SYSTEM INFORMATION					
MODULE	HANWHA Q.PEAK DUO BLK-G10+ 365				
INVERTER	ENPHASE IQ8PLUS-72-2-US				
RACKING	SUNMODO EX GRIP W/ UNIRAC NXT HORIZON 2-RAIL RACKING SYSTEM				
SYSTEM SIZE (DC)	9.125 KW				
LOCATION	30.1866678,-82.6302033				

CEN	IERA	I AI		:c.
GEN	ICKA	LIN	UII	: <b>5</b> :

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>											
V <sub>ult</sub>	110	115	120	130	140	150	160	170	180	190	200
$V_{asd}$	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-G10+ 365 365 WATT MODULE 67.6" X 41.1" X 1.26' (SEE DATASHEET)

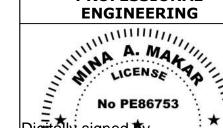
PLAN KEY					
PV-1	COVER PAGE				
PV-1.1	ATTACHMENT DETAIL				
PV-1.1(2)	ATTACHMENT DETAIL				
PV-2	ROOF LAYOUT				
PV-3	ELECTRICAL				
PV-3.1	ELECTRICAL CONT.				
PV-3.2	EQUIPMENT LABELS				

BILL OF MATERIALS	;
MODULES	25
INVERTERS	25
L-FOOT ATTACHMENT W/ RT-MINI	46
171" RAILS	10
SKIRTS	7
ENPHASE COMBINER BOX	1
EATON 60A FUSIBLE AC DISCONNECT	1
40A 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**



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

Date: 2023.04.27 12:04:31 -05:00

#### **SOLAR CONTRACTOR**

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

## **CUSTOMER INFORMATION**

JOSE IRIZARRY - MS124989 280 SE PERRY AVE LAKE CITY, FL 32025 3863440449

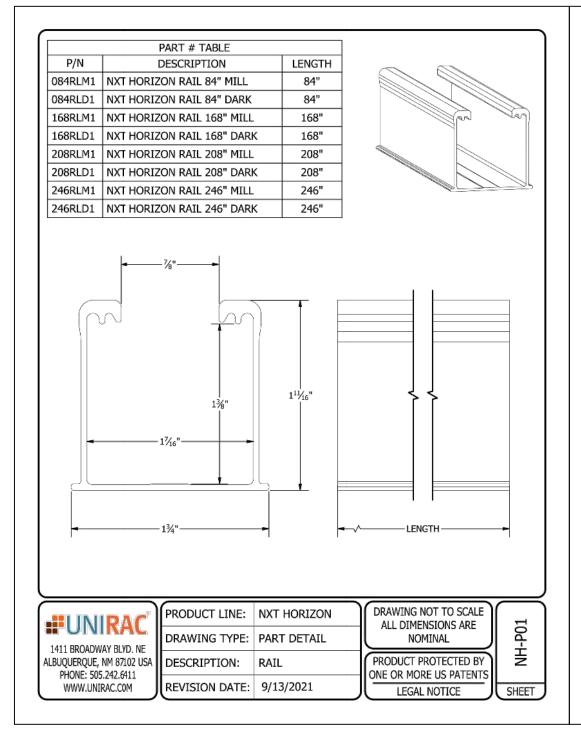
#### **PV SYSTEM INFORMATION**

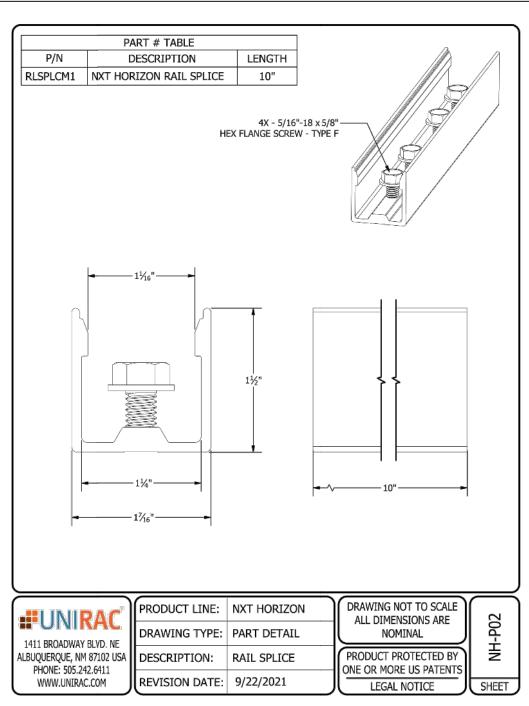
SYSTEM SIZE (DC): 9.125 KW 25 MODULES: HANWHA Q.PEAK DUO BLK-G10+ 365 25 INVERTERS: ENPHASE IQ8PLUS-72-2-US

PROJECT INFORMATION							
NITIAL	DATE: 4/27/2023	DESIGNER: AKL					
REV:	DATE:	DESIGNER:					
REV:	DATE:	DESIGNER:					

**COVER PAGE** 

PV-1







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

# PROFESSIONAL ENGINEERING

No PE86753

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SYSTEM SIZE (DC ): 9.125 KW
25 MODULES: HANWHA Q.PEAK DUO
BLK-G10+ 365
25 INVERTERS: ENPHASE
IQ8PLUS-72-2-US

PROJECT INFORMATION						
	INITIAL	DATE: 4/27/2023	DESIGNER: AKL			
	REV:	DATE:	DESIGNER:			
	REV:	DATE:	DESIGNER:			

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.

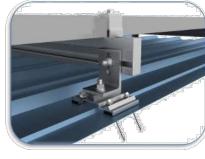
The EZ Grip Metal Deck Mount is designed to fit on the most popular R-Panel and U-Panel trapezoidal types of metal roofs. The aluminum extruded base easily clears roof profiles 7/16" tall by 1-1/2" wide. The EPDM gaskers on the washers and on the aluminum extruded base combine to provide a water tight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

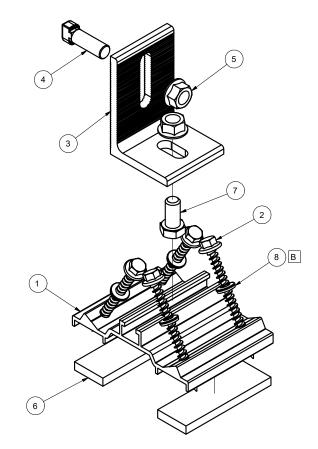


#### Features and Benefits

- 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  $\times$  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

SunMode Corp | Vancouver, WA | 360-844-0048 Document Number D10153-V003 | @2019 - SunModo Corp





IN 1/2" PLYWO		
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
- SunModo

4 1/4" Deck Screws i	in Min 7	/16" OSB
----------------------	----------	----------

	8	B15019-00	4	OF AL IN	IG WASHER .26 ID X .50	V 405			
В	_		·			X .125			4
	7	B15018-00	·		AP SCREW 3/8-16 X 3/4				1
	6	C50001-00	1	GASKE	T, EPDM, WITH ADHESI	VE			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 BOL	Γ 1/4X3			4
	1	A50224-00	1	METAL	ROOF DECK MOUNT				1
	ITEM	PART N	UMBER		DESCRIPT	ON			QTY
	SEE NOTES Third Angle Projection:				SunMod	o Cor	'n.		
	GENERAL SPECIFICATIONS All Dimensions in inches [millimeters] Tolerances XXXX ±0.01 [0.25mm]			14800 NE 65TH STREET, VANCOUVER WA 98682				32	
	X.XX ±0.02 X.X ±0.039 Unless othe DRAWN BY	[1.0mm] .010	ak all sharp edges 0020 unless erwise specified. DATE	TITLE	METAL ROOF DE	CK MOU	NT K	IT	
	LWF CHECKED E	BY	10/16/2018	В	K50532-00	)1 STRU	CTUI	RE	
AY P.	APPROVAL	s		SCALE	: NONE	SHEET	1	of	1

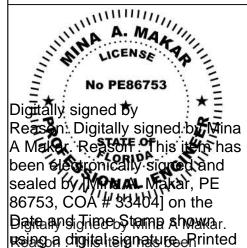
ATTACHMENT DETAIL FOR CORRUGATED METAL ROOF

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# PROFESSIONAL ENGINEERING



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Date: 2023.04.27 12:04:31 -05:00

## SOLAR CONTRACTOR

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

## **CUSTOMER INFORMATION**

JOSE IRIZARRY - MS124989 280 SE PERRY AVE LAKE CITY, FL 32025 3863440449

## **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC ): 9.125 KW
25 MODULES: HANWHA Q.PEAK DUO
BLK-G10+ 365
25 INVERTERS: ENPHASE
IQ8PLUS-72-2-US

PROJECT INFORMATION								
INITIAL	DATE: 4/27/2023	DESIGNER: AKL						
REV:	DATE:	DESIGNER:						
REV:	DATE:	DESIGNER:						

ATTACHMENT DETAIL

PV-1.1 (2)

CCALE: 4 /0" - 41 0"	5005	DANIEL COLUMN	<b>エ</b> ル エ	A 718 41 1TT	CHARMS	LANDSCAPE MAX SPAN	PORTRAIT MAX SPAN	LANDSCAPE MAX	PORTRAIT MAX	_
SCALE: 1/8" = 1'-0"	ROOF	PANEL COUNT	TILT	AZIMUTH	SHADING	(ROOF AREA 1/2/3)	(ROOF AREA 1/2/3)	CANTILEVER	CANTILEVER	
<u> </u>	R1	25	20°	90°	93%	48 /32 /32	48 /32 /32	16 /10 /10	16/10/10	momentum
										SOLAR
(N)										PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR 325 HIGH STREET, METUCHEN, NJ 08840
										325 HIGH STREET, METUCHEN, NJ 08840 (732) 902-6224 MOMENTUMSOLAR.COM
						THE STATE OF THE S				PROFESSIONAL ENGINEERING
					RIDGE	12'-10" 3'-0"	(T FII (3 36 (T	ROUND ACCESS YP)  RE SETBACK 6" VENTILATION, " ROOF ACCESS) YP)  AFTER SPACING I" O.C. (TYP)	FRONT OF RESIDENCE  SE PERRY AVE	No PE86753  Digitally signed by Reason: Digitally signed by Min A Maker. Reason of this item has been electronically signed and sealed by Min Maker, PE 86753, COA # 33404] on the Date And Griero Stome Andwar. Reason digital signed sand sealed and the signature must be verified and the signature must be verified.
							S	OTAL SQUARE FOOTAGE OF SQUARE FOOTAGE OF SOLAR FOOTAGE OF SOLAR ROCK.  8" RIDGE SETBACK SHALL B  SYMBOL	R ARRAY:482.36 SQFT OF COVERAGE: 24.06%	on any electronic copies  Date: 2023.04.27 12:04:31 -05:00  SOLAR CONTRACTOR  CAMERON CHRISTENSEN CERTIFIED SOLAR CONTRACTOR LICENSE NUMBER: CVC570: MOMENTUM SOLAR 5728 MAJOR BLVD. SUITE 307, ORLANDO FL. 32819  CUSTOMER INFORMATION  JOSE IRIZARRY - MS124989  280 SE PERRY AVE LAKE CITY, FL 32025
								MSP MAIN SERVICE PANEL	CHIMNEY	3863440449
								SP SUB-PANEL	SKYLIGHT	SYSTEM SIZE (DC): 9.125 KW
								M UTILITY METER	VENT	25 MODULES: HANWHA Q.PEAK DUO BLK-G10+ 365 25 INVERTERS: ENPHASE
							- 0'-7 <sup>1</sup> / <sub>2</sub> "		<del>  _  </del>	IQ8PLUS-72-2-US
							-	AC DISCONNECT	O PIPE VENT	_
								UDC UTILITY DISCONNECT	FAN	
								LC LOAD CENTER	SATELLITE DISH	PROJECT INFORMATION
CLAMPING MAX SPACING IN ZONE 1						R1		N3R NEMA 3R BOX W/ ENVOY-S	FIRE SETBACKS	REV: DATE: 4/27/2023 DESIGNER: AKL  DESIGNER: DESIGNER:
AND IN ZONE 2 AND ZONE 3 48" O.	С					9'-0"		CB COMBINER BOX	MIN 3'x3' GROUND ACCESS POINT	REV: DATE: DESIGNER:
NOTE:							-			ROOF LAYOUT
1. ROOF COVERING MATERIAL IS CO				MSP AC DISC (	СВ	1		MODULE	PITCH DIRECTION	
2. REFER TO LAYOUT DETAIL DRAWI	NG PV-3 FOR A	TE KOOFTOP DIME	NSIONS. ELEC	CTRICAL EQUI					WIND PRESSURE ZONE LINES. REFER TO PV-2.2 FOR ADDITIONAL INFO	<b>PV-2</b>

PV MODULE RAT	INGS	INVERTER RATINGS			
MODULE MAKE	HANWHA	INVERTER MAKE	ENPHASE		
MODEL	Q.PEAK DUO BLK-G10+ 365	MODEL	IQ8PLUS-72-2- US		
MAX POWER	365W	MAX OUTPUT POWER	290W		
OPEN CIRCUIT VOLTAGE	41.21V	OPEN DC VOLTAGE	60V		
MPP VOLTAGE	34.58V	NOMINAL AC VOLTAGE	240V		
SHORT CIRCUIT CURRENT	11.07A	MAX AC CURRENT	1.21A		
MPP CURRENT	10.56A	CEC INVERTER EFFICIENCY	97%		
NUMBER OF MODULES	25	NUMBER OF INVERTERS	25		
UL1703 COMPLIANT	YES	UL1703 COMPLIANT	YES		

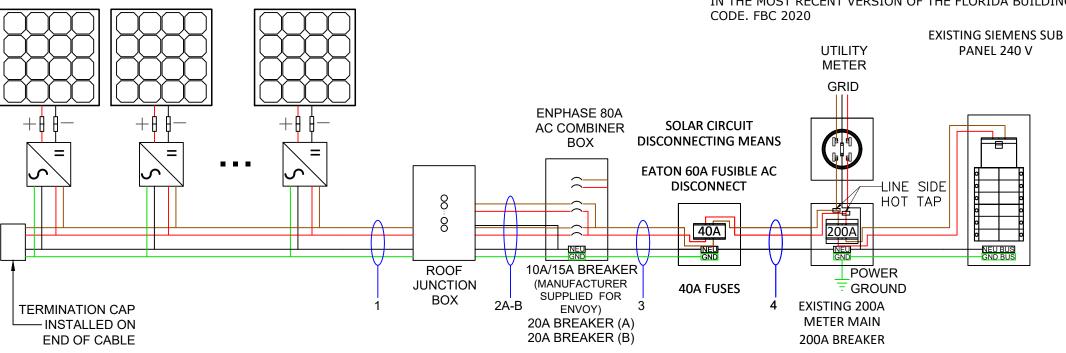
	VOLTAGE DROP CALCULATIONS							
FORMULA USED PER NEC HANDBOOK 215.2(A)(4) WHERE APPLICABLE							]	
WIRE RUN	$V_{mp}$	I <sub>mp</sub>	R	L (FT)	Vo	% V <sub>o</sub>	WIRE SIZE	]
BRANCH TO J-BOX	240.00	15.73	1.98	85.58	5.331	2.22%	12 AWG	L
J-BOX TO LOAD CENTER	240.00	30.25	1.24	50.00	3.751	1.56%	10 AWG	
LOAD CENTER TO AC DISCONNECT	240.00	37.8125	0.778	3.00	0.177	0.07%	08 AWG	
AC DISCONNECT TO INTERCONNECTION	240.00	37.8125	0.491	10.00	0.371	0.15%	06 AWG	

SUB PANEL BREAKER SIZE	# OF MODULES	PV BREAKER PER BRANCH		
	UP TO 16	20A		

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

## 25 HANWHA Q.PEAK DUO BLK-G10+ 365 365W MODULES PAIRED WITH 25 ENPHASE IQ8PLUS-72-2-US MICRO-INVERTERS

**BRANCH CIRCUIT A** 13 MICRO-INVERTERS **BRANCH CIRCUIT B** 12 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	13	1.21	1.25	19.66	12 AWG	Trunk Cable	
2A	2/4   5)/6	_	10 AWG	THWN-2	75°C	35	0.96		26.88	13	1.21	1.25	19.66		<b></b>	INI
2B	3/4" PVC	4	10 AWG	THWN-2	75°C	35	0.96	0.8	26.88	12	1.21	1.25	18.15	08 AWG	111100110 2	REV REV
3	3/4" PVC	3 + G	08 AWG	THWN-2	75°C	50	0.96	1	48.00	25	1.21	1.25	37.81	08 AWG	THWN-2	7
4	3/4" PVC	3	06 AWG	THWN-2	75°C	65	0.96	1	62.40	25	1.21	1.25	37.81		THWN-2	Ė

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

## **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 BUTTORIO. IN THE MOST RECENT VERSION OF THE FLORIDA BUILDING

# **ENGINEERING**

momentum

No PE86753

SOLAR

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

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## **CUSTOMER INFORMATION**

JOSE IRIZARRY - MS124989 280 SE PERRY AVE LAKE CITY, FL 32025 3863440449

## **PV SYSTEM INFORMATION**

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PROJECT INFORMATION						
INITIAL	DATE: 4/27/2023	DESIGNER: AKL				
REV:	DATE:	DESIGNER:				
REV:	DATE:	DESIGNER:				

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.

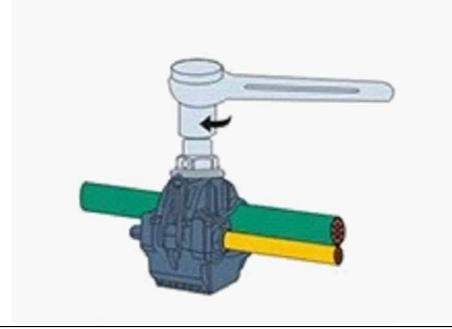
#### **TABLE 1:**

MAKE	MODEL	VOLTAGE RATING		
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**



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Date: 2023.04.27 12:04:31 -05:00

## **SOLAR CONTRACTOR**

CAMERON CHRISTENSEN

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

## **CUSTOMER INFORMATION**

JOSE IRIZARRY - MS124989 280 SE PERRY AVE LAKE CITY, FL 32025 3863440449

#### **PV SYSTEM INFORMATION**

SYSTEM SIZE (DC): 9.125 KW 25 MODULES: HANWHA Q.PEAK DUO BLK-G10+ 365 25 INVERTERS: ENPHASE IQ8PLUS-72-2-US

	PROJECT INFORMATION							
INITIAL	DATE: 4/27/2023	DESIGNER: AKL						
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	_	/ARN OF THE HAZARD. LABE	LS SHALL BE PERMANENTLY AFFIXED TO THE	
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 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	
(E)	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  A  A  A  A  A  A  A  A  A  A  A  A
F	DUAL POWER SUPPLY SECOND SOURCE IS PHOTOVOLTAIC SYSTEM	1	UTILITY METER	1 AT UTILITY METER AND ONE DIRECTORY PLACARD	ELECTRIC SHOCK HAZAND  DO NOT TOUCH HE FINANAS  TERMINAS CON HOT HELE WE NO LOOS SHEES WAYEE SHIFFOLDS  ON THE CHEM POSITION  THE CHEM POSITION
<u> </u>	EMERGENCY RESPONDER THIS SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN  TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUTD DWN ENTIRE PV SYSTEM  SECTIONS OF THE IN PRINTING HAVE ARREST DROWNINGS THE RAPIO AND SHUTCH SOMEWHAT THE RAPIO AND S	1	INTERCONNECTION POINT	4.05 54.00 47 500 500 5	CO STANCES CONTROL OF THE PARTY
	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-ce #227 22 51 51 525 225 226 220 220 200 100 100 100 100 100 100 100
$\oplus$	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		DUAL POWER SUPPLY SOURCE UTILITY CHIEFAE AL GOLAR ELECTR C SYSTEM  (F)



















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

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PROJECT INFORMATION						
INITIAL	DATE: 4/27/2023	DESIGNER: AKL				
REV:	DATE:	DESIGNER:				
REV:	DATE:	DESIGNER:				

**EQUIPMENT LABELS** 

**PV-3.2**