



FG Solar Mount Installation Guide

By: Advanced Technology Structures Ltd

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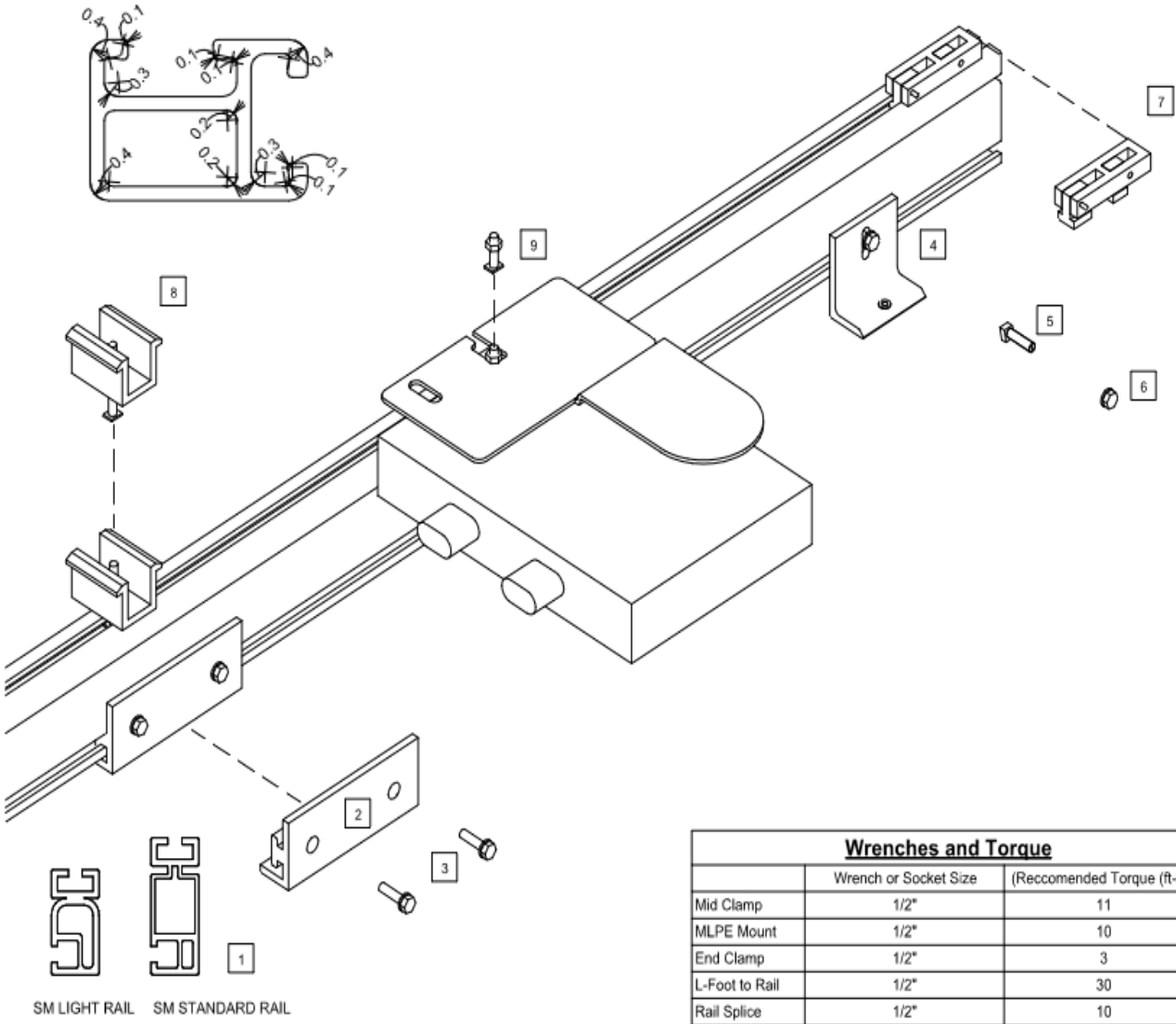
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Standard System Components



Wrenches and Torque		
	Wrench or Socket Size	(Reccomended Torque (ft-lbs))
Mid Clamp	1/2"	11
MLPE Mount	1/2"	10
End Clamp	1/2"	3
L-Foot to Rail	1/2"	30
Rail Splice	1/2"	10

Installation Guide

1. Rail: Supports PV. Use at least 2 rows per module. Fiberglass extrusion Standard Yellow
2. Z-Bracket: (Aluminum/Steel) Used to secure rails through roofing material to building structure. 48" o/c x 2 rails supports
3. Z-Bracket Bolt 1/4" x 2-1/2" Trox bolt with stainless steel and rubber washer
4. Module Mid Clamp: Used to fasten PV panels to mounting rails. Aluminum clamp with stainless steel bolt and aluminum friction plate.

System Layout and Installation Guide

PLANING YOUR FG INSTALLATIONS

The installation can be laid out with rails parallel to the rafters or perpendicular to the rafters.

Center the installation area over the structural members as much as possible.

Leave enough room to safely move around the array during the installation. Some building codes and fire codes require minimum clearances around such installations. Please confirm with local building code requirements.

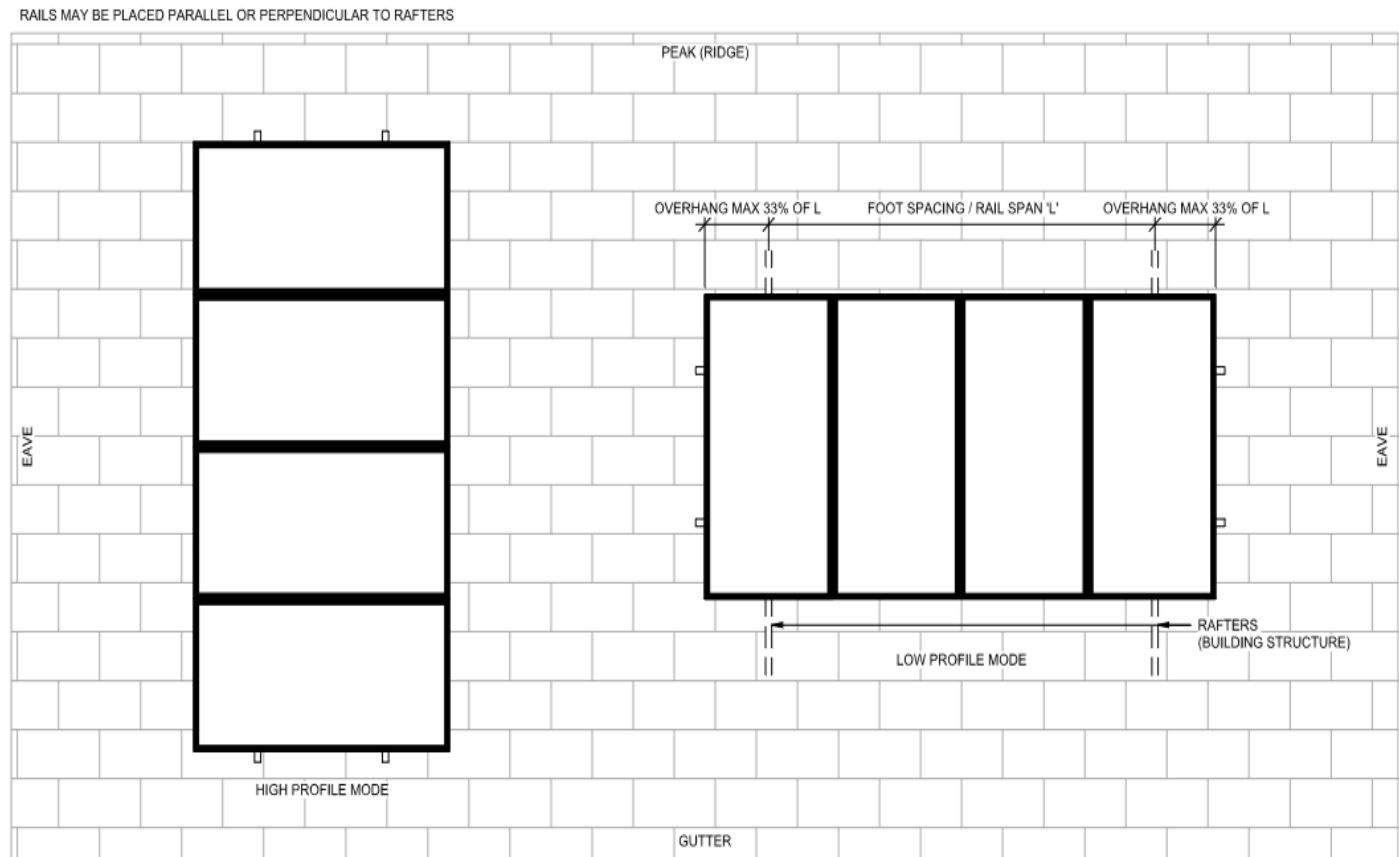
NOTE:

For the total width/length of the modules

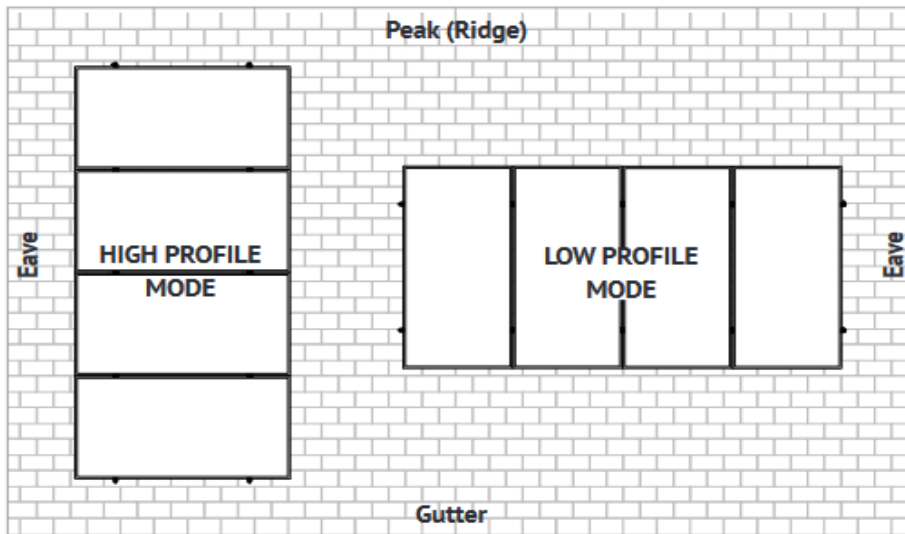
Add:

1" for each space between the modules for mid-clamps

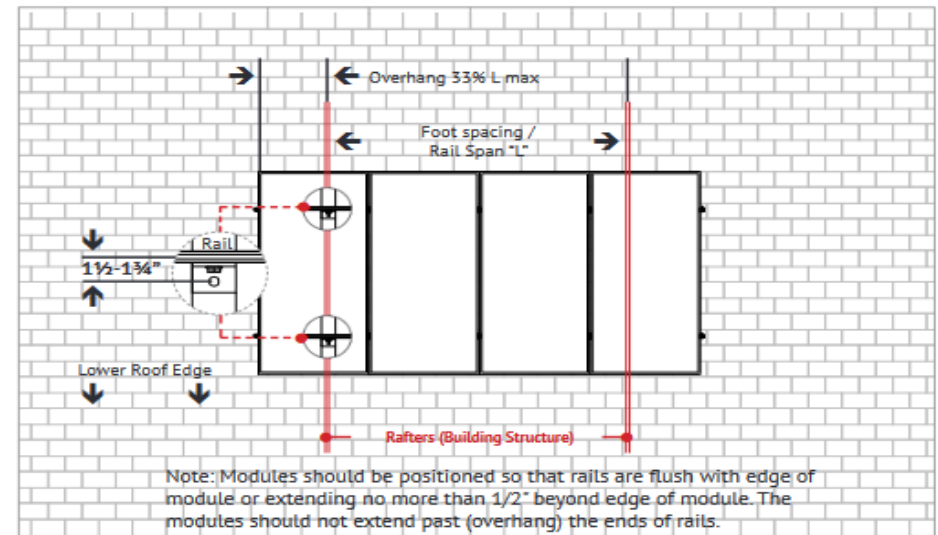
1" for end clamps on each side.



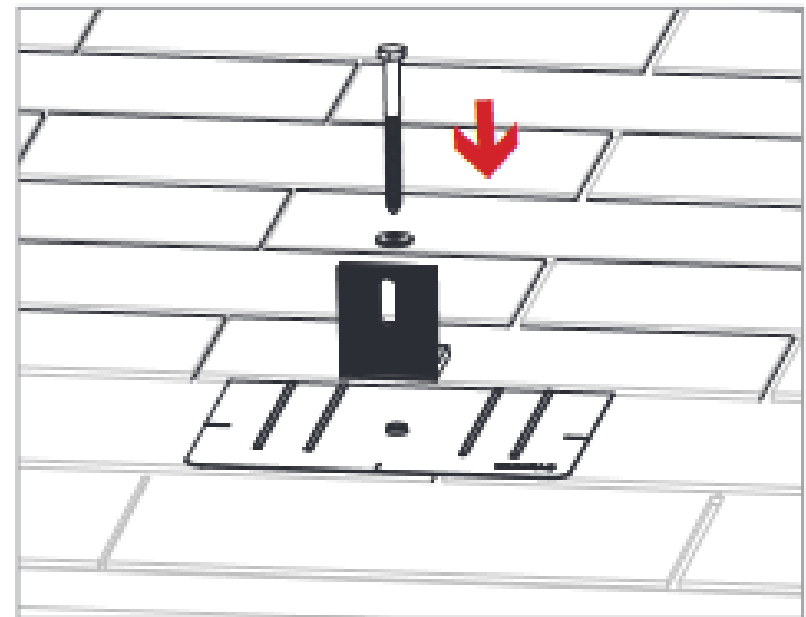
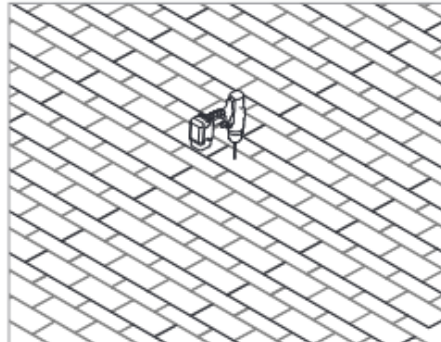
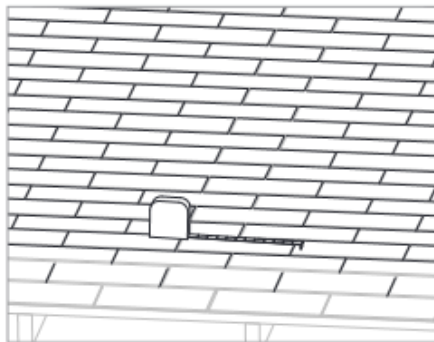
RAILS MAY BE PLACED PARALLEL OR PERPENDICULAR TO RAFTERS



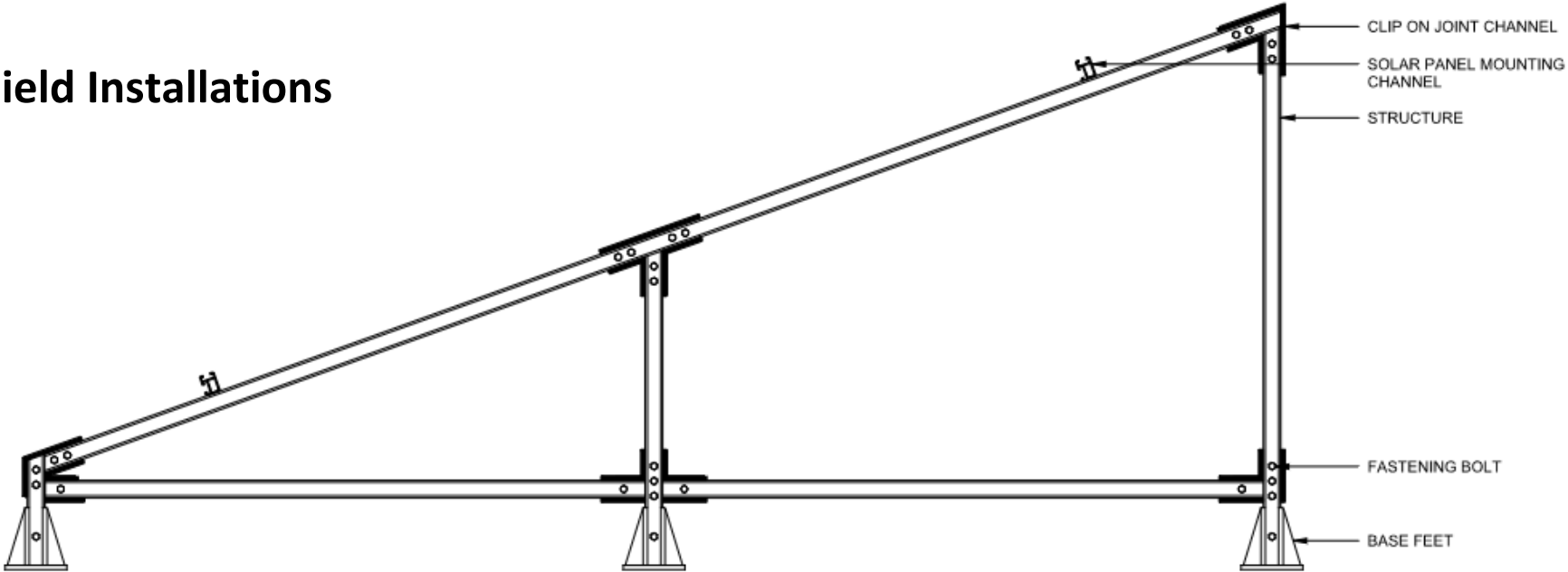
LAYOUT WITH RAILS PERPENDICULAR TO RAFTERS (RECOMMENDED)



Roof Attachment and L-Brackets



Field Installations



1 GROUND-MOUNT SECTION
A2-1 1:10

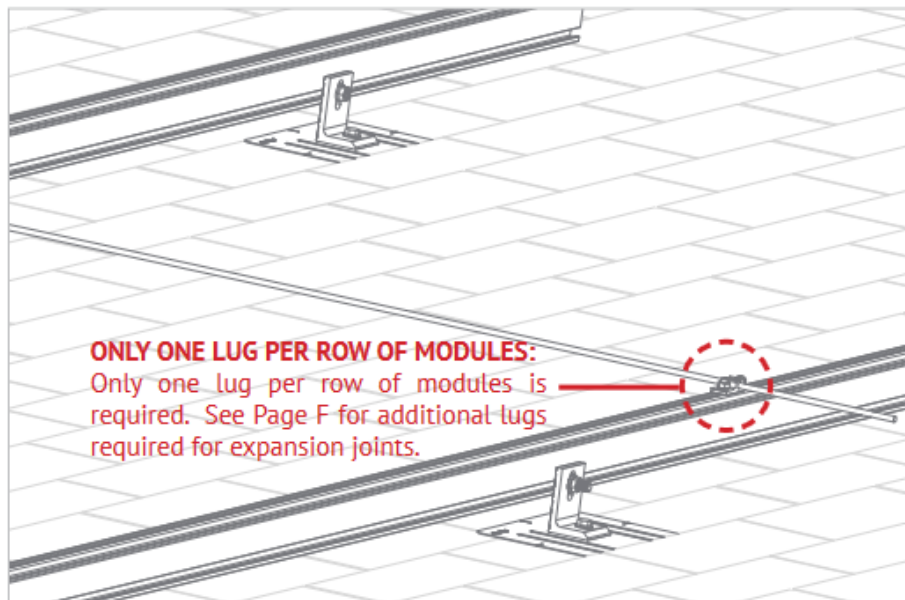
Assemble components as above

Install on Screw Type ground anchors
or concrete pile footings

Use 4 x 5/16 anchor bolts for ground attachment.



Standard System and Grounding



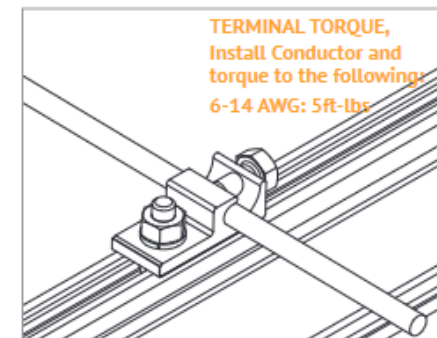
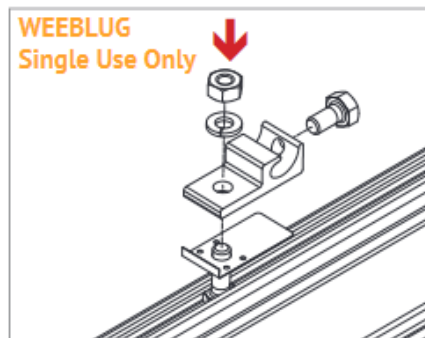
GROUNDING LUG MOUNTING DETAILS:

Details are provided for both the WEEB and IlSCO products. The WEEBLUG has a grounding symbol located on the lug assembly. The IlSCO lug has a green colored set screw for grounding indication purposes. Installation must be in accordance with NFPA NEC 70, however the electrical designer of record should refer to the latest revision of NEC for actual grounding conductor cable size.

Required if not using approved integrated grounding microinverters

GROUNDING LUG - BOLT SIZE & DRILL SIZE		
GROUND LUG	BOLT SIZE	DRILL SIZE
WEEBLUG	1/4"	N/A - Place in Top SM Rail Slot
ILSCO Lug	#10-32	7/32"

- Torque value depends on conductor size.
- See product data sheet for torque value.

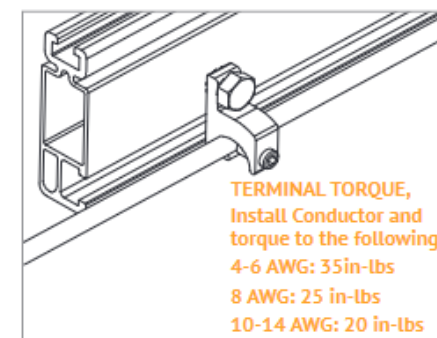
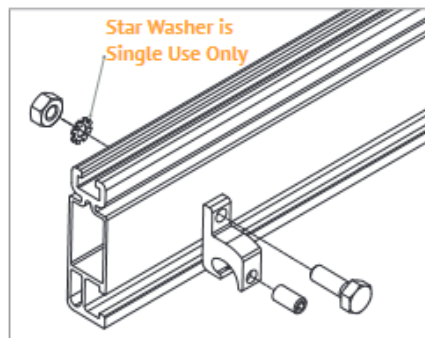


WEEBLUG CONDUCTOR - UNIRAC P/N 008002S:

Apply Anti Seize and insert a bolt in the aluminum rail and through the clearance hole in the stainless steel flat washer. Place the stainless steel flat washer on the bolt, oriented so the dimples will contact the aluminum rail. Place the lug portion on the bolt and stainless steel flat washer. Install stainless steel flat washer, lock washer and nut. Tighten the nut until the dimples are completely embedded into the rail and lug.

TORQUE VALUE 10 ft lbs. (See Note on PG. A)

See product data sheet for more details, Model No. WEEB-LUG-6.7



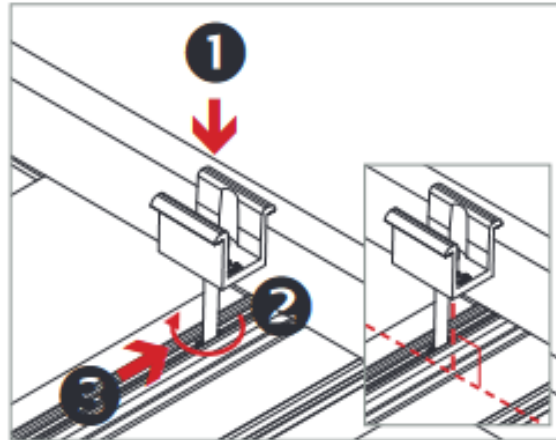
ILSCO LAY-IN LUG CONDUCTOR - UNIRAC P/N 008009P: Alternate Grounding Lug - Drill, deburr hole and bolt thru both rail walls per table.

TORQUE VALUE 5 ft lbs. (See Note on PG. A)

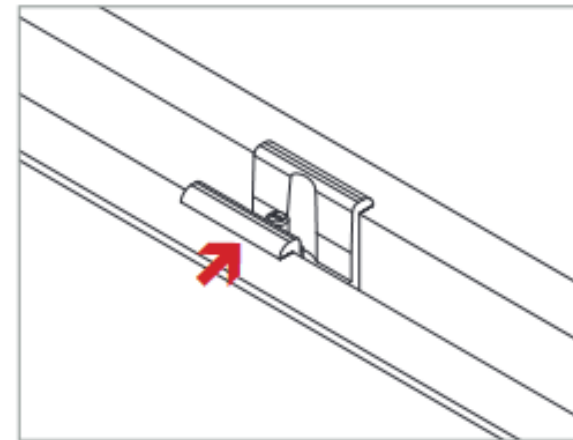
See ILSCO product data sheet for more details, Model No. GBL-4DBT.

NOTE: ISOLATE COPPER FROM ALUMINUM CONTACT TO PREVENT CORROSION

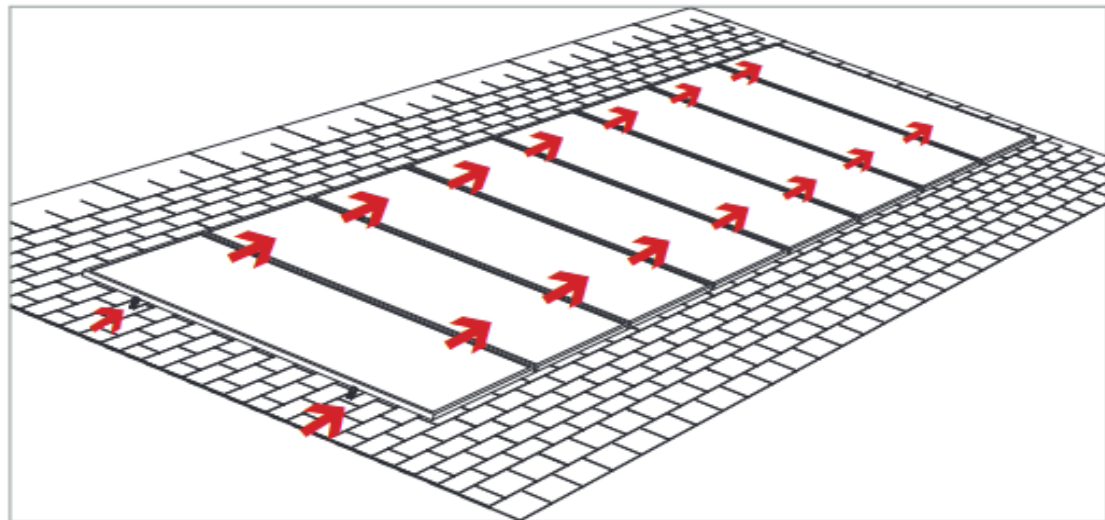
Remaining Modules Installation Guide



INSTALL REMAINING MID-CLAMPS:
Proceed with module installation.
Engage each module with previously
positioned Midclamp assemblies.

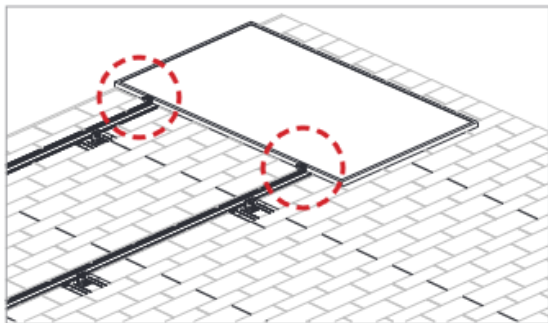


POSITION T-BOLT ALIGNMENT MARKS:
Verify that the position indicator(s)
& T-bolt shaft(s) are angled in the
correct position. Tighten to final
torque.

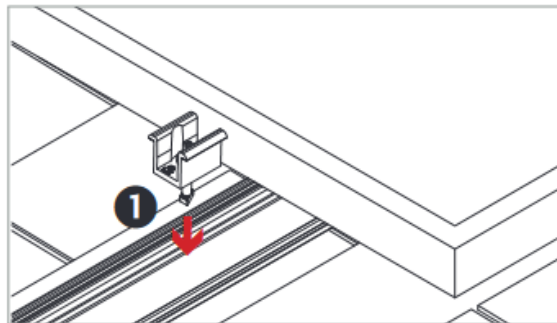


FINISH MODULE INSTALLATION: Proceed with module installation.
Engage each module with the previously positioned clamp assembly:

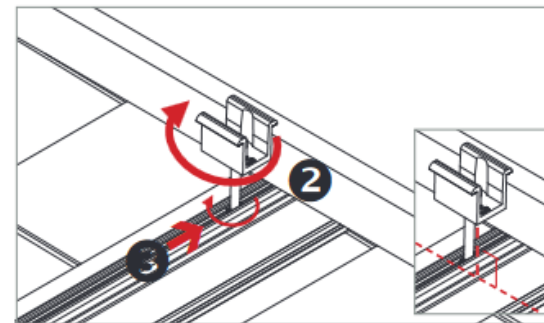
Bonding Mid-clamp and Trim



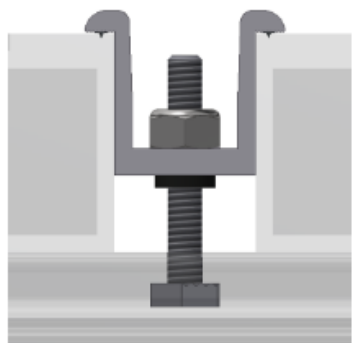
INSTALL MIDCLAMPS: Midclamp is supplied as an assembly with a T-bolt for module installation. Clamp assemblies may be positioned in rail near point of use prior to module placement.



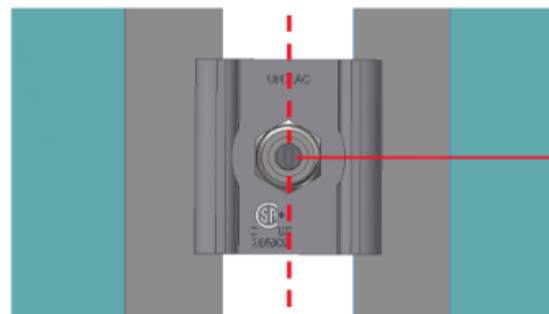
INSERT MIDCLAMP ASSEMBLY: Insert 1/4" T-Bolt into top slot of rail



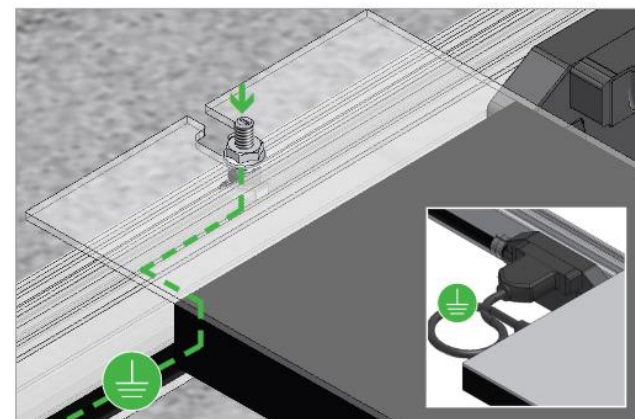
MIDCLAMP: Rotate midclamp assembly and slide until clamp is against module frame. Do not tighten nut until next module is in position. Ensure bolt is perpendicular to rail.



PLACE ADJACENT MODULE AGAINST CLAMPS: Modules must be tight against clamps with no gaps. Tighten nut to required torque.



POSITION INDICATOR - SERRATED T-BOLT: Verify the T-bolt position indicator is perpendicular to the rail.



Inverter Grounding

