



INSTALLATION

## INSTALLATION MANUAL

# DX3-3001S Cold Climate Solar Lighting System

## Hardware List

### Metal Pole Arm – Pole Arm

1. 2 ea. 5/8" x 7" bolts, flat washer, lock washer, nut (supplied with custom pole)



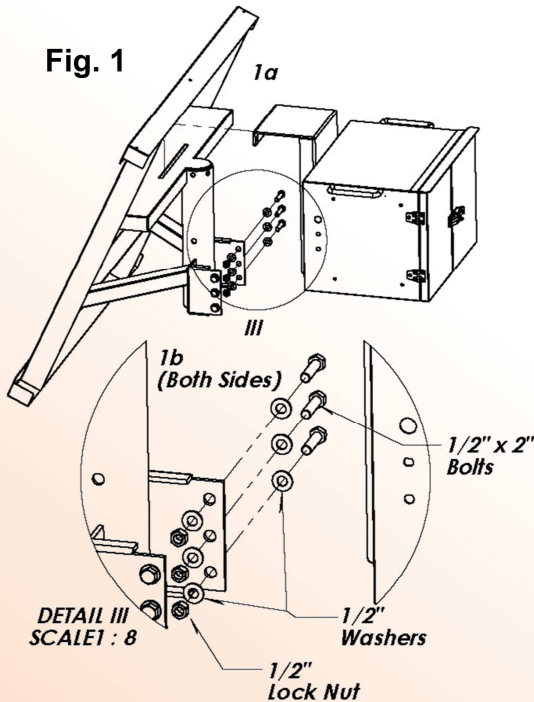
### Metal Pole Solar System

1. 1 ea. 1/2" x 5-1/2" Bolt with washers and nylon locknut - Solar Panel Mount rotation
2. 6 ea. 1/2" x 2" Bolt with washers and nylon locknut - Battery Box to solar panel mount
3. 4 ea. 5/16" x 3/4" Bolt with washers and nylon locknut - Mounting solar panel
4. 15 foot 2C #16AWG VNTC cable - pre-connected to battery box, fish to light head
5. 1 ea. Battery mounting strap, 1" x 6' black nylon c/w metal buckle
6. 1 ea. Battery Jumper cable
7. 1 ea. Battery cable c/w quick connect plug

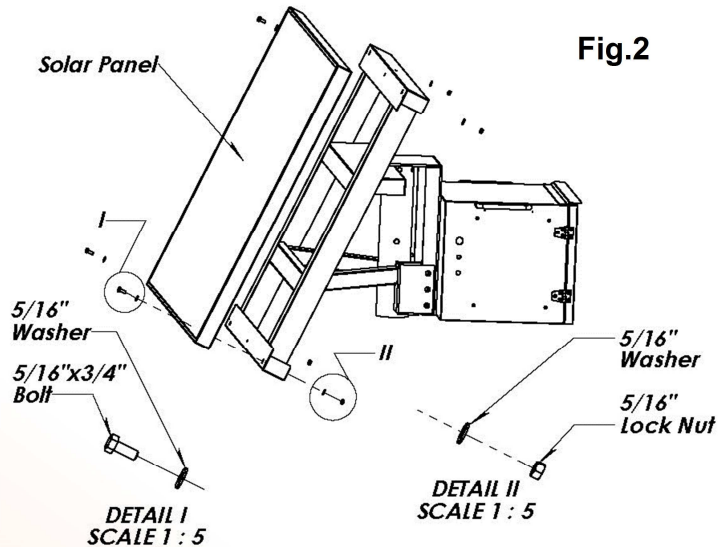
## Metal Pole Solar System Installation

\*order of operation may be altered depending on whether the system is assembled on the ground and erected complete or assembled in place with the pole already standing

**Fig. 1**

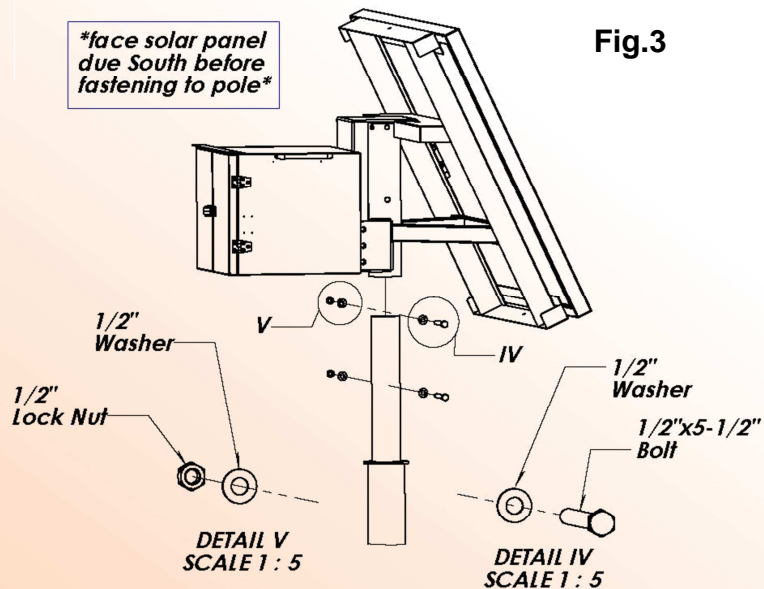


**Fig.2**

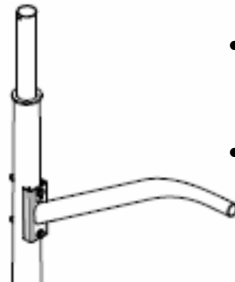
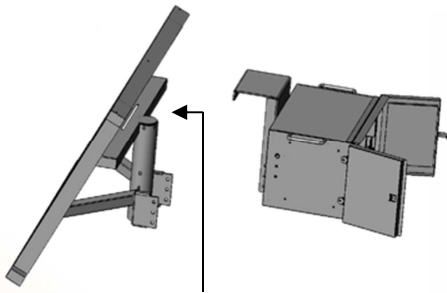


- Mount battery box to the solar mount using the six ( $\frac{1}{2}$ " x 2") bolts, washers and locknuts. (Fig. 1)
- Mount the solar panel to the solar mount using the four ( $\frac{5}{16}$ " x  $\frac{3}{4}$ ") bolts, washers and lock nuts. (Fig. 2)
- Mount assembled solar panel mount and battery box to the top of the DX3-LP custom light pole. (Fig. 3)
- Rotate the assembly on the top of the pole so that the solar panel faces due south. (Fig. 3)

**Fig.3**



- Drill through  $\frac{5}{8}$ " hole in the solar mount sleeve to secure the solar mount to the tenon pipe on the top of the pole. (Fig. 3)
- Secure with the  $\frac{1}{2}$ " x 5- $\frac{1}{2}$ " bolt, washers and locknut. (Fig. 3)



- Attach pole arm to the DX3 custom light pole using the 5/8" x 7" galvanized bolts, flat washers, lock washers and hex nuts
- Fish the 2C #16 VNTC from the battery box (pre-terminated and coiled at the battery box) through one of the openings at the top of the solar mount sleeve down through the DX3 custom light pole and out the end of the pole arm.



- Connect the 2C #16 VNTC cable to the luminaire, red to red, black to black using the pre-attached WAGO inline terminals (Picture below)

- Attach the luminaire to the pole arm with the supplied set screws.

- Install the 2 x 12V, 100AH SLA batteries and secure with the supplied nylon strap. Connect the batteries in parallel with the battery jumper cable between the positive (+) and negative (-) terminals at the back of the battery box. Disconnect the battery quick connect cable and connect the white lead to the positive terminal and the black lead to the negative terminal at the front of the battery box using the ring lugs.

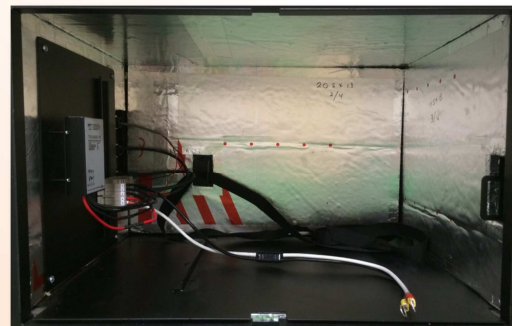


## Optional: 24V Lithium Polymer Battery

- Install 24V, 50 Ah and secure with the supplied nylon strap. Connect the battery with supplied battery cable, black banana plug to the (-) terminal and the red banana plug to the (+) terminal.

## TESTING

- Measure the battery voltage – 23 VDC and higher is acceptable
- Measure the open circuit voltage of the solar panel – 29VDC in direct sunlight
- Connect the battery quick connect cable
- On the charge controller, the idle LED indicator will come on. Within 1 minute it will switch to the discharge LED indicator and the light will come on.
- In daylight, connect the solar panel to the battery box using the pre-terminated MC4 connections. The controller will switch to charging mode and the light will turn off. At night the controller will continue to discharge and the light will remain on.



INSTALLATION