



INSTALLATION MANUAL

DX3-3001S Cold Climate Solar Lighting System

Hardware List

Wood Pole Solar System

1. 4 ea. $\frac{5}{8}$ " x 18" Stainless steel ready rod – Battery Box, Pole Arm and Solar Panel Frame Mounting
2. 8 ea. $\frac{5}{8}$ " Flat washers and nylon locknuts - Battery Box, Pole Arm and Solar Panel Frame Mounting
3. 4 ea. $\frac{5}{16}$ " x $\frac{3}{4}$ " 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
8. 2 ea. MC4 Cable, male/female, 15'



INSTALLATION

Wood 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

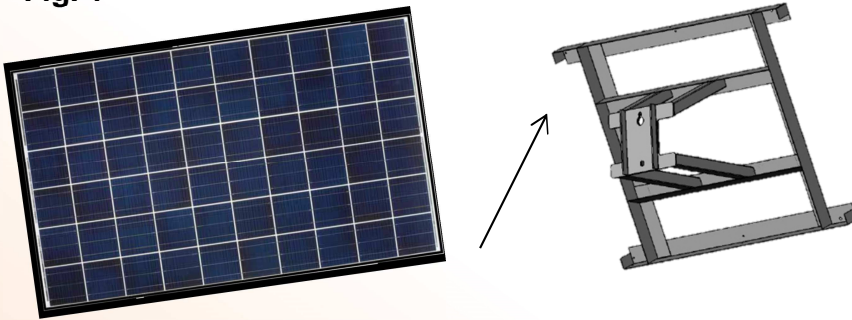
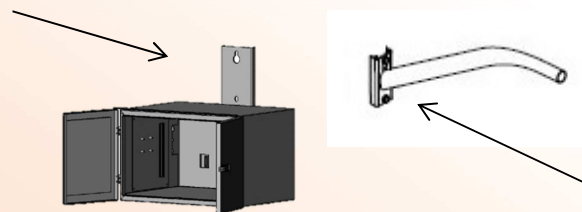


Fig.2



- Mount the solar panel to the solar mount using the pre-drilled mounting holes with the 4 ea. $\frac{5}{16}$ " x $\frac{3}{4}$ " bolts, washers and lock nuts. (Fig. 1)
- Drill 2 ea. $\frac{5}{8}$ " holes, 9" c-c spacing through the wood pole near the top. The orientation for these holes will be North/South when the pole is erected. (Fig. 2)
- Mount assembled solar panel frame to the wood pole with the supplied $\frac{5}{8}$ " x 18" Stainless steel ready rod, flat washers and nylon lock nuts. Ensure that the solar panel will be facing south when the pole is erected. (Fig. 2)

Fig.3



- Drill 2ea. $\frac{5}{8}$ " holes, 9" c-c spacing through the wood pole below the solar panel mount. The hole location will be dependent on site requirements. The orientation for these holes is determined by the direction the pole arm is to be mounted. (Fig. 2)
- Mount the battery box and pole arm to the wood pole with the supplied $\frac{5}{8}$ " x 18" Stainless steel ready rod, flat washers and nylon lock nuts. The battery box can be mounted on the opposite side of the pole or same side as the pole arm depending on site conditions. (Fig. 3)

INSTALLATION



- Fish the 2C #16 VNTC from the battery box (pre-terminated and coiled at the battery box) through 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.

