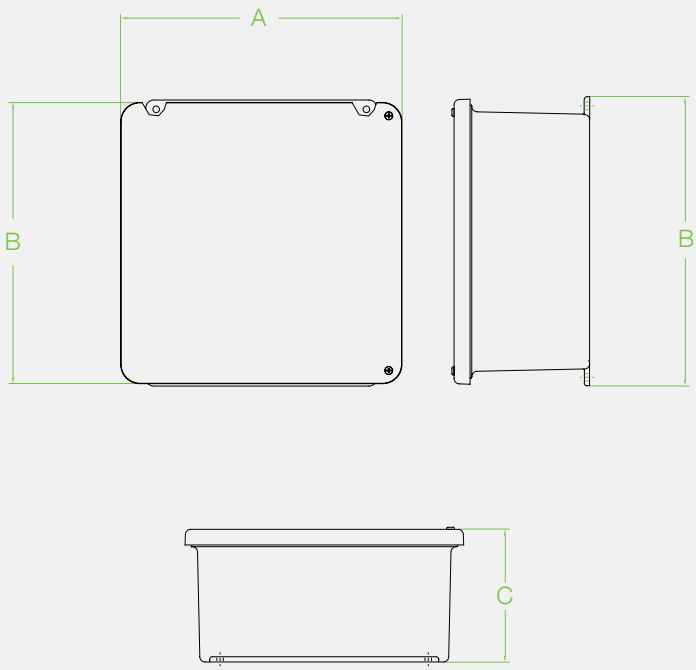
AVAILABLE WITH SNAPshot™ wireless monitoring

made in USA

made in china

*Patent Pending

Dimensional Drawing



Feature Locations

1. Negative (-) inputs
2. Negative (-) output
3. Positive (+) output
4. Positive (+) inputs / fuse holders
5. Reinforced, plated busbar
6. Ground
7. Fiberglass or metallic enclosure

Slimline series
Combiner Boxes

The next evolution of combiner boxes, optimizing both cost and layout without sacrificing quality or performance. The new SlimLine combiner box series from Shoals provides both a lighter weight and more compact design than ever before.

Features

- UL98B listed DC disconnect
- Finger-safe fuse holders
- Oxygen-free, plated busbars
- Listed to UL1741 & CSA 22.2
- NEMA 4X enclosure
- 5-year warranty standard on all models

Options

- SNAPShot™ wireless monitoring
- Surge suppression
- Indicating fuse holders

Technical Information

	STG.CBC.6.BMDRN0010	STG.CBC.12.BJCHN0111	STG.CBC.18.BJCDN0110
Voltage Rating (VDC)	600 CSA / 1000 UL	600 CSA / 1000 UL	600 CSA / 1000 UL
Maximum DC Current (A)	180	200	250
Maximum Input Current per String (A)	30	30	30
Maximum Voltage (VDC)	1000	1000	1000
Max. Positive Output Wire Size (AWG)	350MCM	300MCM	600MCM
Max. Negative Output Wire Size (AWG)	350MCM	300MCM	600MCM
Max. Input Wire Size (AWG)	6	6	6
Enclosure Rating	NEMA 4X	NEMA 4X	NEMA 4X
Number of Fuse Poles	6	12	18
Maximum Input Fuse Rating (A)	30	30	30
Operating Temperature (˚C)	-40 to 50	-40 to 50	-40 to 50

* Product design and specification subject to change or modification without notice.

Reduced enclosure sizes and optimized configurations providing a lighter, more compact, and cost effective product

Combiner Dimensions

	STG.CBC.6	STG.CBC.12	STG.CBC.18
A	445	686	610
B	393	539	508
C	158	252	203

* Units in mm

5 year warranty

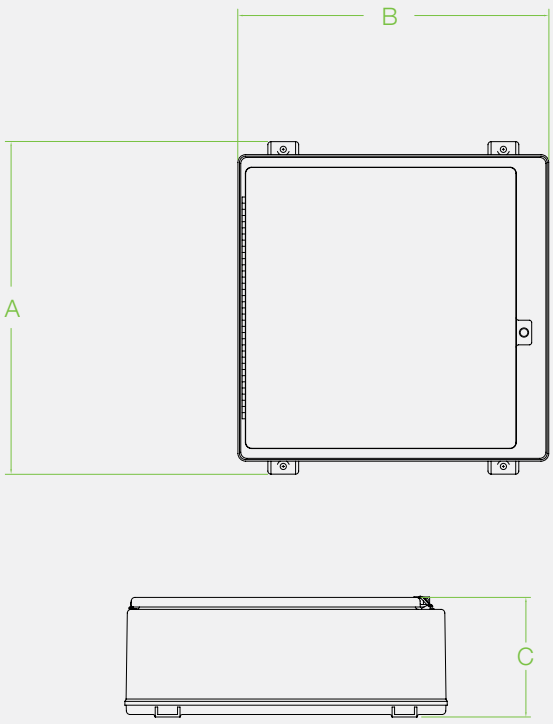
AVAILABLE WITH SNAPshot™ wireless monitoring

made in USA

made in china

*Patent Pending

Dimensional Drawing



Feature Locations

1. Positive (+) inputs / fuse holders
2. Positive (+) output
3. Negative (-) inputs / Negative (-) output
4. Ground
5. Reinforced, plated busbar
6. DC Disconnect (Optional)
7. Surge Suppression (Optional)
8. SNAPShot™ Sensor Control Module (Optional)
9. SNAPShot™ Power Supply (Optional)
10. SNAPShot™ Wireless Radio (Optional)
11. Fiberglass or metallic enclosure

Commercial Combiner Boxes

Shoals' Commercial Combiner Boxes provide the ideal low cost, high quality solution for commercial PV installations. Available in both pre-designed UL1741 certified or customizable configurations, Shoals' Commercial Combiner Box can adapt to any configuration's requirements.

Features

- Finger-safe fuse holders
- Reinforced, plated busbars
- Lockable enclosures
- Listed to UL1741
- Non-conductive NEMA 4X enclosure
- 5-year warranty standard on all models

Options

- Available in Metal or Fiberglass
- Customizable to meet installation requirements
- Available with SNAPShot™ Wireless Monitoring

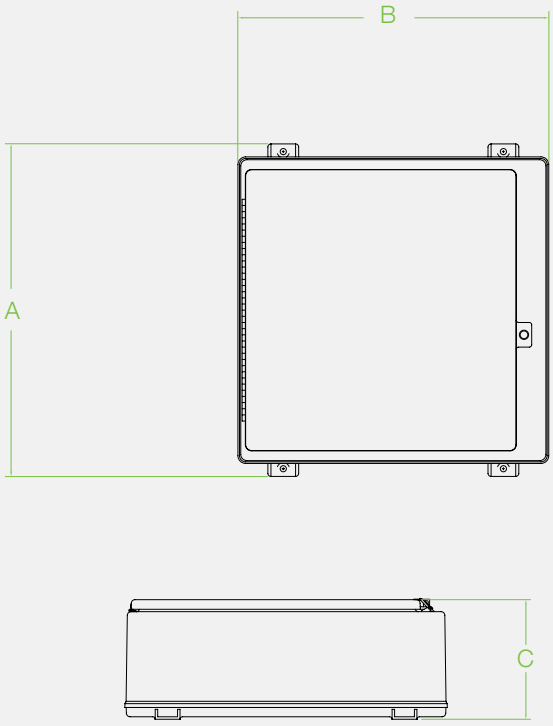
Technical Information

	STG.CBC.13.BJAJN0010_400	STG.CBC.24.BJAHNM0111	STG.CBC.32.BIACNM0010
Voltage Rating (VDC)	1000	1000	1000
Maximum DC Current (A)	390	360	400
Maximum Input Current per String (A)	30	15	12-30
Maximum Voltage (VDC)	1000	1000	1000
Max. Positive Output Wire Size (AWG)	350MCM	600MCM	600MCM
Max. Negative Output Wire Size (AWG)	350MCM	600MCM	600MCM
Max. Positive Input Wire Size (AWG)	6	6	6
Max. Negative Input Wire Size (AWG)	4	1/0	4
Enclosure Rating	NEMA 4X	NEMA 4	NEMA 4X
Number of Fuse Poles	13	24	32
Maximum Input Fuse Rating (A)	30	15	30
Operating Temperature (°C)	-40 to 50	-40 to 50	-40 to 50

* Product design and specification subject to change or modification without notice.

Providing the ideal low cost, high quality solution for commercial photovoltaic installations.

Dimensional Drawing



Combiner Dimensions

	STG.CBC.13	STG.CBC.24	STG.CBC.32
A	849	939	939
B	660	825	825
C	304	304	304

* Units in mm

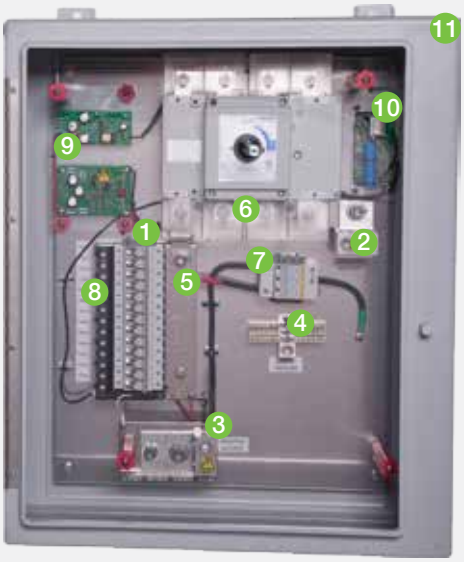
5 year warranty

AVAILABLE WITH SNAPshot™ wireless monitoring

made in USA

made in china

*Patent Pending



Feature Locations

1. Positive (+) inputs / fuse holders
2. Positive (+) output
3. Negative (-) inputs / Negative (-) output
4. Ground
5. Reinforced, plated busbar
6. DC Disconnect (Optional)
7. Surge Suppression (Optional)
8. SNAPShot™ Sensor Control Module (Optional)
9. SNAPShot™ Power Supply (Optional)
10. SNAPShot™ Wireless Radio (Optional)
11. Fiberglass or metallic enclosure

Utility-Scale Combiner Boxes

Shoals' Commercial Combiner Boxes provide the ideal low cost, high quality solution for commercial PV installations. Available in both pre-designed UL1741 certified or customizable configurations, Shoals' Commercial Combiner Box can adapt to any configuration's requirements.

Features

- Finger-safe fuse holders
- Reinforced, plated busbars
- Lockable enclosures
- Listed to UL1741
- Non-conductive NEMA 4X enclosure
- 5-year warranty standard on all models

Options

- Available in Metal or Fiberglass
- Customizable to meet installation requirements
- Available with SNAPShot™ Wireless Monitoring

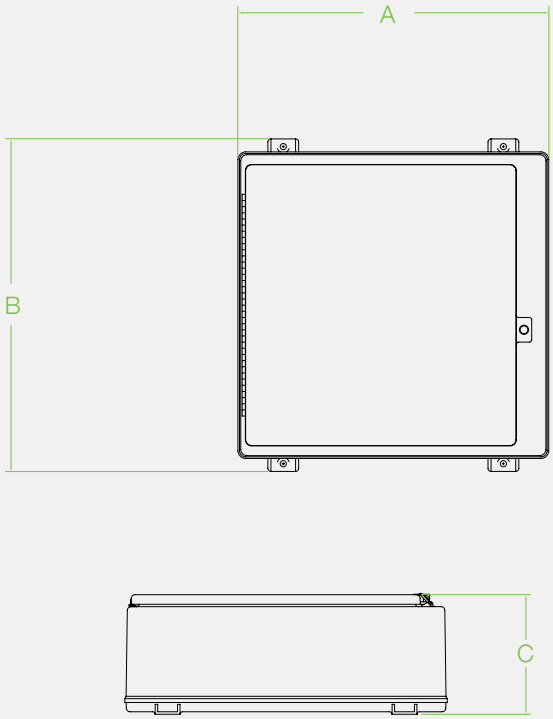
Technical Information

	STG.CBU.24	STG.CBU.36.HC-M*	STG.CBU.48
Voltage Rating (VDC)	1000	1000	1000
Maximum DC Current (A)	720	540	720
Maximum Continuous Current (A)	576	346	576
Max. Positive Input Wire Size (AWG)	14-6	14-6	14-6
Max. Negative Input Wire Size (AWG)	14-6	14-6	14-6
Output Wire Size (AWG)	2-600MCM	2-600MCM	2-600MCM
Enclosure Rating	NEMA 4X	NEMA 4	NEMA 4X
Number of Fuse Poles	24	36	48
Maximum Input Fuse Rating (A)	30	20	15
Operating Temperature (˚C)	-40 to 50	-40 to 50	-40 to 50

* Product design and specification subject to change or modification without notice.
* Denotes certified part number

Used in many of the world's largest photovoltaic installations, providing an unmatched level of reliability.

Dimensional Drawing



Combiner Dimensions

	STG.CBU.24	STG.CBU.36	STG.CBU.48
A	762	762	762
B	915	610	915
C	203	254	203

* Units in mm

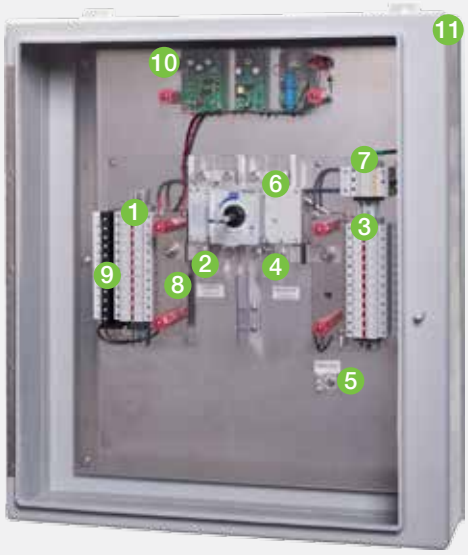
5 year warranty

AVAILABLE WITH SNAPshot™ wireless monitoring

made in USA

made in china

*Patent Pending



Feature Locations

1. Positive (+) inputs / fuse holders
2. Positive (+) output
3. Negative (-) inputs
4. Negative (-) output
5. Ground
6. DC Disconnect (Optional)
7. Surge Suppression (Optional)
8. Reinforced, plated busbar
9. SNAPShot™ Sensor Control Module (Optional)
10. SNAPShot™ Power Supply & Wireless Radio (Optional)
11. Fiberglass or metallic enclosure

SNAPshot™

Wireless Monitoring

Built upon battlefield proven, military grade technology, SNAPShot™ Wireless Monitoring is based on a low power, high performance, secure mesh network that can recover from any issues, large or small, encountered in the field.

Features

- 600V or 1000V capability
- Up to 30 amps per string
- Powered from DC busbar
- Supports external plug-ins for additional features
- No battery change required
- Proprietary wireless mesh protocol
- Maximum ranges exceeding 3 miles
- FCC certified on all 16 channels
- IEEE 802.15.4 low-power mesh protocol
- AES-128 encryption
- Adjustable polling frequency
- Instant-on, self-detecting & self-healing
- 5-year warranty standard on all models

Measured Variables

- Temperature (C°)
- Current (A)
- Voltage (VDC)

Available Accessories

- Modbus Interface
- External glass temperature sensor
- Custom SCADA adapters

made in USA

made in china

5 year warranty

Current Accuracy

- 30A Module - (+/- 1%)
- 15A Module - (+/- 1%)
- 10A Module - (+/- 1%)
- 3A Module - (+/- 1%)

Current Range

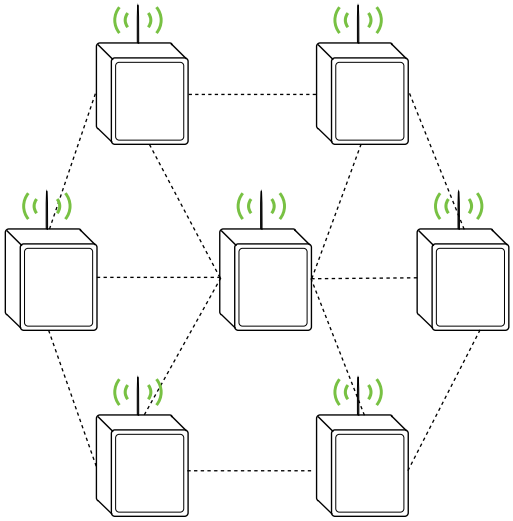
- 30A Module - (2A - 30A)
- 15A Module - (1A - 15A)
- 10A Module - (0A - 10A)
- 3A Module - (0A - 2.5A)

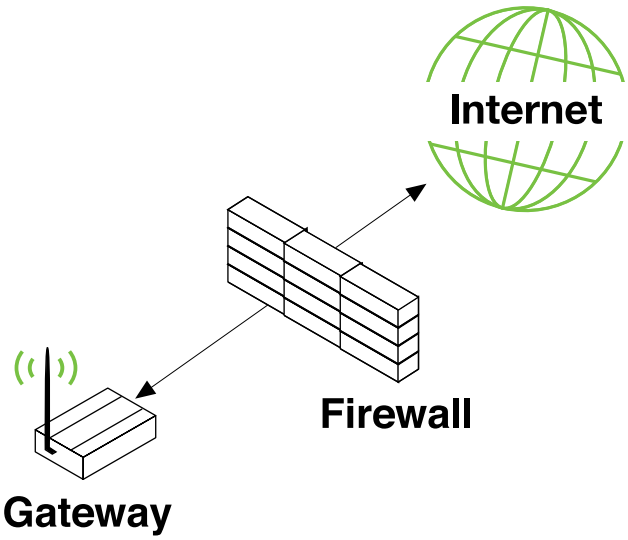
Voltage & Temp Accuracy

- 1V - 1020V - (+/- 1%)
- -40°C to 90°C - (+/- 2°C)

Self-Detecting, Self-Healing Wireless Network

In the SNAPShot™ wireless network there are no single points of failure, any node can talk directly to any other node that is in range, and any node can talk indirectly to any other node via intermediate nodes. These routes between nodes do not have to be pre-configured by the user, as the networks are self-forming (the network establishes itself). When a new node is powered-up, it is automatically integrated into the network and becomes fully operational in a fraction of a second. Furthermore, SNAPShot™ wireless networks are self-healing; if a node fails for any reason, other nodes will automatically route signals around the failed node.





Technical Information

	STG.CBC.12.S	STG.CBC.14.S	STG.CBC.16.S	STG.CBC.24.S	STG.CBC.32.S
Voltage Rating (VDC)	600	600	600	1000	1000
Maximum DC Current (A)	240	280	320	480	640
Max. Continuous Current (A)	154	179	205	308	410
Max. Positive Input Wire Size (AWG)	6	8	8	8	8
Max. Negative Input Wire Size (AWG)	4	4	2	2	2
Ouput Wire Size (AWG)	4-350MCM	4-350MCM	4-350MCM	4-350MCM	4-350MCM
Overall Dimensions	20” x 24” x 8”	20” x 24” x 8”	20” x 24” x 8”	36” x 30” x 10”	36” x 30” x 10”
Enclosure Rating	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X
Number of Fuse Poles	12	14	16	24	32
Max. Input Fuse Rating (A)	30	30	30	30	30
Operating Temperature (C°)	-40 to 50	-40 to 50	-40 to 50	-40 to 50	-40 to 50

* Product design and specification subject to change or modification without notice.

*Patent Pending

Interconnect System™
Branch Connectors

Shoals' patented Interconnect System™ and home run harnesses reduce the specialized labor required in your installation, making the integration of solar panels a breeze. Whether purchased separately or pre-installed in the combiner box to streamline installation, Shoals home-run harnesses and Interconnect System™ are perfect for any PV project.

Features

- Resistance Welded Joints
- Patented chemically bonded overmolding process
- Custom manufactured to the installation
- Pre-labeled to decrease installation time and errors
- Certified to UL9703 for 600V & 1000V systems

Benefits

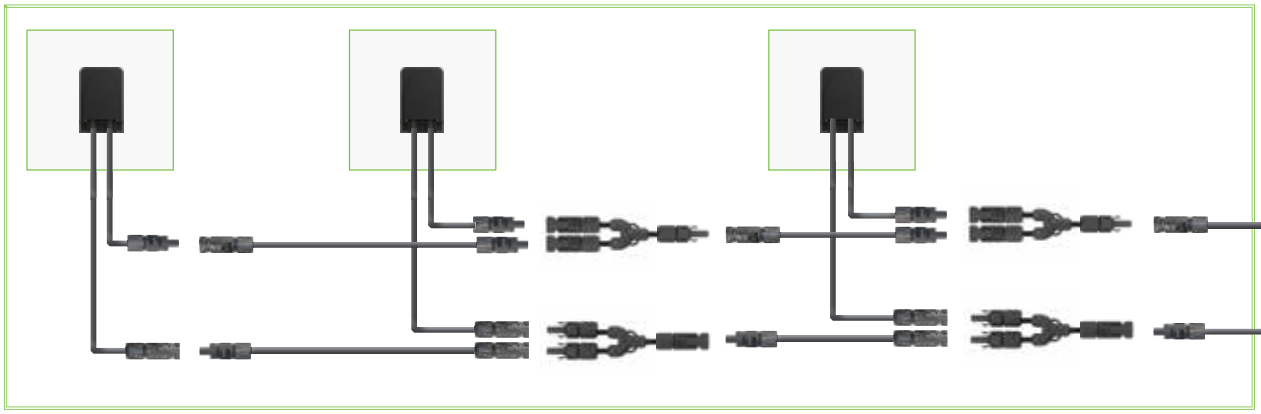
- Reduced potential points of failure
- Reduced maintenance costs
- Line failures reduced over 90%
- Average 20% reduction in labor cost
- Average 50% reduction in material cost

Technical Information

	Interconnect System™
Maximum Voltage (VDC)	1000
Maximum DC Current (A)	20 (12AWG) / 30A (10AWG, 8AWG)
Operating Temperature (˚C)	-40 to 90
Minimum Pull Out Force (lbf)	130
Wet Hi-Pot Leakage Current (µA)	< 1

* Product design and specification subject to change or modification without notice.

Usage Example



*Patent Pending

Available Connectors

Multi-Contact

MC

STÄUBLI GROUP

YAMAICHI ELECTRONICS

lumberg

SMK

Amphenol

TE connectivity

Example: STG.ICT.12.12

Example: STG.ICY.10.12

Example: STG.ICX.8.10

made in USA

made in china

PV Wire Assemblies
Jumpers & Whips

Shoals' pre-manufactured jumper and whip assemblies help increase the efficiency and reduce the costs associated with PV installation. Using state of the art machinery and the highest QC standards available ensure all assemblies are consistent and conform to customer specifications.

Features

- Compatible will all module types
- IP67 and IP68 rated depending on connector type
- UV and ozone resistant
- Rated for direct burial
- Temperature range -40 ˚C to +90 ˚C
- Bundling and spooling available
- Custom labeling and color coding options available

Benefits

- 100% factory tested
- Reduces installation time and cost
- Increased reliability
- Customizable length and wire sizes
- Custom connector options allow for interseries connectivity

Whip & Jumper Assemblies Product Number Matrix

STG - [ ] **-** [ ] [ ] [ ] [ ] [ ] **-** [ ] [ ]

Type
HRW = Whip
HRJ = Jumper

Assembly End 1 Connector Type
M3M = MC3 Male
M3F = MC3 Female
M4M = MC4 Male
M4F = MC4 Female
L3M = LC3 Male
L3F = LC3 Female
L4M = LC4 Male
L4F = LC4 Female
Y3M = Y-Sol 3 Male
Y3F = Y-Sol 3 Female
Y4M = Y-Sol 4 Male
Y4F = Y-Sol 4 Female
H3M = H3 Male
H3F = H3 Female
H4M = H4 Male
H4F = H4 Female
T4M = SolarLok® Male
T4F= SolarLok® Female

Wire AWG
14 = 14 AWG
12 = 12 AWG
10 = 10 AWG

Voltage Rating
6 = 600 VDC
1 = 1000 VDC
2 = 2000 VDC

Certifications
1 = UL
2 = TUV
3 = UL & TUV

Jacket Color
B = Black
BW = Black/White Stripe
W = White
R = Red

Assembly End 2 Connector Type
Connector (Jumpers)
M3M = MC3 Male
M3F = MC3 Female
M4M = MC4 Male
M4F = MC4 Female
L3M = LC3 Male
L3F = LC3 Female
L4M = LC4 Male
L4F = LC4 Female
Y3M = Y-Sol 3 Male
Y3F = Y-Sol 3 Female
Y4M = Y-Sol 4 Male
Y4F = Y-Sol 4 Female
H3M = H3 Male
H3F = H3 Female
H4M = H4 Male
H4F = H4 Female
T4M = SolarLok® Male
T4F= SolarLok® Female

Finish (Whips)
C = Cut Wire
S = Partial Strip

Length (ft)
XXX = 1-999

Available Connectors

Multi-Contact

MC

STÄUBLI GROUP

YAMAICHI ELECTRONICS

lumberg

SMK

Amphenol

TE connectivity

Solar Jumper Assemblies

Solar Whip Assemblies

made in USA

made in china

Flexline™ Junction Box

Originally designed for flexible PV modules, the Flexline Junction Box provides an unparalleled adhesion standard to the back of all module types. The Flexline Junction Box's slim 20 mm profile allows for not only easy handling, but reduced material and installation costs. These cost reductions do not come at the expense of durability, however, as the Flexline Junction Box is the Shoals' standard IP67 with IP68 following testing on the module. Additionally, the Flexline Junction Box is available with customizable wire lengths and connectors, and is suitable for 600V or 1000V systems, providing a universal solution for all of today's photovoltaic modules.

Features

- Suitable for flexible or rigid modules
- Suitable for 600V or 1000V systems
- Low profile, 20mm, design to reduce material and installation costs
- Customizable wire lengths
- IP67 protection rating, IP68 attached to module
- Customizable connector solutions

Part #: STG.FL.JB.21

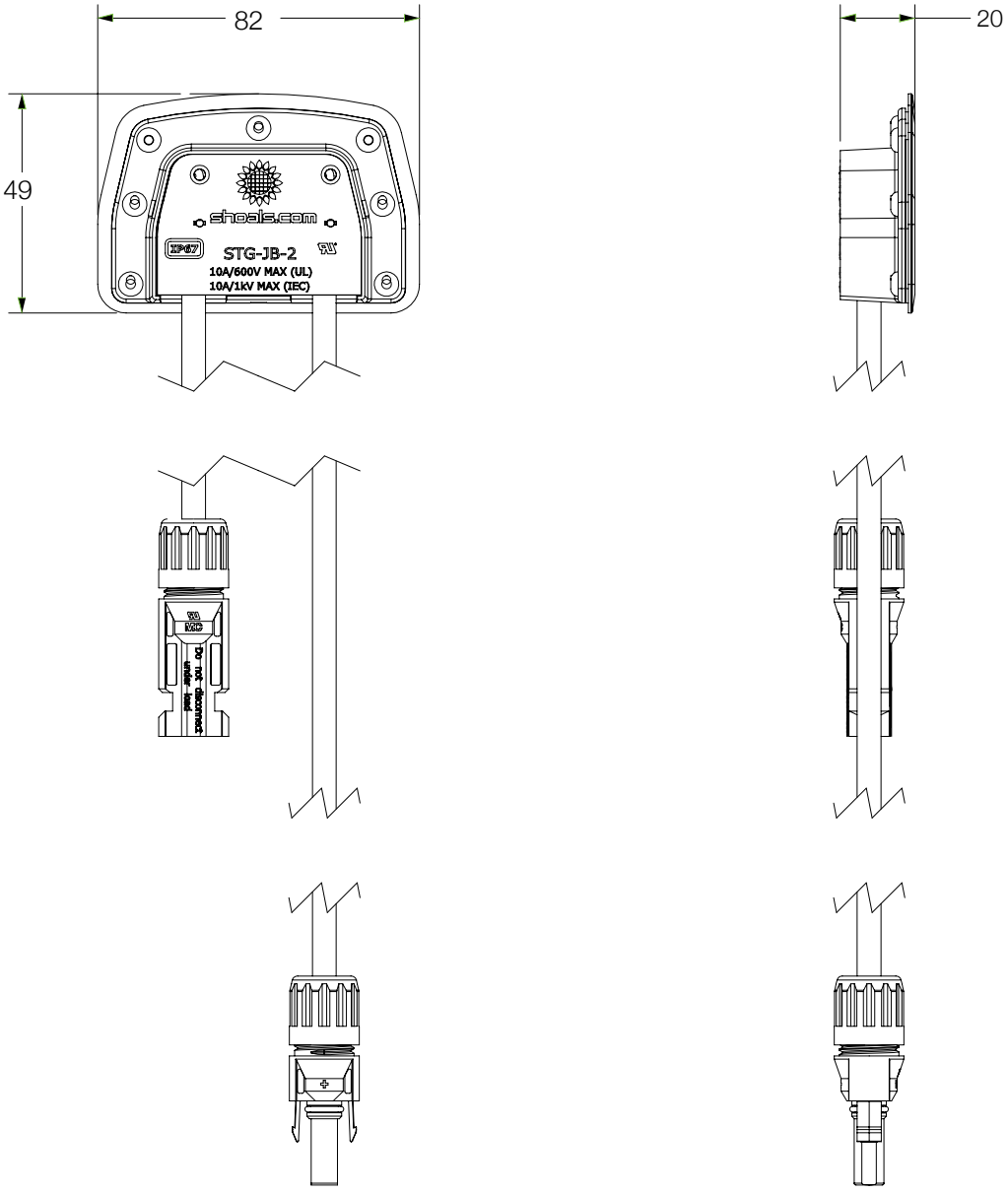
Technical Information

	STG.FL.JB.21 (FG1120)
Rated Current (A)	25
Rated Voltage (VDC)	600 UL / 1000 IEC
Contact Resistance	< 0.1mΩ
Diodes	Customizable
Installation	Adhesive Tape
Connection of Contact Ribbons	Soldering
Insulation Material	PPE/PS
Degree of Protection	IP67
Safety Class	II
Flame Class	5VA
Ambient Temperature Range (°C)	-40 to 90

* Product design and specification subject to change or modification without notice.

Benefits

- Removes requirement for curing time on silicone when installing to module
- Lower volume, weight and profile when compared to similar competing products
- Fewer mechanical parts creating a lower risk of potential failure
- Most current global quality standards are met to ensure the long-life in the harshest environments.
- Maximum thermal efficiency ensures lower heat generation and improved dissipation



*Patent Pending

Shoals Connect™ T1 Junction Box

The Shoals Connect™ T1 Junction Box features a low profile (only 17.5mm) saving material requirements for solar industry OEMs when connecting the foils on their solar panels. In addition, the overall dimensions have been optimized to reduce the bonding material needed for mounting on the back sheet of the module, while still allowing for diode installation. Benefiting from its built in strain relief feature, the Shoals Connect™ Junction Box can be used in a variety of installations without the concern of damage, making it the premiere junction box available today for rigid modules.

Features

- Built-in strain relief feature to protect wire
- Low profile design to reduce material and installation costs
- Customizable wire lengths
- IP67 protection rating, IP68 attached to module
- Customizable connector solutions

Part #: STG.SC.JB.32

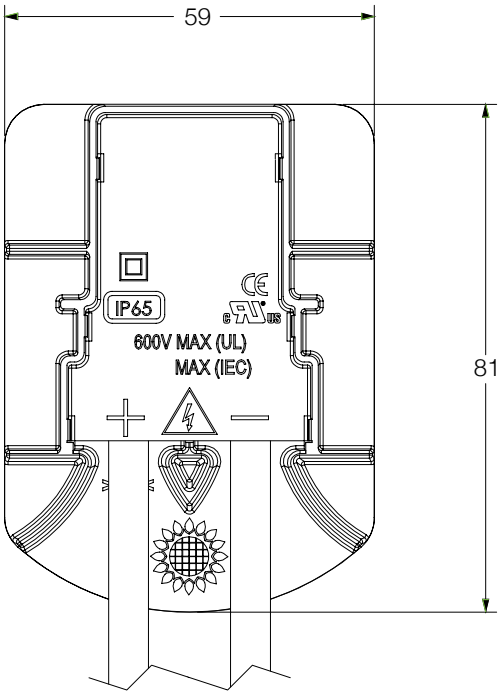
Technical Information

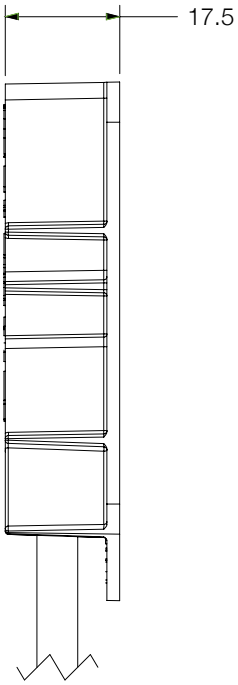
	STG.SC.JB.32 (STG-JB-4)
Rated Current (A)	4
Rated Voltage (VDC)	600 UL / 1000 IEC
Contact Resistance	< 0.1mΩ
Diodes	Customizable
Installation	Adhesive Tape
Connection of Contact Ribbons	Soldering
Insulation Material	PPE/PS
Degree of Protection	IP67
Safety Class	II
Flame Class	5VA
Ambient Temperature Range (°C)	-40 to 90

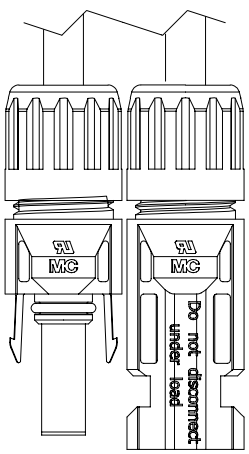
* Product design and specification subject to change or modification without notice.

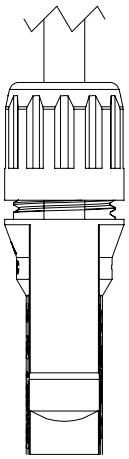
Benefits

- Rugged design ensures long service life
- Ultra slim footprint reduces materials and costs
- Adjustable wire leads increases design flexibility
- Strain relief protection for wire leads
- Variety of connector choices









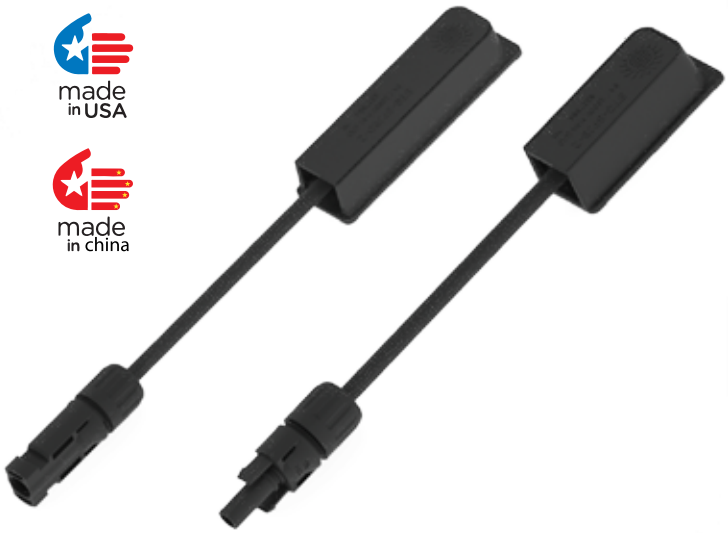
*Patent Pending

Shoals Connect™ CSP1 Junction Box

The Shoals Connect™ CSP1 Junction Boxes feature an ultra slim profile saving material for solar industry OEMs when connecting the ribbons on their solar panels. The CSP1's design allows module manufacturers increased flexibility when compared with the standard single footprint J-Boxes. In addition, the overall dimensions have been optimized to reduce the bonding material needed for mounting on the back sheet of the module. CSP1's multi-platform design is an ideal choice for both crystalline and thin-film solar technologies.

Features

- Single foil termination allows for decentralized termination location
- Low profile to reduce material and installation costs
- Customizable wire lengths
- IP67 protection rating, IP68 attached to module
- Customizable connector solutions



Part #: STG.SPJBD.2

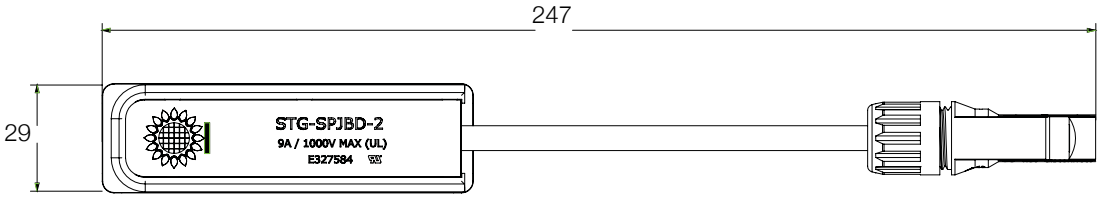
Technical Information

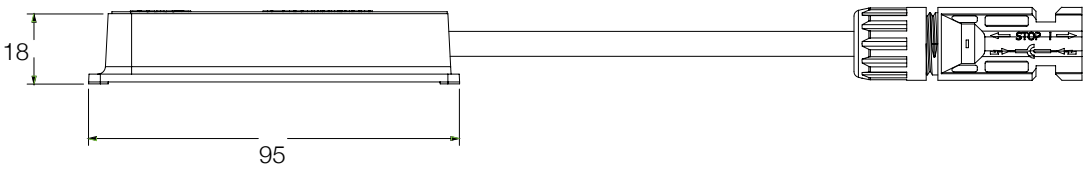
	STG.SPJB.2	STG.SPJBD.2
Rated Current (A)	20	9 or 12
Rated Voltage (VDC)	1000	1000
Contact Resistance	< 0.1mΩ	< 0.1mΩ
Diodes	No	Yes
Installation	Adhesive	Adhesive
Connection of Contact Ribbons	Soldering	Soldering
Insulation Material	PPO	PPO
Degree of Protection	IP67	IP67
Safety Class	II	II
Flame Class	5VA	5VA
Ambient Temperature Range (°C)	-40 to 90	-40 to 90

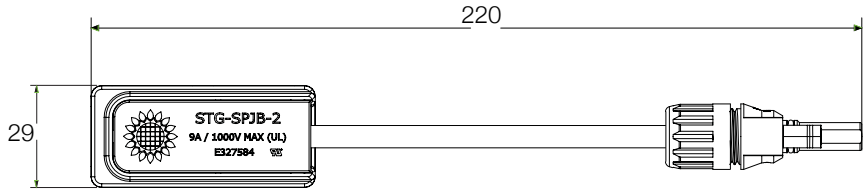
* Product design and specification subject to change or modification without notice.

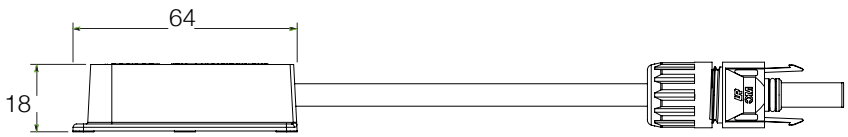
Benefits

- Increased flexibility for module designers
- Ultra slim profile saves time and material cost
- Increased design functionality
- Rugged design ensures long service life
- Optional diode increases design flexibility









*Patent Pending

Junction Boxes

MultiLink Junction Box

The MultiLink™ junction box system features the only universal interface compatible with accessory modules featuring accesories from an extensive catalog of today's leading manufacturers of PV electronics. Available with both a standard junction box accesory or one featuring electronics, the MultiLink™ junction box allows for the end customer to have exactly the features desired and the module manufacturer can still offer a "smart" module without having to integrate electronics into production. These features allow for lower production, installation and engineering costs while providing an unmatched level of flexibility and lifetime upgradability.

Features

- Universal interface with all leading PV electronics
- Ensures "smart" module is "future proof"
- Eliminates manufacturer's risk of integrating a single power electronic into the module
- Field replaceable accessory modules
- Available with or without diodes
- Lower installation and engineering cost
- Can ship as standard junction box with optional accessory module.

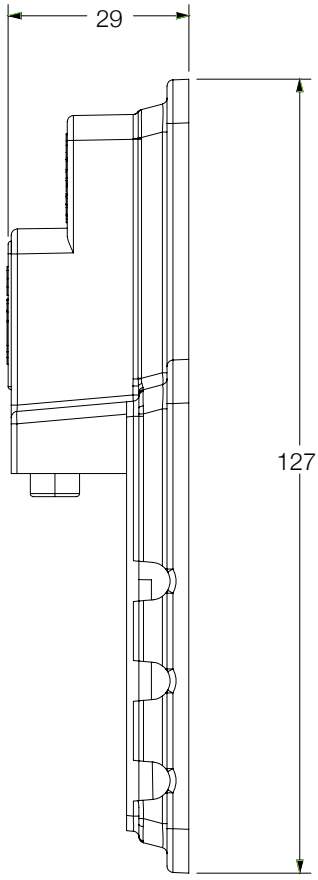
Part #: STG.MLB.2D

Technical Information

	STG.MLB.2	STG.MLB.2D
Rated Current (A)	10	10
Rated Voltage (VDC)	600 UL / 1000 IEC	600 UL / 1000 IEC
Contact Resistance		
Diodes	No	Yes
Installation	Silicon Adhesive	Silicon Adhesive
Connection of Contact Ribbons	Soldering	Soldering
Insulation Material	PPO	PPO
Degree of Protection	IP67	IP67
Safety Class	II	II
Flame Class	5VA	5VA
Ambient Temperature Range (°C)	-40 to 90	-40 to 90

* Product design and specification subject to change or modification without notice.

THE ONLY CERTIFIED UNIVERSAL INTERFACE FOR PV MODULES.



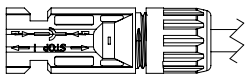
*Patent Pending

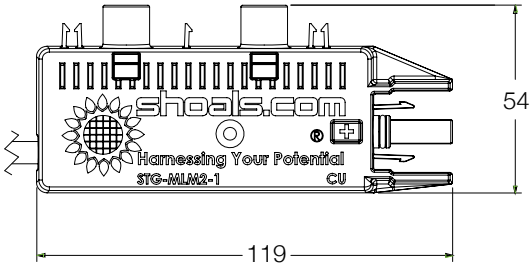
Junction Boxes

MultiLink Junction Box

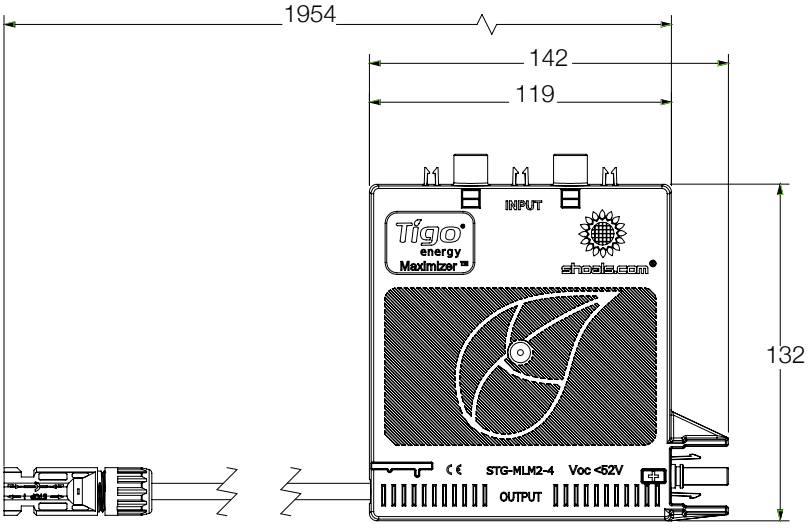
Available accessory modules from today's leading PV electronics manufacturers.

shoals technologies group



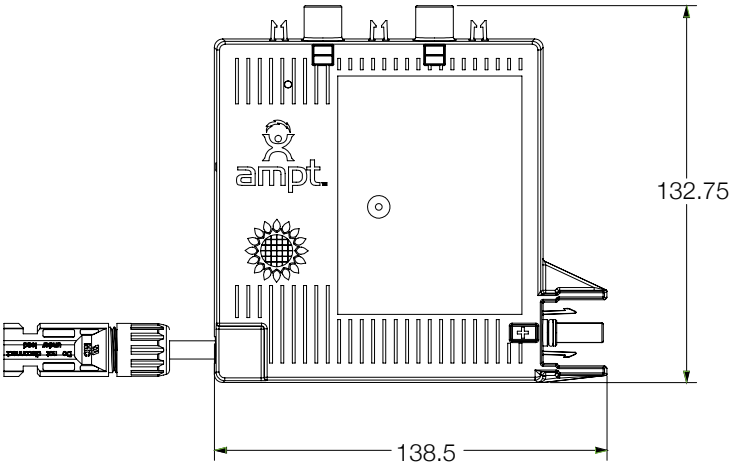


Tigo® energy

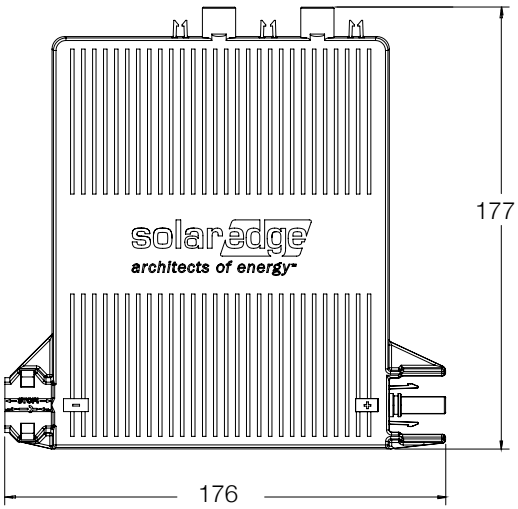


The MultiLink™ junction box eliminates the risks of module integrated power electronics by giving the module a universal and interchangable interface compatible with all of the top electronics manufacturers currently available.

ampt



solaredge
architects of energy



Shoals Connect™ In-Line Fuses

Shoals' In-Line Fuses reduce both the time and money necessary to complete and maintain your PV installation by reducing the number of required combiner boxes. Optional built-in blocking diode capability provides reverse current protection on the string level.

Features

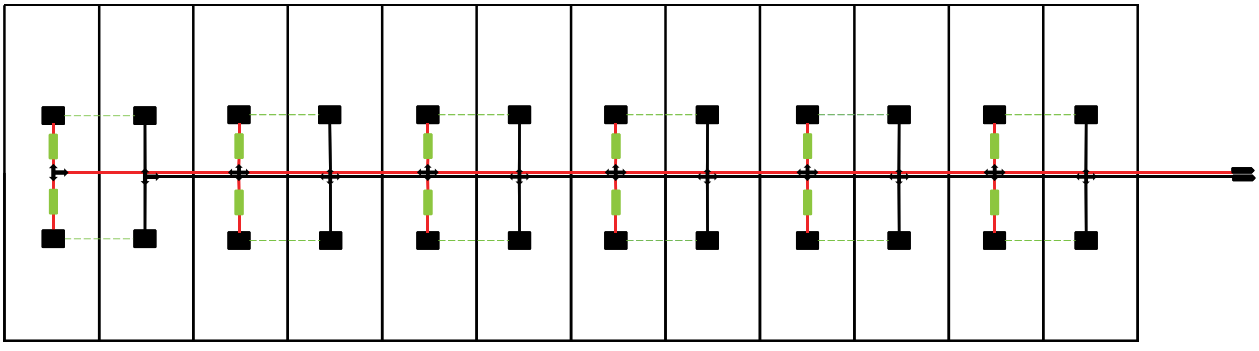
- Replaces combiner boxes
- Units range from 2A to 20A
- Available in 600VDC or 1000VDC
- IP-67 Ingress protection rating

Technical Information

	STG-ILF-1	STG-ILF-2
Rated Voltage (VDC)	600	1000
Ampere Rating (A)	2 - 20	2 - 20
Dielectric Strength (VDC)	3000	3000
Maximum Ambient Temperature (°C)	50	50
Flammability Rating	V0 per UL94	V0 per UL94
Plastic Type	PPE	PPE
Maximum Wire Size (AWG)	10	10
Connector Type	Any approved PV Connector	

* Product design and specification subject to change or modification without notice.

Usage Example



Available Connectors

Multi-Contact

STÄUBLI GROUP

YAMAICHI ELECTRONICS

lumberg

SMK

Amphenol

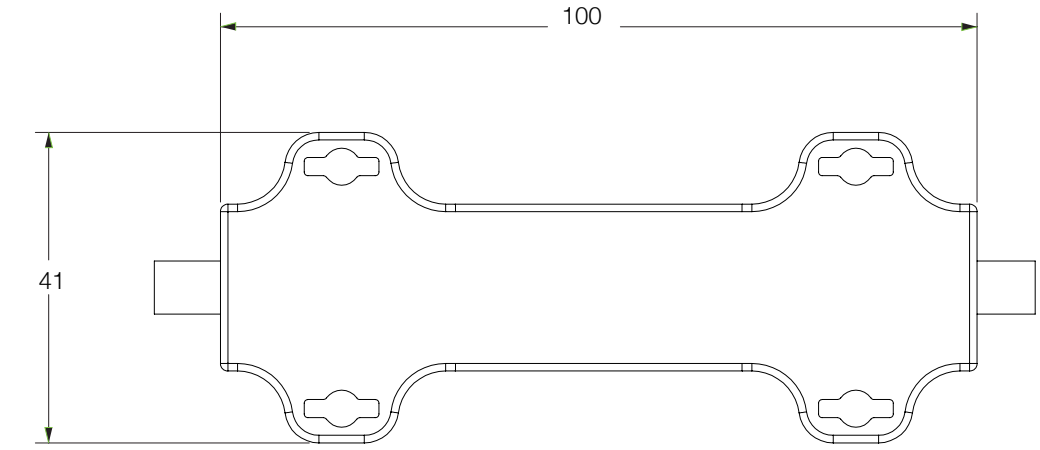
TE connectivity

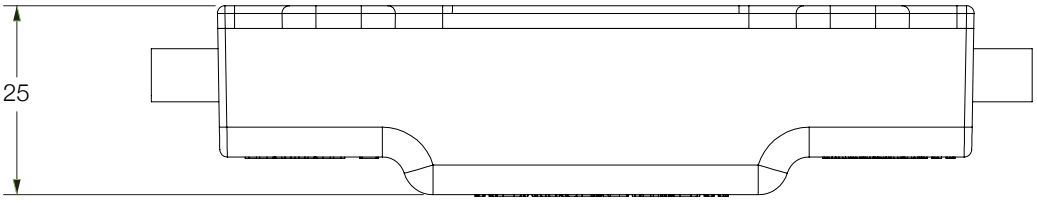
c UL us LISTED

5 year warranty

made in USA

made in china





In-Line Blocking Diode

Shoals' In-Line Blocking Diodes can be installed on module strings to prevent reverses leakage current backwards through the strings. If one string becomes severely shaded, or if there is a short circuit in one of the modules, the blocking diode prevents the other strings from losing current back into the shaded or damaged string. The shaded or damaged string is then "isolated" from the others, and more current is sent on to the load increasing output.

Features

- Prevents reverse current flow into damaged modules from parallel strings
- Decrease the effects of module shading in parallel string configurations

Physical Specifications

Model	Body Dimension
STG2060-3A1	3.93" x 3.33" x 1.68"
STG2100-3A1	(10 x 8.45 x 4.28 cm)
STG2060-4A1	3.93" x 3.33" x 1.68"
STG2100-4A1	(10 x 8.45 x 4.28 cm)

Technical Information

	STG2060-3A1/4A1	STG2100-3A1/4A1
Max System Voltage	600VDC	1000VDC
Max Input Current (Isc)	12.5A	
Foward Voltage Drop	0.7 - 1.26VDC	
Efficiency	99.8%	
Operating Temperature	-40℃ to 70℃	
Connector Type	Any approved PV Connector	

* Product design and specification subject to change or modification without notice.

TÜVRheinland

5 year warranty

made in USA

made in china

*Patent Pending

MC3 Locking Clamshell

Shoals' MC3 Locking Clamshell provides protection from the elements and accidental disconnection of MC3 connectors providing full 2008 NEC 690.33(C) compliance for your installation.

Features

- 2008 NEC 690.33(C) compliant
- Canadian NEC Section 50-16(D) compliant
- Requires tool to remove
- Sunlight resistant
- UL listed material
- Available in black or yellow

made in china made in USA

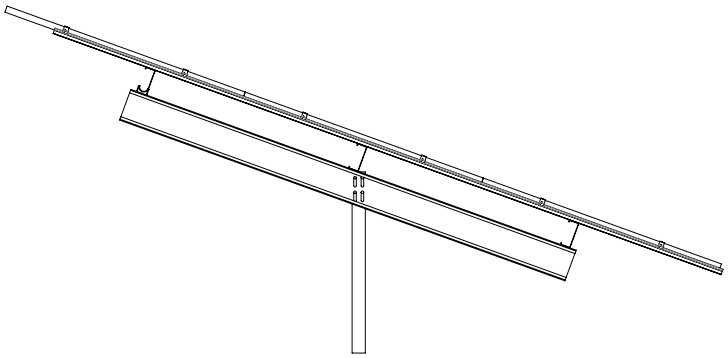
Black
Part Number: STG.CS.3.B

*Patent Pending

NICERACK

Ground Mount

The NiceRack™ GMT is designed to install more quickly and require less hardware than current mounting solutions; along with being the first PV mounting solution to offer fully integrated balance of systems. These key features of the ShoalsRack™ allow for an unprecedented reduction of installation cost and time. For a typical ground mount installation, a three-man crew can easily assemble the complete solution at an average rate of 6.75kW per man-hour. Additionally, the galvanized steel construction allows for wind and snow load capabilities ideal for any environmental conditions.



Features

- Compatible with all major brands of PV modules
- Designed to accommodate any wind and snow load and soil type
- Compatible with several different foundation types
- Integrated cable management
- Installation is quick and easy with a 3-5 man crew
- Self squaring rails for rapid installation
- Load analysis, layout drawings, and engineering support included
- 10 year limited warranty

10 year warranty

made in USA

made in china

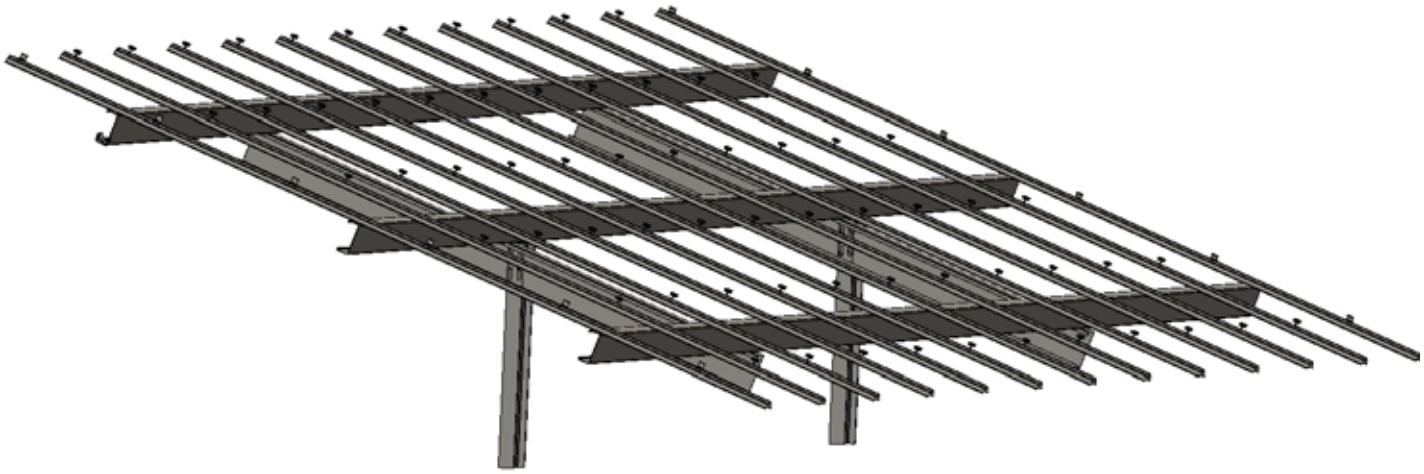
Technical Information

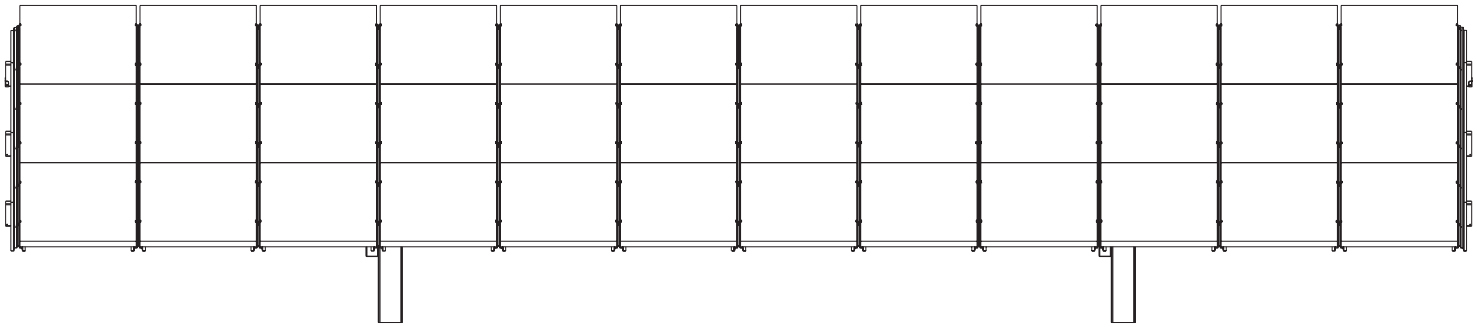
	GMT Standard	GMT Snow	GMT Coastal	
Load Rating	90 mph wind / 0 psf snow	90 mph wind / 40 psf snow	150 mph wind 0 psf snow	120 mph wind 30 psf snow
Materials	50ksi CRS			
Corrosion Resistance	G90 pre-galv	G140 pre-galv	G140 pre-galv	
Fixed Tilt Angle(s)	0° - 30°			
Warranty	10-Year Limited Warranty			
Lead Time	4 Weeks for 10MW to Port / 10MW per week thereafter			
Typical Install Rate	6.75kW per Labor Hour			

* Product design and specification subject to change or modification without notice.

Options

- Driven pile, helical pile, ballast base & concrete pedestal base adaptable for ground mounts
- Pre-installed sub-harness
- Ballasted & structural roof mount systems available
- Bi-Directional module installation (Portrait or Landscape)
- East-West rail splice plates
- Theft-deterrent fastening hardware





Consistently providing our clients with innovative designs and superior quality products directly contributes to our growth and success. We take our design, application, and development very seriously, and are proud to offer a diverse line of products.

Dean Solon, President & CEO