SYSTEM INFORMATION				
MODULE	HANWHA Q.PEAK DUO BLK ML-G10+ 400			
INVERTER	ENPHASE IQ8PLUS-72-2-US			
RACKING	SUNMODO EZ GRIP W/ UNIRAC NXT HORIZON 2-RAIL			
SYSTEM SIZE (DC)	6 KW			
LOCATION	30.0871580,-82.6490190			

# **GENERAL NOTES:**

THIS PV SYSTEM HAS BEEN DESIGNED TO MEET THE MINIMUM DESIGN STANDARDS FOR BUILDING AND OTHER STRUCTURES OF THE ASCE 7-16, 7TH EDITION 2020 FLORIDA RESIDENTIAL CODE, 7TH EDITION 2020 FLORIDA BUILDING CODE, 7TH EDITION 2020 FLORIDA FIRE PREVENTION CODE, NEC 2017 AND ALL LOCAL CODES & ORDINANCES.

ROOF SHALL HAVE NO MORE THAN TWO LAYERS OF COVERING IN ADDITION TO THE SOLAR EQUIPMENT.

INSTALLATION OF SOLAR EQUIPMENT SHALL BE FLUSH MOUNTED, PARALLEL TO AND NO MORE THAN 6-INCHES ABOVE THE SURFACE OF THE ROOF.

ANY PLUMBING VENTS ARE NOT TO BE CUT OR COVERED FOR SOLAR EQUIPMENT INSTALLATION. ANY RELOCATION OR MODIFICATION OF THE VENT REQUIRES A PLUMBING PERMIT AND INSPECTION.

ALL DESIGN, CALCULATIONS ARE PERFORMED BY DANIEL DUNZIK REGISTERED ARCHITECT. FLORIDA STATE STATUTE 471.003(3) PROVIDES THAT LICENSED ARCHITECTS ARE EXEMPTED FROM THE PROVISIONS OF CHAPTER 471 ENGINEERING AND NOT PRECLUDED FROM PERFORMING ENGINEERING SERVICES FOR INTEGRATED SYSTEMS AND SERVICES THAT ARE INCIDENTAL TO BUILDINGS AND STRUCTURES.

# **INVERTER PLACEMENT:**

SYSTEM UTILIZES "ENPHASE" MICRO-INVERTERS WITH RAPID SHUTDOWN CONTROL LOCATED ON THE BACK SIDE OF EACH MODULE.

# **STRUCTURAL STATEMENT:**

THE EXISTING STRUCTURE IS ADEQUATE TO SUPPORT THE NEW LOADS IMPOSED BY THE PHOTOVOLTAIC MODULE SYSTEM INCLUDING UPLIFT & SHEAR.EXISTING RAFTER SIZES & DIMENSIONS CONFORM TO 7TH EDITION 2020 FLORIDA RESIDENTIAL CODE

MOUNTING BRACKETS AND HARDWARE MEET OR EXCEED FLORIDA CODE REQUIREMENTS FOR THE DESIGN CRITERIA OF THE TOWN.

## **FSEC CERTIFICATION STATEMENT:**

PER FL. STATUE 377.705, I, MINA A. MAKAR PE# 86753, CERTIFICATE OF AUTHORIZATION #33404, AN ENGINEER LICENSED PURSUANT TO CHAPTER 471, CERTIFY THAT THE PV ELECTRICAL SYSTEM AND ELECTRICAL COMPONENTS ARE DESIGNED AND APPROVED USING THE STANDARDS CONTAINED IN THE MOST RECENT VERSION OF THE FLORIDA BUILDING CODE. FBC 2020

CLIMATIC & GEOGRAPHIC DESIGN CRITERIA TABLE R301.2(1)					
SPEED (MPH)	120				
TOPOGRAPHIC EFFECTS	В				
SPECIAL WIND REGION	NO				
WIND BORNE DEBRIS ZONE	2				
SEISMIC DESIGN CATEGORY	С				
CLIMATE ZONE	2A				
WIND EXPOSURE CATETORY	В				

FBC, RESIDENTIAL 2020

	TABLE R301.2.1.3										
,	WIND SPEED CONVERSIONS <sup>a</sup>									1	
V <sub>ult</sub>	110	115	120	130	140	150	160	170	180	190	200
V <sub>asd</sub>	85	89	93	101	108	116	124	132	139	147	155

For SI: 1 mile per hour = 0.447 m/s.

a. Linear interpolation is permitted.

HANWHA Q.PEAK DUO BLK ML-G10+ 400 400 WATT MODULE 74" X 41.1" X 1.26" (SEE DATASHEET)

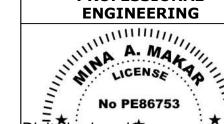
COVER PAGE  ATTACHMENT DETAIL  ATTACHMENT DETAIL CONT
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
ATTACHMENT DETAIL CONT
ATTIME CONTI
ROOF LAYOUT
ELECTRICAL
ELECTRICAL CONT.
EQUIPMENT LABELS

BILL OF MATERIALS	<u>;                                    </u>
MODULES	15
INVERTERS	15
L-FOOT ATTACHMENT W/ RT-MINI	37
171" RAILS	7
SKIRTS	
ENPHASE COMBINER BOX	1
EATON 60A FUSIBLE AC DISCONNECT	1
35A FUSES	2
125A LINE TAPS	2
	1



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM

# **PROFESSIONAL**



Digitally signed by Reason: Digitally signed by Mina A Maker: Reason This it is has been electronically signed and sealed by MANAL Maker, PE 86753, COA # 33404] on the Date and Jibeb Stame Ahawar psiaspa digitaltsignatureeRrinted leggies notathis idaeuraent asee notv ngnsjdengdsigned ændseded # and the signature must be Stamp serified sin anyticlect conict copies Printed copies of this document are

not considered signed and sealed and the signature must be verified on any electronic copies

Date: 2023.07.03 05:07:35 -05:00

## **SOLAR CONTRACTOR**

CAMERON CHRISTENSEN
CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036 MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

#### **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

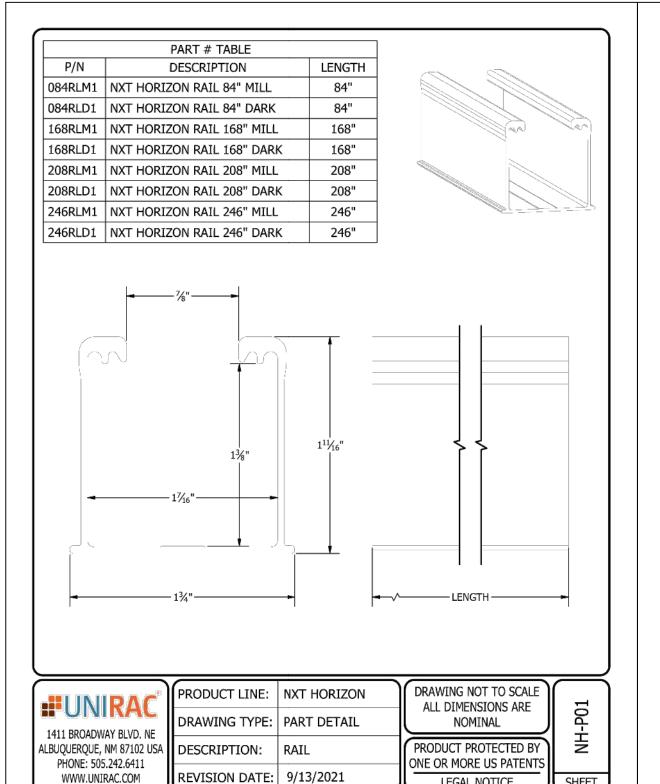
## **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

PROJECT INFORMATION					
NITIAL	DATE: 7/3/2023	DESIGNER: SR			
EV:	DATE:	DESIGNER:			
LEV:	DATE:	DESIGNER:			

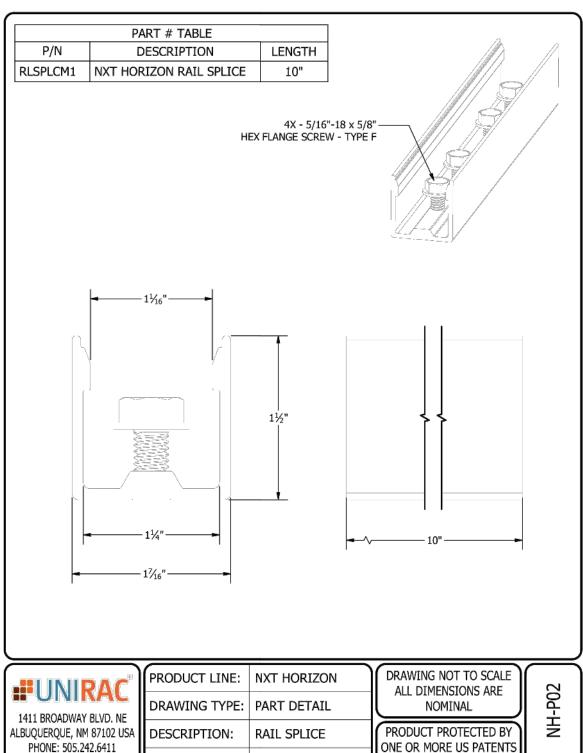
**COVER PAGE** 

PV-1



LEGAL NOTICE

SHEET



9/22/2021

WWW.UNIRAC.COM

REVISION DATE:



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM

# **PROFESSIONAL ENGINEERING**



Digitally signed by Reason: Digitally signed by Mina A Maker. Reason This item has been electronically signed and sealed by What Maker, PE 86753, COA'#33404] on the Date and Jimes Stame Ahawar. Reingoa digitalteignatureeRrinted endernotathis daeumenteamenoty pansidenad signed sandseated # | 30 40 4 georgian at the stamp sephadian any iglect coniat copies

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Date: 2023.07.03 05:07:35 -05:00

# **SOLAR CONTRACTOR**

CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036 MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

## **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

## **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

	PROJECT INFORMA	TION
INITIAL	DATE: 7/3/2023	DESIGNER: SR
REV:	DATE:	DESIGNER:
REV:	DATE:	DESIGNER:

SHEET

LEGAL NOTICE

ATTACHMENT DETAIL

**PV-1.1** 



#### **EZ GRIP METAL DECK MOUNT**

# Make your next metal roof attachment without the daunting task of locating the

truss. SunModo's EZ Grip Metal Deck Mount installs into 26 gauge sheet metal, 1/2 plywood or 7/16 OSB roof decking material.

#### SunModo's EZ Grip Metal Deck Mount installs in just minutes into sheet metal, plywood or OSB roof decking. The four

included 1/4 x 3" Hex Washer Head Self-tapping Screws have the length to penetrate though 1-1/2 inches of insulation while still piercing completely through the roof decking. And since the four screws are guided by the aluminum extruded base to penetrate at a 30-degree angle, the Metal Roof Deck Mount Kit offers superior attachment performance. 1/4-20 Self-drilling screws can be used for attachments into 26 gauge minimum thickness metal roofs.

The EZ Grip Metal Deck Mount is designed to fit on the most popular R-Panel and U-Panel trapezoidal types of metal roofs. The aluminum extruded base easily clears roof profiles 7/16" tall by 1-1/2" wide. The EPDM gaskets on the washers and on the aluminum extruded base combine to provide a water tight seal at the roof penetration site.

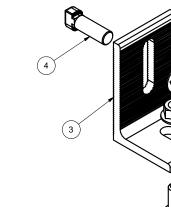


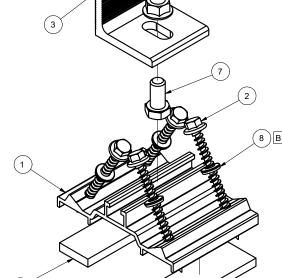
#### Features and Benefits

- Attaches into 1/2 plywood or 7/16 OSB roof decking material using four 1/4 x 3" Hex Washer Head Self-tapping Screws
- Attaches into 26 gauge minimum thickness sheet metal using four 1/4 x 2" Hex Washer Head Self-drilling Screws
- Angled penetrations provide superior attachment performance
- . A wide variety of L-feet and attachment options are available
- Passed the High-Velocity Hurricane Zone (HVHZ) -TAS 100(a) Wind-Driven Rain Test

SunModo Coro I Vancouver, WA I 360-844-0048







3	
	7 2 8 B

	CHE
VING IS CONFIDENTIAL PROPERTY OF SUMMODO AND ITS CONTENTS MAY	APPI

	REVISIONS	BY	DATE
REV	DESCRIPTION	BY	DATE
Α	INITIAL RELEASE	LWF	10/16/2018
В	ADD B15019-001	LWF	10/24/2018

IN 1/2" PLYWOOD					
LOAD DIRECTION	FOS=2	FOS=3			
UPLIFT	345	230			
LATERAL.PERP. TO SLOT	140	95			
LATERAL.PARALLEL TO SLOT	265	175			
IN 7/16" OSB					
LOAD DIRECTION	FOS=2	FOS=3			
UPLIFT	190	125			
LATERAL.PERP. TO SLOT	125	85			
LATERAL.PARALLEL TO SLOT	135	90			

#### NOTES

- \* Factor of Safety as shown
- \* Torque at 3/8" T-Bolt = 15ft.lbs (20 N.m)
- \* All loads in pounds force
- \* Values valid only for conditons equal or better than test conditions
- \* Values valid only when product is used in accordance with SunModo
- installation instruction and other technical documentation \* The kit as shown in the BOM. For alternative configurations, contact
- 4 1/4" Deck Screws in Min 7/16" OSB

В	8	B15019-00	1	SEALIN	IG WASHER .26 ID X .50	X .125			4
_	7 B15018-001			HEX CA	HEX CAP SCREW 3/8-16 X 3/4				1
	6	6 C50001-001			T, EPDM, WITH ADHESI\	/E			2
	5	B15003-00	1	FLANG	E NUT 3/8-16				2
	4	B20007-00	2	T-BOLT	3/8-16X1.0", 304 SS				1
	3	A20062-00	1	L FOOT	-				1
	2	B15039-00	1	HEX W	ASHER HEAD LAG BOLT	1/4X3			4
	1	A50224-00	1	METAL	ROOF DECK MOUNT				1
	ITEM PART NUMBER  MATERIAL SEE NOTES Third Angle Projection: GENERAL SPECIFICATIONS GENERAL SPECIFICATIONS (INCLUDED TO THE PROPERTY OF THE PR			DESCRIPTION				QTY	
				SunModo Corp.					
				14800 NE 65TH STREET, VANCOUVER WA 98682				32	
				METAL ROOF DECK MOUNT KIT				İT	
	LWF CHECKED B	iΥ	10/16/2018	В	DRAWING NUMBER K50532-00	1 STRU	CTUI	RE	
AY P.	APPROVAL	S		SCALE	: NONE	SHEET	1	of	1

ATTACHMENT DETAIL FOR CORRUGATED METAL ROOF



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM

## **PROFESSIONAL ENGINEERING**

No PE86753 Digitally signed by Reason: Digitally signed by Mina A Maker: Reason This it is has been electronically signed and sealed by MANAL Maker, PE 86753, COA'#'33404] on the Date and Jieu-Stame Ahawar.

psiaspa digitaltsignatureeRrinted leggiesnotathis daeuraent assenoty panside realisigned and sealed # andoune signature must here Stamp serified sin anyticlect conict copies

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Date: 2023.07.03 05:07:35 -05:00

## **SOLAR CONTRACTOR**

CAMERON CHRISTENSEN
CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036 MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

## **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

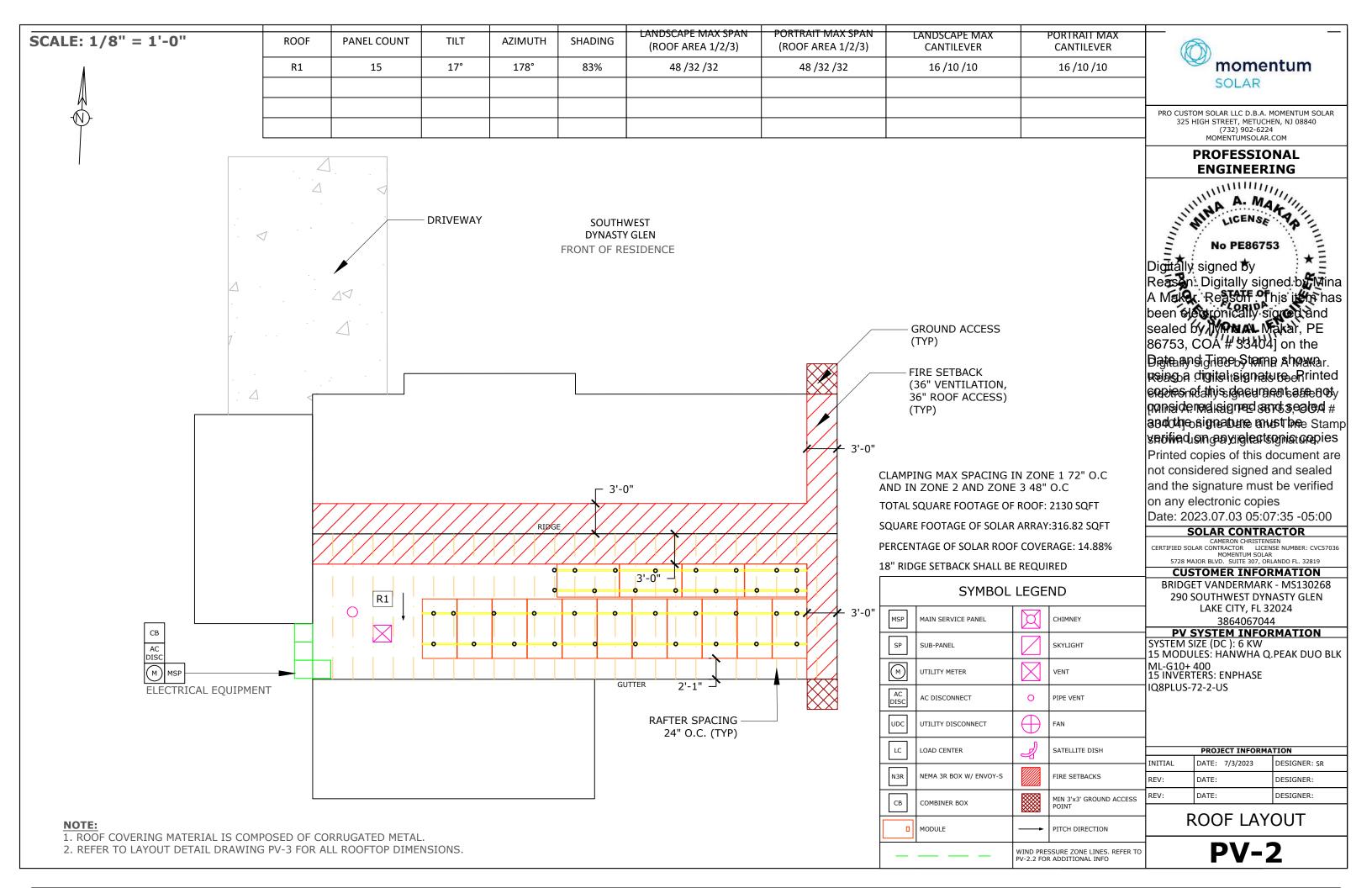
#### **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

PROJECT INFORMATION								
INITIAL	DATE: 7/3/2023	DESIGNER: SR						
REV:	DATE:	DESIGNER:						
REV:	DATE:	DESIGNER:						

ATTACHMENT DETAIL

**PV-1.1 (2)** 



PV MODULE RATINGS		INVERTER RATINGS		VOLTAGE DROP CALCULATIONS									
MODULE MAKE	HANWHA	HANWHA INVERTER MAKE ENPHASE		HANWHA INVERTER MAKE ENPHASE FORMULA USED PER NEC HANDBOOK 215.2(A)(4) WHERE APPLICABLE							_E		
MODEL	Q.PEAK DUO BLK ML-G10+ 400	MODEL	IQ8PLUS-72-2-	WIRE RUN	$V_{mp}$	I <sub>mp</sub>	R	L (FT)	Vo	% V <sub>o</sub>	WIRE SIZE		
		ML-G10+ 400	WIODEL	US	BRANCH TO J-BOX	240.00	9.68	1.98	52.67	2.019	0.84%	12 AWG	1
MAX POWER	400W	MAX OUTPUT POWER	290W	BRANCH TO J-BOX	240.00	9.00	1.90	52.07	2.019	0.64%	12 AWG		
OPEN CIRCUIT VOLTAGE	45.3V	OPEN DC VOLTAGE	60V	J-BOX TO LOAD CENTER	240.00	18.15	1.24	50.00	2.251	0.94%	10 AWG	"	
MPP VOLTAGE	37.13V	NOMINAL AC VOLTAGE	240V	LOAD CENTER TO AC							<u> </u>	$\vdash$	
SHORT CIRCUIT CURRENT	11.14A	MAX AC CURRENT	1.21A	DISCONNECT	240.00	22.6875	0.778	3.00	0.106	0.04%	08 AWG		
MPP CURRENT	10.77A	CEC INVERTER EFFICIENCY	97%	AC DISCONNECT TO	240.00	22.6875	0.491	10.00	0.223	0.09%	06 AWG		
NUMBER OF MODULES	15	NUMBER OF INVERTERS	15	INTERCONNECTION								1	

SUB PANEL **BREAKER SIZE** 

**UL1703 COMPLIANT** 

PV BREAKER # OF MODULES PER BRANCH **UP TO 16** 20A

YES

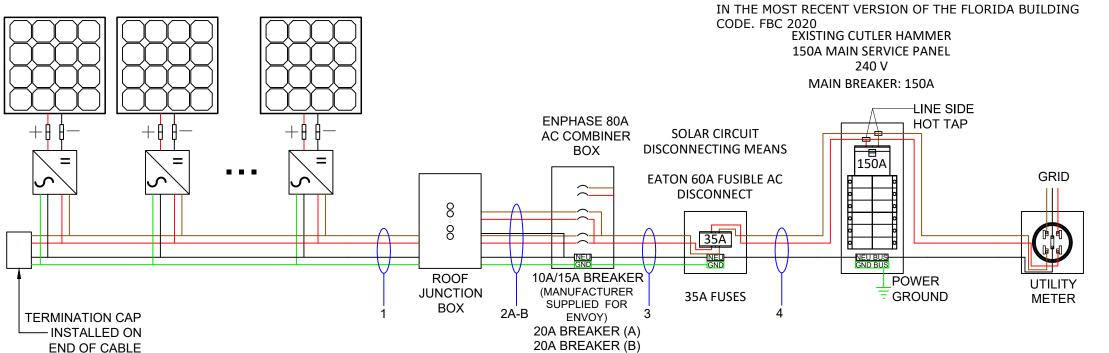
THIS SOLAR PHOTOVOLTAIC SYSTEM COMPLIES WITH THE 2020 FLORIDA BUILDING CODE AND THE 2017 NATIONAL ELECTRICAL CODE

YES

15 HANWHA Q.PEAK DUO BLK ML-G10+ 400 400W MODULES PAIRED WITH 15 ENPHASE IQ8PLUS-72-2-US MICRO-INVERTERS

\_UL1703 COMPLIANT

**BRANCH CIRCUIT A 8 MICRO-INVERTERS BRANCH CIRCUIT B** 7 MICRO-INVERTERS



Wire Tag	Conduit	Wire Qty	Wire Gauge	Wire Type	Temp. Rating	Wire Ampacity (A)	Temp. Derate	Conduit Fill Derate	Derated Ampacity (A)	Inverter Qty	NOC (A)	NEC Correction	Design Current (A)	Ground Size	Ground Wire Type		
1	OPEN AIR	2	12 AWG	Trunk Cable	90°C	30	0.96	1	28.80	8	1.21	1.25	12.10	12 AWG	Trunk Cable		
2A	3/4" PVC	4	10 AWG	THWN-2	75°C	35	0.96	0.8	- 0.8		26.88	8	1.21	1.25	12.10	00 000	THWN-2
2B	3/4 PVC	4	10 AWG	THWN-2	75°C	35	0.96				26.88	7	1.21	1.25	10.59	08 AWG	I II VVIN-Z
3	3/4" PVC	3 + G	08 AWG	THWN-2	75°C	50	0.96	1	48.00	15	1.21	1.25	22.69	08 AWG	THWN-2		
4	3/4" PVC	3	06 AWG	THWN-2	75°C	65	0.96	1	62.40	15	1.21	1.25	22.69		THWN-2		

NOTE: LETTER "G" IN WIRE QTY TAB STANDS FOR GROUNDING CONDUCTOR.



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM

# **PROFESSIONAL ENGINEERING**

No PE86753 Digitally signed by

**FSEC CERTIFICATION STATEMENT:** 

PER FL. STATUE 377.705, I, MINA A. MAKAR PE# 86753,

CERTIFICATE OF AUTHORIZATION #33404, AN ENGINEER LICENSED PURSUANT TO CHAPTER 471, CERTIFY THAT THE PV

ELECTRICAL SYSTEM AND ELECTRICAL COMPONENTS ARE

Reason: Digitally signed by Mina A Maker Reason This it is has been electronically signed and sealed by MANAL Makar, PE DESIGNED AND APPROVED USING THE STANDARDS CONTAINED 86753, COA # 33404] on the Date and Jine Stame shawar. ksiaspa digitaltsignatureeRrinted |eadiesnotathis:deelmaanteadendty pansidenad signed sandseated # | 3040th caigned but a must be Stamp section of the state of the sta

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

# Date: 2023.07.03 05:07:35 -05:00 **SOLAR CONTRACTOR**

CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036 MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

## **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

# **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

ı									
	PROJECT INFORMATION								
1	INITIAL	DATE: 7/3/2023	DESIGNER: SR						
	REV:	DATE:	DESIGNER:						
	REV:	DATE:	DESIGNER:						
-1									

THREE LINE DIAGRAM

PV-3

#### **ELECTRICAL NOTES:**

- 1. ALL CALCULATIONS FOR VOC, VMAX, IMP AND ISC HAVE BEEN CALCULATED USING THE MANUFACTURED STRING CALCULATOR BASED ON ASHRAE 2% HIGH AND EXTREME MINIMUM TEMPERATURE COEFFICIENTS.
- 2. THE ENTIRE ARRAY IS BONDED ACCORDING TO (NEC 690.46 250.120 PARAGRAPH C). THE GROUND IS CARRIED AWAY FROM THE GROUNDING LUG USING #6 BARE COPPER WIRE OR #8 THWN-2 COPPER WIRE.
- 3. THIS SYSTEM COMPLIES WITH NEC 2017
- BRANCH CIRCUIT CALCULATION FOR WIRE TAG 1 DISPLAYS THE LARGEST BRANCH CIRCUIT IN SYSTEM. OTHER BRANCH CIRCUITS SHALL HAVE LOWER DESIGN CURRENT THAN THE ONE SHOWN. IN ADDITION, VOLTAGE DROP CALCULATIONS FROM PANELS TO THE COMBINER BOX SHALL BE SHOWN IN A SIMILAR FASHION
- 5. ALL CONDUCTORS ARE SIZED BASED ON NEC 2017 ARTICLE 310
- 6. ALL EQUIPMENT INSTALLED IS RATED AT 75°C
- 7. INVERTER NOC (NOMINAL OPEN CURRENT) OBTAINED FROM **EQUIPMENT DATASHEET**
- 8. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL LOCAL AND NATIONAL CODE REQUIREMENTS.
- 9. EACH MODULE MUST BE GROUNDED ACCORDING TO USER **INSTRUCTIONS**
- 10. ALL EQUIPMENT SHALL BE LISTED PER NEC 690.4(B)
- 11. PER NEC 690.13. 690.15. PROVIDE A WARNING SIGN AT ALL LOCATIONS WHERE TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION> SIGN SHALL READ \*WARNING -ELECTRIC SHOCK HAZARD - DO NOT TOUCH TERMINALS - OR EQUIVALENT.
- 12. PER NEC 705.10. PROVIDE A PERMANENT PLAQUE OR DIRECTORY SHOWING ALL ELECTRIC POWER SOURCES ON THE PREMISES AT SERVICE ENTRANCE.
- 13. INTERCONNECTION METHOD SHALL COMPLY WITH NEC 705.12
- 14. AND OPTION FOR A SINGLE CIRCUIT BRANCH TO BE SPLIT INTO TWO SUB-CIRCUIT BRANCHES IS ACCEPTABLE
- 15. ALL CONDUCTORS MUST BE COPPER.
- 16. NEUTRAL AND EQUIPMENT GROUNDING CONDUCTOR BONDED AS PER NEC 250.24(C).
- 17. EQUIPMENT GROUNDING CONDUCTOR IS CONNECTED TO A GROUNDING ELECTRODE SYSTEM PER 250.54(D).
- 18. FUSES FOR PV DISCONNECT HAVE AIC RATINGS OF 200KA AC AND 20KA DC.
- 19. SUPPLY SIDE CONNECTION SHALL BE MADE USING ILSCO INSULATION PIERCING CONNECTORS (IPC). MAKE, MODEL, AND RATING OF INTERCONNECTION CAN BE SEEN ON TABLE 1 BELOW.
- 20. METHOD OF INTERCONNECTION CAN BE SEEN IN FIGURE 1.
- 21. UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.

- 22. WORKING CLEARANCES AROUND THE EXISTING AND NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC ARTICLE 110.26
- CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C)(1) AND ARTICLE 310.8 (D).
- 24. CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).
- 25. TOTAL AREA OF ALL CONDUCTORS, SPLICES, AND TAPS INSTALLED AT ANY CROSS SECTION OF THE WIRING DOES NOT EXCEED 75% OF THE CROSS SECTIONAL AREA OF THE SPACE. NEC 312.8(A)(2).
- 26. SYSTEM IS CONSIDERED AN AC MODULE SYSTEM. NO DC CONDUCTORS ARE PRESENT IN CONDUIT, COMBINER, JUNCTION BOX, DISCONNECT. AND COMPLIES WITH 690.6 - NO DC DISCONNECT AND ASSOCIATED DC LABELING ARE REQUIRED.
- 27. SYSTEM COMPLIES WITH 690.12 RAPID SHUTDOWN AND ASSOCIATED LABELING AS PER 690.56(C). AC VOLTAGE AND SYSTEM OPERATING CURRENT SHALL BE PROVIDED 690.52.
- 28. CONDUCTORS IN CONDUIT ARE AC CONDUCTORS BRANCH CIRCUITS AND NOT PV SOURCE CIRCUITS, 690.6.
- 29. ALL GROUNDING SHALL COMPLY WITH 690.47(A) IN THAT THE AC MODULES WILL COMPLY WITH 250.64.
- 30. NO TERMINALS SHALL BE ENERGIZED IN THE OPEN POSITION IN THIS AC MODULE SYSTEM 690.13, 690.15, 690.6.
- 31. WHERE APPLICABLE: INTERCONNECTION SHALL COMPLY WITH 705.12(A) OR 705.12(B)
- 32. ALL WARNING SIGN(S) OR LABEL(S) SHALL COMPLY WITH 2017 NEC ARTICLE 110.21(B). LABEL WARNINGS SHALL ADEQUATELY WARN OF THE HAZARD. LABELS SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT, AND LABELS REQUIRED SHALL BE SUITABLE FOR THE ENVIRONMENT.
- PV POWER CIRCUIT LABELS SHALL APPEAR ON EVERY SECTION OF THE WIRING SYSTEM THAT IS SEPARATED BY ENCLOSURES. WALLS, PARTITIONS, CEILINGS, OR FLOORS.

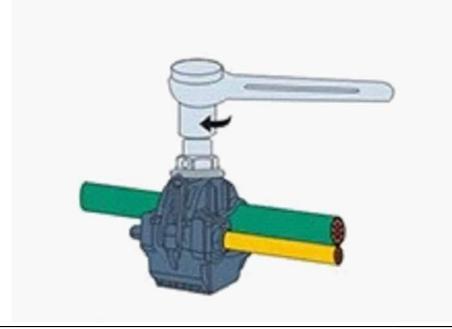
#### **TABLE 1:**

MAKE	MODEL	VOLTAGE RATING	CONDUCTOR RANGE MAIN	CONDUCTOR RANGE TAP
ILSCO	IPC 4006	600 V	4/0-4 AWG	6-14 AWG
ILSCO	IPC 4020	600 V	4/0-2 AWG	2/0-6 AWG

#### INSTRUCTIONS FOR LINE TAPS

## FIGURE 1:

- 1. ADJUST THE CONNECTOR NUT TO SUITABLE LOCATION
- PUT THE BRANCH WIRE INTO THE CAP SHEATH FULLY
- INSERT THE MAIN WIRE, IF THERE ARE TWO LAYS OF INSULATED LAY IN THE MAIN CABLE, SHOULD STRIP A CERTAIN LENGTH OF THE FIRST INSULATED LAY FROM INSERTED END
- TURN THE NUT BY HAND, AND FIX THE CONNECTOR IN SUITABLE LOCATION.
- SCREW THE NUT WITH THE SLEEVE SPANNER.
- SCREW THE NUT CONTINUALLY UNTIL THE TOP PART IS CRACKED AND DROPPED DOWN





PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMS OF ARCOM

# **PROFESSIONAL**



Digitally signed by Reason: Digitally signed by Mina A Maker Reason This it is has been electronically signed and sealed by MANAL Maker, PE 86753, COA # 33404] on the Date and Jibeb Stame Ahawar psiaspa digitaltsignatureeRrinted leavies natalnis idaeura en la atendati ngnsjdengdsigned ændseded # and the signature must be stamp

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies Date: 2023.07.03 05:07:35 -05:00

varified sin capyligheats onist copies

## **SOLAR CONTRACTOR**

CAMERON CHRISTENSEN
CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036 MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

#### **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

# **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

PROJECT INFORMATION								
INITIAL	DATE: 7/3/2023	DESIGNER: SR						
REV:	DATE:	DESIGNER:						
REV:	DATE:	DESIGNER:						

ELECTRICAL CONT.

**PV-3.1** 

ALL	WARNING SIGN(S) OR LABEL(S) SHALL COMPLY WITH NEC ARTICLE 110.21(B). LABEL WARNINGS SHA	LL ADEQUATELY W	/ARN OF THE HAZARD. LABE	LS SHALL BE PERMANENTLY AFFIXED TO THE	EQUIPMENT, AND LABELS REQUIRED SHALL BE SUITABLE FOR THE ENVIRONMENT.
TAG	LABEL	QUANTITY	LOCATION	NOTE	EXAMPLES
A	AC SOLAR VOLTAGE	12	AC CONDUITS	1 AT EVERY SEPARATION BY ENCLOSURES / WALLS / PARTITIONS / CEILINGS / FLOORS OR NO MORE THAN 10'	
B	WARNING: PHOTOVOLTAIC POWER SOURCE PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN	1	COMBINER BOX	1 AT ANY COMBINER BOX	
©	ELECTRICAL SHOCK HAZARD TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION	1	JUNCTION BOX	1 AT ANY JUNCTION BOX	
(D)	PHOTOVOLTAIC SYSTEM A C DISCONNECT  RATED AC OUTPUT CURRENT  NOMINAL OPERATING AC VOLTAGE  POWER TO THIS SERVICE IS ALSO SUPPLIED FROM ON-SITE SOLAR GENERATION  AC SYSTEM DISCONNECT  AC WARNING  ELECTRICAL SHOCK HAZARD TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION  RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM INSTALLED BY MOMENTUM SOLAR 3096 B HAMILTON BLVD S. PLAINFIELD, NJ 07080 PHONE NUMBER: 732-902-6224	1	AC DISCONNECT (RSD SWITCH)	1 OF EACH AT FUSED AC DISCONNECT COMPLETE VOLTAGE AND CURRENT VALUES ON DISCONNECT LABEL	A STATE OF THE PARTY OF THE PAR
F	DUAL POWER SUPPLY SECOND SOURCE IS PHOTOVOLTAIC SYSTEM	. 1	UTILITY METER	1 AT UTILITY METER AND ONE DIRECTORY PLACARD	A WARNING A ELECTRIC SHOCK HAZANO DO NOT TOUCH TERMINALS TERMINAS TERMINALS TERMINAS TORONTHE SHE NO DUSY SHE SERVICE SHYTCOLOGY IN THE OPEN POSITION  AND TO SHE OPEN POSITION  AND THE OPEN POSITION  AND THE OPEN POSITION
(G)	EMERGENCY RESPONDER THIS SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN  TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN ENTIRE PV SYSTEM  EXCENSE OF THE PV SYSTEM  SECTION SHITCH SHOP SHOP SHUTDOWN SHITCH S	1	INTERCONNECTION POINT	4.05.54.011.47.0111.011.0	C A STATE OF THE S
	POWER SOURCE OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE	1	BACKFEED PANEL	1 OF EACH AT BUILDING INTERCONNECTION POINT AND ONE DIRECTORY PLACARD	1-210+c (200 200 200 200 200 200 200 200 200 20
$\oplus$	NOMINAL OPERATING AC VOLTAGE: 240V NOMINAL OPERATING AC FREQUENCY: 60HZ MAXIMUM AC POWER: VA MAXIMUM AC CURRENT: A MAXIMUM OVERCURRENT DEVICE RATING FOR AC MODULE PROTECTION: 20A	1	AC CURRENT PV MODULES		WARNING DUA POWER SUPPLY SOURCE UTLING SINTEN ROOMS LECTING SINTEN ROOMS LECTING SINTEN

















G BACKFEED



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM

# **PROFESSIONAL ENGINEERING**

No PE86753

Digitally signed by Reason: Digitally signed by Reason: Digitally signed by Mina A Maker: Reason of this it in has been electronically signed and sealed by Mina Maker, PE 86753, COA # \$3404] on the Bate and Time Stemps shower Date and Jierb Stame Ahawar. Rejaspa digitalteignatureeRrinted enpires notathis indocuments a see noty pansidenalisigned and sealed # and the signature must be Stamp serified singay iglect comist copies Printed copies of this document are

not considered signed and sealed and the signature must be verified on any electronic copies

Date: 2023.07.03 05:07:35 -05:00

## **SOLAR CONTRACTOR**

CAMERON CHRISTENSEN
CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC57036
MOMENTUM SOLAR
5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819

## **CUSTOMER INFORMATION**

**BRIDGET VANDERMARK - MS130268** 290 SOUTHWEST DYNASTY GLEN LAKE CITY, FL 32024 3864067044

# **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC ): 6 KW 15 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400 15 INVERTERS: ENPHASE IQ8PLUS-72-2-US

PROJECT INFORMATION							
INITIAL	DATE: 7/3/2023	DESIGNER: SR					
REV:	DATE:	DESIGNER:					
REV:	DATE:	DESIGNER:					

**EQUIPMENT LABELS** 

**PV-3.2**