



Descriptive Report

MASTER CONTRACT: 0000304110
REPORT: 80176525
PROJECT: 80176525

EDITION

Edition	Issued On	Project	Location	Prepared By	Authorized By
Edition 1	December 18, 2024	80176525	USA Irvine	Michael Hoffnagle	Michael Hoffnagle

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PRODUCTS

CLASS - C531302 - POWER SUPPLIES - PHOTOVOLTAICS-PV Racking and clamping systems

CLASS - C531382 - POWER SUPPLIES - PHOTOVOLTAICS-PV Racking and clamping systems -
Certified to US Standards

Model(s)
Connect

The listed system is made with aluminum and stainless-steel components designed to provide bonding/grounding and mechanical stability for photovoltaic modules. Modules are secured and bonded to the racking system with SunBallast PowerClamp® mid and end clamps. The system is grounded through any UL approved ground lug, such as Weeb Lug 8.0 or ILSCO Lay-In Lug and 10 AWG copper wire. Fire ratings of Class A with Type 1, 2, 29, or 30 for low slope.

Connect with No-Flex system set up has additional bracket and ballast block for added support for higher loads. No-Flex system has same fire and bonding ratings, only higher download rating.

The grounding of the system is intended to comply with the latest edition of the National Electrical Code, to include NEC 250 & 690. Local codes compliance is required, in addition to national codes. All grounding/bonding connections are to be torqued in accordance with the Installation Manual and the settings used during the certification testing for the current edition of the project report.

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Connect Mechanical ratings UL 2703 and TIL A-40:

Module Area up to 27.74 ft ² Type 1, Type 29 construction	
Downward Design Load (lb/ft ²)	16.8
Upward Design Load (lb/ft ²)	16.8
Down-Slope Load (lb/ft ²)	5

Connect with No Flex setup Mechanical ratings UL 2703 and TIL A-40:

Module Area up to 27.74 ft ² Type 1, Type 29 construction	
Downward Design Load (lb/ft ²)	33.3
Upward Design Load (lb/ft ²)	16.8
Down-Slope Load (lb/ft ²)	5

CONDITIONS OF ACCEPTABILITY

Installation is subject to acceptance of the local inspection authorities having jurisdiction. The certification of these products relates only to the methods of installation, bonding, and grounding as outlined in the Installation Manual for each product.

APPLICABLE REQUIREMENTS

Standards Used	Description
ANSI/UL 2703: 2015 - First Edition- Including revisions through July 11, 2024	UL Standard for Safety Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels
CSA TIL NO. A-40	CSA TIL NO. A-40 - PV Module and Panel Racking Mounting System and Accessories

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The following markings are located on the side of the rails. They will be applied by stamp or adhesive label, compliant with the Standard for Marking and Labeling Systems, UL969.

1. Submitter's name and/or CSA Master Contract number "300336";
2. CSA mark
3. Model designation;
4. Manufacturing date;
5. Manufacturing location;



ALTERATIONS

Not Applicable

FACTORY TESTS

Not Applicable

SPECIAL INSTRUCTIONS FOR FIELD SERVICES

1. Component descriptions marked with either the "(INT)" or "(INT*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

COMPONENT SPECIAL PICKUP

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

DESCRIPTION

Notes:

1. Component Substitution
 - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT*" are not eligible for substitution without evaluation and report updating
 - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
 - c) The Term "(INT*)" means a "Recognized" and/or "Accepted" component may be replaced by a component that is CSA Certified. The applicable country identifiers shall be included, the requirements in item "d" below as well as any "conditions of suitability" for the component (as recorded in this descriptive report) shall be complied with;
 - d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
 - e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.
 - f) Substitution of a "Recognized" and/or "Accepted" component by one that is not CSA Certified is not permitted without a proper evaluation as well as a report update because the Conditions of Acceptance of the original component may be different than the Conditions of Acceptance of the substitute component.
1. The system does not employ a maximum number of modules that can be installed per system.
2. Module Orientation: Landscape
3. See Table 1 for customer supplied information for Connect
4. See the attached installation manual for each model installation instructions, and system drawings.

The critical components identified below may be formed at other locations and shipped directly to the construction site provided they are made with the material/coatings identified and conform to the physical dimensions described and shown in their respective illustrations. Physical specimens may not be present at the location where the CSA mark is applied. Location of markings can be found in the Marking section of this report.

Table 1

MODULE RACKING SYSTEM TYPE/S	
Model	Connect
Module Fire Type..... :	Class A with Type 1, 2, 29 or 30 for low slope.
Max branch circuit overcurrent-protection device (A)	30
IDENTIFICATION OF COMPONENTS AND MATERIALS	
End Clamp..... :	Part # :23920/PWC + K23900/PWC.50 (the end clamp is composed of mid clamp + adjustable height side plate) Material: 304 Stainless Steel
Adjustable plate..... :	Part # 2300R_ES Material: 304 Stainless Steel
Mid Clamp :	Part # : K23900/PWC.50 Material: 304 Stainless Steel
Ballasts :	Part # : 2310.CRLL.US , 2310.CRL.US , 2310.CRH.US , 2305.CRLL.US , 2305.CRL.US , 2305.CRH.US Technical data: 5000 PSI, number 3 rebar reinforced wettest precast concrete, with galvanized M8 threaded inserts embedded
Grounding Jumper..... :	Part# K.14.GND.JMP Material 10 AWG copper wire, tin plated copper ring terminals, factory crimped, round
No-Flex bracket..... :	Part# K23711.US Material: 304 Stainless Steel
Installation Manual..... :	Connect Install Manul, 12-17-2024

TEST HISTORY

Project 80176525 (Ed. 1)

Evaluation, Testing, and Certification of PV racking systems by SunBallast for Bonding/Grounding, Mechanical Load, and Fire ratings.

UL2703 Edition 1

Bonding Path Resistance Test: Section 13

Humidity Test: Section 18

Mechanical Load Test: Section 21

Bonding Conductor Test: Section 22

Fire Tests: Section 15

Construction Review:

Construction review performed with satisfactory results.

---End of Report---