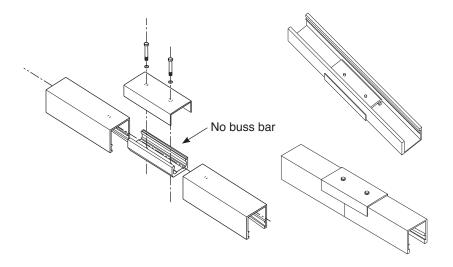




ProSolar® RoofTrac® Bonding and Grounding Guide

(Patent Pending)

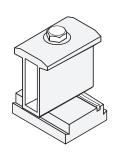


Applies to GroundTrac® and SolarWedge® mounting systems which utilize the RoofTrac® rail/clamp design.

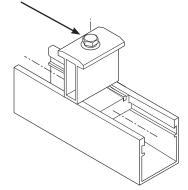
For RoofTrac® Rail Bonding Splice

- Drill 1/2" holes at bottom of rails with 1/2" #10 Irwin Unibit® using the rail support as a hole location guide.
- Insert 5/16" bolt through support holes and hand thread into thread rail splice insert. Fasten to 15 ft-lbs.

Green lock washer indicates electrical bond







Self-bonding Mid Clamp Fastened on Rail (solar module not shown)

For Bonding Module Frame and Clamps to Support Rail

• Fasten pre-assembled mid-clamp assembly to module frame, to 15 ft-lbs.

Module Frame Design:

double wall, aluminum, 1.2"–2.0" tall, 0.059"–0.250" thickness, UL1703 or equivalent tested module.

UL467 standard tested bonding equipment for use with Professional Solar Products (ProSolar®) support rail.

Bonding of module to RoofTrac® rail via ProSolar® rail channel nut using buss bar.

Bonding of RoofTrac® rail to RoofTrac® rail via ProSolar® UL467 tested universal splice kit (splice insert and splice support).

Grounding of RoofTrac® rail via Ilsco SGB-4 rail lug.

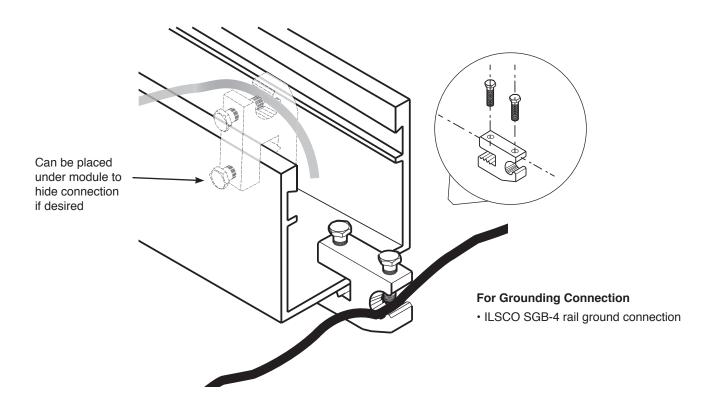
System to be grounded per National Electrical Code (NEC). See NEC and/or Authority Having Jurisdiction (AHJ) for grounding requirements prior to installation. See final run (racking to ground electrode) grounding equipment installation instructions for specific installation information.

COPYRIGHT PROFESSIONAL SOLAR PRODUCTS 2015: All information contained in this manual is property of Professional Solar Products (PSP). TileTrac® is a registered trademark for PSP and is covered under U.S. patent #5,746,029. RoofTrac® and FastJack® are registered trademarks for PSP and are covered under U.S. patent #6,360,491. RoofTrac® bonding designs patent pending.

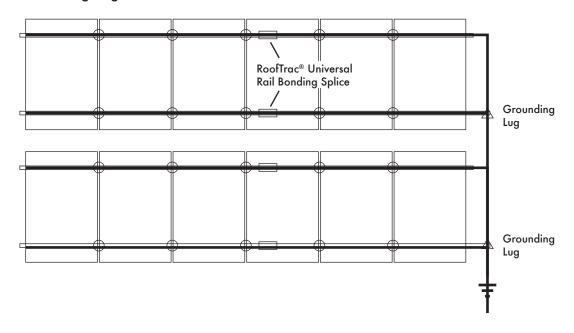


ProSolar® RoofTrac® Bonding and Grounding Guide

(Patent Pending)



Basic Wiring Diagram



COPYRIGHT PROFESSIONAL SOLAR PRODUCTS 2015: All information contained in this manual is property of Professional Solar Products (PSP). TileTrac® is a registered trademark for PSP and is covered under U.S. patent #5,746,029. RoofTrac® and FastJack® are registered trademarks for PSP and are covered under U.S. patent #6,360,491. RoofTrac® bonding designs patent pending.



Listing Constructional Data Report (CDR)

1.0 Reference and Address				
Report Number	100779407LAX-003 Original Issued:		14-Sep-2012	Revised: 28-Apr-2015
Standard(s)	UL Subject 2703 - Outline of Investigation Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels. Issue #2: 2012/11/13			
Applicant	Professional Solar Products, Inc.		Manufacturer	Professional Solar Products, Inc.
Address	1551 S. Rose Avenue Oxnard, CA 93033		Address	1551 S. Rose Avenue Oxnard, CA 93033
Country	USA		Country	USA
Contact	Stan Ullman		Contact	Stan Ullman
Phone	(805) 486-4700		Phone	(805) 486-4700
FAX	(805) 486-4799		FAX	(805) 486-4799
Email	s@prosolar.com		Email	s@prosolar.com

2.0 Product Description Photovoltaic Racking System Product ProSolar Brand name The product covered by this listing report is a rack mounting system. It is designed to be installed on a roof. It will be secured by means of Fast Jack or Tile Trac attachments, depending on the type of roof it is intended to be installed upon. The Rooftrac mounting system is comprised of support rails and top-down clamping hardware. This device can be used on most standard construction residential roof-tops. This system is in compliance with the mounting, bonding and grounding portions of UL Subject 2703. This system has the following fire class resistance ratings: Class A for Steep Slope Applications when using Type 1 or Type 2, Listed Photovoltaic Modules. Class A for Steep Slope Applications when using Type 2, Listed Photovoltaic Modules with or without the wind skirt. Class A for Low Slope Applications when using Type 1, Listed Photovoltaic Modules when a minimum of 12" gap between the roof surface and the bottom of the module is maintained. Class A for Low Slope Applications when using Type 2, Listed Photovoltaic Modules when a minimum of 14" gap between the roof surface and the bottom of the module is maintained. RoofTrac has different types of bonding and grounding, below is a list of them: Bonding of module-to-Roof Trac rail via Weeb PMC Description Bonding of module-to-RoofTrac rail via ProSolar rail channel nut using buss bar Bonding of module-to-Roof Trac rail via Ilsco SGB-4 lugs Bonding of Roof Trac rail-to-Roof Trac rail via Weeb Bonding Jumper-6.7 Bonding of Roof Trac rail-to-Roof Trac rail via Ilsco SGB-4 Lugs Bonding of RoofTrac rail-to-RoofTrac rail via ProSolar UL 467 tested universal splice kit (Splice Insert and Splice Support) Issuance of this report is based on testing to PV module frames with a height of 1 1/4 inch to 2 inches The grounding of the entire system is intended to be in accordance with the latest edition of the National Electrical Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems. Any local electrical codes must be adhered in addition to the national electrical codes. This product investigation was performed only with respect to specific properties, a limited range of hazards, or suitability for use under limited or special conditions. The following risks and other properties of this product have not been evaluated: electric shock, Ultraviolet light exposure. Models RoofTrac Model Similarity N/A Fuse rating: 20 A Mechanical Load: 30 PSF Fire Class Resistance Rating: Class A for Steep Slope Applications when using Type 1 and Type 2, Listed Photovoltaic Ratings Modules. Class A for Low Slope Applications when using Type 1 and Type 2, Listed Photovoltaic Modules Mechanical load was tested using 60 Cell Canadian Solar Modules model CS6P with 40mm frame height and maximum span of 48 inches using 4 inch and 6 inch TileTrac or FastJack Other Ratings posts with 1-1/2 inch tall RoofTrac rail. And maximum span of 72 inches using 4 inch and 6 inch TileTrac or FastJack with 2-1/2 inch tall RoofTrac rail.

Issued: 14-Sep-2012

Revised: 28-Apr-2015