



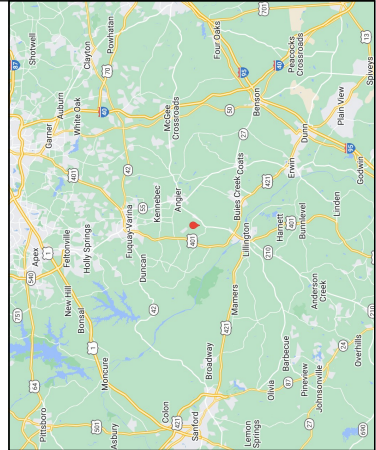
# PALMETTO

+1 843-720-1844  
997 MORRISON DR SUITE #200,  
CHARLESTON, SC 29403, USA  
**Need on-site installation support?**  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

David C. Hernandez

Digitally signed by David C. Hernandez  
Date: 2023.03.29 08:32:29 -04:00

032823



# RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEM

## 188 CHEDWORTH DR ANGIER, NC 27501

7.290 kW DC-STC / 6.000 kW AC  
28/MAR/23



### SYSTEM SPECIFICATIONS

SYSTEM SIZE: 7.290 kW  
MODULE: VSUN 405-1088MH 405W  
NUMBER OF PANELS: 18  
INVERTER: SE6000H-US (240V)  
OPTIMIZER: S440  
RACKING SYSTEM: IRONRIDGE XR-10-168M

UTILITY: DUKE ENERGY PROGRESS (DEP) (NC)  
GOVERNING CODE:  
2018 NORTH CAROLINA BUILDING CODE  
2018 NORTH CAROLINA FIRE CODE  
2018 NORTH CAROLINA RESIDENTIAL CODE FOR  
ONE AND TWO-FAMILY DWELLINGS  
NEC 2017



**EXACTUS ENERGY**  
NEW AGE ENGINEERING

+1 833 392 2887  
208-888 DUPONT STREET  
TORONTO, ON

### SHEET INDEX

C1 - COVER PAGE
N1 - GENERAL NOTES
G1 - SITE PLAN
G2 - PANEL LAYOUT
G3 - MOUNTING DETAIL
E1 - LINE DIAGRAM
E2 - WARNING LABELS
E3 - PLACARD
A1 - PANEL SPECIFICATIONS
A2 - RACKING SPECIFICATIONS
A3 - BONDING AND GROUNDING SPECIFICATIONS
A4 - MOUNTING SPECIFICATIONS
A5 - INVERTER SPECIFICATIONS
A6 - OPTIMIZERS SPECIFICATIONS

C1 - COVER PAGE

GENERAL NOTES:

- THE INSTALLATION OF PV SYSTEM SHALL BE IN ACCORDANCE WITH THE MOST RECENT NATIONAL ELECTRICAL AND BUILDING CODES AND STANDARDS, AS AMENDED BY JURISDICTION
- PV SYSTEMS SHALL BE PERMITTED TO SUPPLY A BUILDING OR OTHER STRUCTURE IN ADDITION TO ANY OTHER ELECTRICAL SUPPLY SYSTEM(S) [NEC 690.4(A)]
- THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS [NEC 690.4(C)]
- EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATIONS INTAKE AIR OPENINGS SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM
- INVERTERS, MOTOR GENERATORS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, SOURCE-CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN PV SYSTEMS SHALL BE LISTED OR FIELD LABELED FOR THE PV APPLICATION [NEC 690.4(B)]
- ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED (OR BETTER), INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.
- SYSTEM GROUNDING SHALL BE IN ACCORDANCE WITH NEC 690.41
- FOR PV MODULES, EQUIPMENT GROUNDING CONDUCTORS SMALLER THAN 6AWG SHALL COMPLY WITH NEC 250.12(C) [NEC 690.46]
- ALL PV SYSTEM DC CIRCUIT AND INVERTER OUTPUT CONDUCTORS AND EQUIPMENT SHALL BE PROTECTED AGAINST OVERCURRENT UNLESS STATED OTHERWISE IN NEC 690.9(A)
- OVERCURRENT DEVICES USED IN PV SYSTEM DC CIRCUITS SHALL BE LISTED FOR USE IN PV SYSTEMS [NEC 690.9(B)]
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION IN ACCORDANCE WITH NEC 690.12
- DISCONNECTING MEANS SHALL BE LOCATED IN A VISIBLE, READILY ACCESSIBLE LOCATION OR A MAXIMUM OF 10 FEET AWAY FROM THE SYSTEM [NEC 690.13(A)]
- ALL WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC 690.31
- CONNECTORS SHALL REQUIRE A TOOL TO OPEN AND BE MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING". [NEC 690.33(E)]
- ALL GROUNDED CONDUCTORS SHALL BE PROPERLY COLOR IDENTIFIED AS WHITE. [NEC 200.6]
- PV SYSTEM CONNECTED ON THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS OF THE OTHER SOURCE(S) AT ANY DISTRIBUTION EQUIPMENT ON THE PREMISES SHALL MEET THE FOLLOWING [NEC 705.12(B)]:

  1. EACH SOURCE CONNECTION SHALL BE MADE AT A DEDICATED CIRCUIT BREAKER OF FUSIBLE DISCONNECTING MEANS. [NEC 705.12(B)(1)]
  2. 125 PERCENT OF THE POWER SOURCE OUTPUT CIRCUIT CURRENT SHALL BE USED IN AMPACITY CALCULATIONS. [NEC 705.12(B)(2)]
  3. EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUS BAR OR CONDUCTOR SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES. [NEC 705.12(B)(3)]
  4. CIRCUIT BREAKER, IF BACK FED, SHALL BE SUITABLE FOR SUCH OPERATION [NEC 705.12(B)(4)]

- WHEN A BACKFED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION, THE BREAKER SHALL BE INSTALLED AT THE OPPOSITE END OF THE BUS BAR OF THE MAIN BREAKER.
- TO REDUCE FIRE HAZARDS, DC PV SYSTEMS WILL BE EQUIPPED WITH A GROUND FAULT PROTECTION SYSTEM IN ACCORDANCE WITH NEC 690.41(B)
- WHERE GROUND-FAULT PROTECTION IS USED, THE OUTPUT OF AN INTERACTIVE SYSTEM SHALL BE CONNECTED TO THE SUPPLY SIDE OF THE GROUND FAULT PROTECTION [NEC 705.32]
- ALL PLAQUES AND SIGNAGE REQUIRED BY THE LATEST EDITION OF NATIONAL ELECTRICAL CODE. LABEL SHALL BE METALLIC OR PLASTIC, ENGRAVED OR MACHINE PRINTED IN A CONTRASTING COLOR TO THE PLAQUE. PLAQUE SHALL BE UV RESISTANT IF EXPOSED TO SUNLIGHT
- ALL THE NEC REQUIRED WARNING SIGNS, MARKINGS, AND LABELS SHALL BE POSTED ON EQUIPMENT AND DISCONNECTS PRIOR TO ANY INSPECTIONS TO BE PERFORMED BY THE BUILDING DEPARTMENT.
- CONNECTORS SHALL BE OF LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30 VOLTS SHALL REQUIRE TOOL TO OPEN AND MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING". [NEC 690.33(C) & (E)(2)]
- FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES, OR CONNECTORS IN ACCORDANCE WITH NEC 110.14
- WORK CLEARANCES AROUND ELECTRICAL EQUIPMENT WILL BE MAINTAINED PER NEC 110.26(A)(1), 110.26(A)(2) AND 110.26(A)(3)
- ALL EXTERIOR CONDUITS, FITTINGS AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS PER NEC 314.15.
- ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED & IDENTIFIED IN ACCORDANCE WITH UL 1703
- EACH MODULE TO BE GROUNDED USING THE SUPPLIED CONNECTION POINT PER MANUFACTURER'S REQUIREMENTS. ALL SOLAR MODULES, EQUIPMENT, AND METALLIC COMPONENTS ARE TO BE BONDED. IF THE EXISTING GROUNDING ELECTRODE SYSTEM CAN NOT BE VERIFIED OR IS ONLY METALLIC WATER PIPING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
- DC CONDUCTORS SHALL BE RUN IN EMT AND SHALL BE LABELED "CAUTION DC CIRCUIT" OR EQUIV. EVERY 5 FT
- CONFIRM LINE SIDE VOLTAGE AT ELECTRIC UTILITY SERVICE PRIOR TO CONNECTING INVERTER. VERIFY SERVICE VOLTAGE IS WITHIN INVERTER VOLTAGE OPERATIONAL RANGE.
- SERVING UTILITY TO BE NOTIFIED BEFORE ACTIVATION OF PV SYSTEM.
- ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC.
- THE HOMEOWNER IS RESPONSIBLE FOR ENSURING ALL EQUIPMENT OUTSIDE THE SCOPE OF WORK IS NEC COMPLIANT.



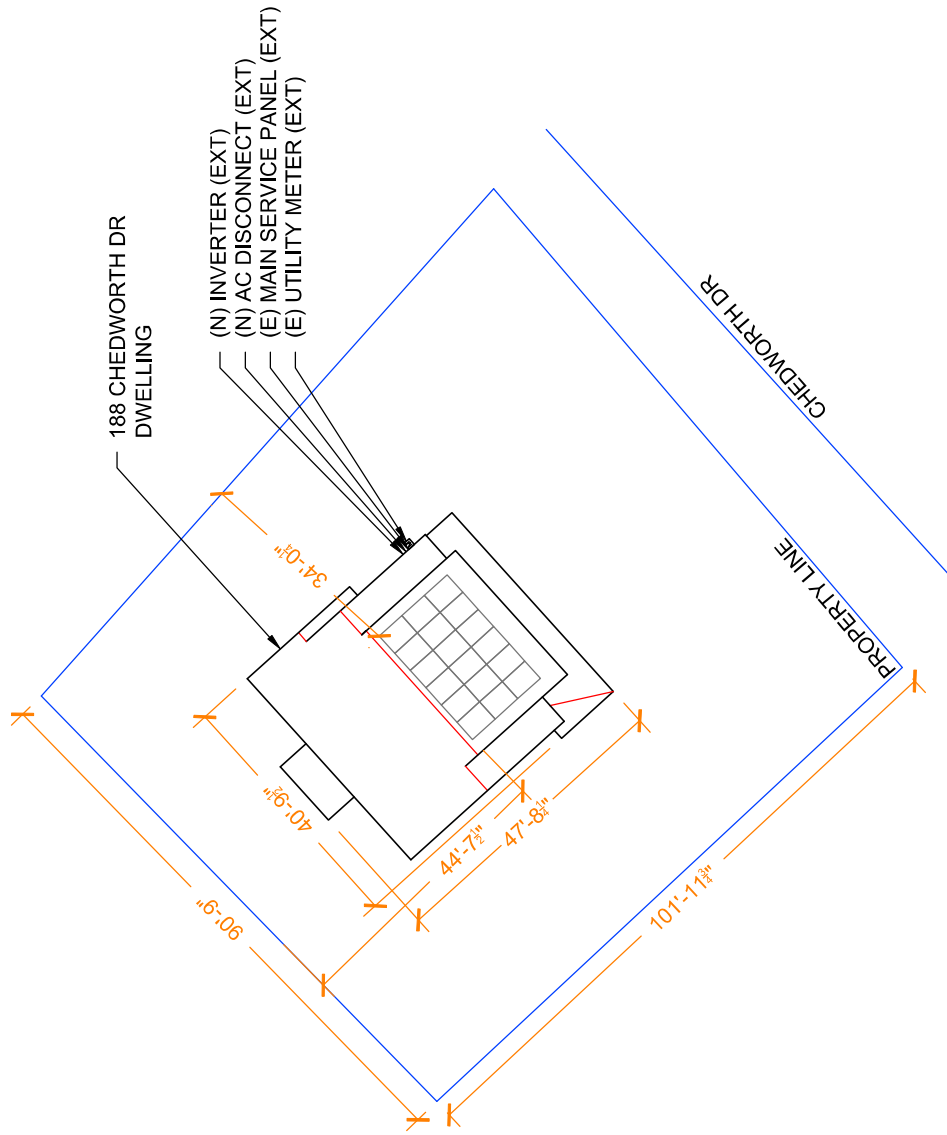
**N1 - GENERAL NOTES**  
**Need on-site installation support?**  
 Palmetto Installation Hotline  
 Call or Text: 1-843-258-5389  
 InstallHotline@Palmetto.com

**AUTHOR:** ----  
**DATE:** 28/MAR/23  
**REV.:** -

**PROJECT:** 188 CHEDWORTH DR  
**MUNICIPALITY:** ANGIER, NC  
**ZIP CODE:** 27501  
**CLIENT:** MECHELLE CHAMPION  
 7.290 KW DC-STC / 6.000 KW AC

**PALMETTO**  
**PHONE:** +1 843-720-1844  
**WWW.PALMETTO.COM**





SCALE: 1"=20'

**NOTES:**

- SCALE AS SHOWN
- ALL DIMENSIONS IN FEET UNLESS OTHERWISE STATED

**SAFETY PLAN:**

- INSTALLERS SHALL DRAW IN DESIGNATED SAFETY AREA AROUND HOME
- INSTALLERS SHALL UPDATE NAME, ADDRESS, AND PHONE NUMBER OF NEAREST URGENT CARE FACILITY RELATIVE TO THE SITE BEFORE STARTING WORK

**NEAREST URGENT CARE FACILITY**

NAME:  
ADDRESS:  
PHONE NUMBER:

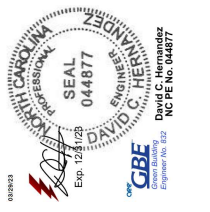


PALMETTO  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM

PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGLIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7,290 KW DC-STC / 6,000 KW AC

AUTHOR: ----  
DATE: 28/MAR/23  
REV: -

G1 - SITE PLAN  
Need on-site installation support?  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com



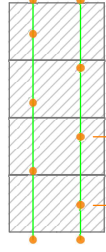
**SITE INFORMATION**

ARRAY	AZIMUTH	PITCH	NO. OF PANELS	ARRAY AREA (SQ. FT.)	ROOF TYPE	ATTACHMENT	FRAME SIZE & FRAME TYPE	FRAME SPACING	MAX ATTACHMENT SPAN	OVERHANG
ROOF 1	138°	30°	18	378.41	COMPOSITE SHINGLE	QUICK MOUNT L-MOUNT	2" X 4" PRE FABRICATED TRUSSES	2'-0"	4'-0"	1'-4"

**PANELS DATA**

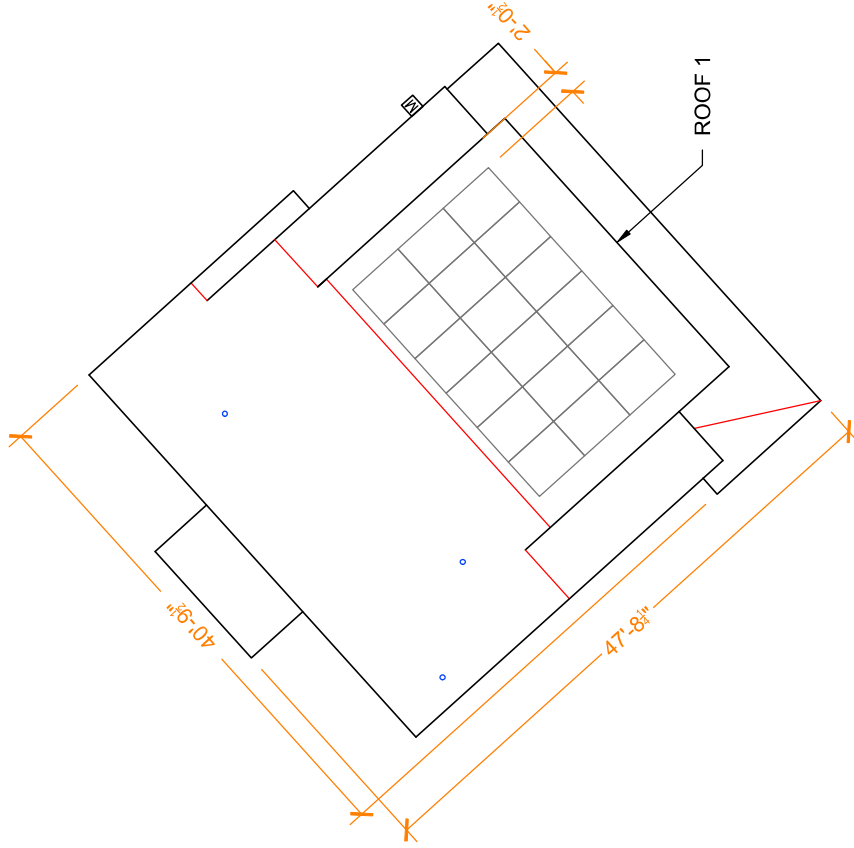
PANEL TYPE	VSUN 405-108BMH 405 W
NO. OF PANELS	18
PANEL SIZE	67.80" X 44.65"
PANEL WEIGHT (LBS)	47.18
PANEL AREA (FT <sup>2</sup> )	21.02
UNIT WEIGHT OF AREA (LBS/FT <sup>2</sup> )	2.24

**MOUNTING PATTERN SAMPLE**



MAXIMUM MOUNT SPACING: 48"  
MOUNT PATTERN: STAGGERED

ALL HARDWARE, INCLUDING MOUNTING AND RACKING, TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.



SCALE: 1"=10'



**LEGEND**

- [M] METER
- PVC VENT
- ⊗ METAL VENT
- VENT BOX
- STRUCTURAL DELIMITER
- SERVICE MAST
- SATELLITE
- △ ANTENNA
- SNOW GUARD
- DOWNSPOUT
- MOUNT
- RAIL
- TOP CHORD
- CHIMNEY

TOTAL ROOF AREA: 1933.84 FT<sup>2</sup>  
TOTAL ARRAY AREA: 378.41 FT<sup>2</sup>  
TOTAL ARRAY PERCENT COVERAGE: 19.57%

MODULE WATTAGE: 405 W  
NUMBER OF PANELS: 18  
SYSTEM SIZE: 7.290 kW

PALMETTO  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM

PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7.290 KW DC-STC / 6.000 KW AC



**NOTES:**

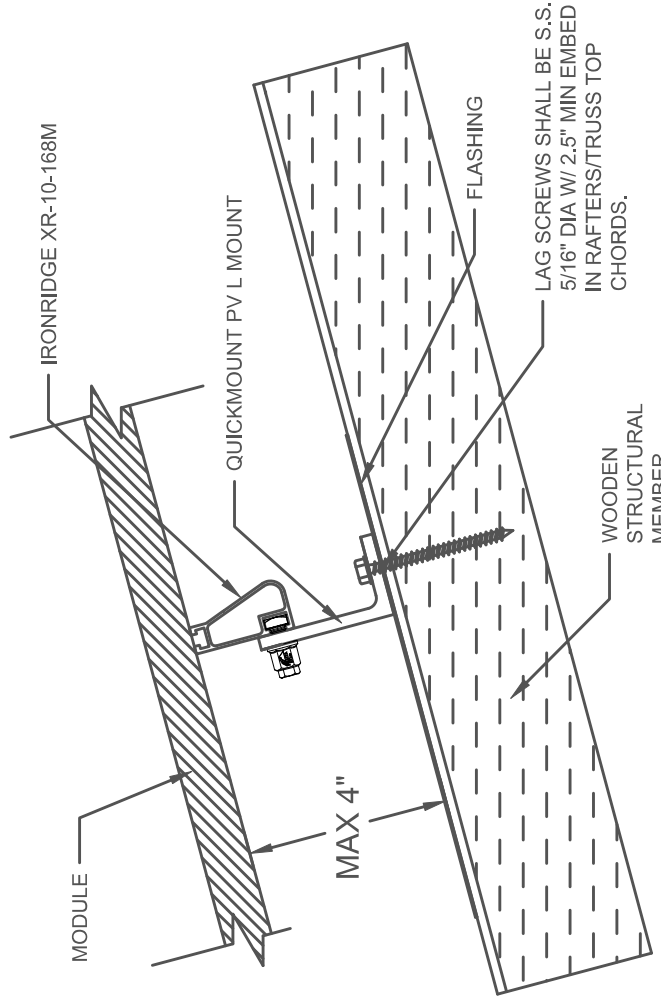
- SOLAR PANEL LAYOUT SUBJECT TO CHANGE ACCORDING TO EXISTING CONDITIONS
- SCALE AS SHOWN
- ALL DIMENSIONS IN FEET UNLESS OTHERWISE STATED

AUTHOR: ---  
DATE: 28/MAR/23  
REV: -  
G2 - PANEL LAYOUT  
Need on-site installation support?  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

030303



David C. Heintz  
Professional Engineer No. 044877  
N.C.P.E. No. 044877



SCALE: NTS

PANEL TYPE: VSUN 405-108BMH 405W  
 PANEL SIZE: 67.80" X 44.65"  
 RACKING TYPE: IRONRIDGE XR-10-168M  
 MOUNT TYPE: QUICK MOUNT L-MOUNT  
 SOLAR SYSTEM DEAD LOAD: 3.0 PSF



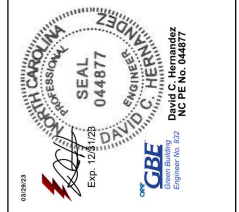
PALMETTO  
 PHONE: +1 843-720-1844  
 WWW.PALMETTO.COM

PROJECT: 188 CHEDWORTH DR  
 MUNICIPALITY: ANGIER, NC  
 ZIP CODE: 27501  
 CLIENT: MECHELLE CHAMPION  
 7,290 KW DC-STC / 6,000 KW AC

NOTES:  
 - SCALE AS SHOWN  
 - ALL DIMENSIONS IN FEET UNLESS OTHERWISE STATED

AUTHOR: ----  
 DATE: 28/MAR/23  
 REV: -

G3 - MOUNTING DETAIL  
 Need on-site installation support?  
 Palmetto Installation Hotline  
 Call or Text: 1-843-258-5389  
 InstallHotline@Palmetto.com



UTILITY METER NUMBER: 332 252 189

NABCEP PV PROFESSIONAL LICENSE: PV-102415-012615

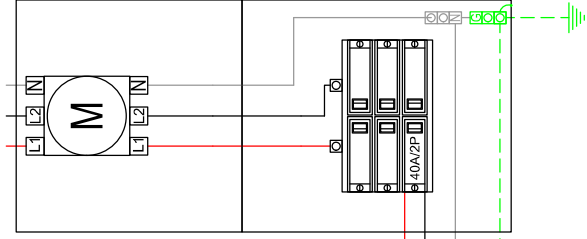
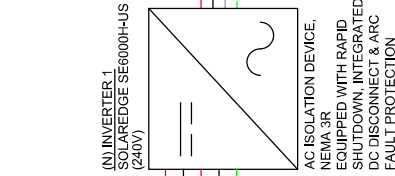
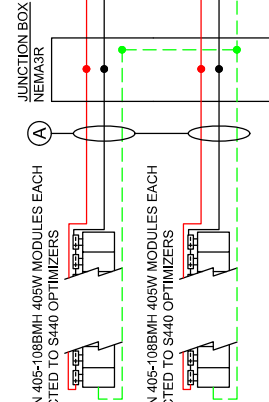
ELECTRICAL CONTRACTOR LICENSE: U.32289

NOTE:

- 7,200KW DC SYSTEM SIZE (STC) MODULES: 18 X 405W = 7,290KW DC (STC)
- INVERTER: 1X SOLAREEDGE SE6000H-US INVERTER = 6,000KW AC SYSTEM
- (18) VSUN 405-108BMH 405W PANELS
- (18) SOLAREEDGE S440 OPTIMIZER
- (1) SOLAREEDGE SE6000H-US INVERTER

STRING OF 9 VSUN 405-108BMH 405W MODULES EACH CONNECTED TO S440 OPTIMIZERS

STRING OF 9 VSUN 405-108BMH 405W MODULES EACH CONNECTED TO S440 OPTIMIZERS



(E) UTILITY METER  
240/120 V, 1Ø, 3W, 200A

(E) EXTERNAL MAIN SERVICE PANEL  
240/120 V, 1Ø, 3W, 200A  
MAIN PANEL HAS NO MAIN BREAKER  
AND HAS MULTIPLE SUPPLY-SIDE  
SERVICE DISCONNECT BREAKERS.  
THIS PANEL COMPLIES WITH THE  
SIX-HANDLE RULE AND NEC 230.71

(E) GROUNDING  
ELECTRODE

AC CONDUCTOR SCHEDULE

ID	From	To	Phase	AC Voltage	Circuit Current	80% or 100% Rated OCPD?	Circuit Current x 125% (If Present)	DCPD	Material	Conductor Type	# of CCCs	Fill Factor	Ambient Temp.	Temp. Factor	Conductor Size @ 75°C	Conductor Ampacity	Max Ampacity	Derated Ampacity	Neutral Size	# of Neutrals	Ground Material	Ground Type	Ground Size	Conduit Type	Conduit Size	Conduit EMT
1	SolarEdge Inverter 1	AC Disconnect	1Ø	240(V)	25.0(A)	80%	31.3(A)	40(A)	CU	THWN-2	2	1.00	32.9(°C)	0.96	8 AWG	50(A)	55(A)	52.8(A)	8 AWG	1	EGC	THWN-2	10 AWG	EMT	0.75 (in.)	EMT
2	AC Disconnect	PDI	1Ø	240(V)	25.0(A)	80%	31.3(A)	40(A)	CU	THWN-2	2	1.00	32.9(°C)	0.96	8 AWG	50(A)	55(A)	52.8(A)	8 AWG	1	EGC	THWN-2	10 AWG	EMT	0.75 (in.)	EMT

SOLAREEDGE DC CONDUCTOR SCHEDULE

(A) FREE AIR  
TEMPERATURE FACTOR IS BASED ON 2% DRY BULB HIGH TEMPERATURE OF 32.9°C WITH A 0°C TEMPERATURE ADDBR THEREFORE RACEWAYS MUST BE AT LEAST 0.875 INCHES ABOVE ROOF AS PER NEC 310.15(B)(3)(C)

Number of Strands	Conductor Material	Conductor Size	Fill Factor	Min. OCPD (If Required)	Min. OCPD	EGC	EGC Material	EGC Size	Conduit
1	PV Wire	10 AWG	1.00	38.0(A)	15.00(A)	20A	CU	6 AWG	N/A - Free Air

(B) IN CONDUIT  
TEMPERATURE FACTOR IS BASED ON 2% DRY BULB HIGH TEMPERATURE OF 32.9°C WITH A 0°C TEMPERATURE ADDBR THEREFORE RACEWAYS MUST BE AT LEAST 0.875 INCHES ABOVE ROOF AS PER NEC 310.15(B)(3)(C)

Number of Strands	Conductor Material	Conductor Size	Fill Factor	Min. OCPD (If Required)	Min. OCPD	EGC	EGC Material	EGC Size	Conduit
1	PV Wire	10 AWG	0.80	30.72(A)	15.00(A)	20A	CU	THWN-2 10 AWG	0.50 in.

PALMETTO  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM

PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7,290 KW DC-STC / 6,000 KW AC

AUTHOR: ---  
DATE: 28/MAR/23  
REV: -

E1 - LINE DIAGRAM  
Need on-site installation support?  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com



032823

**WARNING**

**ELECTRIC SHOCK HAZARD**  
TERMINALS ON BOTH THE LINE AND LOAD  
SIDES MAY BE  
ENERGIZED IN THE OPEN POSITION

CODE REF: [NEC 690.13(B)]  
LOCATION: PLACE ON ALL DISCONNECTING  
MEANS WHERE ENERGIZED IN AN OPEN  
POSITION

**WARNING**

**TURN OFF PHOTOVOLTAIC AC**  
**DISCONNECT PRIOR TO**  
**WORKING INSIDE PANEL**

CODE REF: [NEC 110.27(C) & OSHA 1910.14(07)]  
LOCATION: PLACE ON ALL COMBINER  
DISCONNECT, BREAKER PANEL & PULL BOXES

**WARNING**

**THIS EQUIPMENT FED BY**  
**MULTIPLE SOURCES**

TOTAL RATING OF ALL OVERCURRENT  
DEVICES EXCLUDING MAIN POWER SUPPLY  
SHALL NOT EXCEED CAPACITY OF BUSBAR

CODE REF: [NEC 705.12(B)(2)(b)]  
LOCATION: PLACE THIS LABEL AT P.O.C. TO  
SERVICE DISTRIBUTION EQUIPMENT  
(I.E., MAIN PANEL OR SUB-PANEL) IF APPLICABLE

**WARNING**

**THE DISCONNECTION OF THE**  
**GROUNDING CONDUCTOR(S)**  
**MAY RESULT IN OVERVOLTAGE**  
**ON THE EQUIPMENT**

CODE REF: [NEC 690.31(f)]  
LOCATION: PLACE ON ALL DISCONNECTING  
MEANS WHERE ENERGIZED IN AN OPEN  
POSITION

**WARNING**

**DUAL POWER SOURCE**  
SECOND SOURCE IS PHOTOVOLTAIC  
SYSTEM

CODE REF: [NEC 705.12(B)(3) & 690.39]  
LOCATION: PLACE LABEL ON ALL EQUIPMENT  
CONTAINING OVERCURRENT DEVICES IN  
CIRCUITS SUPPLYING POWER TO  
EQUIPMENT FROM MULTIPLE SOURCES

**WARNING**

**POWER SOURCE OUTPUT**  
**CONNECTION**

DO NOT RELOCATE THIS OVERCURRENT  
DEVICE  
CODE REF: [NEC 705.12(B)(2)(b)]  
LOCATION: PLACE LABEL ON ALL EQUIPMENT  
CONTAINING OVERCURRENT DEVICES IN  
CIRCUITS SUPPLYING POWER TO  
EQUIPMENT FROM MULTIPLE SOURCES

**CAUTION**

**PHOTOVOLTAIC SYSTEM CIRCUIT IS**  
**BACKFEED**

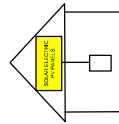
CODE REF: [NEC 705.12(B)(4) & 690.39]  
LOCATION: PLACE LABEL ON ALL EQUIPMENT  
CONTAINING OVERCURRENT DEVICES IN  
CIRCUITS SUPPLYING POWER  
TO A BUSBAR OR CONDUCTORS SUPPLIED  
FROM MULTIPLE SOURCES

**RAPID SHUTDOWN SWITCH**  
**FOR SOLAR PV SYSTEM**

CODE REF: [NEC 690.56(C)(3)]  
LOCATION: PLACE NO MORE THAN 1m (3FT) FROM  
SWITCH

**SOLAR PV SYSTEM EQUIPPED WITH**  
**RAPID SHUTDOWN**

TURN RAPID SHUTDOWN  
SWITCH TO THE  
"OFF" POSITION TO  
SHUTDOWN THE SYSTEM  
AND REDUCE  
SHOCK HAZARD  
IN THE ARRAY.



CODE REF: [NEC 690.56(C)]  
LOCATION: PLACE AT MAIN SERVICE PANEL

**WARNING: PHOTOVOLTAIC**  
**POWER SOURCE**

CODE REF: [NEC 690.31 (G)(3) & 690.31 (G)(4)]  
LOCATION: PLACE ON ALL JUNCTION BOXES, EXPOSED  
RACEWAYS EVERY 10'

**MAXIMUM VOLTAGE**

480 V

**MAXIMUM CIRCUIT CURRENT**

30 A

**MAX RATED OUTPUT**

15 A

**CURRENT OF DC-TO-DC**

CONVERTER (IF INSTALLED)

CODE REF: [NEC 690.53]  
LOCATION: PLACE AT INVERTER 1

**DO NOT DISCONNECT**  
**UNDER LOAD**

CODE REF: [NEC 690.15(C) & 690.31(E)(2)]  
LOCATION: PLACE ON ALL DISCONNECTING  
MEANS WHERE ENERGIZED IN AN OPEN POSITION

**PHOTOVOLTAIC AC DISCONNECT**

RATED AC OUTPUT CURRENT

25A

NOMINAL OPERATING AC VOLTAGE

240V

CODE REF: [NEC 690.54]  
LOCATION: PLACE AT P.O.C. TO SERVICE DISTRIBUTION  
EQUIPMENT / AC DISCONNECT / PULL BOXES

**PHOTOVOLTAIC**

**AC DISCONNECT**

CODE REF: [NEC 690.13(B)]  
LOCATION: PLACE AT P.O.C. TO SERVICE DISTRIBUTION  
EQUIPMENT / AC DISCONNECT / PULL BOXES

**PHOTOVOLTAIC**

**DC DISCONNECT**

CODE REF: [NEC 690.13(B)]  
LOCATION: PLACE ON DC DISCONNECT

**NOTES:**

- ALL LABELING USED OUTDOORS MUST BE ENGRAVED METAL, UV STABILIZED ENGRAVED PLASTIC OR OF A MATERIAL SUFFICIENTLY DURABLE TO WITHSTAND THE ENVIRONMENT INVOLVED. VALUES HAND WRITTEN OR IN WRITTEN IN MARKER ARE NOT ACCEPTABLE PER NEC 2017.
- LABELS USED INDOORS MAY BE MADE OF DURABLE VINYL OR PAPER
- DO NOT COVER ANY EXISTING MANUFACTURER APPLIED LABELS WITH INSTALLATION SPECIFIC LABELS
- LABEL COLORS CHOSEN PER NFPA 70 2017 DIRECTION THAT ANSI Z535-2011 BE USED
- REQUIREMENTS COMPLY WITH NEC 2017
- ADDITIONALLY, IT IS HIGHLY RECOMMENDED THAT THE INSTALLER ATTACH A LABEL WITH THE COMPANY NAME AND CONTACT INFORMATION AT THE INVERTER
- ALL WARNING SIGNS OR LABELS SHALL COMPLY WITH NEC 110.21(B)

**FORMAT**

- WHITE LETTERING ON A RED BACKGROUND
- MINIMUM 3/8 INCHES LETTER HEIGHT
- ALL LETTERS SHALL BE CAPITALIZED
- ARIAL OR SIMILAR FONT (NON-BOLD)

**MATERIAL**

REFLECTIVE, WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT  
(USE UL-969 AS STANDARD FOR WEATHER RATING), DURABLE ADHESIVE MATERIALS

**E2 - WARNING LABELS**

**Need on-site installation support?**  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

AUTHOR: ---

DATE: 28/MAR/23

REV: -

PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7,290 KW DC-STC / 6,000 KW AC

PALMETTO  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM



030303  
David C. Hernandez  
Engineer No. 044877  
N.C. P.E. No. 044877

**CAUTION:**  
**MULTIPLE SOURCES OF POWER**  
 POWER TO THIS SERVICE IS ALSO SUPPLIED FROM THE  
 FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

RAPID SHUTDOWN DEVICE  
 AC DISCONNECT  
 MAIN SERVICE PANEL  
 UTILITY METER

(NEC 706.10 & NEC 706.11) CUSTOMER SERVICE PANEL, P/VAC DISCONNECT AND  
 RAPID SHUTDOWN DEVICE



PALMETTO  
 PHONE: +1 843-720-1844  
 WWW.PALMETTO.COM

PROJECT: 188 CHEDWORTH DR  
 MUNICIPALITY: ANGIER, NC  
 ZIP CODE: 27501  
 CLIENT: MECHELLE CHAMPION  
 7,290 KW DC-STC / 6,000 KW AC

AUTHOR: ----  
 DATE: 28/MAR/23  
 REV: -

E3 - PLACARD  
 Need on-site installation support?  
 Palmetto Installation Hotline  
 Call or Text: 1-843-258-5389  
 InstallHotline@Palmetto.com



GBE  
 Group, Inc.  
 David C. Heppner  
 Engineer No. 1122  
 N.C.P.E. No. 044877





# VSUN405-108BMH

## 405W

Highest power output

## 20.74%

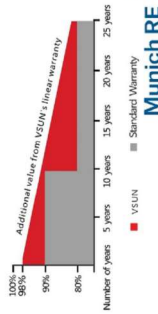
Module efficiency

## 25years

Material & Workmanship warranty

## 30years

Linear power output warranty



PERC MBB technology with Circular Ribbon

Higher output power

Half-cell Technology

Positive tolerance offer

- Micro Gap
- Up to 30% extra power generation yield from the back side
- Certified for salt/ammonia corrosion resistance
- Load certificates: wind to 2400Pa and snow to 5400Pa
- Lower LCOE



PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7:290 KW DC-STC 76.000 KW AC

AUTHOR: ----  
DATE: 28/MAR/23  
REV: -

**A1 - PANEL SPECIFICATIONS**  
**Need on-site installation support?**  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

### 最も信頼出来る再エネパートナー

#### Electrical Characteristics at Standard Test Conditions (STC)

Module Type	VSUN405-108BMH	VSUN400-108BMH	VSUN395-108BMH	VSUN390-108BMH
Maximum Power - Pmax (W)	405	400	395	390
Open Circuit Voltage - Voc (V)	37.36	37.2	37.03	36.84
Short Circuit Current - Isc (A)	13.68	13.68	13.59	13.5
Maximum Power Voltage - Vmp (V)	31.16	31.17	31.12	31.05
Maximum Power Current - Imp (A)	12.82	12.84	12.75	12.66
Module Efficiency	20.74%	20.68%	20.23%	19.97%

Standard Test Conditions (STC): irradiance 1,000 W/m<sup>2</sup>; AM 1.5; module temperature 25°C. Pmax Sorting: 0-5W. Measuring Tolerance: ±3%.  
Remark: Electrical data do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

#### Electrical Characteristics with different rear side power gain(reference to 400 front)

Pmax (W)	Voc (V)	Isc (A)	Vmp (V)	Imp (A)	Pmax gain
420	37.1	14.36	31.17	13.48	5%
440	37.1	15.05	31.17	14.12	10%
479	37.2	16.42	31.12	15.41	20%
499	37.2	17.10	31.12	16.05	25%

#### Temperature Characteristics

NOCT	45°C(L2+Q)	Maximum System Voltage [V]
21.4kg <td>-0.27%/°C <td>1500</td> </td>	-0.27%/°C <td>1500</td>	1500
White toughened safety glass, 3.2 mm <td>-0.048%/°C <td>30</td> </td>	-0.048%/°C <td>30</td>	30
Cell encapsulation <td>-0.32%/°C <td>70%±10%</td> </td>	-0.32%/°C <td>70%±10%</td>	70%±10%

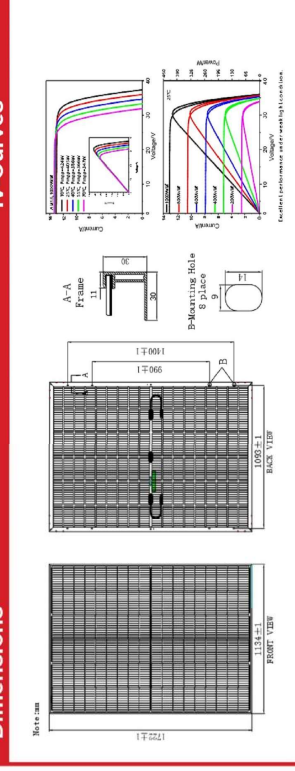
#### Material Characteristics

Dimensions 1722x1134x30mm (LxWxH)  
Weight 21.4kg  
Frame Black anodized aluminum profile  
Front Glass White toughened safety glass, 3.2 mm  
Cell Encapsulation T/A (Ethylene bisVinyl-Acetate) or POE  
Back Sheet T/A (Ethylene bisVinyl-Acetate) or POE  
Cells 12-9 junction monocrystalline solar cells series strings  
IP68, 3 diodes  
Junction Box  
Cable&Connector Pozziat: 500 mm (cable length can be customized, 1-4 mm<sup>2</sup>, compatible with MC4)

#### Packaging

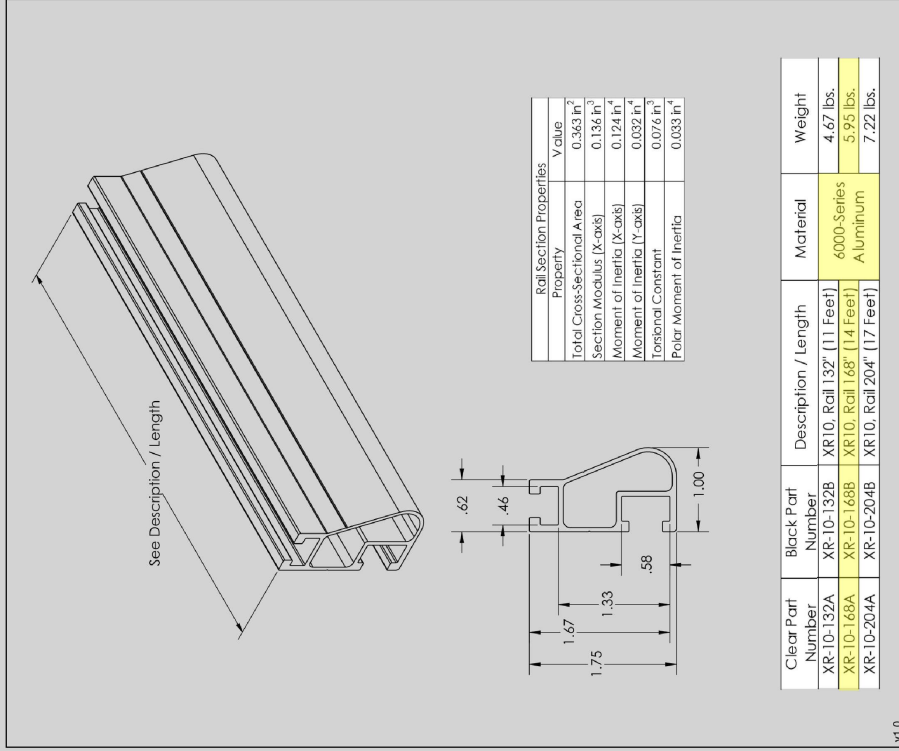
Dimensions(LxWxH) 1760x1125x1253mm  
Container 20 216  
Container 40 468  
Container 40'HC 936  
Temperature Range -40 °C to + 85 °C  
Withstanding Hail Maximum diameter of 25 mm with impact speed of 23 m/s  
Maximum Surface Load 5,400 Pa  
Application class class A

#### Dimensions





XR10 Rail



v1.0

Clear Part Number	Black Part Number	Description / Length	Material	Weight
XR-10-132A	XR-10-132B	XR10, Rail 132" (11 Feet)	6000-Series	4.67 lbs.
XR-10-168A	XR-10-168B	XR10, Rail 168" (14 Feet)	Aluminum	5.95 lbs.
XR-10-204A	XR-10-204B	XR10, Rail 204" (17 Feet)	Aluminum	7.22 lbs.

**UL Certification**

The IronRidge Flush Mount, Tilt Mount, and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

Go to [IronRidge.com/UFO](http://IronRidge.com/UFO)



**A2 - RACKING SPECIFICATIONS**  
**Need on-site installation support?**  
 Palmetto Installation Hotline  
 Call or Text: 1-843-258-5389  
 InstallHotline@Palmetto.com

AUTHOR: ---  
 DATE: 28/MAR/23  
 REV: -

PROJECT: 188 CHEDWORTH DR  
 MUNICIPALITY: ANGIER, NC  
 ZIP CODE: 27501  
 CLIENT: MECHELLE CHAMPION  
 7:290 KW DC-STC 76,000 KW AC

PALMETTO  
 PHONE: +1 843-720-1844  
 WWW.PALMETTO.COM





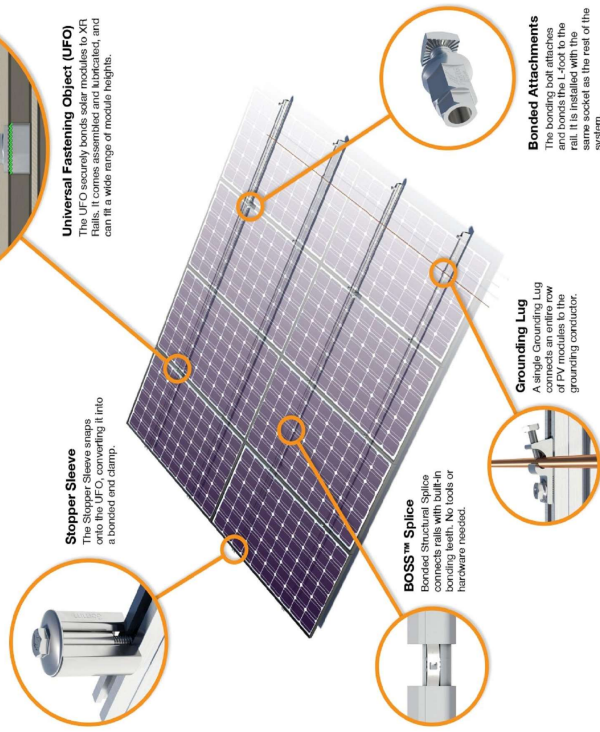
## UFO Family of Components

Tech Brief

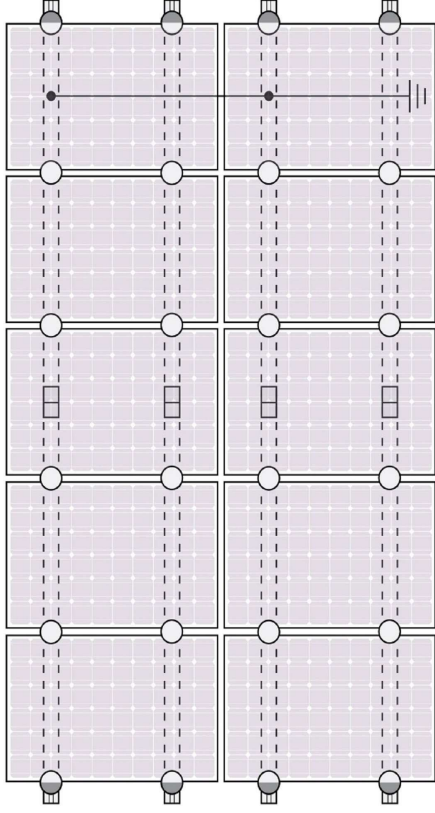
### Simplified Grounding for Every Application

The UFO family of components eliminates the need for separate grounding hardware by bonding solar modules directly to IronRidge XR Rails. All system types that feature the UFO family—Flush Mount, Tilt Mount and Ground Mount—are fully listed to the UL 2703 standard.

UFO hardware forms secure electrical bonds with both the module and the rail, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.



## System Diagram



○ UFO   ◐ Stopper Sleeve   ● Grounding Lug   ◻ BOSS™ Splice   ≡ Ground Wire

Approved Ephese microinverters can provide equipment grounding of IronRidge systems, eliminating the need for grounding lugs and field installed equipment ground conductors (EGC). A minimum of two microinverters mounted to the same rail and connected to the same Engage cable is required. Refer to installation manuals for additional details.

### UL Certification

The IronRidge Flush Mount, Tilt Mount, and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

Go to [IronRidge.com/UFO](http://IronRidge.com/UFO)

Feature	Cross-System Compatibility		
	Flush Mount	Tilt Mount	Ground Mount
XR Rails	✓	✓	XR1000 Only
UFO/Stopper	✓	✓	✓
BOSS™ Splice	✓	✓	N/A
Grounding Lugs	1 per Row	1 per Row	1 per Array
Microinverters & Power Optimizers	Compatible with most MLPE manufacturers. Refer to system installation manual.		
Fire Rating	Class A	Class A	N/A
Modules	Tested or Evaluated with over 400 Framed Modules. Refer to installation manuals for a detailed list.		

030303



**PALMETTO**  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM

**PROJECT: 188 CHEDWORTH DR**  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7:290 KW DC-STC 76,000 KW AC

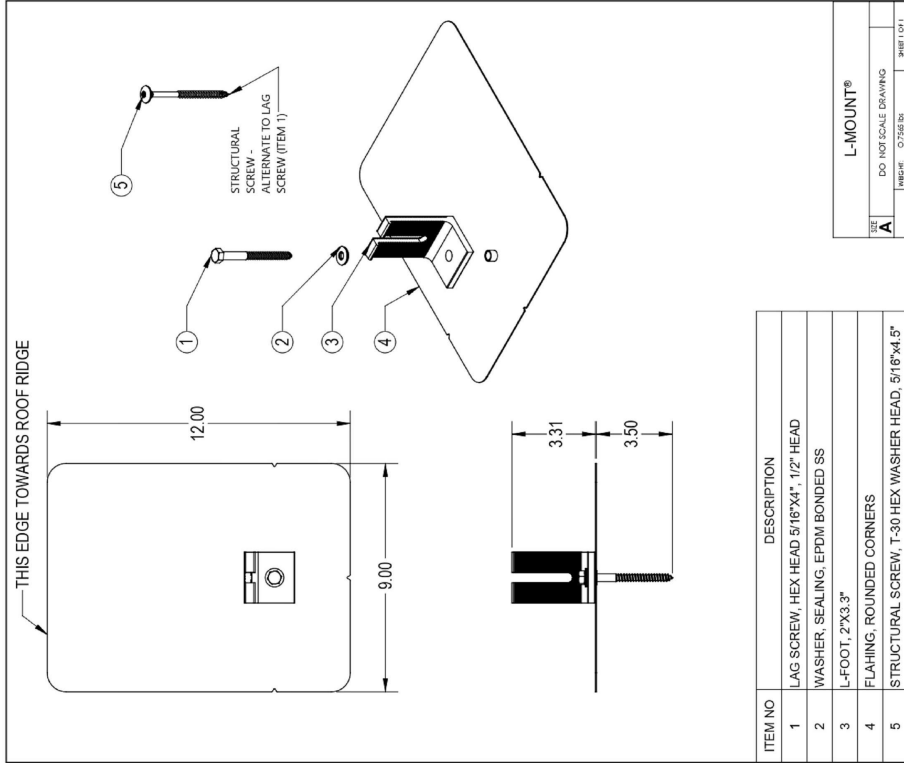
AUTHOR: ----  
DATE: 28/MAR/23  
REV: -

**A3 - BONDING AND GROUNDING SPECIFICATIONS**  
Need on-site installation support?  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

© 2021 IronRidge, Inc. All rights reserved. Visit [www.ir-patents.com](http://www.ir-patents.com) for patent information. Version 1.20



L-Mount®



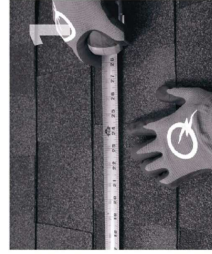
© 2022 QuickMount All rights reserved. Visit [www.quickmount.com](http://www.quickmount.com) or call 1-800-227-9523 for more information.

L-Mount MNI Rev 1.12

## L-Mount® Installation Instructions

**Installation Tools Required:** tape measure, roofing bar, chalk line, stud finder, caulking gun, sealant compatible with roofing materials, drill with 7/32" or 1/8" bit, drill or impact gun with 1/2" socket.

**WARNING:** QuickMount® products are NOT designed for and should NOT be used to anchor fall protection equipment.



1 Locate, choose, and mark centers of rafters to be mounted. Select the courses of shingles where mounts will be placed.



2 Carefully lift composition roof single with roofing bar, just above placement of mount. Remove nails as required and backfill holes with approved material. See "Proper Flashing Placement" on next page.



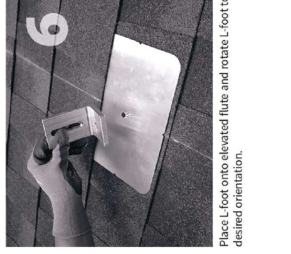
3 Insert flashing between 1st and 2nd course. Slide up so top edge of flashing is at least 1/4" higher than the butt-edge of the 3rd course and lower than the butt-edge of 1st course. Mark center for drilling.



4 If attaching with lag bolt, use a 1/4" bit (Lag). Use a 3/8" bit (S1) for attaching with the structural screw. Drill pilot hole into roof and raft er, taking care to drill square to the roof. Do not use mount as a drill guide. Drill a 2" deep hole into roof.



5 Clean off any sawdust, and fill hole with sealant compatible with roofing materials.



6 Place L-foot onto elevated flute and rotate L-foot to desired orientation.



7 Prepare lag bolt or structural screw with sealing washer. Using a 1/2-inch socket on an impact gun, drive prepared lag bolt through L-foot until L-foot can no longer easily rotate. **DO NOT over-torque.** NOTE: Structural screw can be driven with T-30 hex head bit.



8 You are now ready for the rack of your choice. Follow all the directions of the rack manufacturer as well as the module manufacturer. NOTE: Make sure top of L-Foot makes solid contact with racking.

All roofing manufacturers' written instructions must also be followed by anyone modifying a roof system. Consult the roof manufacturer's specs and instructions prior to working on the roof.

© 2022 QuickMount All rights reserved. Visit [www.quickmount.com](http://www.quickmount.com) or call 1-800-227-9523 for more information.

L-Mount MNI Rev 1.12



**A4 - MOUNTING SPECIFICATIONS**  
**Need on-site installation support?**  
 Palmetto Installation Hotline  
 Call or Text: 1-843-258-5389  
 InstallHotline@Palmetto.com

**AUTHOR:** ----  
**DATE:** 28/MAR/23  
**REV:** -

**PROJECT:** 188 CHEDWORTH DR  
**MUNICIPALITY:** ANGIER, NC  
**ZIP CODE:** 27501  
**CLIENT:** MECHELLE CHAMPION  
 7:290 KW DC-STC 76:000 KW AC

**PALMETTO**  
**PHONE:** +1 843-720-1844  
**WWW.PALMETTO.COM**



# INVERTERS

## Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US



### Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking 99% weighted efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge Se/App
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

solarEdge.com



PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7,290 KW DC-STC / 6,000 KW AC

AUTHOR: ---  
DATE: 28/MAR/23  
REV: -

**A5 - INVERTER SPECIFICATIONS**  
**Need on-site installation support?**  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

## Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXX-XXXXXXBXX4						
OUTPUT							

Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V
AC Output Voltage Min.-Nom.-Max. (211-240-264)	✓	✓	✓	✓	✓	✓	✓
AC Output Voltage Min.-Nom.-Max. (188-208-229)	-	✓	-	✓	-	-	✓
AC Frequency (Nominal)	59.3 - 61 - 60.5 <sup>1</sup>						
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5
Power factor	1, Adjustable -0.85 to 0.85						
GFDI Threshold	1						
UL984 Monitoring, Identifying Protection, Country Configurable Thresholds	Yes						

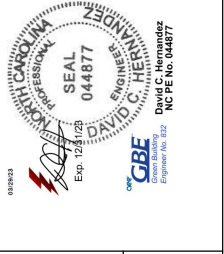
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							
Normal DC Input Voltage	380							
Maximum Input Current @240V <sup>1</sup>	8.5	10.5	13.5	16.5	20	27	30.5	
Maximum Input Current @208V <sup>1</sup>	-	9	-	13.5	-	-	27	
Max. Input Short Circuit Current	45							
Reverse-Battery Protection	Yes							
Ground-Fault Isolation Detection	600µs Sensitivity							
Maximum Inverter Efficiency	99	99.2					99	99 @ 240V 98.5 @ 208V
CEC Weighted Efficiency	99							
Nighttime Power Consumption	< 2.5							

ADDITIONAL FEATURES							
Supported Communication Interfaces	RS-485, Ethernet, ZigBee (optional), Cellular (optional)						
Revenue Grade Metering, ANSI C12.20	Optional <sup>1</sup>						
Consumption Metering	Optional <sup>1</sup>						
With the Se/App	With the Se/App (enable applications using Built-in Wi-Fi, Access Point for Local Connection)						
Reverse Current Protection, NEC 2014, NEC 2017 and IEC 60361-20	Automatic Rapid Shutdown upon AC Grid Disconnect						

STANDARD COMPLIANCE							
Safety	UL1741, UL1741 SA, UL9698, CSA C22.2, Canadian ARC (according to TLL M-07)						
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (H)						
Emissions	FCC Part 15 Class B						

INSTALLATION SPECIFICATIONS							
AC Output Cordset Size / AWG Range	1" Maximum / 14-4 AWG						
DC Input Cordset Size / # of Straps / AWG Range	1" Maximum / 1/2 Straps / 14-6 AWG						
Dimensions with Safety Switch (HxWxD)	22 / 10	17.7 x 14.6 x 6.8	14.5 x 3.70 x 17.4	26.2 / 11.9	23.3 x 14.6 x 7.3	14.0 x 3.70 x 18.5	38.8 / 17.6
Weight with Safety Switch	4.25		25.1 / 11.4		26.2 / 11.9		38.8 / 17.6
Case	NEMA 4X						
Operating Temperature Range	-40 to +40 / -40 to +60 <sup>1</sup>						
Protection Rating	NEMA 4X (Equivalent with Safety Switch)						

<sup>1</sup>Optional revenue grade metering (0.5% accuracy, ANSI C12.20) is available for the SE3000H-US, SE3800H-US, SE5000H-US, SE6000H-US, SE7600H-US, SE10000H-US, and SE11400H-US. For consumption metering, current transformers should be ordered separately. SA-CT100-200MA-20 or SA-CT100-400MA-20, 20 units per box. For power de-rating information refer to <https://www.solaredge.com/sites/default/files/temperature-clearing-table-avg1>



# Power Optimizer

## For North America

S440, S500



# POWER OPTIMIZER

## PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Derects abnormal PV connector behavior, preventing potential safety issues\*
- Module-level voltage shutdown for installer and firefighter safety
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading

\* Expected availability in 2022

solaredge.com



PROJECT: 188 CHEDWORTH DR  
MUNICIPALITY: ANGIER, NC  
ZIP CODE: 27501  
CLIENT: MECHELLE CHAMPION  
7,290 KW DC-STC 76,000 KW AC

PALMETTO  
PHONE: +1 843-720-1844  
WWW.PALMETTO.COM

AUTHOR: ----  
DATE: 28/MAR/23  
REV: -

AG - OPTIMIZERS SPECIFICATIONS  
Need on-site installation support?  
Palmetto Installation Hotline  
Call or Text: 1-843-258-5389  
InstallHotline@Palmetto.com

# Power Optimizer

## For North America

### S440, S500

INPUT	S440	S500	Unit
Rated Input DC Power*	440	500	W
Absolute Maximum Input Voltage (Voc)	60	60	Vdc
MPIPT Operating Range	8 - 60	8 - 60	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15	Adc
Maximum Efficiency	99.5	99.5	%
Weighted Efficiency	99.6	99.6	%
Overvoltage Category	II	II	
OUTPUT DURING OPERATION			
Maximum Output Current	15	15	Adc
Maximum Output Voltage	60	60	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer	17/01	17/01	Vdc
STANDARD COMPLIANCE			
Photovoltaic Rapid Shutdown System	NEC 2014, 2017 & 2020		
EAC	FCC Part 15 Class B, IEC 60066-2, IEC 60320-1-2		
Safety	IEC 60320-1 Class 1 Safety, UL 741		
UL Listed	UL 94 V-0 Fire Retardant		
RoHS	RoHS		
Fire Safety	VDE-AR-E 2100-7:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 133 x 30 / 5.07 x 5.02 x 1.18		mm / in
Weight (including cable)	6.55 / 1.5		g / lb
Input Connector	MC4*		
Input Wire Length	0.1 / 0.32		m / ft
Output Connector	MC4		
Output Wire Length	(+1.2, (-) 0.10 / (+) 7.54, (-) 0.32		m / ft
Operating Temperature Range**	-40 to +85		°C
Protection Rating	IP68 / NEMA6P		
Operating Temperature Range**	0 - 80		°F
Notes	(A) Based on the module's STC, will increase the power optimizer rated input DC power. Modules with up to +5% power tolerance are allowed. (B) For ambient temperature above +30°C / +86°F, power derating is applied. Refer to Power Optimizer Temperature Derating Technical sheet for more details. (C) For other connector types, please contact SolarEdge. (D) For ambient temperature above +30°C / +86°F, power derating is applied. Refer to Power Optimizer Temperature Derating Technical sheet for more details.		

PV System Design Using a SolarEdge Inverter	Single Phase for 120V Grid	Three Phase for 208V Grid	Three Phase for 277/480V Grid
Maximum String Length (Power Optimizers)	8	10	18
Maximum String Length (Power Optimizers)	5440, S500		
Maximum Nominal Power per String	5700 (6000 with SE1800-LU)	6000	12750
Maximum Nominal Power per String (inverter only) w/ the difference in connected power between strings (1:200w or less)	Refer to Footnote 5	One string 7200	15000
Maximum Number of Strings per Inverter	16	Two strings or more 1800	16
Notes	(A) A string of up to 16 strings per inverter is allowed. (B) A string of up to 16 strings per inverter is allowed. (C) If the inverter rated AC power is greater than nominal power per string, then the maximum power per string will be able to reach up to the inverter's maximum input DC power. Refer to the inverter's technical specifications for more details. (D) For ambient temperature above +30°C / +86°F, power derating is applied. Refer to Power Optimizer Temperature Derating Technical sheet for more details. (E) Based on the module's STC, will increase the power optimizer rated input DC power. Modules with up to +5% power tolerance are allowed.		

