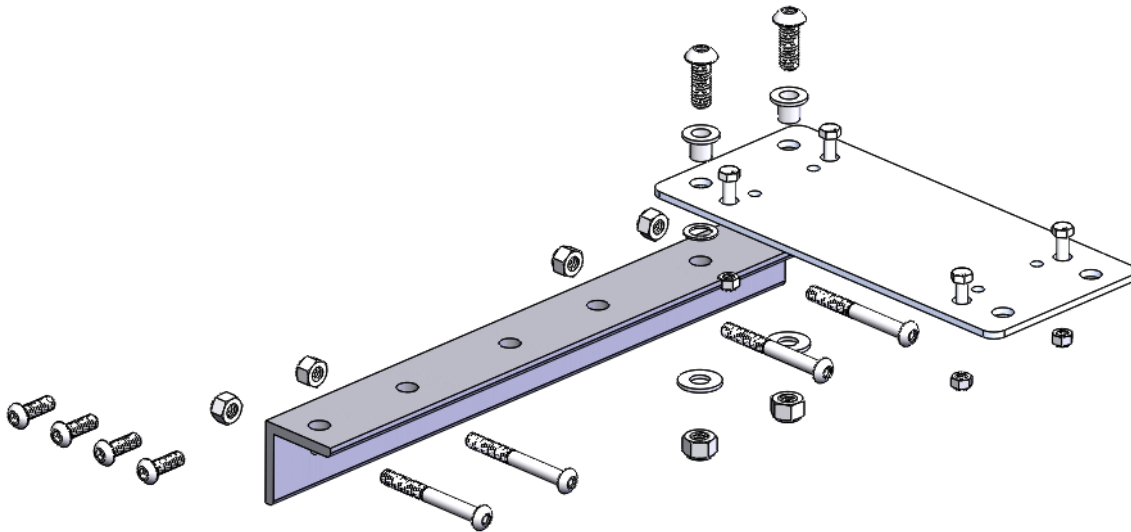




## INTRODUCTION

These instructions explain how to mount a reference cell sensor to the frame of a PV array with a frame or mounting location that can be drilled. The bracket allows the sensor to be placed in a global plane-of-array (GPOA) orientation.

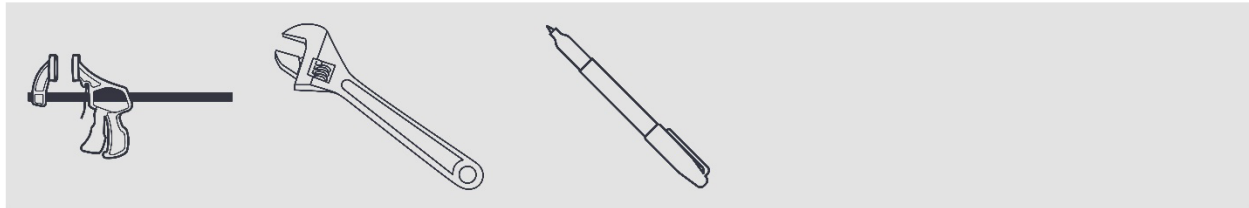


### #17103 Parts/BOM

NRG Part Number	Part Description	Part Specification Notes	Qty
10194	Cap Screw	M5 x .8mm thread   14mm length	4
10406	Nyloc Nut	1/4-20 thread   Stainless	4
12022	Button Head Screw	1/4-20 thread   3/4" length   Stainless	4
14467	Bracket	1 1/2"   Angle, short	1
14975	Nyloc Nut	M5   Stainless	4
14979	Nyloc Nut	5/16-18 thread   Stainless	2
14980	Button Head Screw	5/16-18 thread   7/8" length   Stainless	2
14981	Button Head Screw	1/4-20 thread   2 1/4" length   Stainless	4
15756	Reference Cell Plate	Boom Mount Plate	1
18249	Nylon washer	Washer   Nylon   .34 ID	2
18250	Nylon washer	Washer   Nylon   .375 ID	2
18251	Nylon sleeve washer	Washer Sleeve   Nylon   .3125 ID	2



**Tools**

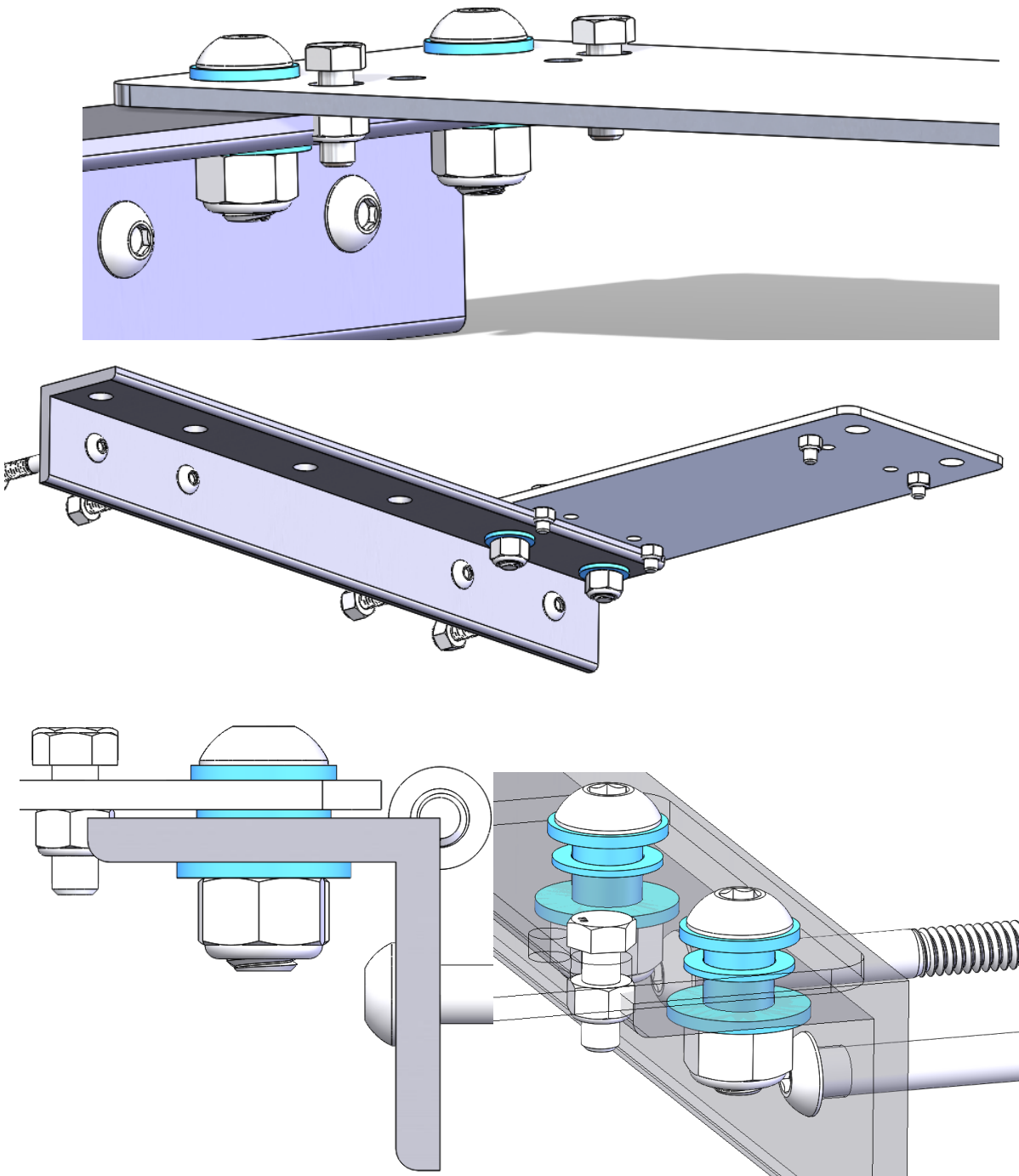


*Apply a small amount of anti-seize to the bolt threads.*



## INSTALLATION PRODECURE

1. Insert the screws #14980 into the sleeve washers #18251 and then through the holes in the universal mounting plate. Add nylon washers #18250 to the ends of the screws, and insert the screws through the holes in the angle bracket #14467. Add nylon washers #18249 to the ends of the screws before adding the nuts #14979 as shown below. Nylon washers are represented below in blue.





## Universal Reference Cell Array Mount | #17103

2. Attach the **reference cell sensor** to mounting plate #15756 with the M5 screws #10194 and M5 nuts #14975.  
**IMPORTANT:** Note that it is preferable to have the sensor cable exit northward, however this may not be possible if the sensor in all situations.
3. Clamp the assembly to the PV array frame at the desired mounting location.  
**IMPORTANT:** Ensure that the reference cell sensing element is on plane with the PV panels by adjusting the bracket up or down.
4. Angle bracket #14467 has (4) mounting holes, but a minimum of two can be used. Mark the locations of these holes on the PV array frame with a marker. Remove the assembly after marking.
5. Carefully drill the marked holes through the PV array frame. Drill bit size: 9/32" | 7.2mm | Size K
6. Mount the assembly to the PV array frame using the 1/4-20 stainless screws and nuts (#10406). Longer screws (2 1/4") #14981 are shown, but shorter 3/4" screws #12022 are included to suit thinner PV array frames.