



Tamarack Solar  
Products

# Installation Manual

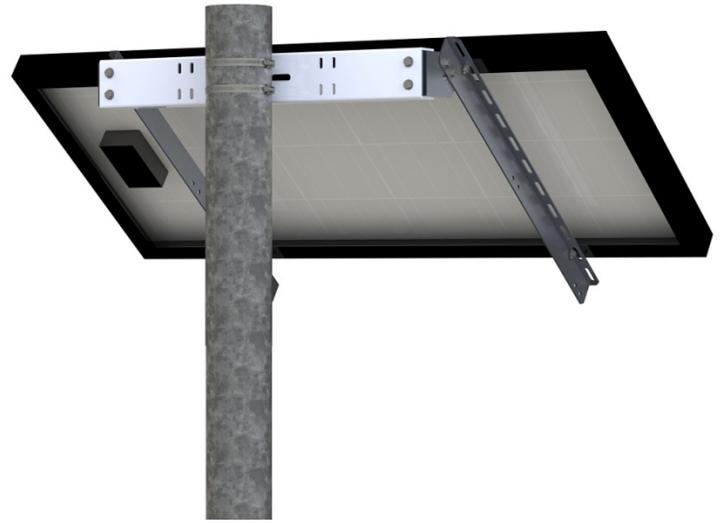
2019 Edition

SP-KNBR-MAN v1.01

**For model:**

SP-KNBR-001

Knee brace retro fit  
for UNI-SP/01A



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### Introduction

The Side of Pole Mount is a simple and universal pole mounting solution for small area solar photovoltaic (PV) needs. With its user-adjustable angle settings, the Side of Pole Mount can support installations in a wide range of locations. These can be installed on 2"-4" sch-40 pipe, flat surfaces, and 25G ROHN tower frame.

### Customer Support

Tamarack Solar makes every effort to ensure your mounting kit is easy to install. If you need assistance at any point with your installation or have suggestions on how we can improve your experience, call our customer support at **1-800-819-7236** or email us at [info@tamaracksolar.com](mailto:info@tamaracksolar.com).

### Tools Required and Torque Specifications

Use a torque wrench with a range of up to 144 inch-pounds or 12 Ft-Lbs.

5/16" socket (for the hose clamps)	torque to 35 Inch-pounds
7/16 " socket (for 1/4-20 hardware)	torque to 84 inch-pounds (7 Ft-Lbs).
1/2 " socket (for 5/16-18 hardware)	torque to 144 inch-pounds (12-Ft Lbs).

## Component images

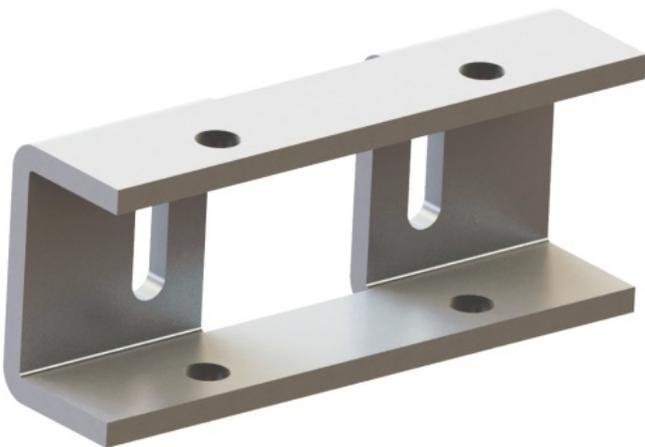
### Inner\Outer channels



### Swivel Brackets



### Knee Bucket

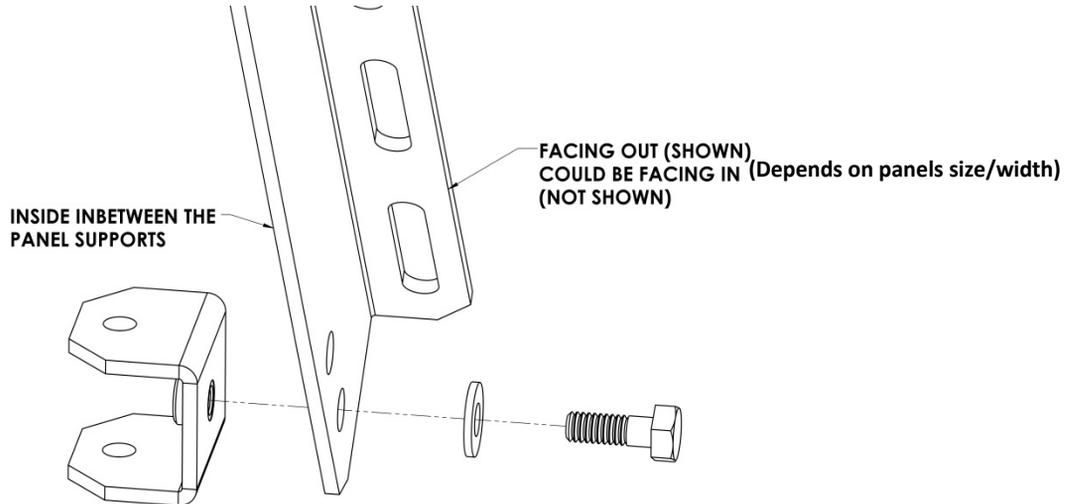


### Hose clamp



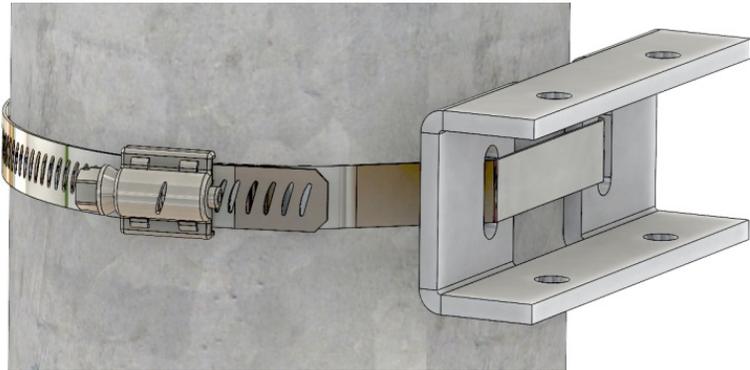
## Step 1. Attaching Swivel Bracket to Panel Support

- A. Using a 1/4-20 x 3/4" bolt and flat washer, attach the bracket to the inside end of the panel support in the hole as shown.
- B. Repeat on the opposite panel support, **leave brackets "finger tight"** for final adjustment of the knee brace assembly.

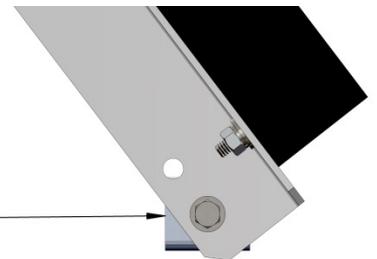


## Step 2. Attaching Lower Knee Brace Bucket

- A. Thread the banding through the set of narrow slots in the lower bucket.
- B. Place on the pole such that the knee braces will be level with the tips of the panel supports as shown below, **leave loose enough to move for final adjustments.**

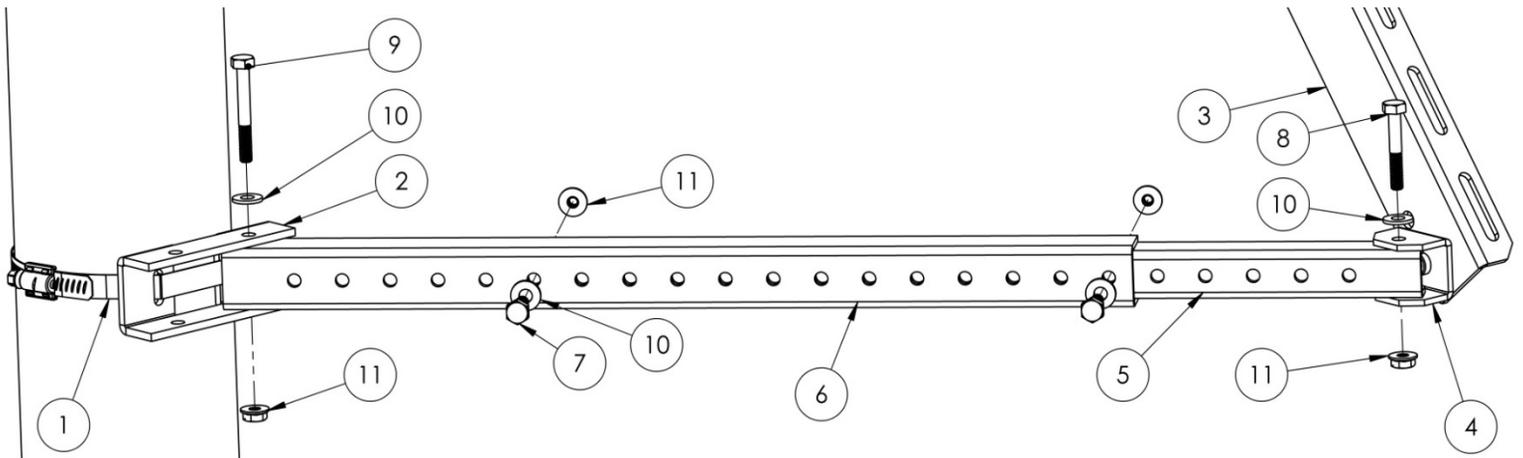


**LOCATE BUCKET IN LINE  
WITH THE SWIVEL BRACKET**



### Step 3. Attaching Inner\outer Brace Channels

- A. Loosely attach the outer channel to the Knee bucket as shown
- B. Loosely attach the inner channel to the swivel bracket as shown
- C. Align the inner channel inside the outer channel and align the holes to install the bolts
- D. Install the bolts in the holes at the end of the channels
- E. Repeat for the other side
- F. Torque ¼" hardware to 84in Lbs
- G. Re-torque the 5/16 hardware if loosened to adjust angle to 144in lbs
- H. Torque the hose clamp to 35in lbs



### Components List

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	27-5000-010	Hose Clamp, 1/2" x 1-7/8" - 5"	1
2	51-3517-203	BUCKET, KNEE	1
3	REFERENCE	EXISTING PANEL SUPPORT	2
4	51-3517-204	BRACKET, SWIVEL 1" CHANNEL ATTACHING	2
5	51-3517-207	CHANNEL, INNER 19" X 1"	2
6	51-3517-208	CHANNEL, OUTER 19" X 1.28"	2
7	23-2520-050	Bolt, 1/4-20 x .75 SS	6
8	23-2520-158	BOLT, HEX 1/4-20 X 1 5/8 SST.	2
9	23-2520-200	BOLT, HEX 1/4-20 X 2.0 SST	2
10	25-2502-000	Washer, flat 1/4 SS	10
11	25-2501-014	NUT, HEX 1/4-20 SERRATED FLANGE	8

## Installer Responsibility

The installer is solely responsible for:

- i. Complying with all applicable local or national building codes, including any that may supersede this manual;
- ii. Ensuring that Tamarack Solar and other products are appropriate for the particular installation and the installation environment;
- iii. Using only Tamarack Solar parts and installer-supplied parts as specified by Tamarack Solar. Substitution parts may void warranty;
- iv. Ensuring safe installation of all electrical aspects of the PV array; and
- v. Ensuring correct and appropriate design parameters are used in determining the design loading used for the specific installation. Parameters, such as snow loading, wind speed, exposure and topographic factor should be confirmed with the local building official or a licensed professional engineer.

## Warranty Information

Tamarack Solar warrants each Mounting Structure to be free from defects in materials and workmanship for ten (10) years from the date of first purchase (“Warranty Period”), when installed properly and used for the purpose for which it is designed, except for the finish, which shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of three (3) years, from the earlier of 1) the date the installation of the Product is completed, or 2) 30 days after the purchase of the Product by the original Purchaser (“Finish Warranty”). The Finish Warranty does not apply to any foreign residue deposited on the finish. All installations in corrosive atmospheric conditions are excluded. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 – “Cleaning and Maintenance for Architecturally Finished Aluminum” ([www.aamanet.org](http://www.aamanet.org)) are not followed by Purchaser for Tamarack Solar’s aluminum based products.

The warranty covers the replacement cost of parts to repair the product to proper working condition. Transportation and incidental costs associated with warranty items are not reimbursable. The warranty does not cover normal wear, or damage resulting from misuse, abuse, improper installation, negligence, or accident. The warranty does not cover any defect that has not been reported in writing to Tamarack Solar within ten (10) days after discovery of such defect. Furthermore, it does not cover units that have been altered, modified or repaired without written authorization from the manufacturer or its authorized representative, or units used in a manner or for a purpose other than that specified by the manufacturer. Tamarack Solar’s entire liability and Purchaser exclusive remedy, whether in contract, tort or otherwise, for any claim related to or arising out of breach of the warranty covering the Mounting Structures shall be correction of defects by repair, replacement, or credit, at Tamarack Solar’s discretion. Refurbished Mounting Structures may be used to repair or replace the Mounting Structures.

Tamarack Solar shall have no liability for any injuries or damages to persons or property resulting from any cause, whatsoever, or any claims or demands brought against Tamarack Solar by Purchaser, any employee of Purchaser, client of Purchaser, end-user of the Product or other party, even if Tamarack Solar has been advised of the possibility of such claims or demands (collectively, “Third Party Claims”). This limitation applies to all materials provided by Tamarack Solar during and after the Warranty