

clawFR[®] & clawFRplus[™] Wire Management Manual

Table of Contents

Introduction & Safety	2
Wire Management Accessories & Tools	3
Wire Management Homerun & Homerun XL	4
Wire Router	8
Wire Clip	10
MLPE Installation	11

Introduction

The clawFR & clawFRplus 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 & clawFRplus 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

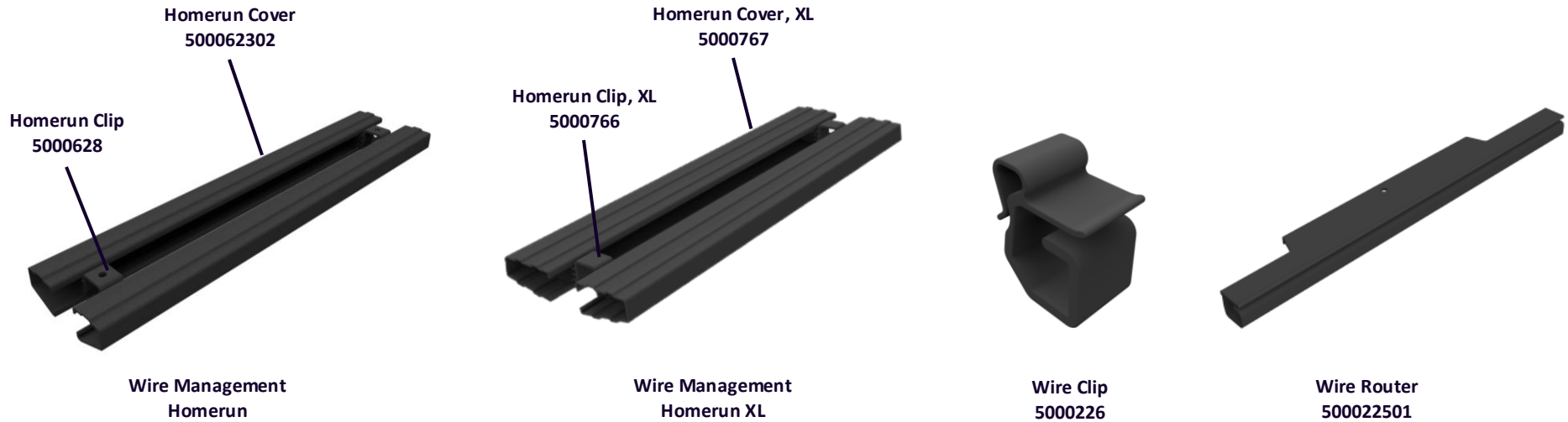
UL 1565 Wire Positioning - Ratings

The clawFR & clawFRplus Wire Management products conform to UL STD 1565 and are Certified to CSA C22.2 #18.5-13 Positioning Devices, 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 & Homerun XL Installation

Part Number: 500062302, 5000628, 5000766, 5000767

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

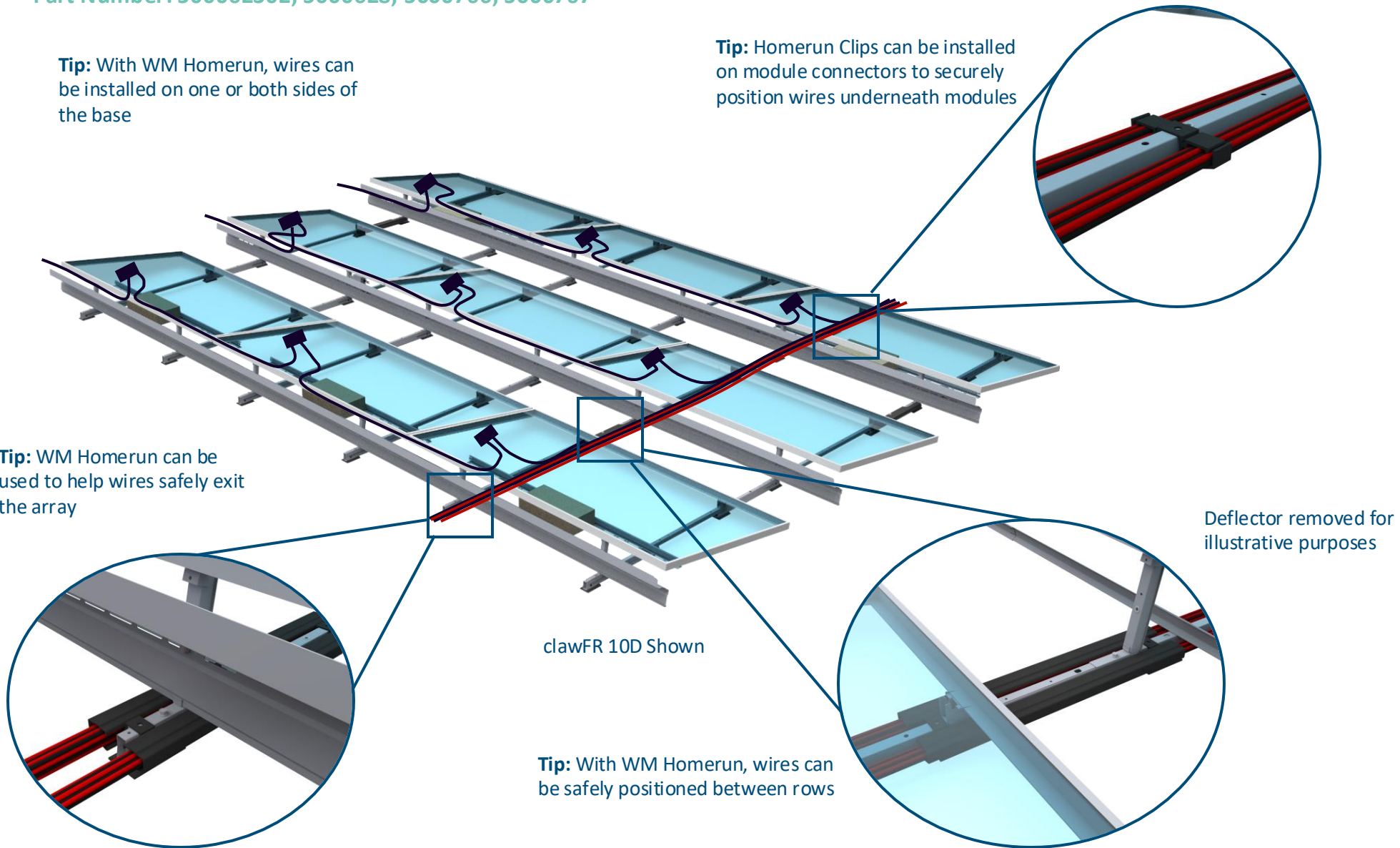
Tip: Homerun Clips can be installed on module connectors to securely position wires underneath modules

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

clawFR 10D Shown

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

Deflector removed for illustrative purposes



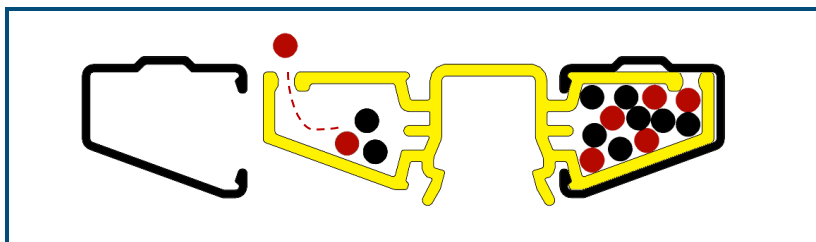
Wire Management Homerun Installation (Continued)

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

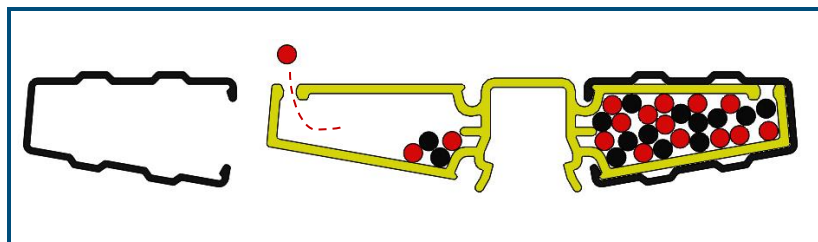
Wire Management Homerun XL Installation (Continued)

Part Number: 5000766, 5000767

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

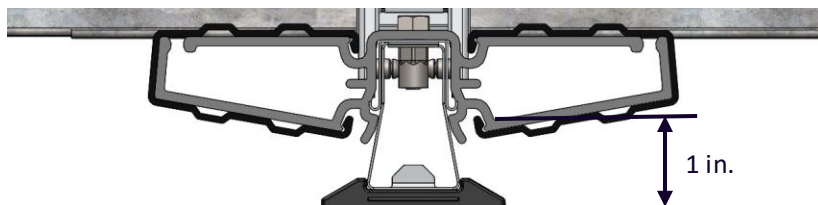
Each **Homerun Cover, XL** Pack includes 25 Covers.

Each **Homerun Clip, XL** Pack includes 100 Clips.



Insert wires into Wire Clip as shown, before snapping on Cover
A maximum of 25 #10 wires or 16 #8 wires are allowed for each side dependent on outer diameter.

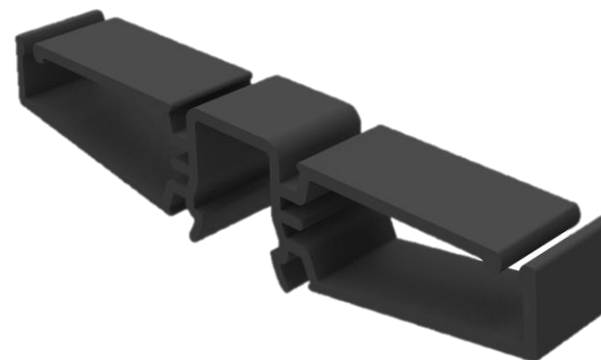
Tip: Wire Management Homerun is more easily installed prior to modules being in place.



Reference height from bottom of Homerun Clip to ground.



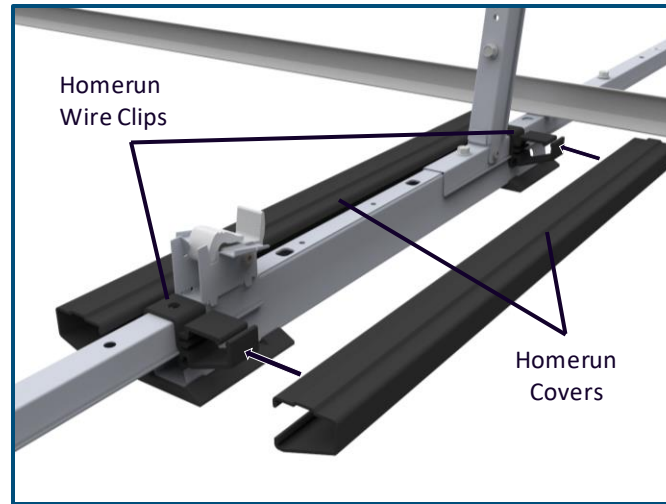
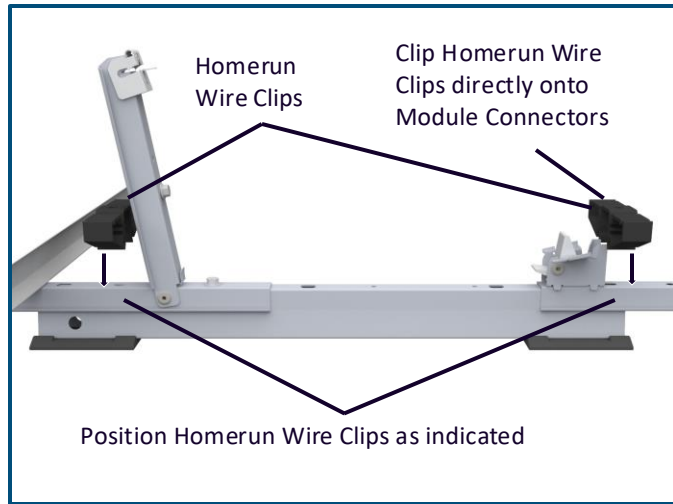
5000767 Homerun Cover, XL
For use with all Bases



5000766 Homerun Clip, XL
For use with all Bases

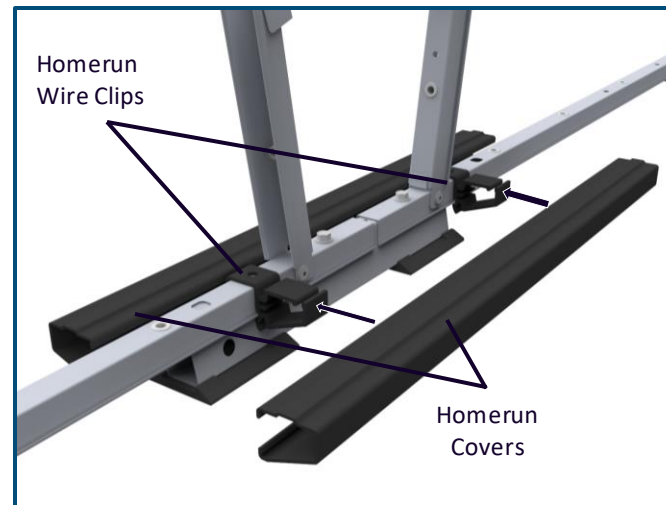
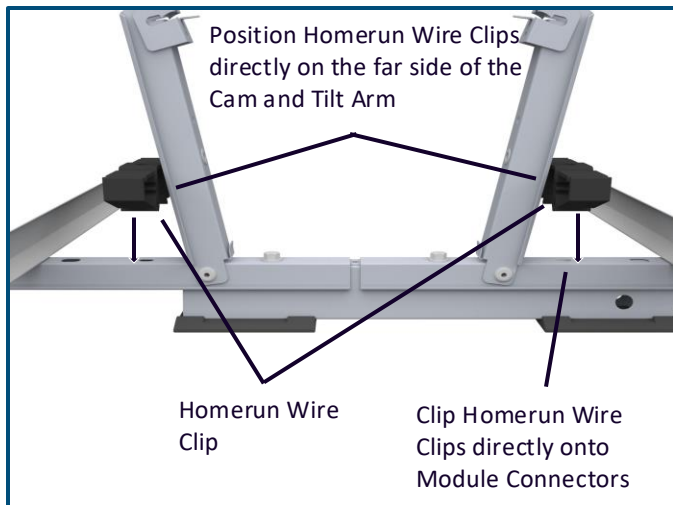
Wire Management Homerun Installation (Continued)

Part Number: 500062302, 5000628



clawFR & clawFRplus 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 10D Shown



clawFR & clawFRplus 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.

clawFR 10D Shown

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

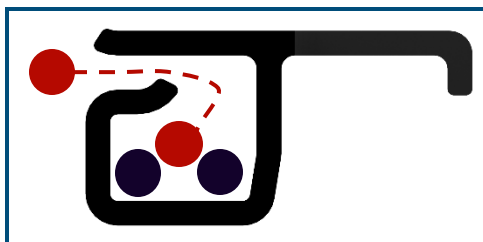
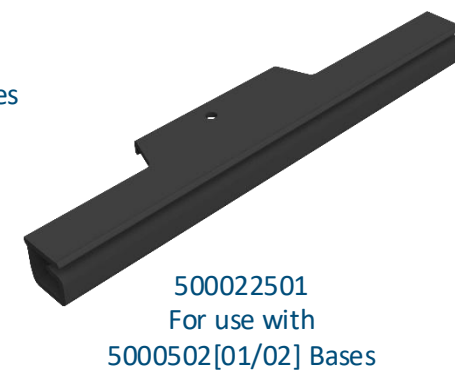
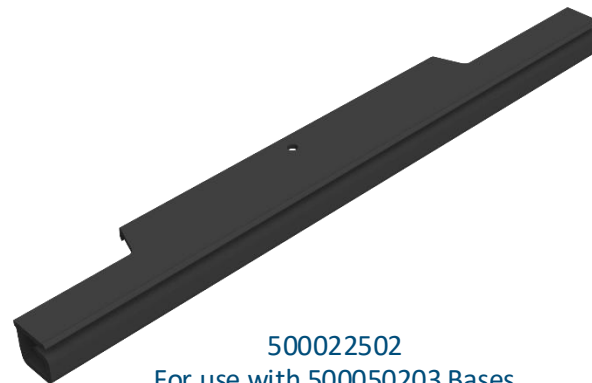
Wire Router Installation

Part Number: 5000225 [01/02]

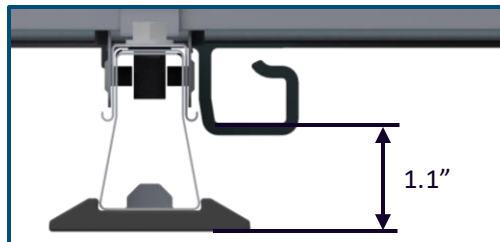
Wire Routers provide a convenient solution for safely and securely positioning up to 4 #10 wires between module rows. Wire Routers install directly onto the Base and provide both physical and UV protection to the PV wire.

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

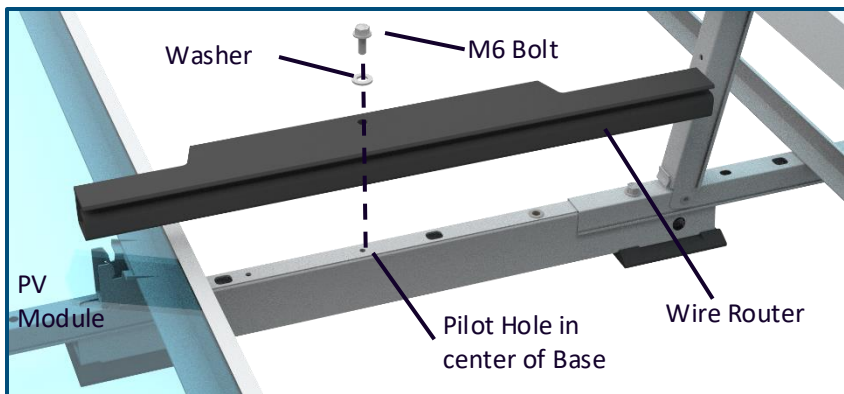
Alert: Wire Routers may not be used on Bases to which Mechanical Attachment Struts are installed.



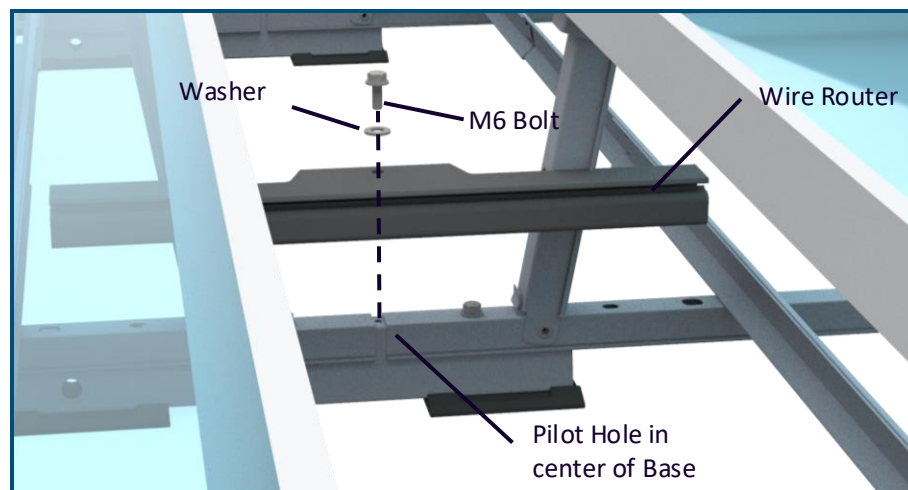
Insert wires into Wire Router as shown. A maximum of 4 #10 wires or 2 #8 wires is allowed dependent on outer diameter.



Reference height from bottom of Wire Router to ground.



clawFR & clawFRplus 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 10D Shown.



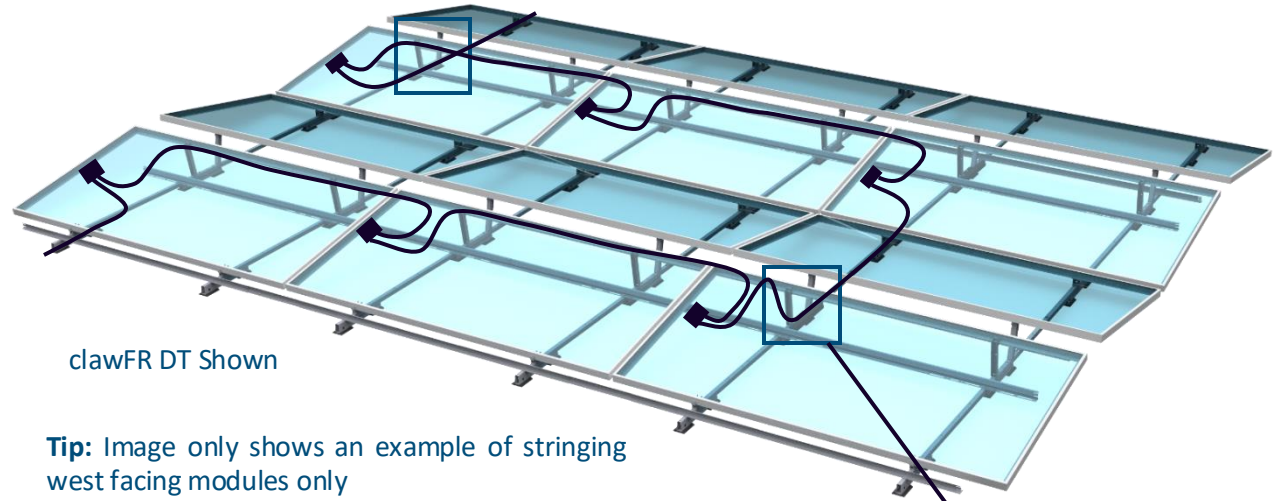
clawFR & clawFRplus DT: clawFR 10D Shown.

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.

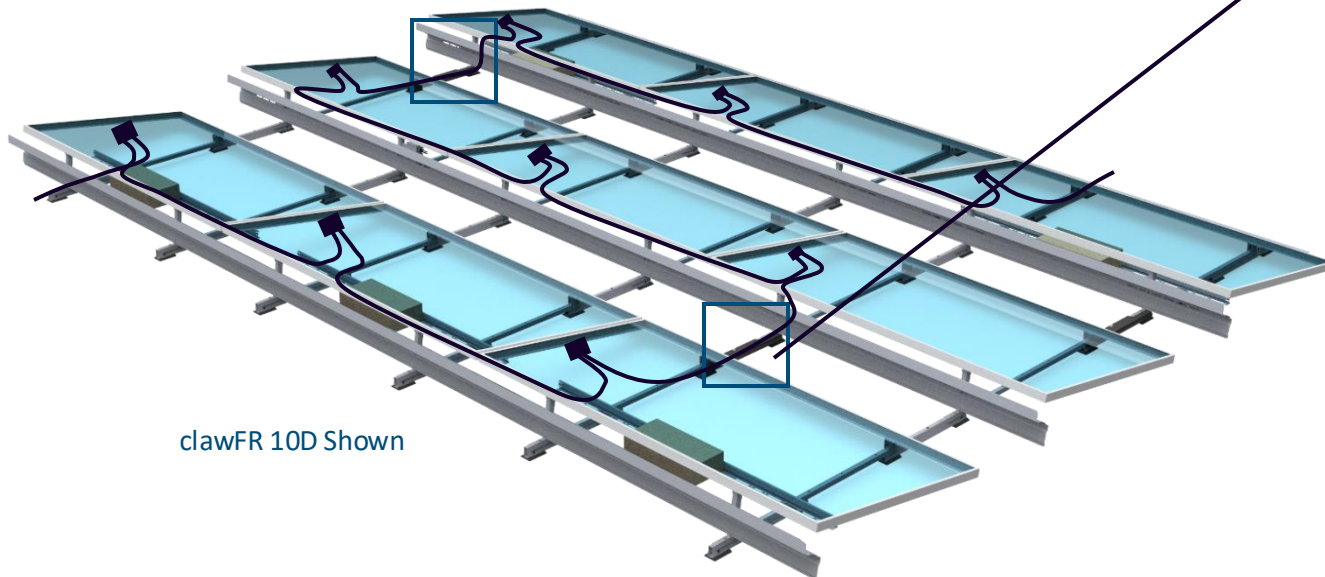
Tip: The gap on the valley is 1.6" [40 mm], which provides built-in physical protection of the wire



clawFR DT Shown

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

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



clawFR 10D Shown

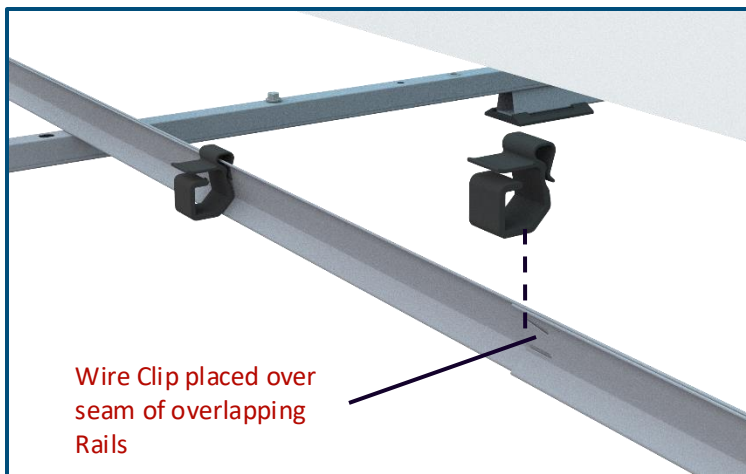
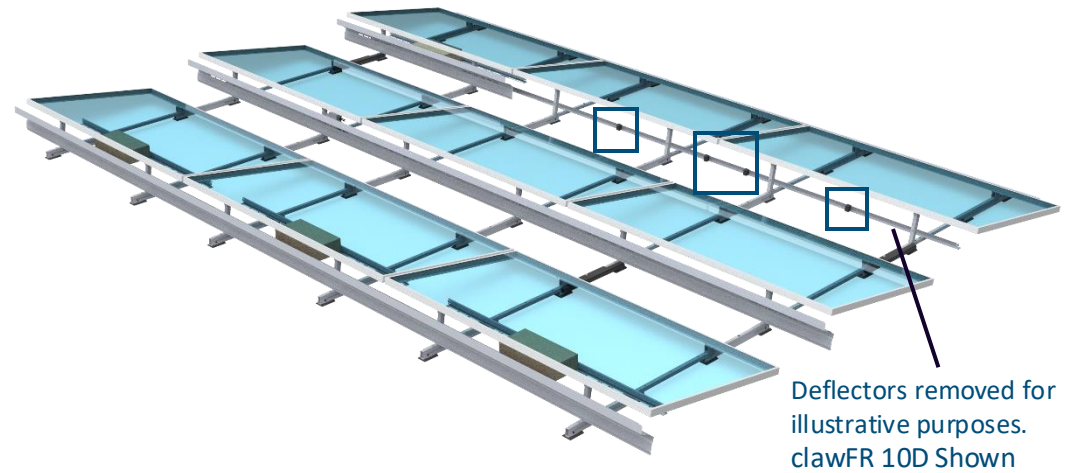
Wire Clip Installation

Part Number: 5000226

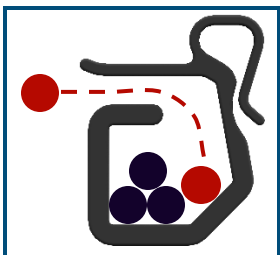
Wire Clips are an optional accessory that provide a convenient solution for safely and securely positioning wires along rows. Wire Clips clip directly onto clawFR & clawFRplus Rails without tools.

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

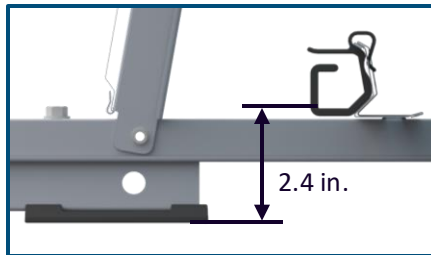
Alert: Place Wire Clips over the seam of overlapping Rails.



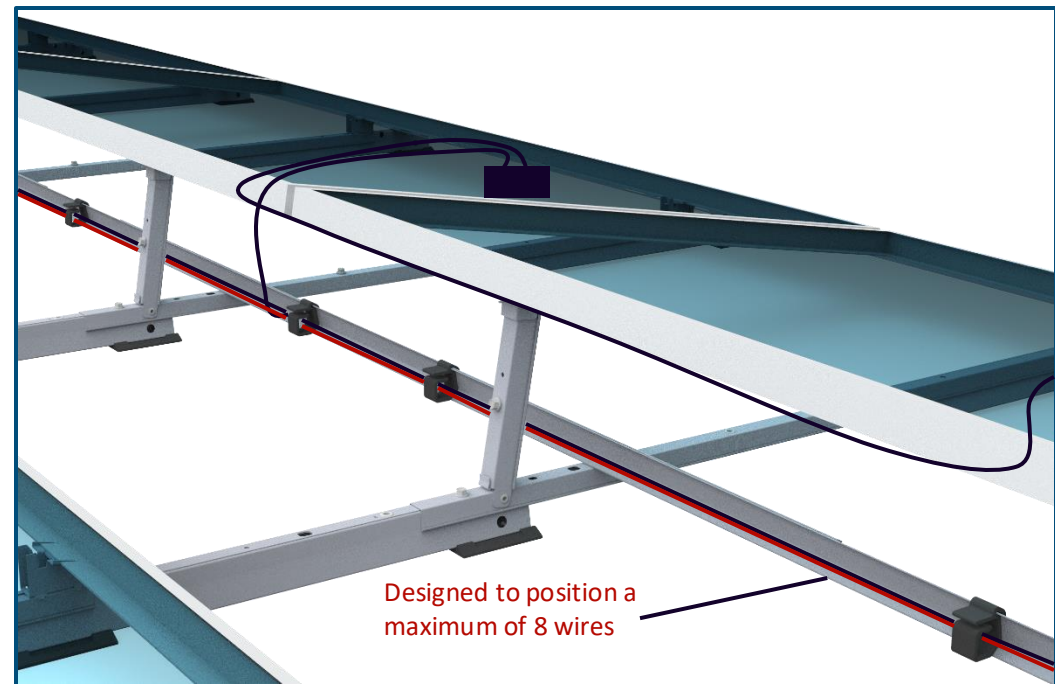
Place Wire Clip over the top of Rail.



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. clawFR 10D Shown.



Tip: Installation is identical for clawFR & clawFRplus 5D, 10D & DT. clawFR 10D Shown.