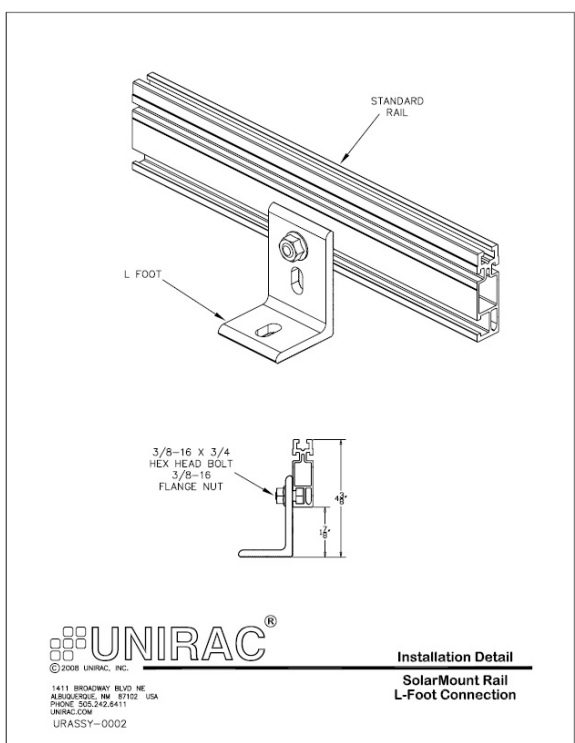**A brand of Plug Watts Inc.**
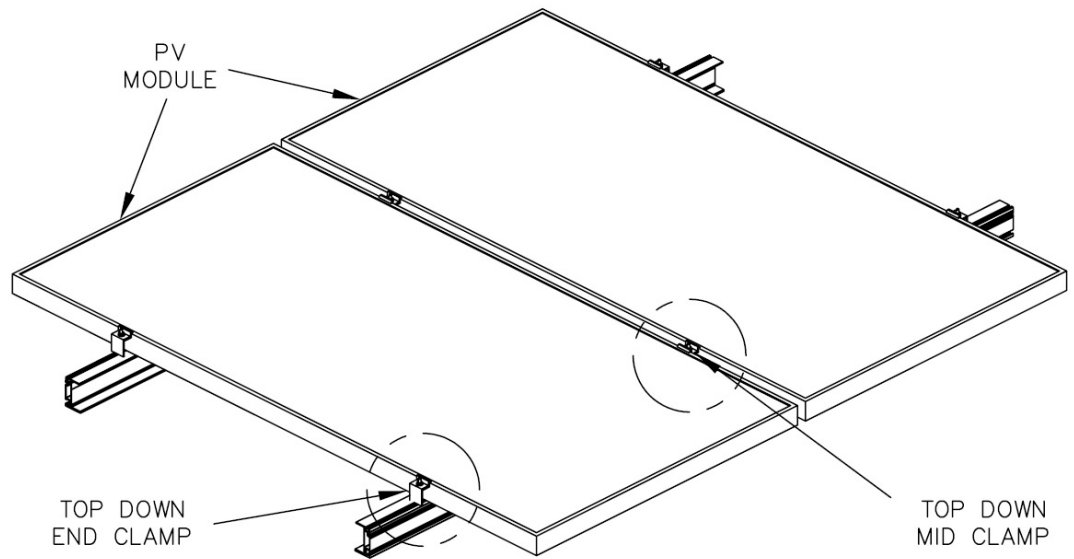
10 KW Roof Installation Manual

Include Elements (Please see details in the Appendix):

- Solar PV Panels: Up to 10KW
- Unirac™ roof installation parts.
- Solis Hybrid Grid-Tie/Off-grid Inverter 10KW,97.5% Efficiency, approved by utility
- DC solar PV cord with Mc4 for connecting solar panels to the solar inverters.
- AC Wires
- AC Disconnect
- Wifi Monitor

Installation Steps

1. Using Unirac Universal PV Module Roof Mounts installation booklet, install the roof mount system in your roof and secure the panels.

PV
MODULE

TOP DOWN
END CLAMP

TOP DOWN
MID CLAMP

Solar panel installation video with Unirac
https://www.youtube.com/watch?v=QFRXavTA1AI&t=5s
https://www.youtube.com/watch?v=jGplJO--qqw
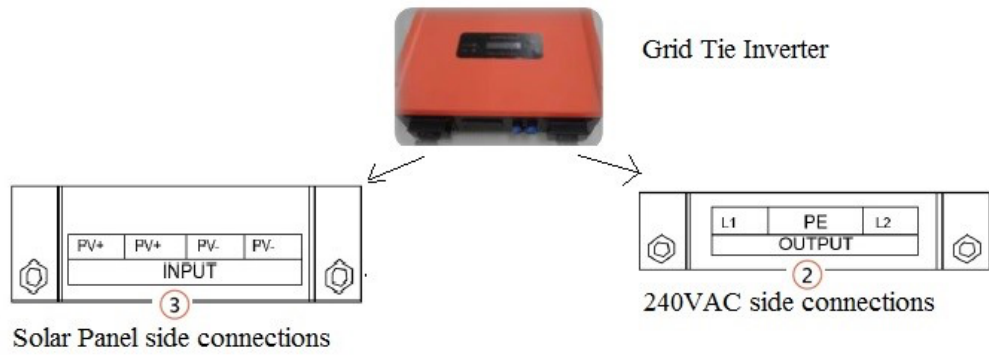
2. Attach the 10guage ground wire (not provided and can be bought from local store) to the rail.

3. Start the connecting solar panels with each other, positive/male to negative/female in series, using the snap-plug connectors.
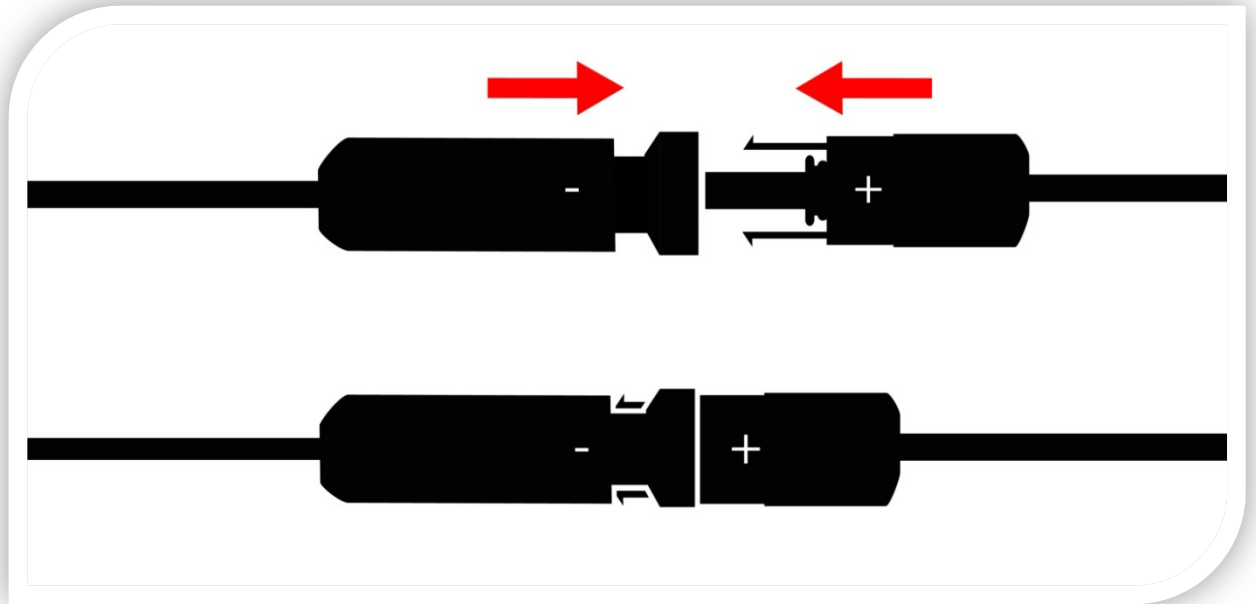
Electrical Connections

SYSTEM 3 LINE DIAGRAM

E.2

4. Attach the Inverter Box plate on the wall

5. Attach the DC cables from the Solar Panels to the '+' and '-' of the PV side of inverter connections. Please make sure the polarity is correct. Please see the drawing below.

6. Attach AC cables to the AC side of the inverter. Connect the naked copper wire to the "PE" slot as shown in drawing tomorrow. The other two wires go to 'L1' and 'L2'

7. Wires from the AC side of the inverter go to one of the available 240V AC circuit breaker (min 25Amp). If there is none available, you may buy one circuit breaker from the local hardware store and put into a vacant slot of the electric box. It is highly recommended to get a professional electrician to do the 240VAC work.

8. Turn on the breaker, Wait 6 minutes for the Plugged Solar System to start and check the Monitor display.

Grid Tie Inverter

PV+	PV+	PV-	PV-
	INPUT		

③

Solar Panel side connections

L1	PE	L2
	OUTPUT	

②

240VAC side connections

SOLAR PATIO / ROOF INSTALLATION

① Solar Panel
② Inverter box
③ DC Cable
④ Roof Racking
⑤ Ground Cable
⑥ Main Elec.Box
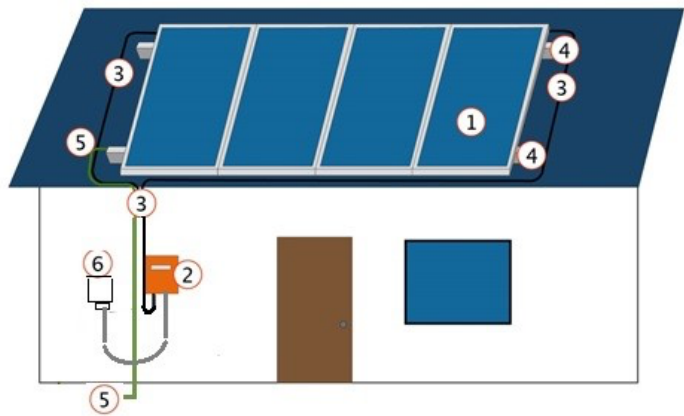
9. Start saving money on electricity by using Plugged Solar™.

If you want ground mount system, please contact us for ground mount additional racking.

www.PluggedSolar.com   Tel: 800.823.9786   E-mail:info@pluggedsolar.com

Details of Included Parts

Qnty	Item
14	**RECOM 380W 72-Cell Mono Tier 1 Solar Panel** • Manufacturer: RECOM Model: RCM-380-6MA • Rated Power Output [W]: 380 • Length [mm (in)]: 1960 mm (77.17 in) • Width [mm (in)]: 990 mm (38.98 in) • Depth [mm (in)]: 40 mm (1.57 in) • Weight [kg (lb)]: 22.5 kg (49.61)
1	**Solis 10kW Single-Phase Dual MPPT Energy Storage Hybrid Inverter with SunSpec Transmitter RHI-1P10K-HVES-5G-SPRT** Solis 10kW Single-Phase Dual MPPT Energy Storage Hybrid Inverter with SunSpec Transmitter Warranty: 10 years Rated Output Power: 10kWh Rated Grid Voltage: 208 V / 240 V Rated Grid Frequency: 60 Hz Weight: 66.1 lbs (30 kgs) Dimensions (LxWxH): 28.1 x 20.2 x 8.18 in CEC Efficiency: 97.5% DC to AC Ratio: 1.4 Communication: RS485, Optional: Wi-Fi, Cellular Operating Temperature Range: -13°F to 140°F (-25°C to 60°C) Maximum Operation Altitude: 6, 560 ft (2000 m) Cooling: natural convection Topology: Transformerless
1	**Solis External Autotransformer Solis-ATR-6K**
8	**Unirac Rail Standard Duty 132 in. 11 Ft. Mill SolarMount SM 320132M** Unirac SolarMount SM 132 inch, 11 feet, Rail 320132M (Mill Finish)
4	**Unirac Splice Bar Clear Bonding Serrated 303019M SM Qty.1 303019M** Unirac SolarMount Bonding Splice Bar Serrated, CLEAR, Qty. 1 303019M
3	**Unirac FLASHKIT PRO, Mill 004055M 004055M** Unirac FLASHKIT PRO, Mill 10PK 004055M Featuring EcoFasten Solar Technology	FLASHKIT PRO - A Complete Flashing & Attachment Solution for Composition Roofs
20	**Unirac SolarMount PRO SERIES Universal Mid Clamp Mill 302030 302030M** Unirac SolarMount PRO SERIES Universal Mid Clamp Mill 302030M

Qnty	Item
8	**Unirac SolarMount PRO SERIES Universal End Clamp with End Cap 302035M** Unirac SolarMount PRO SERIES Universal End Clamp with End Cap 302035M Requires the rails to be cut flush to the last modules edge to work properly
2	**Unirac Grounding Weeblug-1 008002S SolarMount SM 008002S** Unirac SolarMount SM Ground Weeblug #1 008002S WILEY ELECTRONICS Lay-In Ground Lug WEEBLUG NOTE: One or two grounding lugs required per module row, depending on AHJ (usually only one is required).
36	**Unirac Wire Clip for Double PV Wire DCS-1307, Qty 1 008004S** Unirac Stainless Steel Cable PV Wire Clip for DOUBLE Wire (up to 7.7mm) DCS-1307, Qty 1 1/8" MAX. Thick Panel Holds 1 or 2 PV Wires Wires Rolled Edge For Maximum Wire Protection Made in USA SolarMount SM Nine Fasteners
1	**SQUARE-D DU222RB AC Disconnect, NEMA3R, 60A 240VAC,2-Pole UF DU222RB** SQUARE-D DU222RB AC Disconnect, NEMA3R, 60A 240VAC, 2-Pole UF
100	**Grounding Wire 6 SOL-BARE SOFT DRAWN-CU-500 Price per Ft WIR 6SOL-BARE-SD-500** Grounding Wire 6AWG SOL-BARE SOFT DRAWN-CU-500 Price per Ft Any length in multiples of 100ft