DYNOBOND™

DynoBond™

Installation Manual

UL 2703 and UL 467
Recognized

Publication Number 070919

866.682.0503 | dynobond.com

Installer Responsibilities:

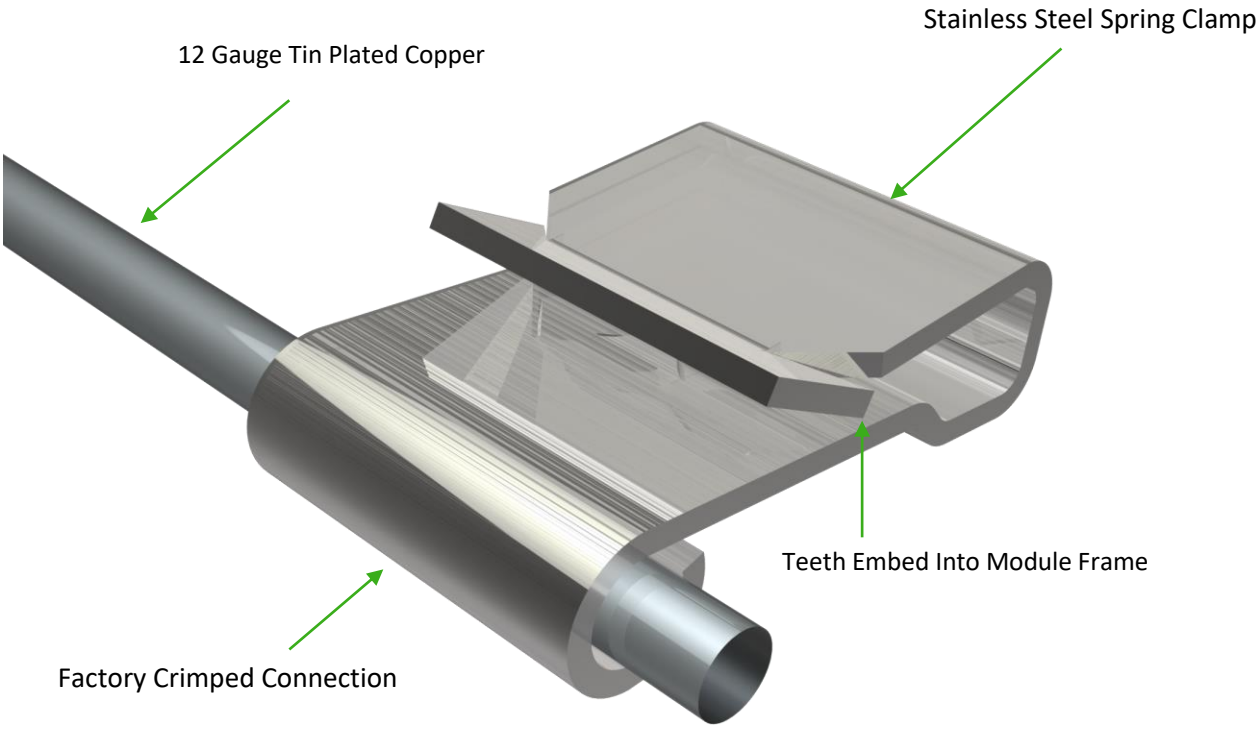
Thank you for choosing the DynoBond , an innovative technology used for bonding modules together; creating a streamlined equipment ground path. It is designed to penetrate the anodized coating on solar modules. The DynoBond consists of two stainless steel spring clamps and a tin-plated wire ordered in 8", 12”, 38", 76", 96" and custom made to order lengths.

The DynoBond is engineered for commercial and residential applications. The proprietary design allows the DynoBond to be used as a jumper between modules, making the module frames the medium for the equipment ground path. The DynoBond can also be used to exit an array and be terminated or spliced in a junction or combiner box with the equipment ground.

The DynoBond was designed by installers in the field and engineered for optimal performance. The DynoBond will save on installation costs due to its universal design and preassembled nature. No more cutting various length wire to thread through individual grounding lugs. The Dynobond offers a clean aesthetic look on the roof and greatly decreases installation time.

To ensure that the DynoBond is installed properly and is functional, it is important to adhere to the following guidelines set forth in this manual. A failure to follow the guidelines may void the limited manufacturer warranty on the DynoBond system. The DynoBond is for one-time use. If a DynoBond is removed for any reason a new DynoBond must be used for replacement.

Product Highlights:

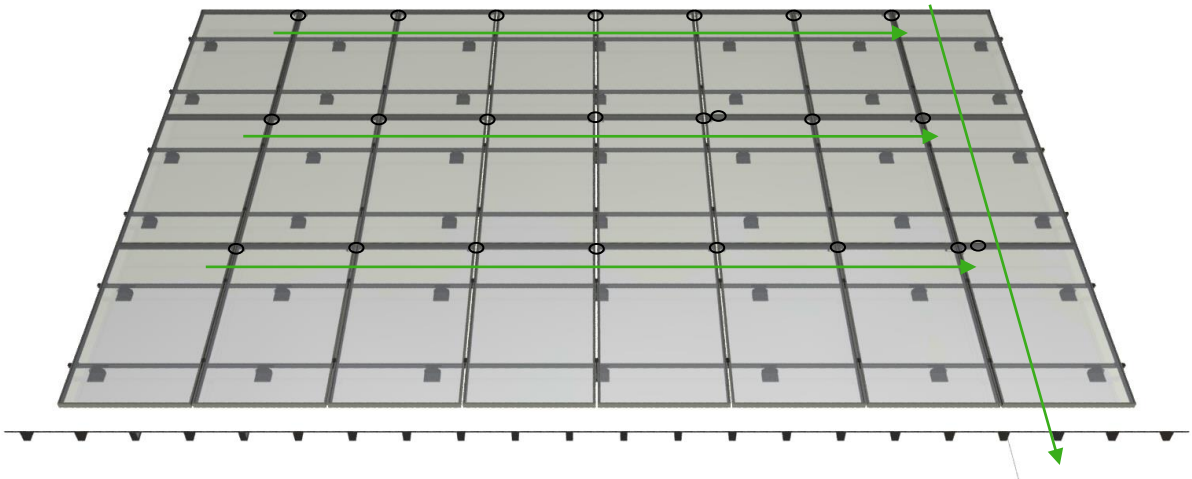


DynoBond Installation Instructions:

The DynoBond's versatility allows the modules to be mounted in portrait or landscape. The 12-gauge wire permits various mounting positions. Installing the DynoBond is as simple as locating the bottom lip flange of the module and fitting it with the spring clip. Please take proper time to plan the installation correctly. Two examples will be shown.

Pitched Roof Installation:

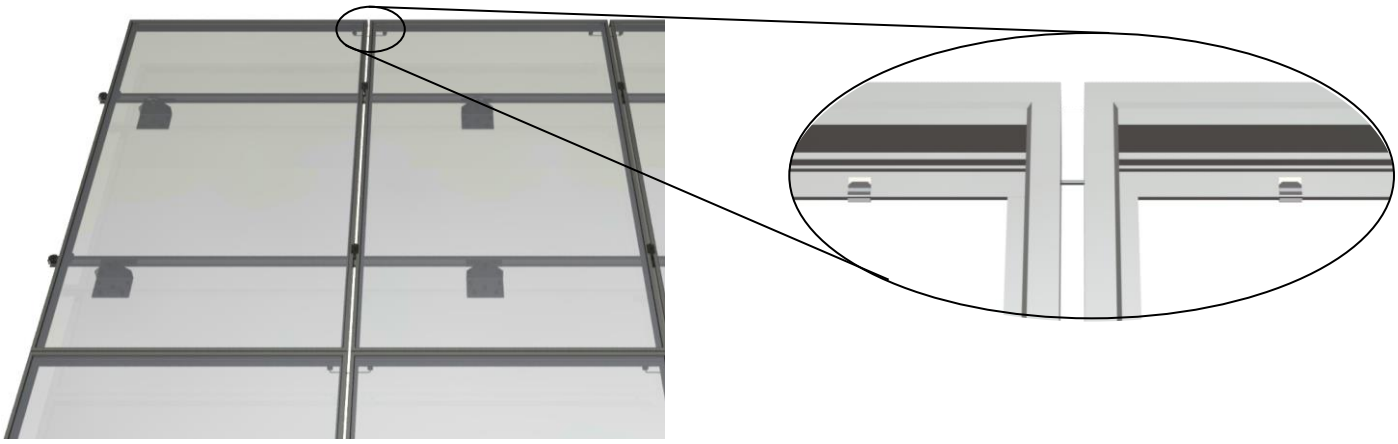
Step 1: Begin by charting your installation. In this example, the system consists of 3 rows of 8 modules per row totaling 24 modules shown in portrait. The DynoBond is installed in the same manner for pitched roof systems mounted in landscape. The homerun wires are shown exiting the system at the southeast corner of the array. The DynoBond will be installed to connect the modules west to east across each individual row. The DynoBond will also be connected on a row to row basis from North to South; to bridge each row together. The DynoBond is used as a jumper between modules. The highlighted circles are the location of DynoBonds for this specific installation. The DynoBond can be installed while installing the modules or if space permits after the module installation is completed.



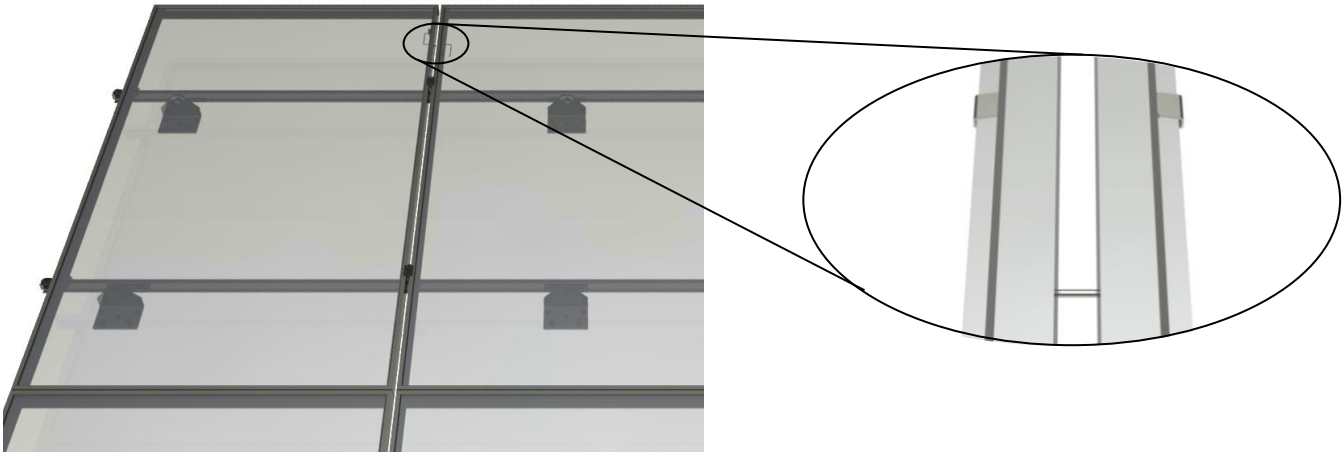
Exits with Homerun Wiring

Step 2: Locate the DynoBond between your first set of modules. The DynoBond penetrates the anodization of the module's frames; bonding them together. The DynoBond is used as a jumper between modules acting as a bridge for the equipment ground path. The connection points can be made along either the short or long sides of the panels granted the frame is the same on all four sides of the module.

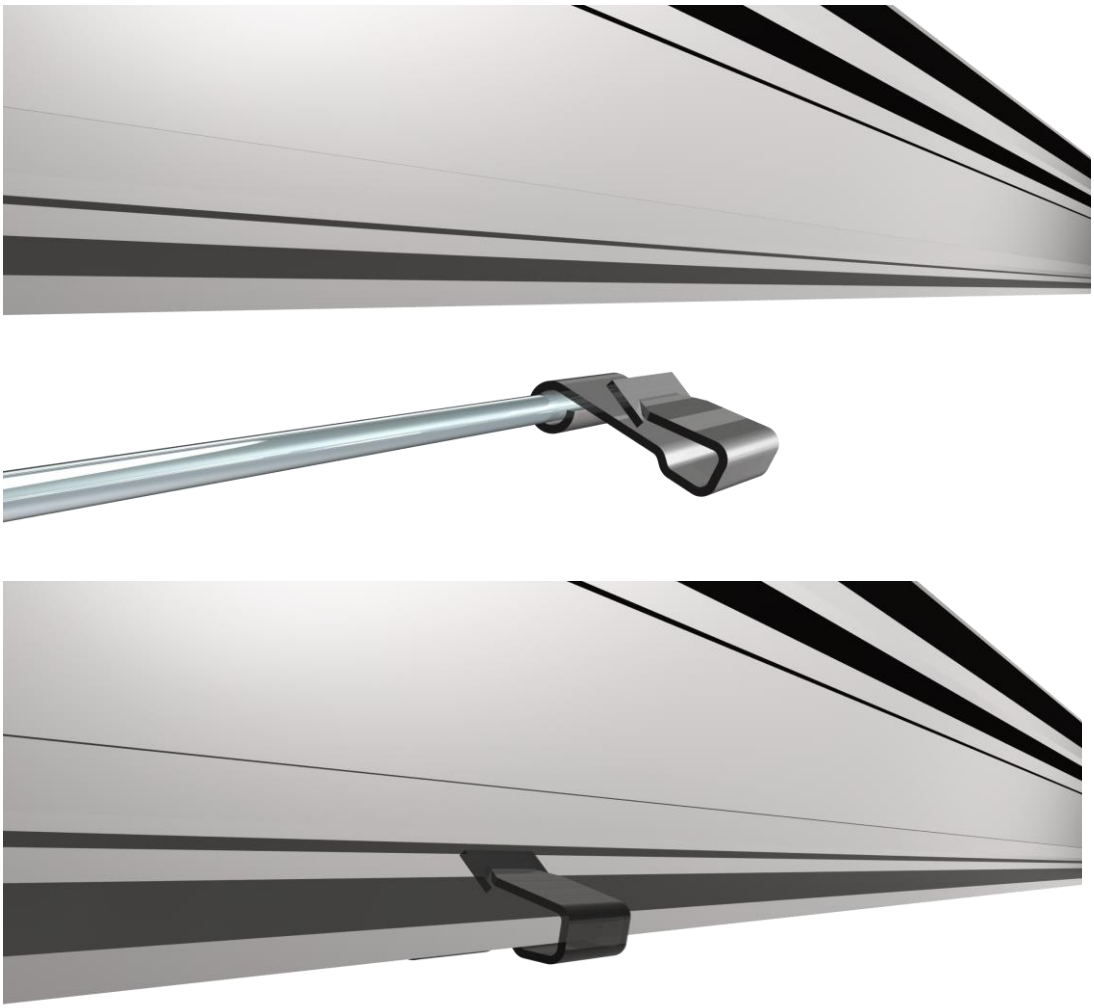
A. Short Side Connection:



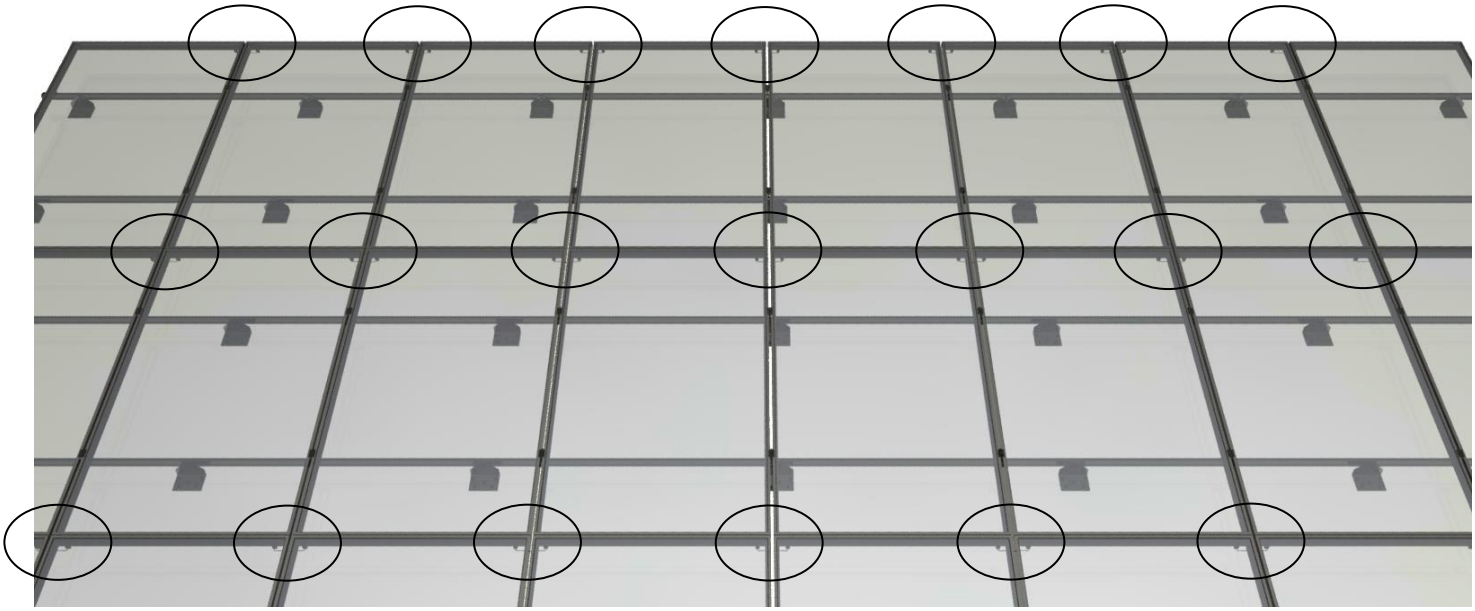
B. Long Side Connection:



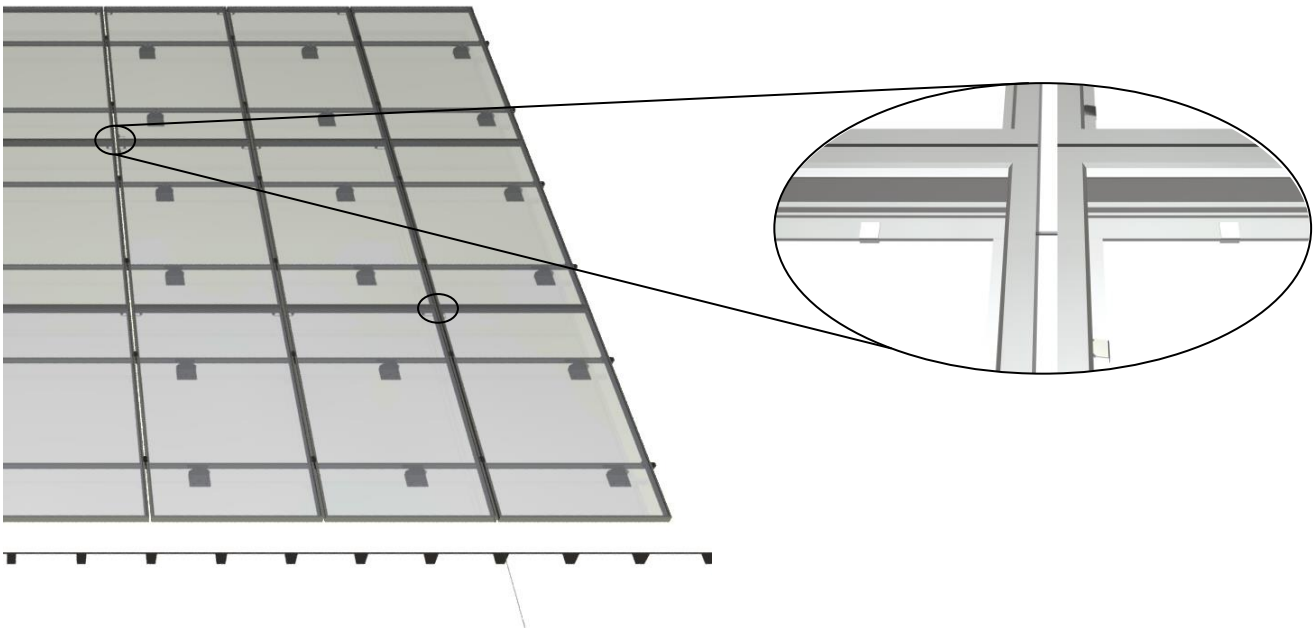
Step 3: Position the DynoBond on the bottom lip flange of the first module. To engage the module frame fit the module's bottom lip flange between the toothed section of the stainless-steel spring clamp. Next, fit the adjacent module with the free end of the DynoBond. Place a bend or an “S-curve” in the conductor to allow for thermal expansion and contraction of modules within an array.



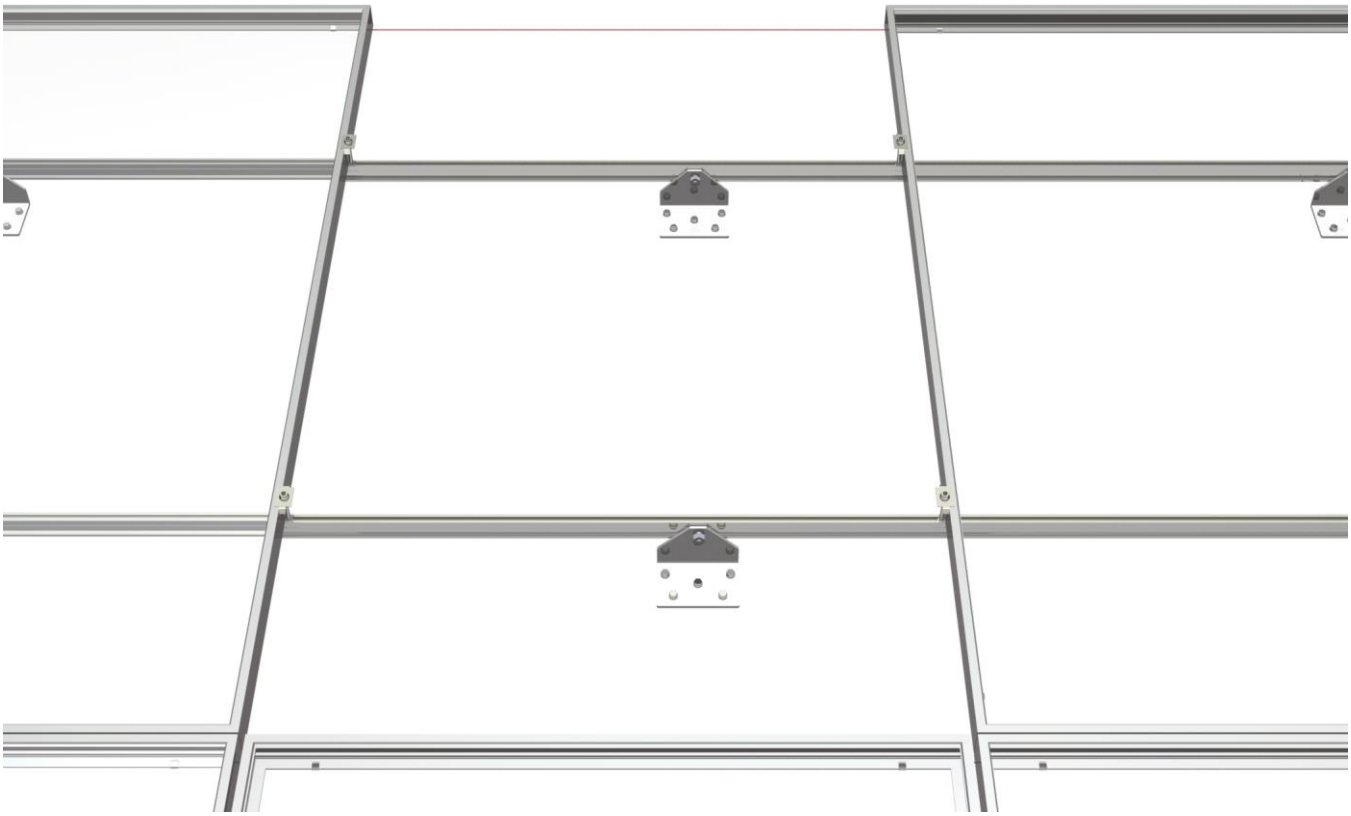
Step 4: Continue connections between modules across each individual row. This is shown in the below diagram circled in black.



Step 5: The DynoBond is a versatile solution able to follow the array layout on any installation. After the modules have been bridged across the row it is time to connect each row together. One DynoBond is needed to connect one row to the next. The connection does not need to be in a straight column. It can be staggered following the contours of the installation. The only requirement is that all rows are interconnected together by at least one point. Please see diagram below for an example of staggered inter row bridging. Connection points are highlight with black circles.

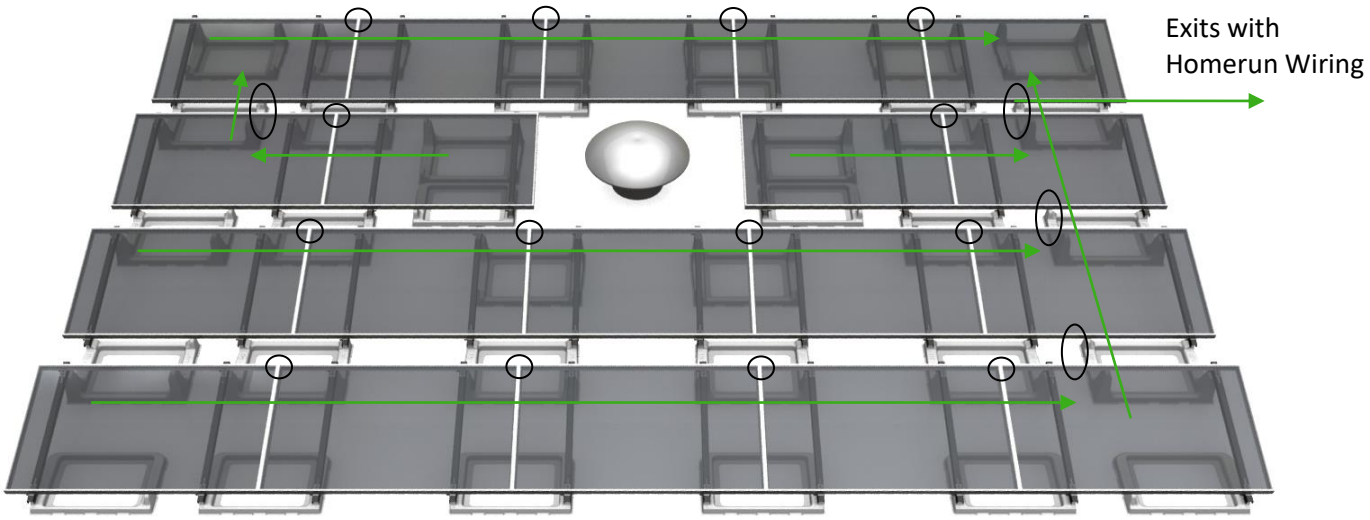


Step 6: The homerun equipment ground wire can be landed via a grounding lug attached to a grounding point of a module anywhere throughout the array. Please keep in mind if a panel is removed within the array at any point for maintenance or service a DynoBond should be placed to maintain ground continuity. This replacement DynoBond is highlighted in red for clarity.



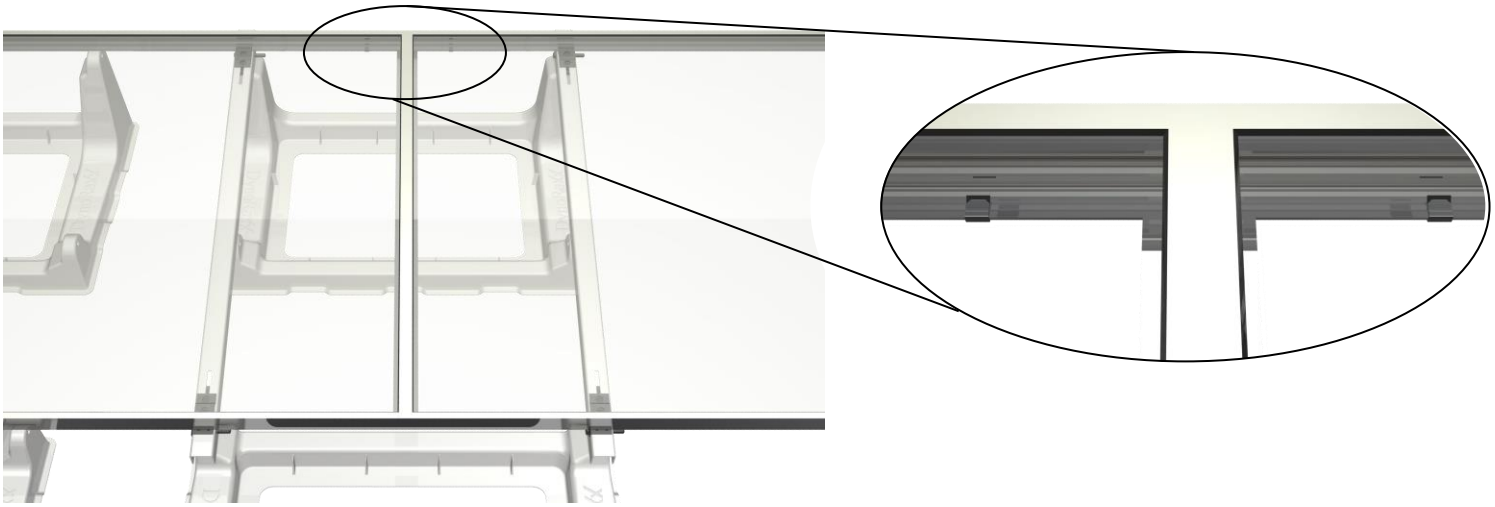
Flat Roof Installation:

Step 1: Begin by charting your installation. In this example, the system consists of 4 rows of 4 and 5 modules per row totaling 19 modules. In this instance, the homerun wires are exiting the system at the northeast corner of the array. The DynoBond will be installed to connect the modules west to east across each individual row. The DynoBond will also be connected on a row to row basis from North to South; to bridge each row together. The DynoBond is used as a jumper between modules. The highlighted circles are the location of DynoBond Assemblies for this specific installation. The DynoBond can be installed while installing the modules or if space permits after the module installation is completed.

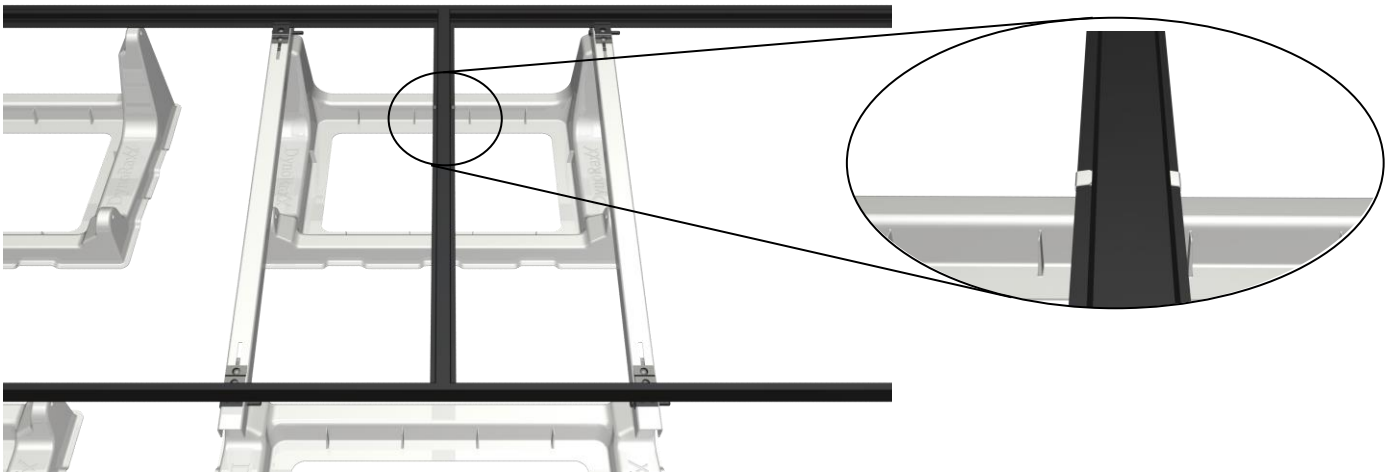


Step 2: Locate the DynoBond between your first set of modules. The DynoBond penetrates the anodization of the module's frames; bonding them together. The DynoBond is used as a jumper between modules acting as a bridge for the equipment ground path. The connection points can be made along either the short or long sides of the panels granted the frame is the same on all four sides of the module.

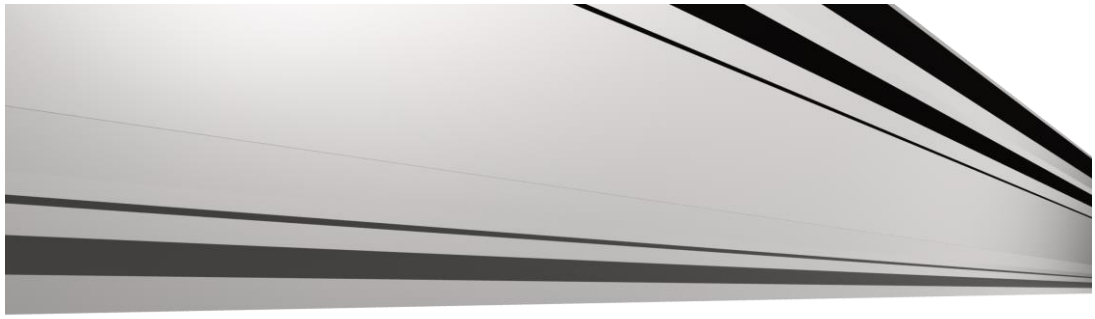
A. Long Side of Module

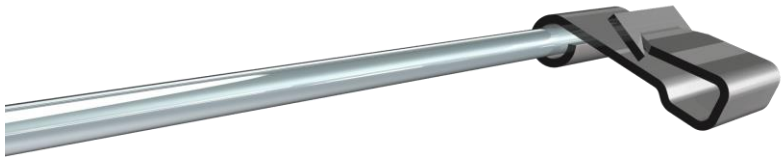


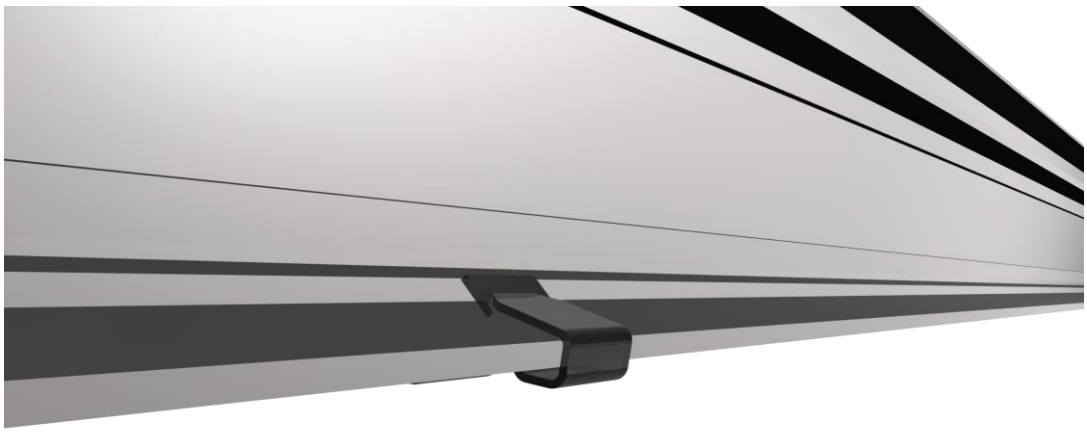
B. Short Side of Module



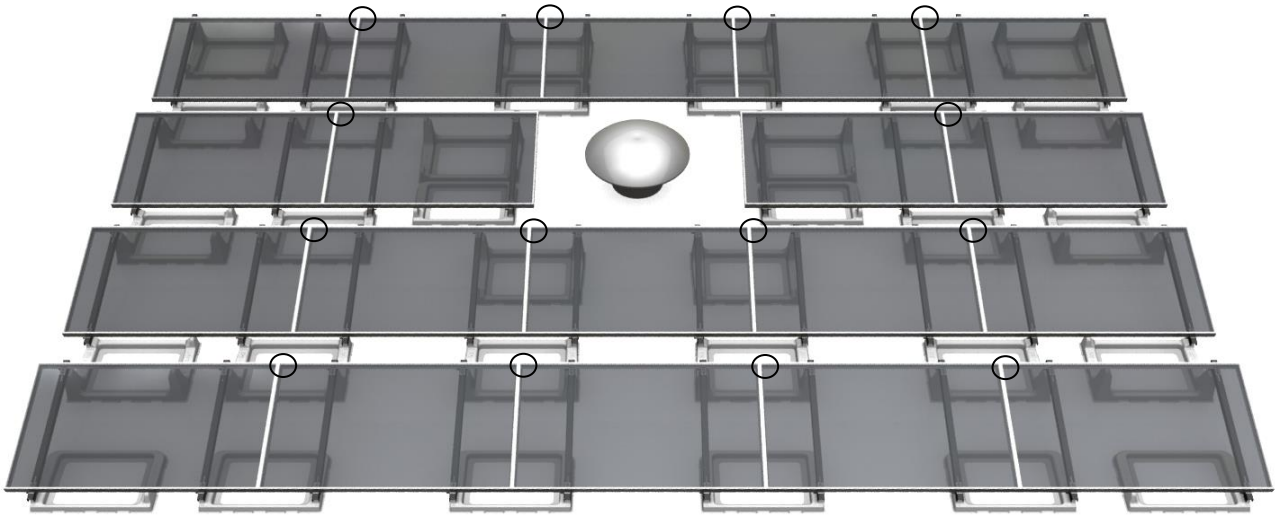
Step 3: Position the DynoBond on the bottom lip flange of the first module. To engage the module frame fit the module's bottom lip flange between the toothed section of the stainless-steel spring clamp. Next, fit the adjacent module with the remaining free end of the DynoBond. Place a bend or an “S-curve” in the conductor to allow for thermal expansion and contraction of modules within an array.



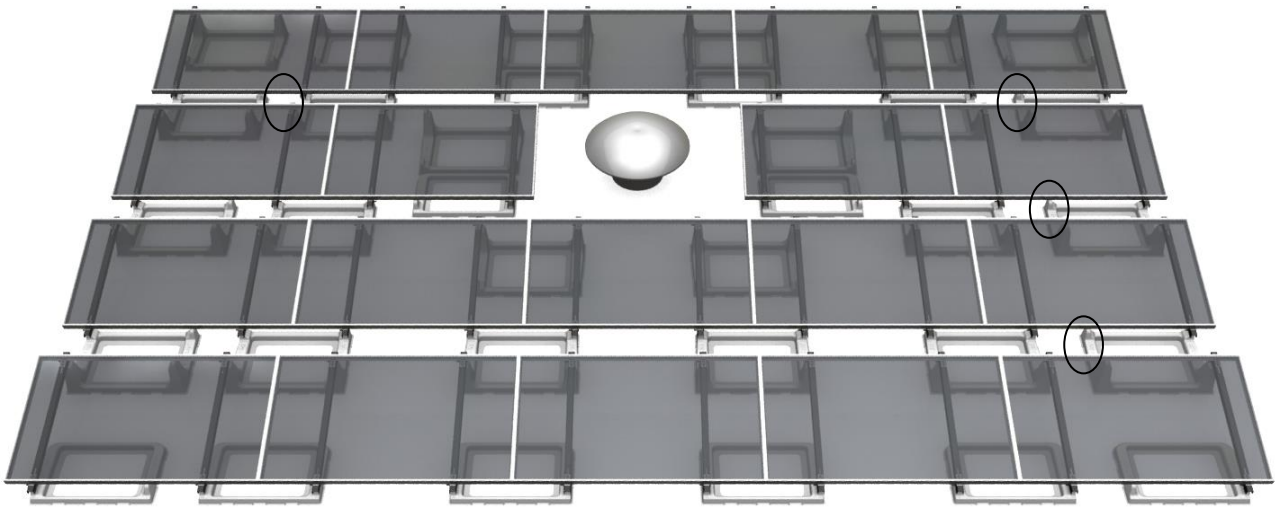




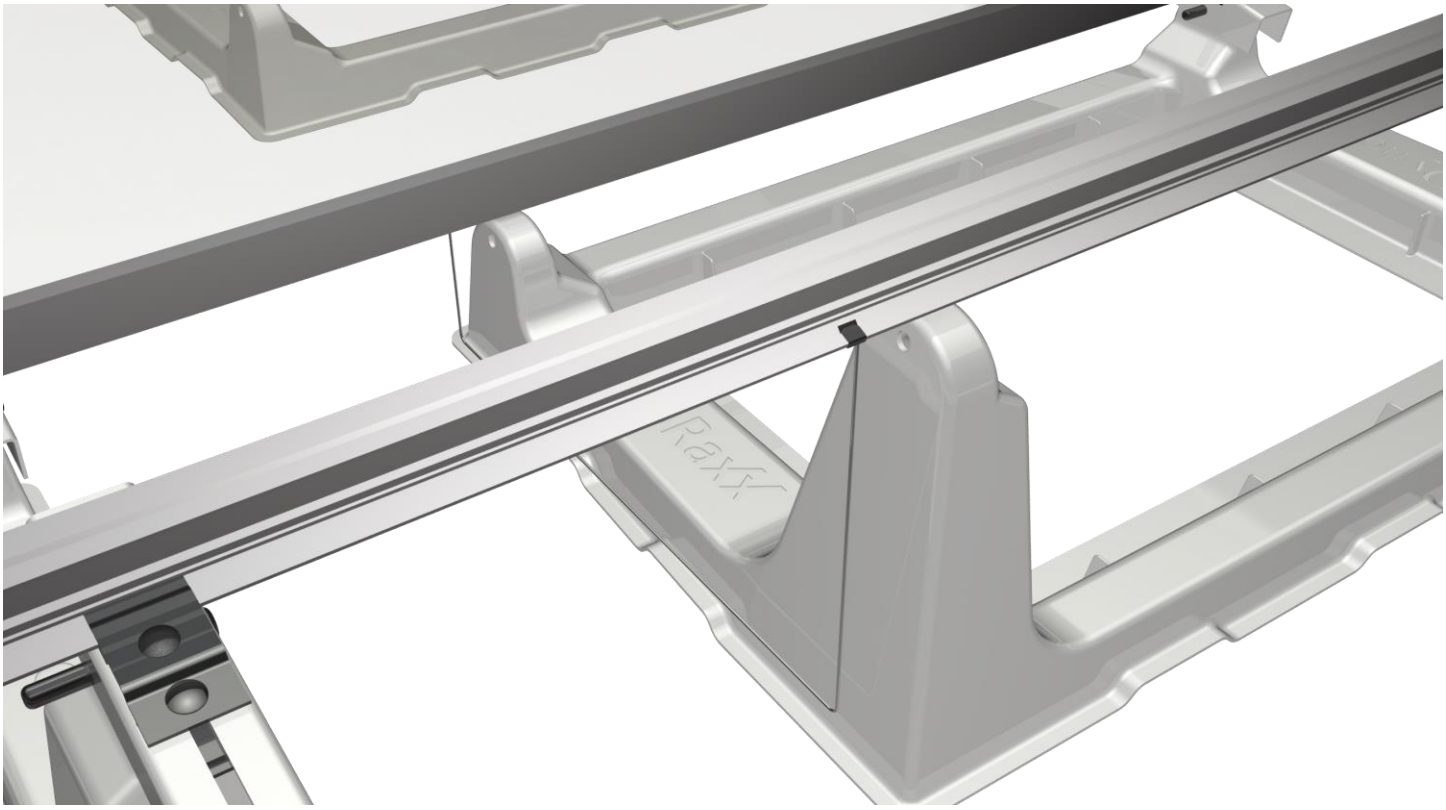
Step 4: Continue connections between modules across each individual row. This is shown in the below diagram circled in black.



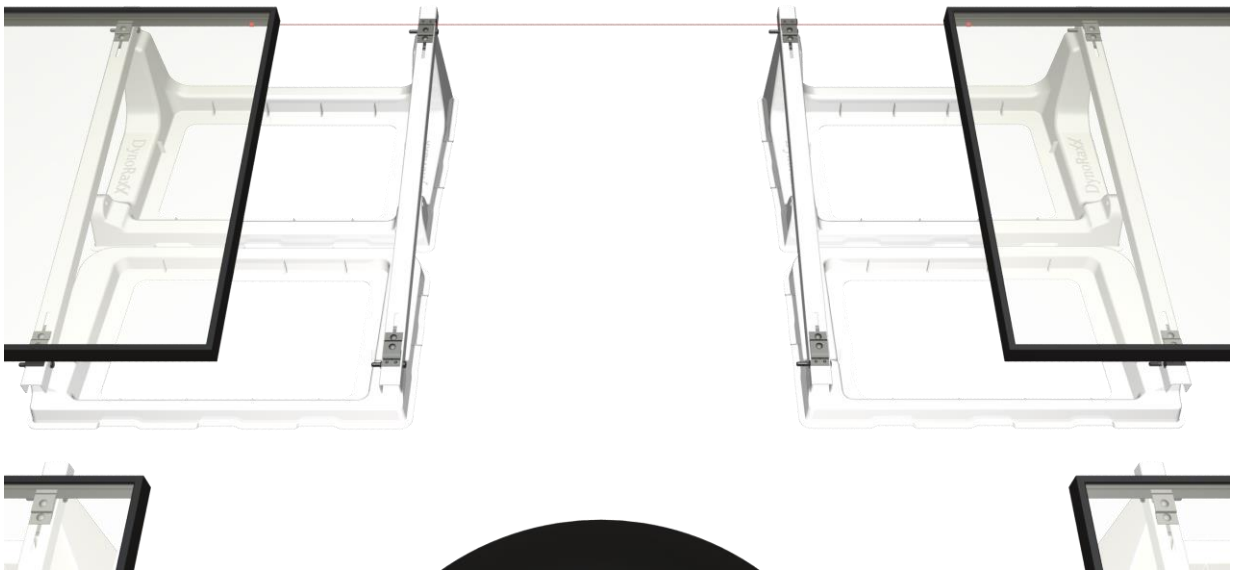
Step 5: The DynoBond is a versatile solution able to follow the array layout on any installation. After the modules have been bridged across the row it is time to connect each row together. One DynoBond is needed to connect one row to the next. The connection does not need to be in a straight column. It can be staggered following the contours of the installation. The only requirement is that all rows are interconnected together by at least one point. Please see diagram below for an example of staggered inter row bridging. Connection points are highlight with black circles.



Step 5 (continued)



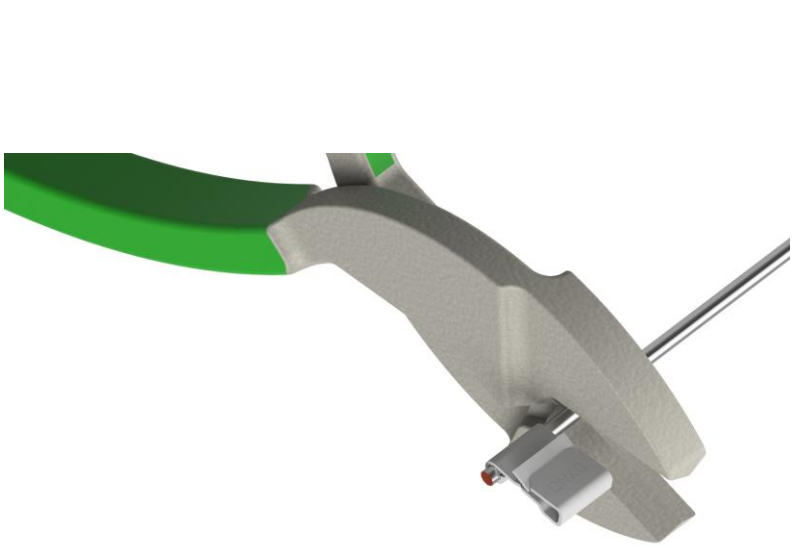
Step 6: The homerun equipment ground wire can be landed via a grounding lug attached to a grounding point of a module anywhere throughout the array. Please keep in mind if a panel is removed within the array at any point for maintenance or service a DynoBond should be placed to maintain ground continuity. Highlighted in red for clarity.

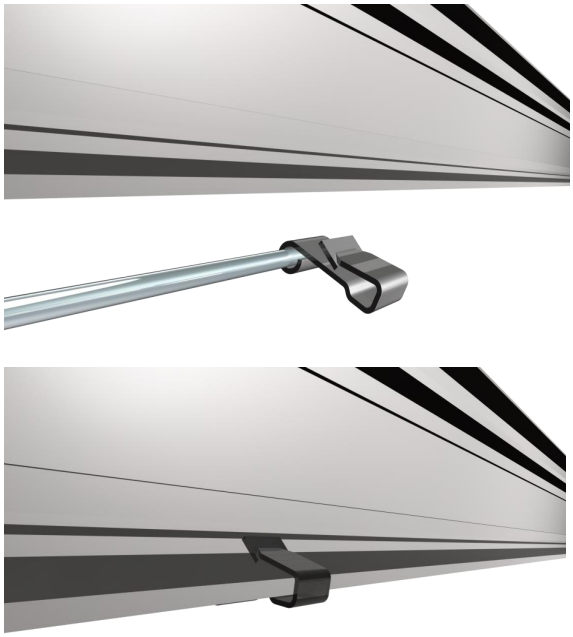


DynoBond Additional Uses:

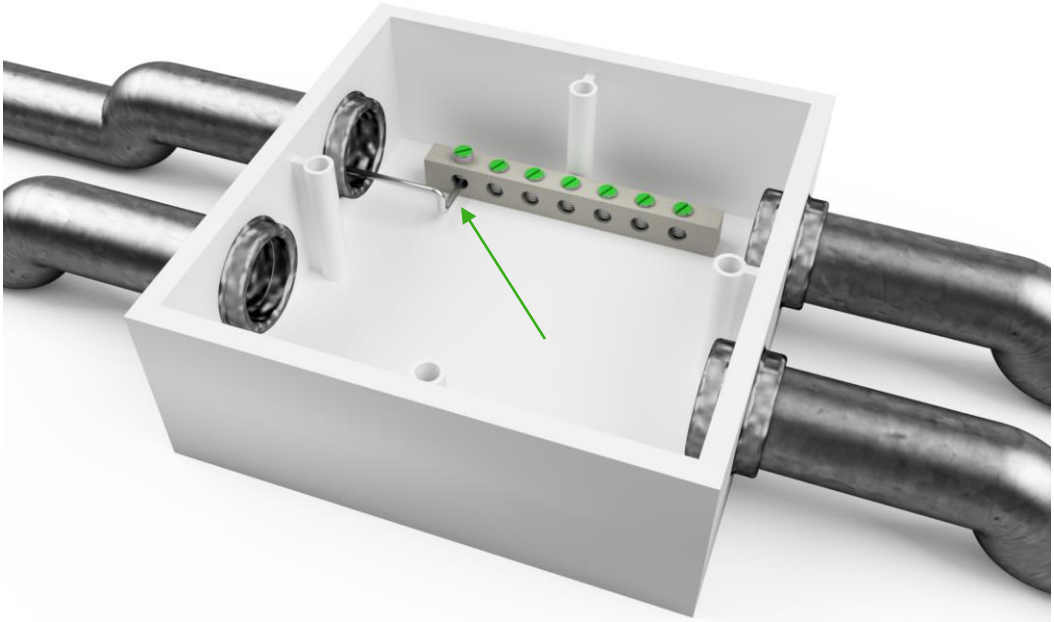
The DynoBond can also be used to exit an array and be terminated or spliced in a junction or combiner box with the equipment ground. The below steps outline the required process for ensuring proper installation of the DynoBond for exiting an array.

Step 1: Make sure to utilize the proper length DynoBond to reach your termination or splice point without applying tension to the DynoBond tin-plated copper wire. Please take extra care to account for expansion or contraction of the wire that may apply additional tension to the DynoBond stainless-steel wire clamp. Once proper length is chosen, cutoff one stainless-steel spring clamp. Attach the remaining stainless-steel spring clamp to the module nearest the array exit point.





Step 2: Route tin-plated copper to termination or splice point. If exiting a protected area of the area take extra precautions to protect tin-plated copper wire in conduit. In below example, the DynoBond is being terminated within a junction box.



Step 3: Terminate or splice equipment ground. In the below example, equipment ground is terminated within a junction box.