

clawFR®

Wire Management Manual

Table of Contents

Wire Management Accessories & Tools	2
Wire Management Homerun	3
Wire Router	6
Wire Clip	8
MLPE Installation	9

Introduction

The clawFR Wire Management product line is comprised of four major components that intuitively install to safely secure wiring for photovoltaic (PV) arrays.

This installation manual explains how to install Wire Management products for clawFR 5 Degree, 10 Degree, and Dual Tilt.



WIRE MANAGEMENT PRODUCTS ARE NOT COVERED UNDER THE PANEL CLAW LIMITED PRODUCT LIABILITY WARRANTY



THIS PRODUCT MUST BE INSTALLED AND USED ACCORDING TO THIS WRITTEN INSTRUCTION. ANY INSTALLATION OR USE OF THIS PRODUCT NOT IN ACCORD WITH OR NOT AUTHORIZED BY THIS WRITTEN INSTRUCTION SHALL VOID ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, ON THE PRODUCT OR THE USE OF THE PRODUCT AND MAY CAUSE FAILURE, PROPERTY DAMAGE AND PERSONAL INJURY. PANELCLAW IS NOT LIABLE FOR ANY UNAUTHORIZED USE. INSTALL AND USE ONLY WITH OTHER PANELCLAW **AUTHORIZED** RACKING PRODUCTS TO ENSURE PROPER FIT AND FUNCTION.

Safety Overview

Safety is an essential part of every PV installation and every construction site. It is imperative to plan ahead for any safety concerns and hazards to promote safe work practices during installation. This section does not claim to address or support all safety concerns that may arise during the installation of PanelClaw mounting systems or any other aspect of the work being performed. Before beginning work, installers should refer to all local and federal safety, health, and regulatory requirements to assure compliance. Refer to OSHA Part 1926 and its related Subparts for federal construction related regulations and standards.



DO NOT STEP OR STAND ON WIRE MANAGEMENT PRODUCTS

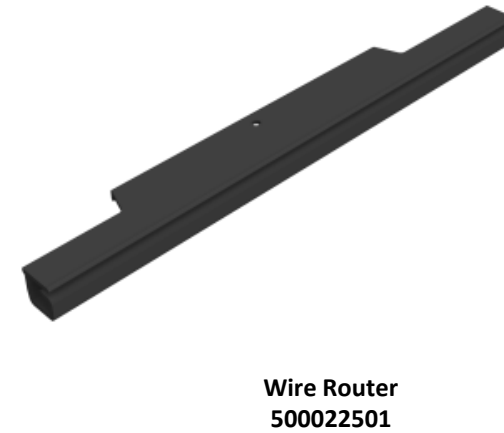
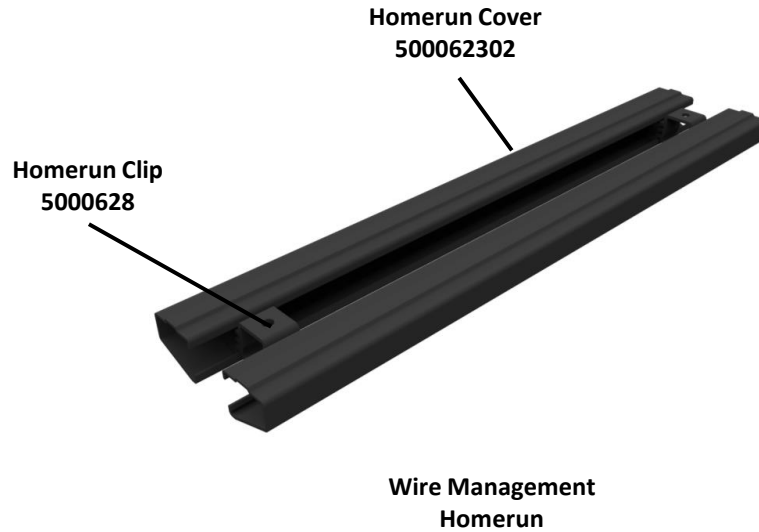
UL 1565 Wire Positioning - Ratings

The clawFR Wire Management products have been evaluated to UL 1565 with the following ratings:

- Operating Temperature Range: -35 to 90C
- Maximum Load: 10lbs
- For Outdoor Use



Wire Management Accessories



Note: The above images are not on the same scale.

Tools

Drill with torque limiter or torque wrench

ALERT: NO IMPACT DRIVERS

Torque Setting*	Fastening Operation
3 ft-lb (4.1 Nm)	Wire Router

* +/-4% allowable during installation

Socket sizes	Fastening Operation
10 mm Magnetic	Used with 6 mm bolts

Wire Management Homerun Installation

Part Number: 500062302, 5000628

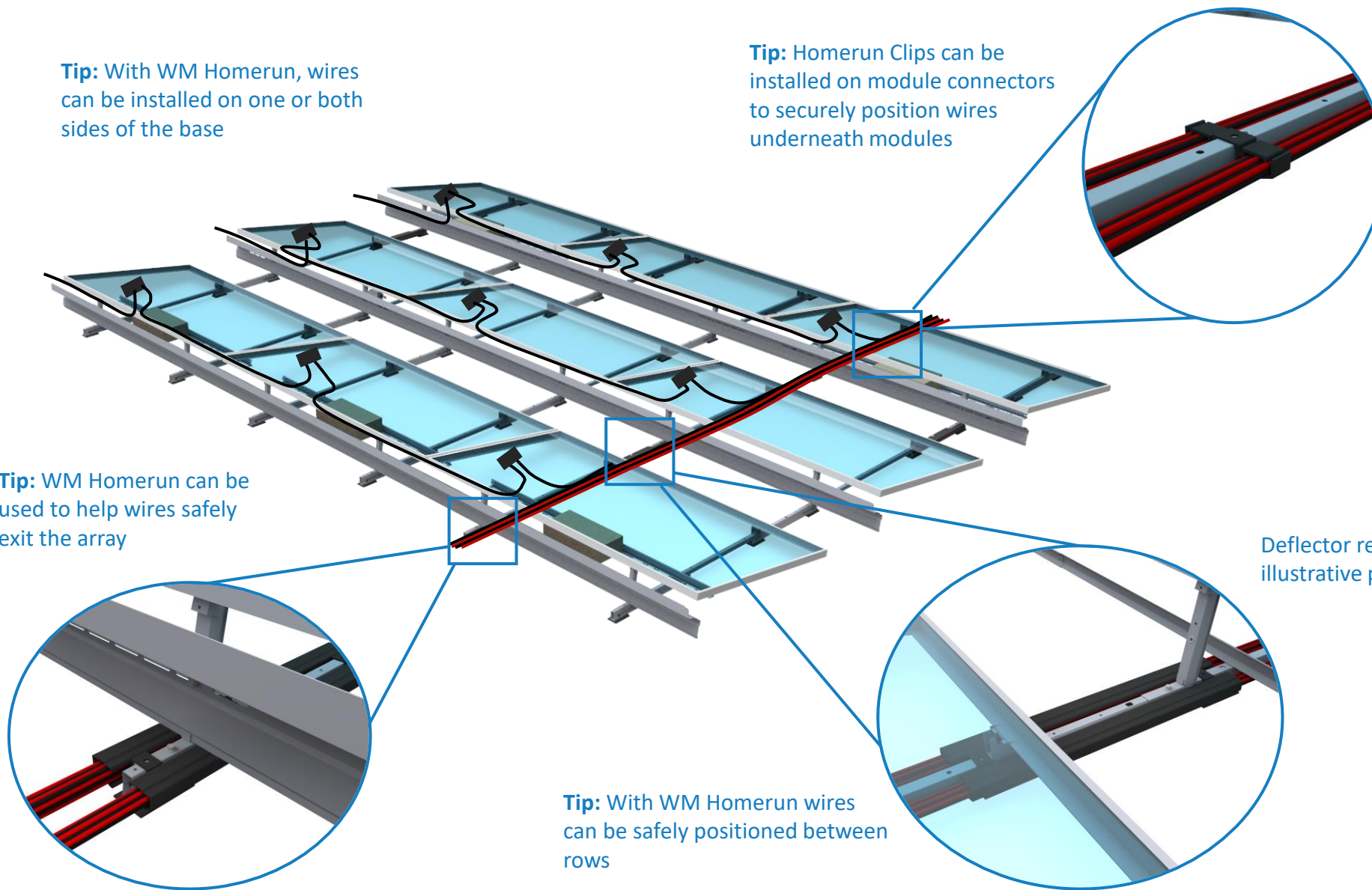
Tip: With WM Homerun, wires can be installed on one or both sides of the base

Tip: Homerun Clips can be installed on module connectors to securely position wires underneath modules

Tip: WM Homerun can be used to help wires safely exit the array

Deflector removed for illustrative purposes

Tip: With WM Homerun wires can be safely positioned between rows

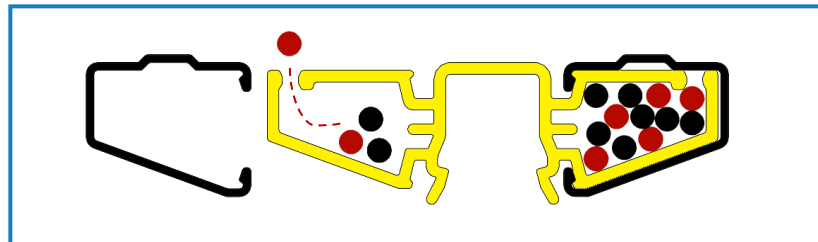


Wire Management Homerun Installation (Continued)

Part Number: 500062302, 5000628

Homerun Clip and Homerun Cover provide a convenient solution for safely and securely positioning wires running between module rows. WM Homerun clicks directly onto the Module Connector without the need for any tools.

Each **Homerun Cover Pack** includes 25 Covers.
 Each **Homerun Clip Pack** includes 100 Clips.



Insert wires into Wire Clip as shown, before snapping on Cover. A maximum of 12 #10 wires or 8 #8 wires are allowed for each side dependent on outer diameter.

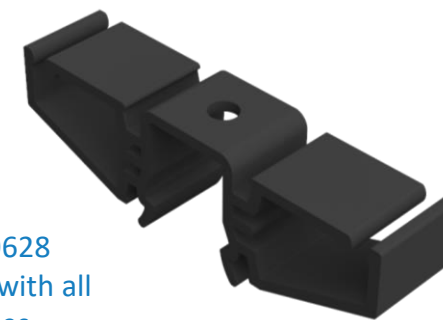
Tip: Wire Management Homerun is more easily installed prior to modules being in place.



Reference height from bottom of Homerun Clip to ground.



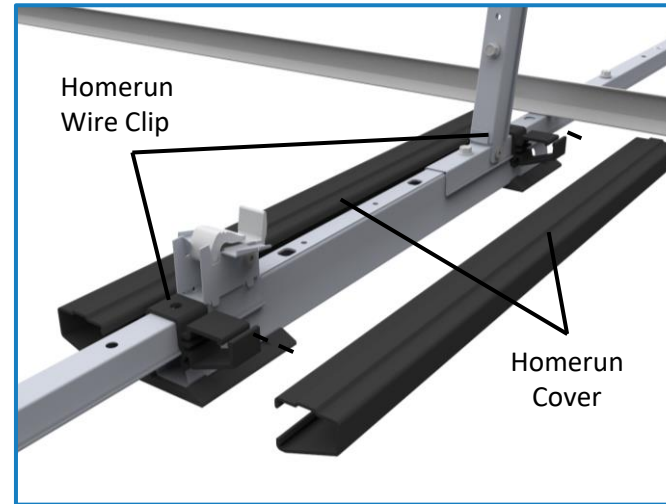
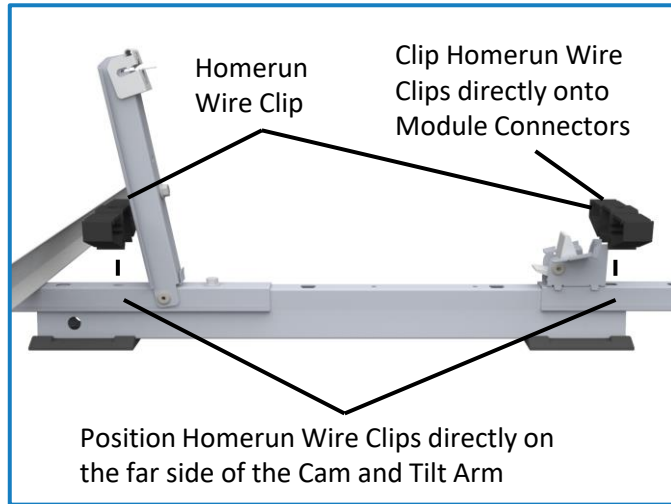
500062302
For use with all Bases



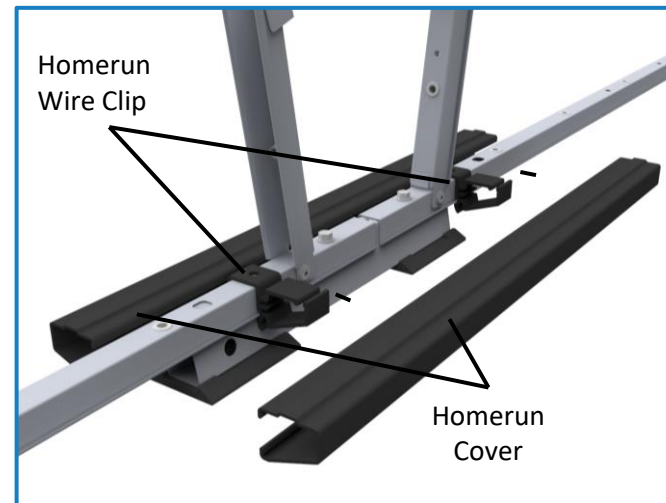
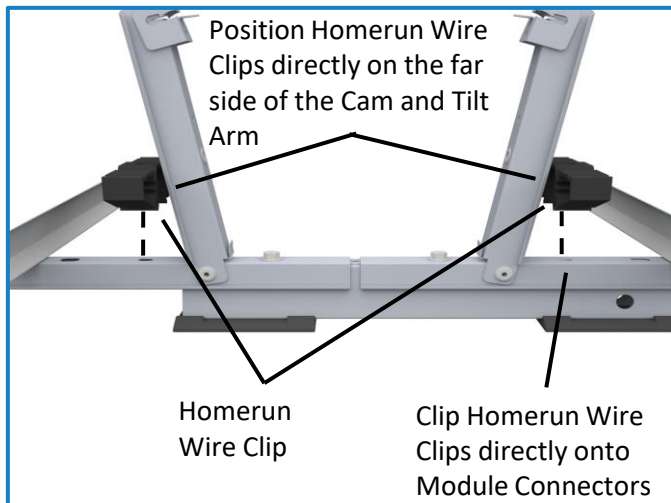
5000628
For use with all Bases

Wire Management Homerun Installation (Continued)

Part Number: 500062302, 5000628



clawFR 5D & 10D: Click Homerun Wire Clips directly onto the Module Connectors on the far side of the Cam and Tilt Arm. Homerun Covers click directly onto one or both sides of the Wire Clip. No mechanical fasteners are needed for installation.



clawFR DT: Click Homerun Wire Clips directly onto the module connector on the far side of the two Tilt Arms. Homerun Covers click directly onto one or both sides of the Wire Clip. No mechanical fasteners are needed for installation.

Alert: Two Homerun Wire Clips must be used per walkway aisle.

Wire Router Installation

Part Number: 5000225 [01/02]

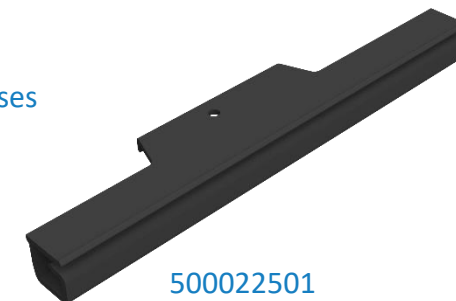
Wire Routers provide a convenient solution for safely and securely positioning up to 4 #10 wires between module rows. Wire Routers install directly onto the Base and provide both physical and UV protection to the PV wire.

Each **Wire Router Pack** includes a total of 25 Wire Routers and 30 washers.

Alert: Wire Routers may not be used on Bases to which Mechanical Attachment Struts are installed.



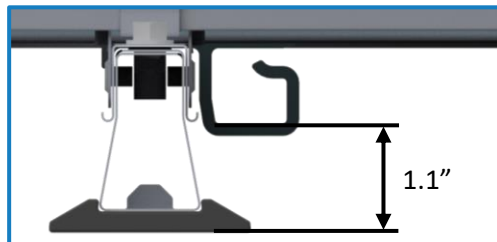
500022502
For use with 500050203 Bases



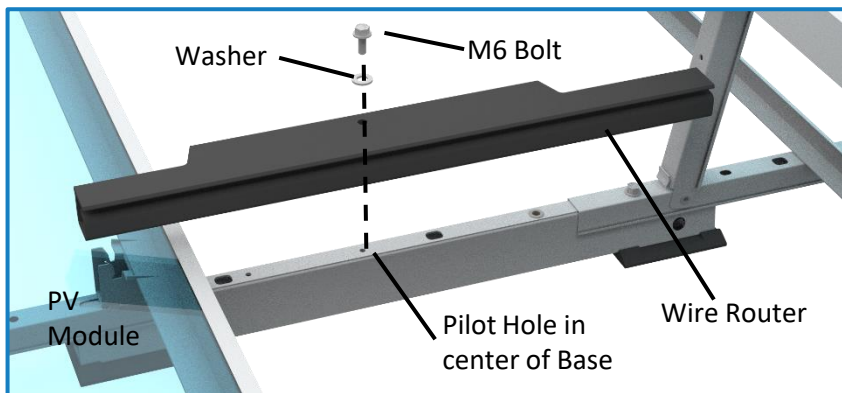
500022501
For use with 5000502[01/02] Bases



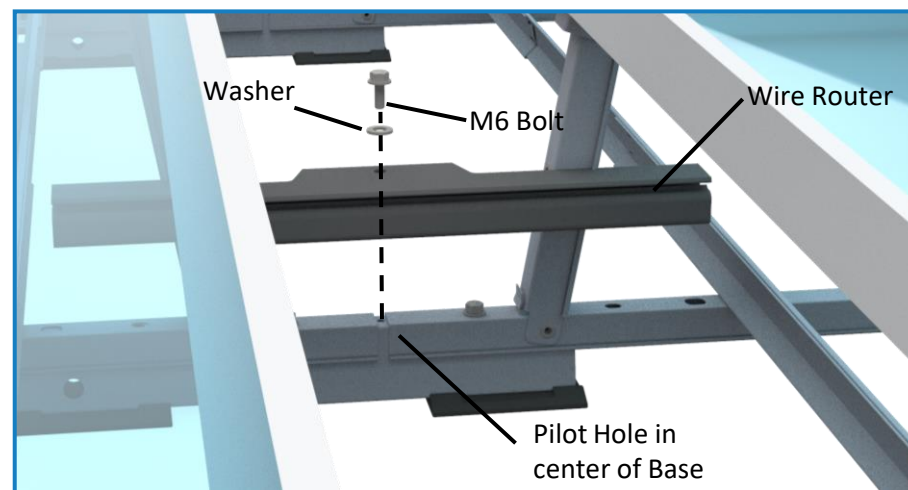
Insert wires into Wire Router as shown. A maximum of 4 #10 wires or 2 #8 wires is allowed dependent on outer diameter.



Reference height from bottom of Wire Router to ground.



clawFR 5D & 10D: Place Wire Router on top of Base and bolt through mounting hole into pilot hole in center of Base. Torque to **3 ft-lb**.



clawFR DT

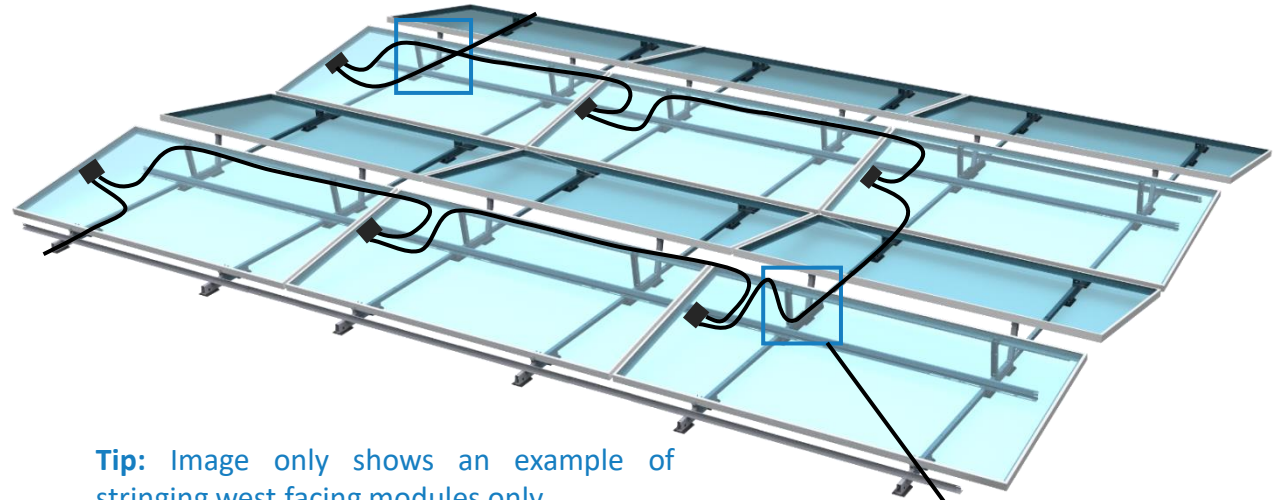
Wire Router Installation (Continued)

Part Number: 5000225 [01/02]

Alert: Wire Routers may not be used on Bases to which Mechanical Attachment Struts are installed.

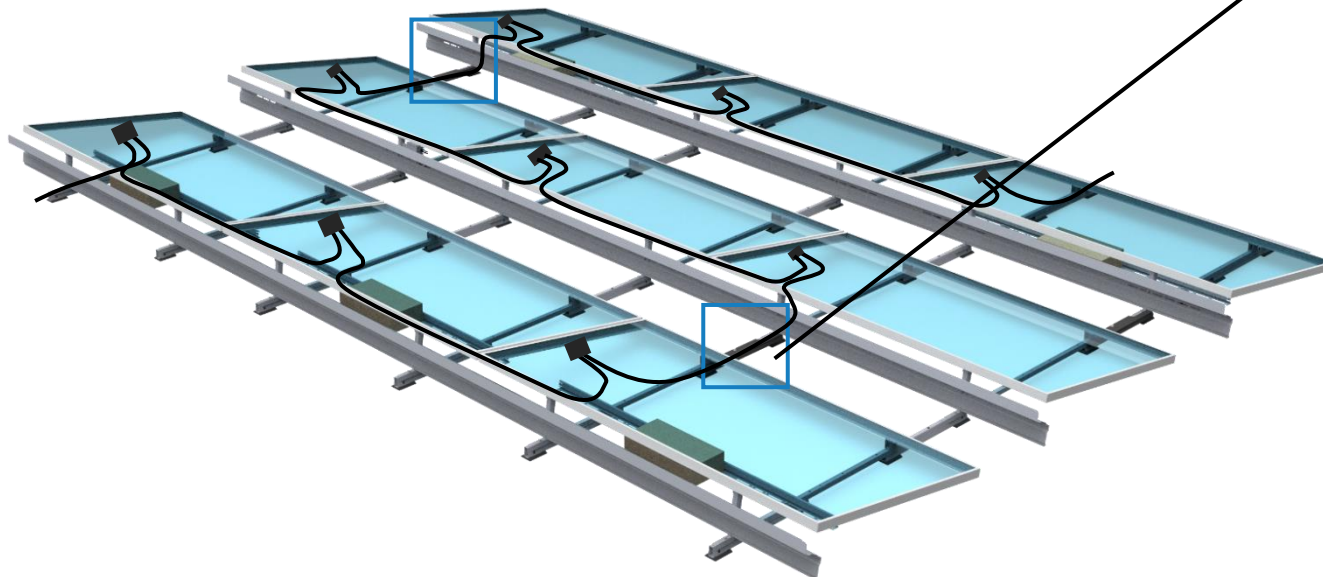
Tip: The gap on the valley is 1.6" [40 mm], which provides built-in physical protection of the wire

Tip: Wire Router can be installed on either side of the Base.



Tip: Image only shows an example of stringing west facing modules only

Wire Router installed to facilitate safe wire management across the gap



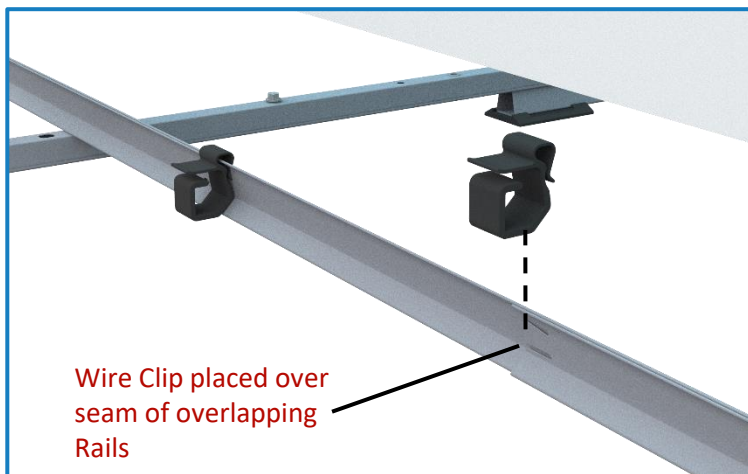
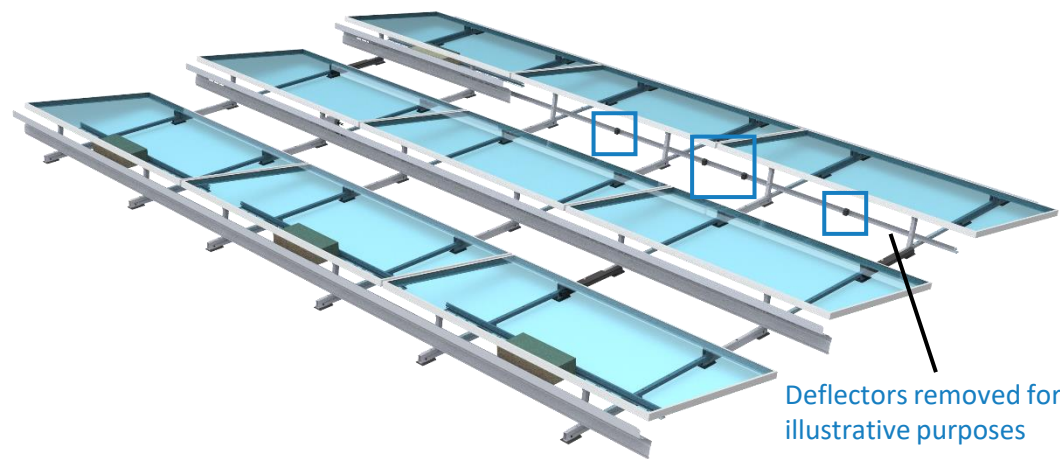
Wire Clip Installation

Part Number: 5000226

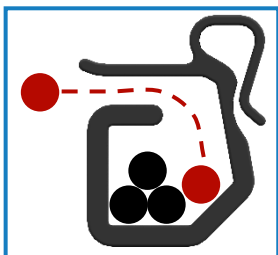
Wire Clips are an optional accessory that provide a convenient solution for safely and securely positioning wires along rows. Wire Clips clip directly onto clawFR Rails without tools.

Each **Wire Clip Pack** includes a total of 100 Wire Clips.

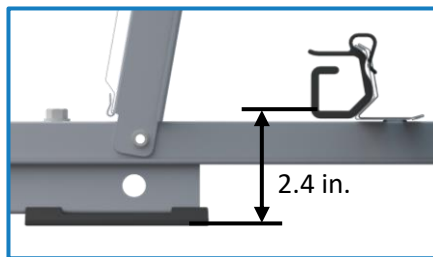
Alert: Place Wire Clips over the seam of overlapping Rails.



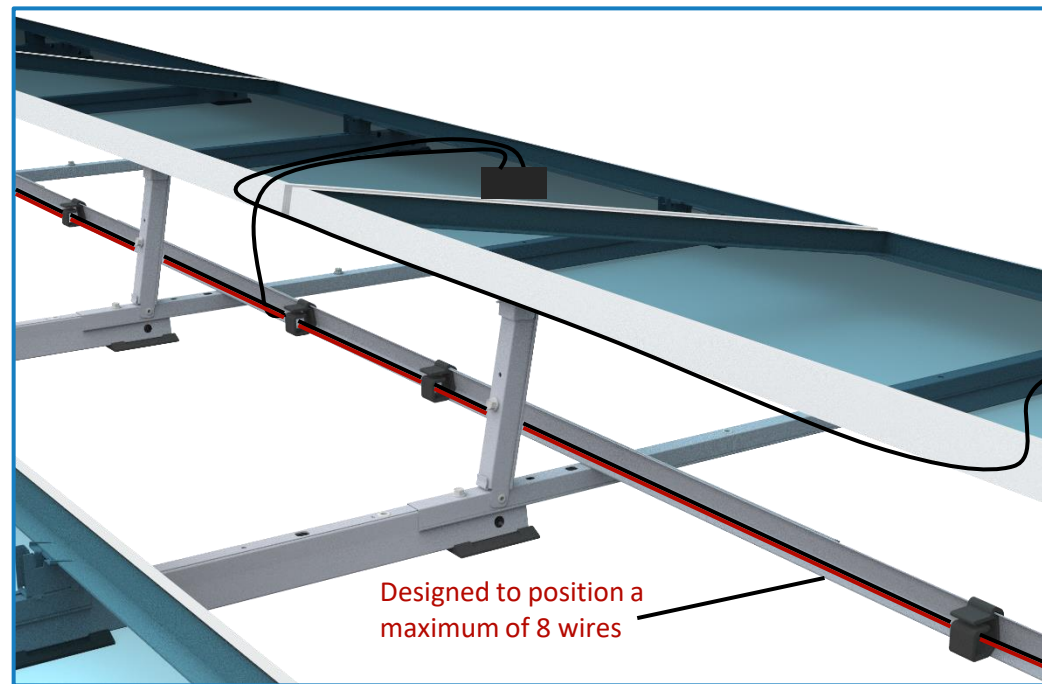
Place Wire Clip over the top of Rail.



Insert wires into Wire Clip as shown. A maximum of 8 #10 wires or 5 #8 wires is allowed dependent on outer diameter.



Reference height from bottom of Wire Clip to ground.



Tip: clawFR 10D is shown. Installation is identical for clawFR 5D & DT

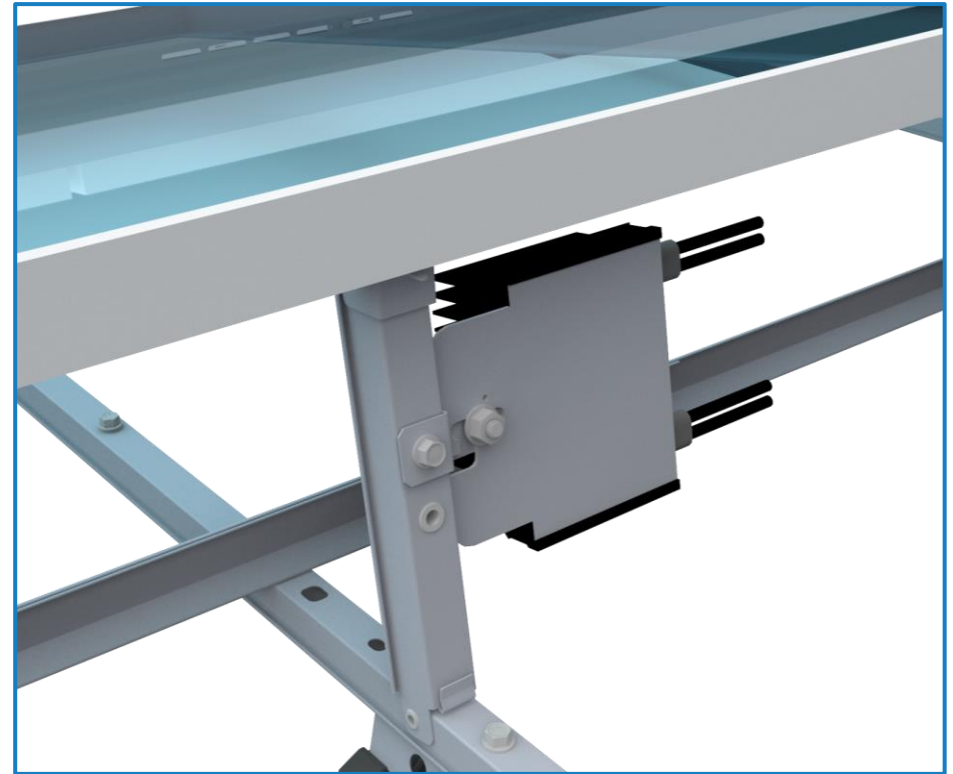
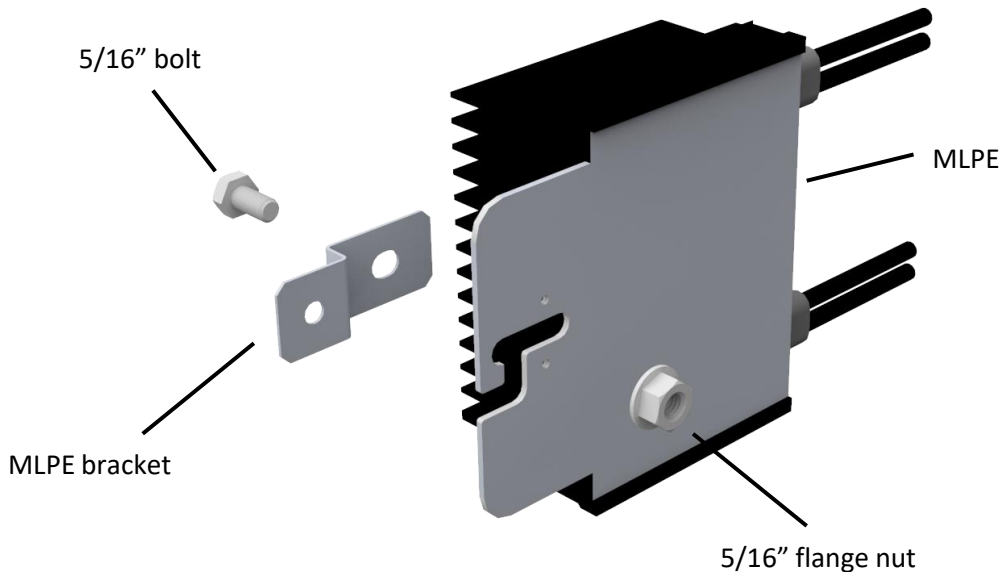
MLPE Installation Options

Module Level Power Electronics (MLPE), such as optimizers, rapid shutdown devices, and microinverters, can provide a host of benefits to solar arrays. PanelClaw offers convenient solutions for mounting MLPE's to clawFR systems. See corresponding clawFR 10D, 5D, and DT Installation Manuals for specific MLPE installation instructions.

solaredge

Tigo[®]

ENPHASE[®]



The **MLPE Bracket** is UL 2703 approved for bonding. A specific list of compatible MLPEs can be found in the "clawFR UL 2703 List of Ratings and Compatible Modules and MLPEs" document. The most recent version is available on the PanelClaw website (www.panelclaw.com/ul-2703).