PROJECT DESCRIPTION

SYSTEM CAPACITY: 9.36 KW DC / 6.96 KW AC

PV PANELS: (24) CS3U-390MS (390W) BY CANADIAN SOLAR

COMBINER: (24) PV LINK BY GENERAC

INVERTER: (1) PWRCELL 7600 BY GENERAC

RACKING SYSTEM: XR100 SYSTEM BY IRON RIDGE SYSTEMS

PROJECT INFORMATION

PROJECT LATITUDE	30.123397	MIN AMBIENT TEMP	-5 ° C
PROJECT LONGITUDE	-82.647421	MAX AMBIENT TEMP	35 ° C
AHJ	COLUMBIA COUNTY	WIND EXPOSURE	C
		DESIGN WIND SPEED	119 MPH

DRAWINGS INDEX

C-1	COVER SHEET
E-1	ONE LINE RISER DIAGRAM
E-2	SAFETY LABELS
S-1	STRUCTURAL PLAN
S-2	RACKING PLAN
S-3	RACKING PLAN
D-1	PV MODULES DATA SHEET
D-2	SMART MONITORING DATA SHEET
D-3	INVERTER DATA SHEET
D-4	RAPID SHUTDOWN DATA SHEET
D-5	BATTERY DATA SHEET
D-6	AUTOMATIC TRANSFER SWITCH DATA SHEET

GENERAL NOTES

PER FL. STATUTE 377.705 (REVISED 7/1/2017), I RAFAEL A. GONZALEZ SOTO, P.E. 83104 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.

APPLICABLE CODES: 2020 FLORIDA BUILDING CODE 7TH EDITION, ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, FFPC 7TH EDITION, NFPA 2018, NFPA 70 AND NEC 2017.

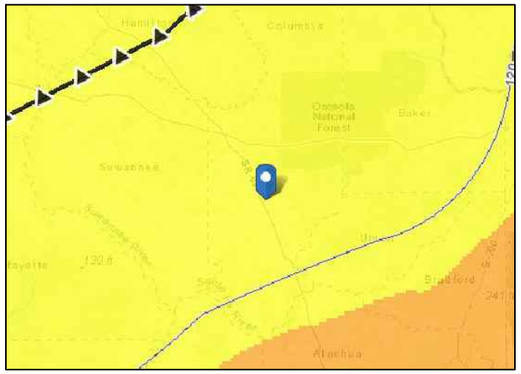
CONTRACTOR SHALL ENSURE ALL ROOF PENETRATIONS TO BE INSTALLED AND SEALED PER 2020 FLORIDA BUILDING CODE 7TH EDITION OR LOCAL GOVERNING CODE.

ALL WIRING METHODS AND INSTALLATION PRACTICES SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) 2017, LOCAL STATE CODES, AND OTHER APPLICABLE LOCAL CODES. MEANS SHALL BE PROVIDED TO DISCONNECT ALL CURRENT CARRYING CONDUCTORS OF THE PHOTOVOLTAIC POWER SOURCE FROM ALL OTHER CONDUCTORS IN THE BUILDING. CONNECTORS TO BE TORQUED PER DEVICE LISTING, OR MANUFACTURERS RECOMMENDATIONS. NON-CURRENT CARRYING METAL PARTS SHALL BE CHECKED FOR PROPER GROUNDING.

REQUIRED SAFETY SIGNS AND LABELS SHALL BE PERMANENTLY ATTACHED BY ADHESIVE, OR OTHER MECHANICAL MEANS, LABELS SHALL COMPLY WITH ARTICLE 690 VI OF THE NEC 2017 OR OTHER APPLICABLE STATE AND LOCAL CODES. SEE LABELS AND MARKING PAGE FOR MORE INFORMATION.

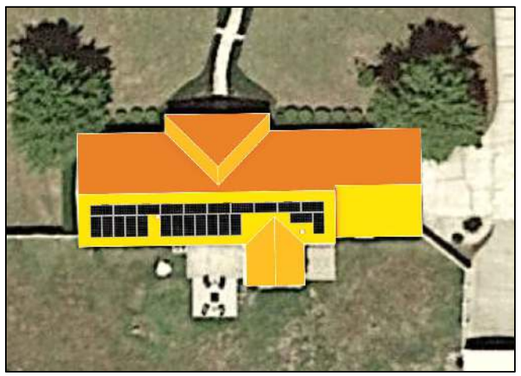
RACKING ROOF MOUNT SYSTEM SHALL BE INSTALLED FOLLOWING MANUFACTURERS INSTRUCTION SPEC'S, INCLUDING ALL GROUNDING WEEB CLIPS, GROUND LUGS, AND RAIL SPLICE KITS FOR ELECTRICAL CONTINUITY.

MECAWIND TOOL IS BASED ON THE C&C WIND LOADS FOR ENCLOSED BUILDINGS. DESIGN WIND PRESSURES ARE CALCULATED USING ASCE 7-16 EQUATION 30.6-1. ALL NOTES IN FIGURES ASCE 7-16 30.4-1 AND 30.4-2(A,B AND /67C) HAVE BEEN INCORPORATED. MEAN ROOF HEIGHT MUST BE LESS THAN 60 FEET.



2 LOCATION MAP / WIND ZONES

N.T.S.

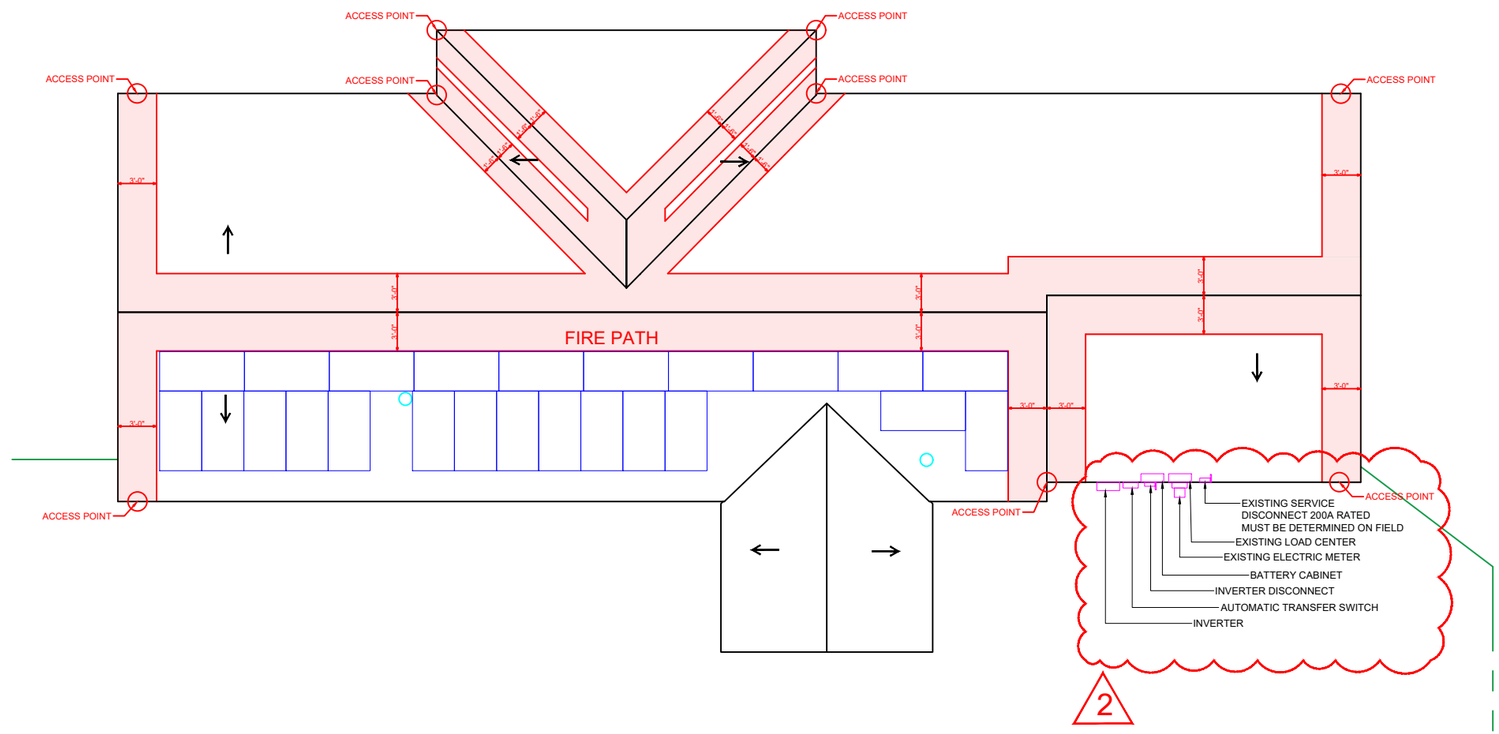


3 IRRADIANCE MAP

N.T.S.

4 3D RENDERING

N.T.S.



1 ROOF PLAN VIEW / BOS LOCATION

N.T.S.

DOCUMENT CONTROL		DATE	sCAD	eCAD
ISSUED FOR PERMIT		8-2-22	JH	DM
REV	DESCRIPTION	DATE	sCAD	eCAD
1	INDEX AND EQUIPMENT REVISED	09-14-22	DM	DM
2	ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION

ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134

DESIGN@ENGIPARTNERS.COM

833 - 888 - 3644

ENGINEERING STAMP

Rafael A Gonzalez Soto
2022.09.23 14:09:36 -04'00'

CONTRACTOR CONTACT INFORMATION

SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134

(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO

SUN4

CUSTOMER: ISAAC HARRIS

PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025

PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: COVER SHEET

PROJECT ID: EP15365

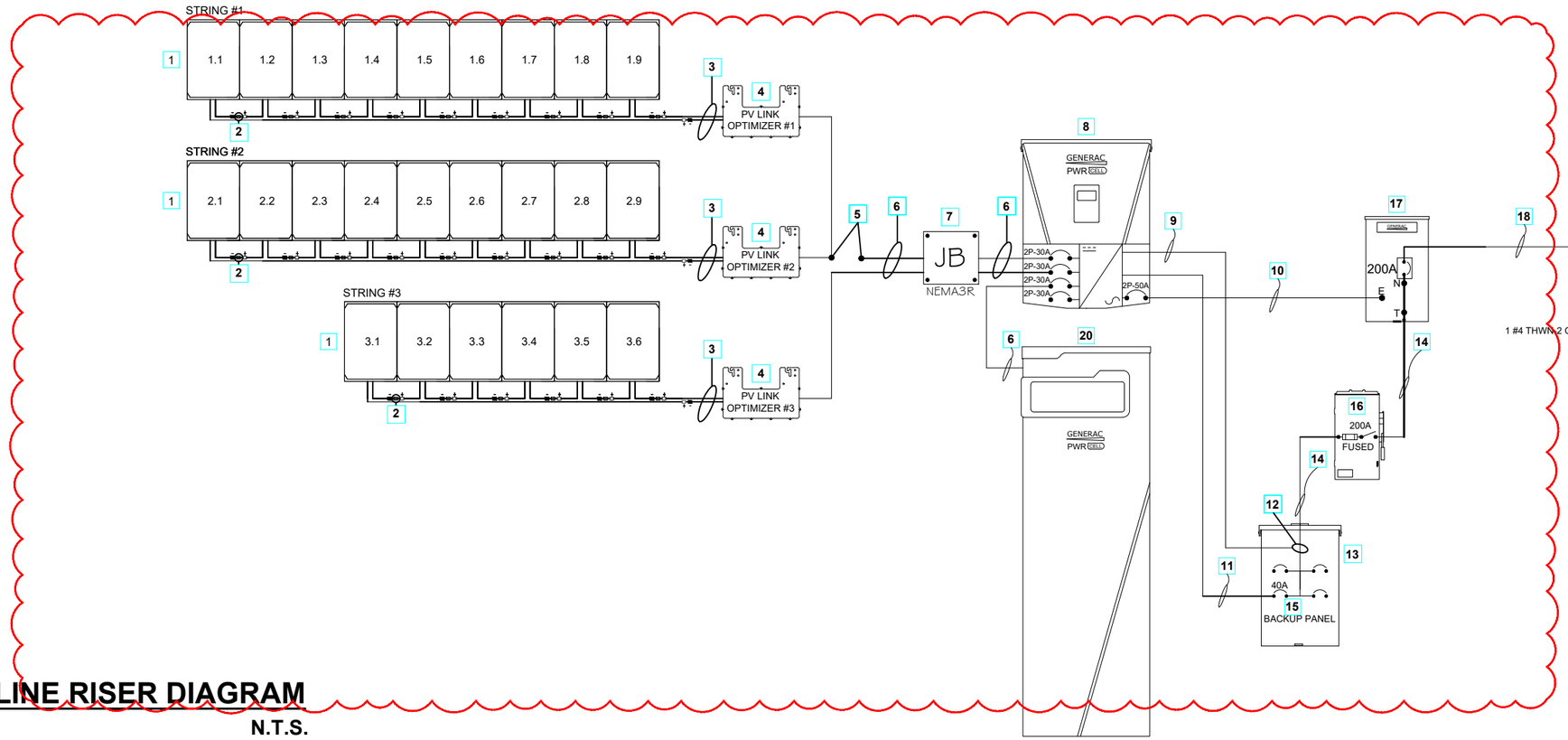
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE

DATE: 8-1-22

SHEET TITLE: C-1

	WIRE SIZES, QUANTITY & TYPE			RACEWAY SIZE, TYPE & LOCATION			WIRE AMPACITY CALCULATIONS							ADDITIONAL INFORMATION			
										WIRE DE-RATED CALCULATION							
WIRE TAG	CONDUCTOR QTY. SIZE & TYPE	NEUTRAL QTY. SIZE & TYPE	GROUND QTY. SIZE & TYPE	RACEWAY SIZE & TYPE	RACEWAY LOCATION	RACEWAY HEIGHT ABOVE ROOF	OUTPUT CURRENT	125% OF OUTPUT CURRRENT	MIN OCPD	WIRE RATING	AMBIENT TEMPERATURE COEFFICIENT	# OF CONDUCTORS COEFFICIENT	DE-RATES AMPACITY	DIST.	VOLTAGE	VOLTAGE DROP %	CONDUIT FILL %
DC (BEFORE JB)	(4) #10 AWG PV WIRE	N/A	(1) #8 AWG BARE COPPER	NOT APPLICABLE	UNDER ARRAY	1/2" TO 3-1/2"	15A	18.8A	20A	40A	0.76	1	30A	10 FT.	350V	0.11%	6.4%
DC (AFTER JB)	(4) #10 AWG THWN-2	N/A	(1) #8 AWG THWN-2	3/4" EMT CONDUIT	ABOVE ROOF	1/2" TO 3-1/2"	15A	18.8A	20A	40A	0.76	0.8	24.3A	20 FT.	350V	0.21%	8.1%
AC (INVERTER TO METER)	(2) #8 AWG THWN-2	(1) #8 AWG THWN-2	(1) #8 AWG THWN-2	3/4" EMT CONDUIT	EXTERIOR WALL	"N/A"	32A	40.0A	40A	55A	1	1	55A	5 FT.	240V	0.1%	7.7%

2



2

1 ONE LINE RISER DIAGRAM

N.T.S.

LEGEND:

1	(24) CS3U-390MS (390W) BY CANADIAN SOLAR REFER TO D-1 SHEET	2	GENERAC SNAP RS801 REFER TO D-4 SHEET	3	2 #10 PV WIRE PER STRING 1 #8 BARE WIRE GROUND 3/4" EMT CONDUIT	4	GENERAC PV LINK SUBSTRING OPTIMIZER S2502
5	MULTI-CONTACT 32.0018 PV-AZB4, MC4 Y-CONNECTOR (1) MALE / (2) FEMALE, 1500V, 50A	6	2 #10 THWN-2 1 #10 THWN-2 GROUND 3/4" EMT CONDUIT (21.95% CONDUIT FILL)	7	NEMA 3R JUNCTION BOX	8	PWRCELL7600A BY GENERAC REFER TO D-4 SHEET
9	CAT5 CABLE FOR RJ-45 CONNECTOR BREAKOUT ADAPTER	10	2 #6 L1,L2 THWN-2 1 #6 THWN-2 NEUTRAL 1 #8 TWHN-2 GROUND 3/4" EMT CONDUIT	11	2 #8 L1,L2 THWN-2 1 #8 THWN-2 NEUTRAL 1 #8 TWHN-2 GROUND 3/4" EMT CONDUIT	12	GENERAC PWRCELL CT
13	EXISTING INTERIOR MAIN DISTRIBUTION PANEL	14	2 #3/0 L1,L2 THWN-2 1 #3/0 THWN-2 NEUTRAL 1 #4 THWN-2 GROUND 1 1/2" EMT CONDUIT	15	PV INTERCONNECTION - PV BREAKER	16	EXISTING INTERIOR MAIN PANEL DISCONNECT - 200A RATED W/200A FUSES
17	PWRCELL ATS - 200A SERVICE ENTRANCE RATED BY GENERAC REFER TO D-6 SHEET	18	2 #3/0 THWN-2 1 #3/0 THWN-2 GROUND 1 1/2" EMT CONDUIT	19	UTILITY ELECTRICAL SERVICE	20	PWRCELL 18KW BATTERY BY GENERAC REFER TO D-5 SHEET

2

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD
1 LEGEND AND EQUIPMENT REVISED	09-14-22	DM	DM
2 ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:09:51 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO

CUSTOMER: ISAAC HARRIS

PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025

PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: ONE LINE RISER DIAGRAM

PROJECT ID: EP15365

ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE

DATE: 8-1-22

SHEET TITLE: E-1

WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION:
AC DISCONNECT,
POINT OF INTERCONNECTION
PER CODE: NEC 690.13 (B)

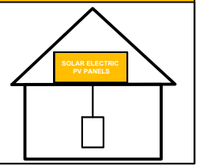
WARNING

TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

LABEL LOCATION:
AC DISCONNECT, MAIN PANEL
PER CODE: NEC 110.27 (C)
OSHA 1910.145(f)(7)

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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



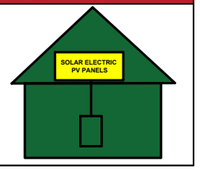
LABEL LOCATION:
AC DISCONNECT, MAIN PANEL
PER CODE: NEC 690.56(C)(1)(a)

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SYSTEM SHUTDOWN

LABEL LOCATION:
AC DISCONNECT
POINT OF INTERCONNECTION
PER CODE: NEC 690.56(C)

EMERGENCY RESPONDER
THIS SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN THE ENTIRE PV SYSTEM.



LABEL LOCATION:
AC DISCONNECT, MAIN PANEL
PER CODE: FFPC 7TH EDITION: 11.12.2.1.1.1.1

1 PV SAFETY LABELS DATA
N.T.S.

INVERTER #1

2

NOMINAL OPERATING AC VOLTAGE	240 V
NOMINAL OPERATING AC FREQUENCY	60 HZ
MAXIMUM AC POWER	6.96 KW
MAXIMUM AC CURRENT	32A
MAX OVERCURRENT DEVICE RATING FOR AC MODULE PROTECTION	N/A

LABEL LOCATION:
INVERTER
PER CODE: NEC 690.52

MAXIMUM VOLTAGE	480 VDC
MAXIMUM CIRCUIT CURRENT	30 A
MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED)	15A

LABEL LOCATION:
INVERTER
PER CODE: NEC 690.53

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT:	32 A
NOMINAL OPERATING AC VOLTAGE:	240V

LABEL LOCATION:
AC DISCONNECT
PER CODE: NEC 690.54

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

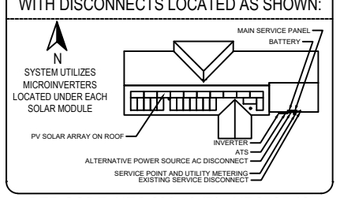
LABEL LOCATION:
AC DISCONNECT
PER CODE: NEC 690.13 (B)

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION:
MAIN SERVICES
DISCONNECT, DC CONDUIT
PER CODE: NEC 690.31 (G) (3)

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN:



PER CODE: NEC 690.56 (B) , NEC705.10

WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION:
POINT OF
INTERCONNECTION
PER CODE: NEC 705.12 (B)(3)

WARNING
POWER SOURCE OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
POINT OF
INTERCONNECTION
PER CODE: NEC
705.12(B)(2)(3)(b)

CAUTION
PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

LABEL LOCATION:
MAIN SERVICE PANEL
PER CODE: NEC 690.45(B)(5)

DO NOT DISCONNECT UNDER LOAD

LABEL LOCATION:
POINT OF
INTERCONNECTION
PER CODE:
NEC 690.33(E)(2) & NEC
690.15 (C)

CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

LABEL LOCATION: POINT OF INTERCONNECTION
PER CODE: NEC 690.15, NEC 690.13(B)

LABEL LOCATION: ADJACENT TO MAIN DISCONNECT

SUN4

PHONE: 786-833-7864

ADDRESS: 2222 PONCE DE LEON BLVD
3RD FLOOR CORAL GABLES, FL 33134

GENERAL NOTE:

ADHESIVE FASTENED SIGNS:

· THE LABEL SHALL BE VISIBLE, REFLECTIVE AND SUITABLE FOR THE ENVIRONMENT WHERE IT IS INSTALLED [NFPA 1, 11.12.2.1]
· WHERE REQUIRED ELSEWHERE IN THIS CODE, ALL FIELD APPLIED LABELS, WARNINGS, AND MARKINGS SHOULD COMPLY WITH ANSI Z535.4 [NEC 110.21(B) FIELD MARKING].
· ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT [IFC 605.11.1.3]

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM

REV	DESCRIPTION	DATE	sCAD	eCAD
2	ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:10:05 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO

CUSTOMER: ISAAC HARRIS

PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025

PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: SAFETY LABELS

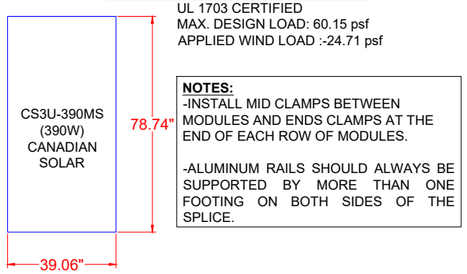
PROJECT ID: EP15365

ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE

DATE: 8-1-22

SHEET TITLE: E-2

SOLAR MODULE



UL 1703 CERTIFIED
MAX. DESIGN LOAD: 60.15 psf
APPLIED WIND LOAD :-24.71 psf

NOTES:
-INSTALL MID CLAMPS BETWEEN MODULES AND ENDS CLAMPS AT THE END OF EACH ROW OF MODULES.

-ALUMINUM RAILS SHOULD ALWAYS BE SUPPORTED BY MORE THAN ONE FOOTING ON BOTH SIDES OF THE SPLICE.

WORST CASE MODULE:
ZONE 1: 84%
ZONE 2e: 16%
-24.71(0.84) + -24.71(0.16) = -24.71psf

ULTIMATE WIND SPEED	120	mph
DESIGN WIND SPEED	119	mph
RISK CATEGORY	II	
EXPOSURE CATEGORY	C	
ROOF SLOPE (°)	20	
ROOF TYPE	GABLED	
MATERIAL ROOF TYPE	METAL	
PRESSURE ZONE:	1&2	
MEAN ROOF HEIGHT:	12.58 '	
0.5 MEAN ROOF HEIGHT	6.29 '	
$2H_2$	12 "	
PERIMETER WIDTH:	3.36 '	
K_D	0.85	
K_{ZT}	1.0	
K_H	0.849	
VELOCITY PRESSURE (q) = 0.60*0.00256* $K_H K_{ZT} K_D V^2$		
VELOCITY PRESSURE (ASD)	15.69	

NON EXPOSED	EXPOSED	ARRAY EQUALIZATION FACTOR:
EDGE FACTOR: γ_E = 1.0	EDGE FACTOR: γ_E = 1.5	γ_a = 0.7

EXTERNAL PRESSURE COEFFICIENT Z1	0.7	-1.5
EXTERNAL PRESSURE COEFFICIENT Z2e	0.7	-1.5
EXTERNAL PRESSURE COEFFICIENT Z2n	0.7	-2.5
EXTERNAL PRESSURE COEFFICIENT Z2r	0.7	-2.5
EXTERNAL PRESSURE COEFFICIENT Z3e	0.7	-2.5
EXTERNAL PRESSURE COEFFICIENT Z3r	0.7	-3.6
INTERNAL PRESSURE COEFFICIENT	0.18	

ZONES	PRESSURES (PSF)	NON EXPOSED PRESSURES (PSF)	EXPOSED PRESSURES (PSF)	MAX SPAN (FT)	MAX CANTI-LEVER (IN)
1	-26.37	-16.47	-24.71	4 '	16"
2e	-26.37	-16.47	-24.71	4 '	16"
2n	-42.06	-27.46	-41.19	4 '	16"
2r	-42.06	-27.46	-41.19	4 '	16"
3e	-42.06	-27.46	-41.19	4 '	16"
3r	-59.33	-39.54	-59.31	4 '	16"

TOTAL ROOF AREA	3596.07	sq.-ft
TOTAL MODULES:	24	
TOTAL PHOTOVOLTAIC AREA:	512.53	sq.-ft
TOTAL PERCENTAGE AREA OF PV SYSTEM:	14.25	%
WIND LOAD (PSF):	-24.71	
TOTAL WIND LOAD (LBS):	-12,664.62	
TOTAL ROOF MOUNTS:	50	
TENSION FORCE PER MOUNT (LBS):	-253.29	

LEGEND & SYMBOLS

OBS — ROOF OBSTRUCTIONS
XX.X — ARRAY # / MODULE # / STRING #
NON-EXPOSED MODULES
EXPOSED MODULES
EDGE MODULES
TRUSSES OR RAFTERS
ROOF MOUNTS & RAIL
ROOF SLOPE

ROOF'S GENERAL NOTES:

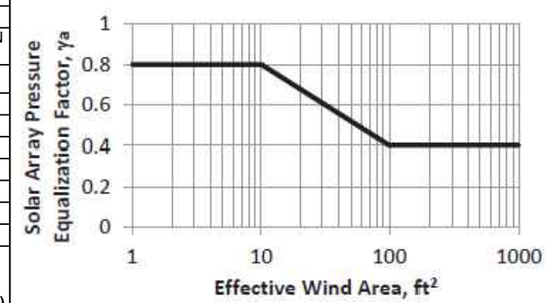
1- CONTRACTOR/INSTALLER TO VERIFY ROOF CONDITIONS FOR PROPER INSTALLATION OF THE PV SYSTEM.
2- CONTRACTOR/INSTALLER TO NOTIFY THE OWNER IMMEDIATELY OF ANY ROOF DEFICIENCIES AND/OR REPAIR REQUIRED TO INSTALL THE PV SYSTEM.
3- EOR DOES NOT ASSUME ANY RESPONSIBILITY FOR THE INSTALLATION OF ANY PV SYSTEM ON DEFICIENT ROOFS.
4-CONTRACTOR/INSTALLER ASSUMES ALL RESPONSIBILITY TO INSTALL AS PER MANUFACTURER STANDARDS.

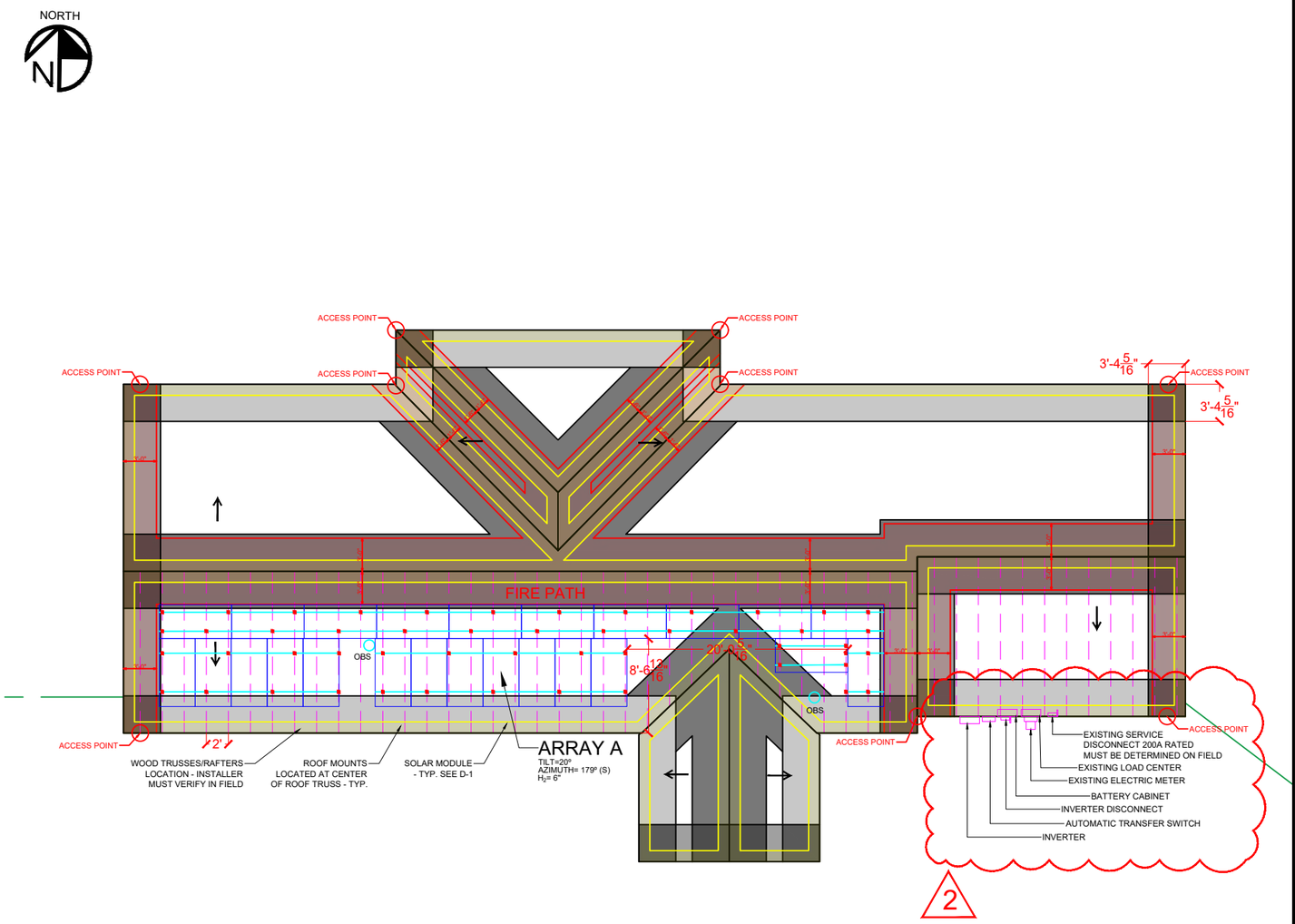
ROOF INSPECTION NOTE:

A PANEL IS DEFINED AS
EXPOSED IF D1 TO THE ROOF EDGE >0.5H AND ONE OF THE FOLLOWING APPLIES:
1. D1 TO THE ADJACENT ARRAY > 4 FT (1.2 M) OR
2. D2 TO THE NEXT ADJACENT PANEL> 4 FT. (1.2 M)

ASCE 7.16 - 29.4-7
DESIGNED WIND PRESSURES:

$$p = q_h (GC_p)(\gamma_E)(\gamma_a)$$





1 STRUCTURAL ROOF PLAN & PV MODULES LAYOUT
N.T.S.

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD
2 ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:10:21 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: STRUCTURAL PLAN
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: S-1

Grouping of ASCE 7-16 Roof Zones (Gable)

Roof Slope	8° - 27°			28° - 45°		
Group	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
ASCE 7-16 Roof Zones	1 2e	2n 2r 3e	3r	1 2e 2r	2n 3r	3e

= min 72" span = min 64" span = min 48" span
= Shaded cells indicate conditions in which UFO Mid Clamp connection capacity is exceeded.

RAIL: XR100		GABLE ROOF FLUSH MOUNT SYSTEM SPAN TABLE (INCHES) - PORTRAIT OR LANDSCAPE INSTALLATION MAX MODULE LENGTH: 80.0" EXPOSURE C								
WIND SPEED (MPH)	ROOF SLOPE (DEG.)	GROUND SNOW: 0 PSF			EXPOSED MOD.			EDGE MOD.		
		GROUP 1	GROUP 2	GROUP 3	GROUP 1	GROUP 2	GROUP 3	GROUP 1	GROUP 2	GROUP 3
120 MPH	20 TO 27	107	92	88	83	73	69	64	57	52

S-5 BRACKET PULL OUT CALCULATIONS

Ultimate Pull Out Strength per Clamp	798 lbs.
Max. Pull Out Strength Required per Clamp	253.29
Allowable Clamp Pull Out Strength Safety Factor	3.15

DISTRIBUTED LOAD CALCULATIONS

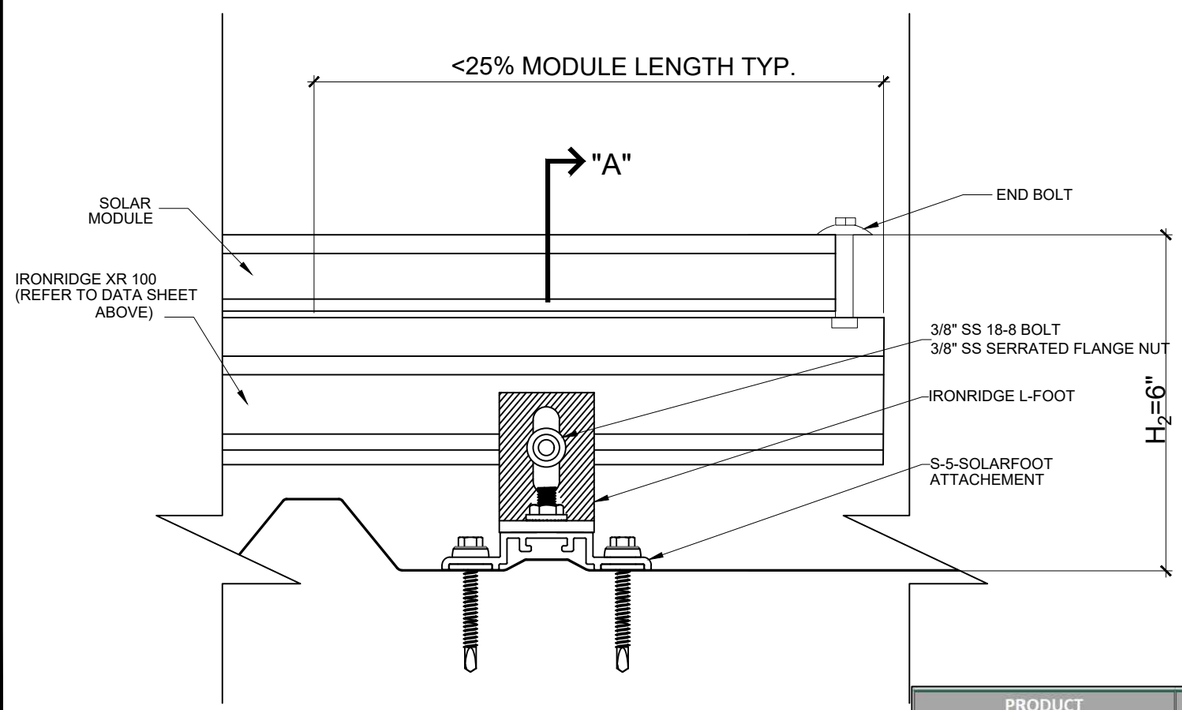
PV MODULES & RACKING WEIGHT = (INDIVIDUAL MODULE WEIGHT + 3.5 LBS) * (MODULE QTY) = (53.10 LBS) * (24) = 1,274.40 LBS

PER SQUARE FEET (PSF) ARRAY LOAD = PV MODULES & RACKING WEIGHT / TOTAL ARRAY AREA = 1,274.40 LBS / 512.53 SQFT = 2.49 PSF

HENCE, ROOF WILL CARRY THE ADDITIONAL SOLAR SYSTEM LOAD

Lag Screw Installation Guidelines

1. Determine location for the Mount on roof by drilling through the center of truss from bottom with 5/32" drill bit.
2. Mark mounting holes for Mount on underlayment. Mounting holes should be centered on the trusses.
3. Drill 15/64" pilot hole.
4. Apply sealant to bottom of Mount.
5. Place Mount over roof underlayment with holes in roof.
6. Apply sealant to bottom of Mount, apply sealant to lag screws and fasten Mount securely to trusses.
7. Apply additional sealant to top assembly to be sure all penetrations are sealed.



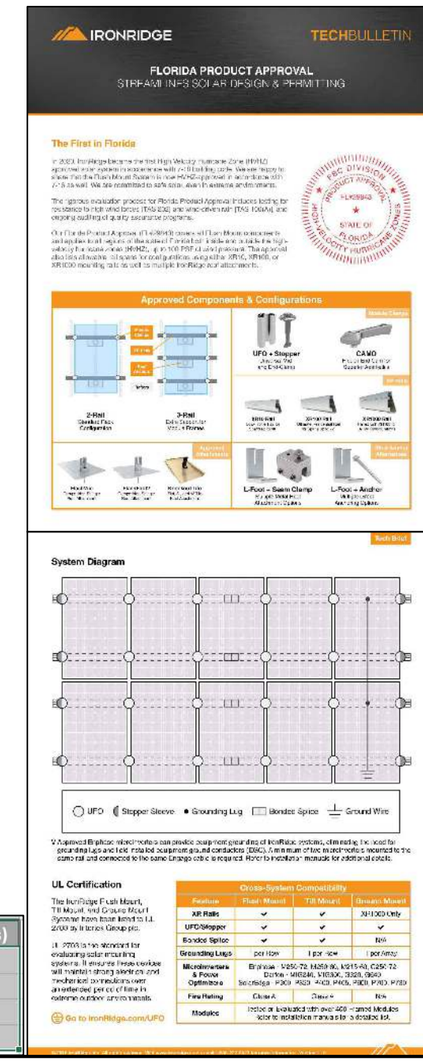
ASCE 7-16 Velocity Pressure
qz10 = 0.00256Kz Kzt Kd V2
Where:
qz10 = ASCE 7-16 velocity pressure evaluated at mean roof height (psf)
Kz = velocity pressure exposure coefficient
Kzt = topographic factor
Kd = wind directionality factor
V = basic wind speed (mph) from ASCE 7-16 maps referred to as ultimate wind speed maps in 2020 FBC.

As an example, for an array having an area of 158.04 sq.-ft., the total uplifting (resultant) force acting on the array would be -39.1 psf x 158.04 sq. ft. = -6,179.364 lb. Knowing this resultant force, the design engineer can now determine the number of attachment points and the size of the mounting hardware necessary to safely carry this load.

Live Loads:
Live loads associated with photovoltaic systems are usually assumed to be distributed uniformly and are small, on the order of 4 psf or less.

Notes: (1) Thread must be embedded in the side grain of a Trusses or other structural member integral with the building structure.
(2) Lag Bolts must be located in the middle third of the structural member.
(3) These values are not valid for wet services.
(4) This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size with regard to shear forces.
(5) Install lag bolts with head ad washer flush to surface (no gap). Do nor over-torque.
(6) Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if necessary. See table 10.3.1 in the American Wood Council NDS for Wood Construction.

PRODUCT	THICKNESS MATERIAL	SCREW TENSION (inch-lbs)	ULTIMATE LOAD (lbs)	FAILURE MODE	ALLOWABLE LOAD (lbs)
Standing Seam 360	24 ga steel	115	1778	B	889
Standing Seam II Panel	24 ga steel	115	1583	B	792
Series 1000 Standing Seam	24 ga steel	115	1032	F	516
Snap-On Standing Seam	24 ga steel	115	748	A/B	374



1 METAL ROOF MOUNT DETAIL & DATA

N.T.S.

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:10:36 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: RACKING PLAN
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: S-2

intertek
Total Quality. Assured.

SFS GROUP USA, INC.
TEST REPORT

SCOPE OF WORK
ASTM E2140 TESTING ON SYSTEM 1 AND SYSTEM 2, ROOF ATTACHMENTS

REPORT NUMBER
M5602.01-109-44

TEST DATE
07/02/21

ISSUE DATE
07/26/21

RECORD RETENTION END DATE
07/02/25

PAGES
17

DOCUMENT CONTROL NUMBER
ATI 00479 (07/24/17)
RT-R-AMER-Test-2805
© 2017 INTERTEK

---

intertek
Total Quality. Assured.

130 Derry Court
York, Pennsylvania 17406
Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR SFS GROUP USA, INC.
Report No.: M5602.01-109-44
Date: 07/26/21

SECTION 2
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM E2140-01(2017), *Standard Test Method for Water Penetration of Metal Roof Panel Systems by Static Water Pressure Head*

SECTION 3
MATERIAL SOURCE/INSTALLATION

Test specimen(s) were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimens were installed into a Spruce-Pine-Fir wood test deck. The test deck for System #1 had an interior dimension of 35-3/4" x 72-1/4" with joists spaced 24" on center with 1/2" plywood scabbed into place for the valley mount attachments. A sheet of R-panel metal roofing was secured to the test deck for mounting the attachments. The test deck for System #2 had an interior dimension of 35-1/4" x 60-1/4" with 1/2" plywood scabbed into place for the valley mount attachments. A sheet of corrugated metal roofing was secured to the test deck for mounting the attachments. The interior perimeters of the test decks were sealed with silicone.

SECTION 4
EQUIPMENT

Pressure Loop Calibrator – 65456
Stopwatch – INT00974
Weather Station – 65316
Tape Measure Verification – 63788

SECTION 5
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
James Cole	SFS Group USA, Inc.
Jon Moss	SFS Group USA, Inc.
Vicki L. McElwain	Intertek B&C
Kyle W. Ruch	Intertek B&C

Version: 07/24/17 Page 5 of 17 RT-R-AMER-Test-2805

---

intertek
Total Quality. Assured.

TEST REPORT FOR SFS GROUP USA, INC.
Report No.: M5602.01-109-44
Date: 07/26/21

SECTION 6
TEST SPECIMEN DESCRIPTION

System #1:

ATTACHMENT #	PRODUCT NAME	DESCRIPTION	ATTACHMENT
1	Protea 0.25 Hole TPE	3" wide by 4" long by 2-3/4" high extruded aluminum with TPE sealing pads	Four 1/4" x 1" hex washer head screws with EPDM washers
2	Protea 0.25 Hole EPDM	3" wide by 4" long by 2-3/4" high extruded aluminum with EPDM sealing pads	
3	Rib Bracket III 0.25 Hole TPE	2-1/2" wide by 1-3/4" long by 2-5/8" high extruded aluminum with TPE sealing pads	
4	Rib Bracket III 0.25 Hole EPDM	2-1/2" wide by 1 3/4" long by 2-5/8" high extruded aluminum with EPDM sealing pads	
5	Solar Foot Butyl	3-5/8" wide by 2" long by 1-7/8" high extruded aluminum with butyl sealing pads	Four 1/4" x 1-1/2" hex washer head screws with EPDM washers
6			
7	VersaBracket™ 47 Butyl	2-1/2" wide by 2-7/8" long by 1-7/8" high extruded aluminum with butyl sealing pad	Three 1/4" x 1-1/2" hex washer head screws with EPDM washers
8			
13	EF Tap 0.25 Hole TPE	1-3/16" wide by 2" long by 3/4" high extruded aluminum with TPE sealing pad	Two 1/4" x 1" hex washer head screws with EPDM washers

Version: 07/24/17 Page 6 of 17 RT-R-AMER-Test-2805

---

intertek
Total Quality. Assured.

130 Derry Court
York, Pennsylvania 17406
Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR SFS GROUP USA, INC.
Report No.: M5602.01-109-44
Date: 07/26/21

SECTION 8
CONCLUSION

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

SECTION 9
PHOTOGRAPHS

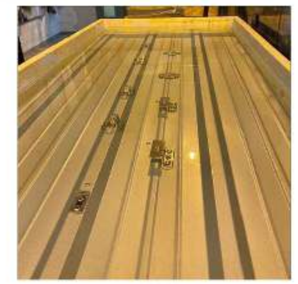
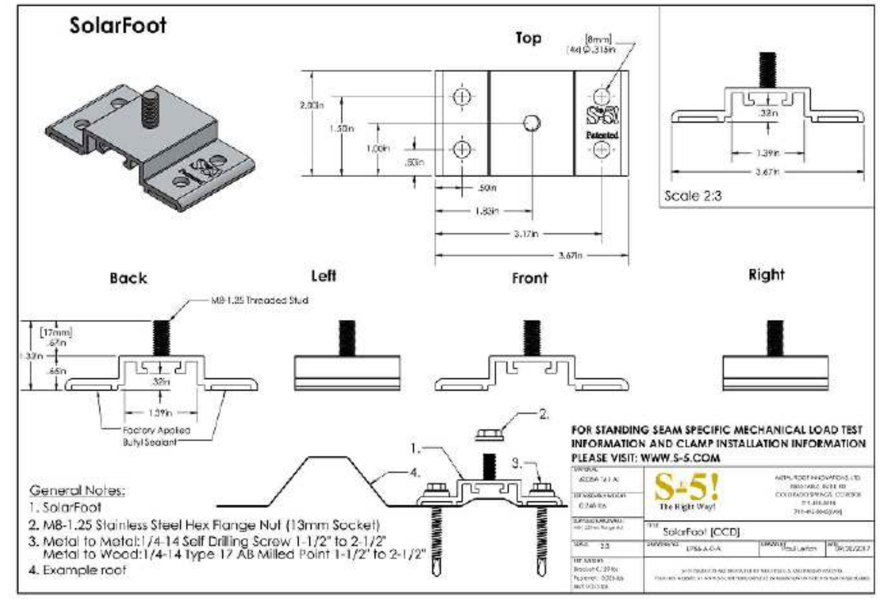


Photo No. 1
System #1

Version: 07/24/17 Page 7 of 17 RT-R-AMER-Test-2805



Tech Brief

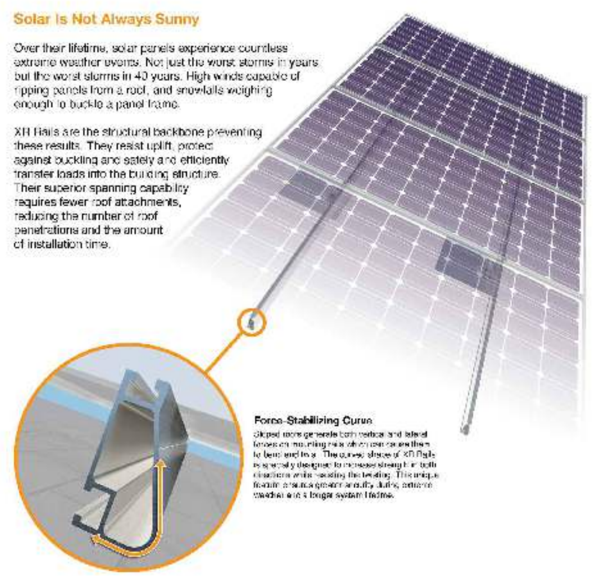
IRONRIDGE

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve
Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs
XR Rails are compatible with FlashFoot and other pitched roof attachments.
IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials
All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10
XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.
- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

XR100
XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.
- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available

XR1000
XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.
- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90						
	120						
	140	XR10		XR100		XR1000	
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

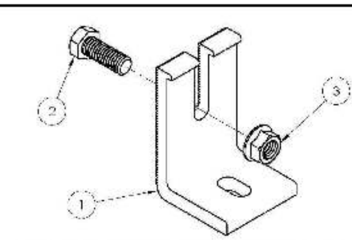
*Table is meant to be a simplified span chart for conveying general rail recommendations. Use approved certification letters for actual design guidance.

© 2020 IronRidge, Inc. All rights reserved. Visit www.ironridge.com or call 1-800-227-9523 for more information.

Cut Sheet

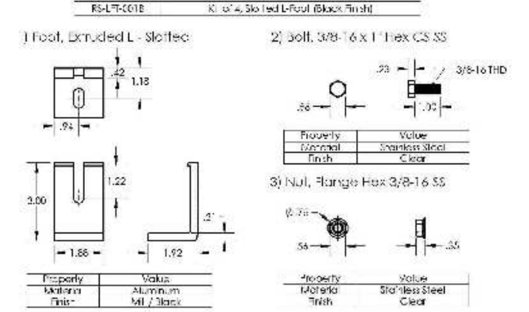
IRONRIDGE

Slotted L-Foot



Item Number	Component	Qty in Kit
1	FOOT, EXTRUDED L - SLOTTED	4
2	BOLT, 3/8-16 X 1" HEX CS SS	4
3	NUT, FLANGE HEX 3/8-16 SS	4

Part Number	Description
RS-LFT-001	Kit of 4, Slotted L-Foot (Mill Finish)
RS-LFT-001B	Kit of 4, Slotted L-Foot (Black Finish)



Property	Value
Material	Aluminum
Finish	Mill / Black

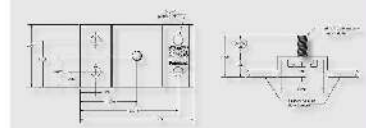
Property	Value
Material	Stainless Steel
Finish	Clear

Property	Value
Material	Stainless Steel
Finish	Clear

S-5!® The Right Way!

SolarFoot™ Mounting for Exposed Fastener Roofing

The SolarFoot is a simple, cost effective pedestal for L-Foot (not included) attachment of rail-mounted solar PV. The unique design is compatible with all rail producer L-Foot components. The new SolarFoot assembly ensures a durable weathertight solution for the life of the roof. Special factory applied butyl co-polymeric sealant contained in a reservoir is The Right Way, allowing a water-tested seal. Stainless integrated stud and hex flange lock-nut secure the L-Foot into position. A low center of gravity reduces the moment arm commonly associated with L-Foot attachments. Direct attachment of the SolarFoot to the structural member or deck provides unparalleled holding strength.



SolarFoot Advantages:
- Exposed fastener mounting platform for solar arrays attached via L-Foot and Rails
- Weatherproof attachment to exposed fastener roofing
- Butyl sealant reservoir provides long-term watertproof seal
- M8-1.25x17mm stud with M8 hex flange nut for attachment of all popular L-Foot/rail combinations
- Tool: 13 mm Hex Socket or ½" Hex Socket
- Tool Required: Electric screw gun with hex drive socket for self-tapping screws
- Low Center of Gravity reduces moment arm commonly associated with L-Foot/Rail solar mounting scenarios
- Attaches directly to structure or deck for optimal holding strength
- S-5! Recommended substrate-specific (e.g. steel purlin, wood 2x4, OSB, etc.) fasteners provide excellent waterproofing and pull-out strength
- Fastener through-hole locations comply with NDS (National Design Specification) for Wood Construction

Fastener Selection

Metal to Metal:
1/4-14 Self Drilling Screw
1-1/2" to 2-1/2"

Metal to Wood:
1/4-14 Type 17 AB Milled Point
1-1/2" to 2-1/2"

To source fasteners for your projects, contact S-5!
When other brands claim to be "just as good as S-5!", tell them to PROVE IT.

S-5!® Warning! Please use this product responsibly!

Distributed by:

S-5!® The Right Way!

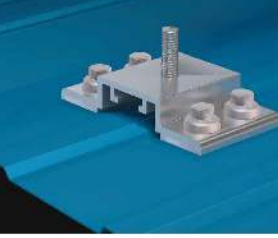
NEW PRODUCT SolarFoot™

Introducing the new SolarFoot™ for exposed fastener metal roofing with the strength, testing, quality, and time-proven integrity you expect from S-5!. The SolarFoot provides an ideal mounting platform to attach the L-Foot (not included) of a rail-mounted PV system to the roof. This solution is The Right Way to secure rail-mounted solar systems to exposed fastener metal such as AG Panel or R Panel.

The right way to attach almost anything to metal roofs!

SolarFoot Features:
- Manufactured in the U.S.A. from certified raw material
- Fabricated in our own ISO 9001:2015 certified factory
- All aluminum and stainless components
- 25yr limited warranty
- Compatible with all commercial L-Foot products on the market
- Factory applied 40-year butyl/isoprene crosslinked polymer sealant for reliable weathertightness
- Sealant reservoir to prevent over compression of sealant
- Load-to-failure tested Normal to Seam by a nationally accredited laboratory on numerous metal roof materials and substrates
- Four points of attachment into structure or deck with tested holding strength for engineered applications
- Integrated M8-1.25x17mm stud and M8-1.25 stainless steel hex flange nut included

888-825-3432 | www.S-5.com



---

1 METAL ROOF MOUNT DETAIL & DATA
N.T.S.

DOCUMENT CONTROL		DATE	sCAD	eCAD
ISSUED FOR PERMIT		8-2-22	JH	DM
REV	DESCRIPTION	DATE	sCAD	eCAD

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
RAFAEL A. GONZALEZ SOTO LICENSE No. 83104 STATE OF FLORIDA PROFESSIONAL ENGINEER
Rafael A Gonzalez Soto 2022.09.23 14:10:49 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: RACKING PLAN
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: S-3

CanadianSolar

KuMax

HIGH EFFICIENCY MONO PERC MODULE

CS3U-380|385|390|395|400MS

(1000 V / 1500 V)

MBB 5BB

MORE POWER

- Low power loss in cell connection
- Low NMOT: 42 ± 3 °C
  Low temperature coefficient (Pmax): -0.36 % / °C
- Better shading tolerance
- High PTC rating of up to: 93.24 %

25 years — linear power output warranty*

12 years — enhanced product warranty on materials and workmanship*

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

MORE RELIABLE

- Lower hot spot temperature
- Minimizes micro-crack impacts
- Heavy snow load up to 5400 Pa, wind load up to 3600 Pa*

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / CQC / MCS / KS / INMETRO
UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / IEC 60068-2-68: SGS
Take-e-way

* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

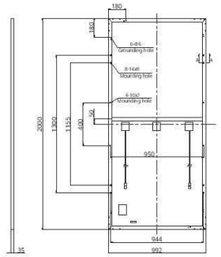
CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance / price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 40 GW deployed around the world since 2001.

* For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR INC.
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

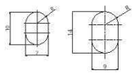
ENGINEERING DRAWING (mm)

Rear View

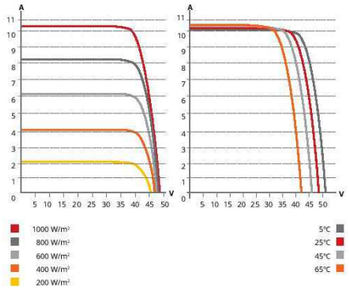


Frame Cross Section A-A

Mounting Hole



CS3U-400MS / I-V CURVES



ELECTRICAL DATA | STC*

CS3U	380MS	385MS	390MS	395MS	400MS
Nominal Max. Power (Pmax)	380 W	385 W	390 W	395 W	400 W
Opt. Operating Voltage (Vmp)	40.0 V	40.2 V	40.4 V	40.6 V	40.8 V
Opt. Operating Current (Imp)	9.50 A	9.58 V	9.66 A	9.73 A	9.81 A
Open Circuit Voltage (Voc)	47.8 V	48.0 V	48.2 V	48.4 V	48.6 V
Short Circuit Current (Isc)	10.01 A	10.09 A	10.17 A	10.25 A	10.33 A
Module Efficiency	19.2%	19.4%	19.7%	19.9%	20.2%
Operating Temperature	-40°C ~ +85°C				
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)				
Module Fire Performance	TYPE 1 (UL 1703) or Class C (IEC 61730)				
Max. Series Fuse Rating	30 A				
Application Classification	Class A				
Power Tolerance	0 ~ + 10 W				

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS3U	380MS	385MS	390MS	395MS	400MS
Nominal Max. Power (Pmax)	283 W	287 W	290 W	294 W	298 W
Opt. Operating Voltage (Vmp)	37.2 V	37.4 V	37.6 V	37.8 V	38.0 V
Opt. Operating Current (Imp)	7.60 A	7.66 A	7.72 A	7.78 A	7.84 A
Open Circuit Voltage (Voc)	44.8 V	45.0 V	45.2 V	45.4 V	45.6 V
Short Circuit Current (Isc)	8.08 A	8.14 A	8.20 A	8.27 A	8.33 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 X (12 X 6)]
Dimensions	2000 X 992 X 35 mm (78.7 X 39.1 X 1.38 in)
Weight	22.5 kg (49.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy, crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 400 mm (15.7 in) (+) / 280 mm (11.0 in) (-); landscape: 1250 mm (49.2 in); leap-frog connection: 1670 mm (65.7 in)*
Connector	T4 series or H4 UTX or MC4-EVO2
Per Pallet	30 pieces
Per Container (40' HQ)	660 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.36 % / °C
Temperature Coefficient (Voc)	-0.29 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

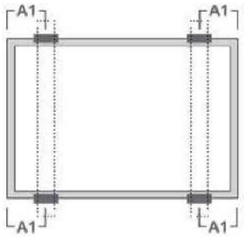
PARTNER SECTION

* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustments to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

CANADIAN SOLAR INC.
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

May, 2020. All rights reserved, PV Module Product Datasheet V5.61_EN

6.2.1 Four clamps on long side of frame and rails perpendicularly to the long side frame



Module Types	Max Mechanical Load (Pa)					
	+2000/ -2000	+2400/ -2400	+3600/ -2400	+5400/ -2400	+5400/ -3600	+7000/ -5400
	A1 Range (mm)					
CS1H	0-219	220-440	/	/	270-330	/
CS1VL/CS1HA	0-219	220-440	/	270-330	/	/
CS1V	0-239	331-550	/	240-330	/	/
CS3K	0-239	331-550	/	/	240-330	/
CS3U/CS3W	/	340-550	/	/	410-490	/
CS1U	/	340-550	/	410-490	/	/
CS1Y	/	/	300-600	/	350-550	400-500
CS3L/CS3LA/CS3LB	0-240	331-550	/	/	240-330	/
CS3N 〈F30 Frame〉	/	300-600	/	/	400-500	/
CS3N 〈F23 Frame〉	/	/	200-650	/	300-600	450-550
CS3Y/CS6W/CS7L/CS7N	/	300-600	/	400-500	/	/
CS3SA	/	/	300-600	400-500	/	/
CS6R	0-100	100-600	200-500	300-400	/	/

EN-Rev IM/GN-AM-EN/2.91 Copyright © May, 2022. CSI Solar Co., Ltd.

DOCUMENT CONTROL		DATE	sCAD	eCAD
ISSUED FOR PERMIT		8-2-22	JH	DM
REV	DESCRIPTION	DATE	sCAD	eCAD

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:11:04 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL
33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: PV MODULES DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-1

GENERAC

PV Link™

2500W MPPT Substring Optimizer
Model #: S2502 (Ordering SKU: APKE00010)

Intertek

PV Link is the simple solar optimizer for quick installation and long-lasting performance. Connect PV modules to each PV Link to overcome shading and challenging roof lines.

FEATURES & BENEFITS

- Fast, simple installation
- Lower failure risk than module-level optimizers
- 2017/2020 NEC rapid shutdown compliant with SnapRS™
- Quick connections with MC4 connectors
- Exports up to 2500W
- Compatible with PWRcell™ Inverters
- Cost-effective solution for high-performance PV
- Ground-fault protection

SINGLE-STRING PV ARRAY WITH SnapRS DEVICES

Where PV module-level rapid shutdown is required (NEC 690.12), a SnapRS device (RS) is installed to negative (-) lead of each PV module.

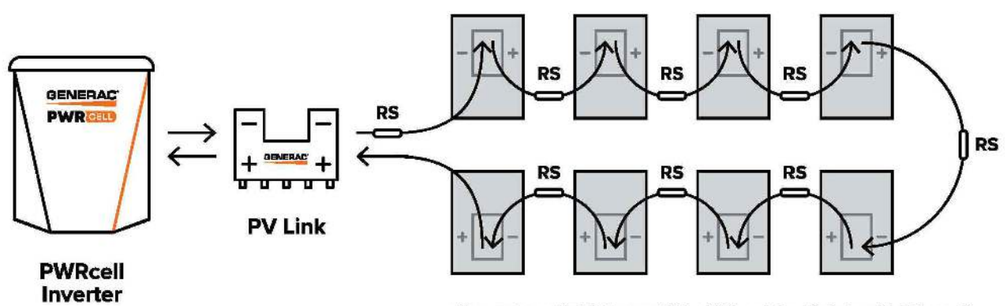


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

PV Link™ (APKE00010)	
RATED POWER*:	2500W
PEAK EFFICIENCY:	99%
MPPT VOLTAGE RANGE:	60-360 VMP
MAX INPUT VOLTAGE:	420 VOC; max when cold
MAX OUTPUT:	420 VOC
NOMINAL OUTPUT (REbus™):	380 VDC
MAX OUTPUT CURRENT (CONTINUOUS):	8 A
MAX OUTPUT CURRENT (FAULT):	10 A
MAX INPUT CURRENT (CONTINUOUS):	13 A @ 50°C, 10 A @ 70°C
MAX INPUT SHORT CIRCUIT CURRENT (ISC):	18 A
STANDBY POWER:	< 1 W
PROTECTIONS:	Ground-fault, Arc-fault (Arc-fault Type 1 AFCI, Integrated), PVRSE
MAX OPERATING TEMP: FAHRENHEIT (CELSIUS)	158 °F (70 °C)
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
ENCLOSURE:	Type 4X
WEIGHT - LB (KG):	7.3 lb (3.3 kg)
DIMENSIONS, L x W x H - IN (MM):	15.4" x 2" x 9.6" (391.2 x 50.8 x 243.8)
COMPLIANCE:	UL 1741, CSA 22.2
WARRANTY:	25 Years

**PV Link can tolerate higher than rated power at its input if Max Input Voltage and Short Circuit Current specifications are not exceeded*

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528162 REV D

©2020 Generac Power Systems. All rights reserved.
Specifications are subject to change without notice.

GENERAC

2

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM

REV	DESCRIPTION	DATE	sCAD	eCAD
2	ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:11:23 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: SMART MONITORING DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-2

GENERAC®

PWRcell

7.6kW 1Ø PWRcell Inverter with CTs
Model #: X7602 (Ordering SKU: APKE00014)

11.4 kW 3Ø PWRcell Inverter with CTs
Model #: X11402 (Ordering SKU: APKE00013)

Intertek

Solar + storage is simple with the Generac PWRcell™ Inverter. This bi-directional, REbus™-powered inverter offers a simple, efficient design for integrating smart batteries with solar. Ideal for self-supply, backup power, zero-export and energy cost management, the PWRcell Inverter is the industry's most feature-rich line of inverters, available in single-phase and three-phase models.

FEATURES & BENEFITS

- Single inverter for grid-tied solar with smart battery integration
- Simplified system design: No autotransformer or battery inverter needed
- User-selectable modes for backup power, self-supply, time-of-use, zero-import and export limiting
- Free system monitoring included via PWRview™ Web Portal and Mobile App

AC OUTPUT/GRID-TIE	MODEL X7602	MODEL X11402
MAX. CONT. GRID-TIED AC POWER @ 50°C (122°F):	7600 W	11400 W
AC OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 3Ø VAC
AC FREQUENCY:	60 Hz	60 Hz
MAXIMUM CONTINUOUS OUTPUT CURRENT:	32 A, RMS	32 A, RMS
GROUND-FAULT ISOLATION DETECTION:	Included	Included
CHARGE BATTERY FROM AC:	Yes	Yes
THD (CURRENT):	< 2%	< 2%
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	< 7 W

AC OUTPUT/ISLANDED	MODEL X7602	MODEL X11402
MAX. CONT. AC POWER @ 40°C (104°F) W/ SINGLE 6 MODULE BATTERY CABINET[1]:	9,000 W	9,000 W
MAX. CONT. AC POWER @ 40°C (104°F) WITH 2 BATTERY CABINETS (8 MODULES MINIMUM):	11,000 W	9,600-11,000 W[2]
MAX. CONT. AC POWER @ 50°C (122°F):	8,800 W	7,500-8,800 W[2]
PEAK MOTOR STARTING CURRENT (2 SEC):	50 A, RMS	
AC BACKUP OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 1Ø VAC
AC FREQUENCY:	60 Hz	60 Hz
THD (VOLTAGE):	< 2%	< 2%
AUTOMATIC SWITCHOVER TIME:	< 1 Seconds	< 1 Seconds

DC INPUT	MODEL X7602	MODEL X11402
DC INPUT VOLTAGE RANGE:	360-420 VDC	360-420 VDC
NOMINAL DC BUS VOLTAGE:	380 VDC	380 VDC
DC DISTRIBUTION INPUT BREAKERS:	4 x 2P30 A	4 x 2P30 A
MAX INPUT CURRENT PER DC INPUT:	30 A	30 A
REVERSE-POLARITY PROTECTION:	Yes	Yes
TRANSFORMERLESS, UNGROUNDED:	Yes	Yes
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	< 7 W
DC BUS EXPORT FUSES (+/-):	40 A	40 A
2-POLE DISCONNECTION:	Yes	Yes

EFFICIENCY	MODEL X7602	MODEL X11402
PEAK EFFICIENCY:	97.3%	97.7%
CEC WEIGHTED EFFICIENCY:	96.5%	97.5%

[1]Peak Performance
[2]In Island mode X11402 protected loads only supply 2 phases 120 VAC L-N, 208 L-L which results in lower power than in grid tied 3 phase mode. The low value of the range is for full L-L loading while high value of the range is full L-N loading

Specifications

2

FEATURES AND MODES	
ISLANDING[3]:	Yes
GRID SELL:	Yes
SELF CONSUMPTION:	Yes
PRIORITIZED CHARGING FROM RENEWABLES:	Yes
GRID SUPPORT - ZERO EXPORT:	Yes
ESS PCS OPERATION MODES (IMPORT ONLY, EXPORT ONLY):	Yes

ADDITIONAL FEATURES	
SUPPORTED COMMUNICATION INTERFACES:	REbus™, CANbus, Ethernet
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
BACKUP LOADS DISCONNECT[3]:	Yes, 50 A Circuit Breaker
INVERTER BYPASS SWITCH:	Automatic
WARRANTY:	10 Years

STANDARDS COMPLIANCE	
SAFETY:	UL 1741 SA, CSA 22.2, UL 1998
GRID CONNECTION STANDARDS:	IEEE 1547, Rule 21, Rule 14H, CSIP, UL 1741 PCS CRD (Import Only, Export Only)
EMISSIONS:	FCC Part 15 Class B

DIMENSIONS AND INSTALLATION SPECIFICATIONS	
ENCLOSURE KNOCKOUTS - QTY, SIZE - IN (MM):	6 x Combo 3/4" x 1" (19 x 25.4) 7 x Combo 1/2" x 3/4" (12.7 x 19)
DIMENSIONS L x W x H - IN (MM):	24.5" x 19.25" x 8" (622.3 x 488.9 x 203.2)
WEIGHT - LB (KG):	62.7 (28.4)
COOLING:	Forced convection
AUDIBLE NOISE:	< 40 dBA
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-4 to 122 °F (-20 to 50 °C)[4]
PROTECTION RATING:	NEMA 3R

INSTALLATION GUIDELINES	
BATTERY TYPES SUPPORTED:	PWRcell™ Battery
MODULE STRING SIZE PER PV LINK OPTIMIZER:	Varies, refer to PV Link Installation Manual
MAXIMUM RECOMMENDED DC POWER FROM PV:	15 kW

[3]3Ø inverters offer islanding for 1Ø loads.
[4]Includes ambient temperature rising from inverter operation. Reduced power at extreme temperatures.
Specifications listed in this document are achieved with firmware version 13310 or greater. Confirm inverter has latest firmware to ensure full performance.

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528185 REV E

©2020 Generac Power Systems. All rights reserved.
Specifications are subject to change without notice.

GENERAC®

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD
1 GENERAC INVERTER ADDED	09-14-22	DM	DM
2 ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:12:24 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: INVERTER DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-3

GENERAC®

SnapRS™

Inline Disconnect Switch
Model: APKE00011
Certification Model Reference: RS801

Intertek

Generac SnapRS are a simple way to satisfy rapid shutdown compliance for solar + storage systems. Generac SnapRS are 2017/2020 NEC 690.12 compliant, don't require any extra hardware to mount, and need no pairing or fussy digital communications.

FEATURES & BENEFITS

- Fast, easy, and simple to install
- One SnapRS device per PV module
- Achieves PVRSS Compliance
- Low cost, high efficiency solution

SYSTEM DESIGN

Snap a Generac SnapRS disconnect device (RS) to the negative lead (-) of each module in the solar array for simple module-level rapid shutdown compliance. SnapRS devices isolate array voltage when a rapid shutdown is initiated at a PWRcell™ Inverter. When rapid shutdown is initiated, SnapRS units isolate each PV module in the array, reducing array voltage to <80V in seconds.

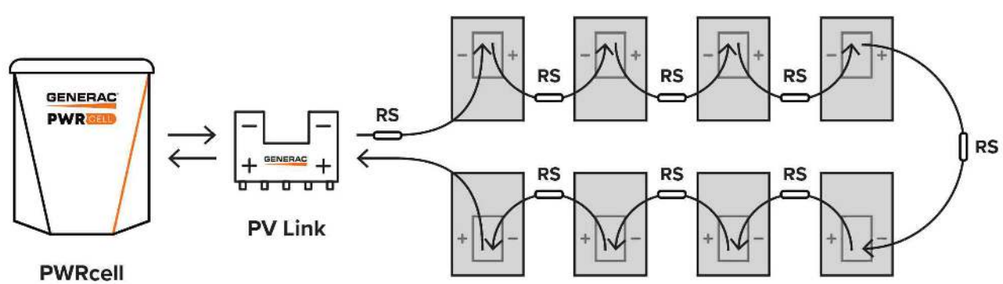


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

SnapRS™ (APKE00011)	
PV MODULE MAX VOC:	75 V
EFFICIENCY:	99.8%*
MAX INPUT CURRENT:	13 A
SHUTDOWN TIME:	< 10 Seconds
ENCLOSURE RATING:	NEMA 6P
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-40 to 158 °F (-40 to 70 °C)
CERTIFICATIONS:	UL1741
PROTECTIONS:	PVRSE
WEIGHT - LB (KG):	0.17 (0.08)
DIMENSIONS, L x W x H - IN (MM):	7" x 1" x 1" (177.8 x 25.4 x 25.4)
WARRANTY:	25 Years

**When used with a 50V panel*

Connect one SnapRS device to the negative lead of each PV module in the PV Link controlled array for complete PV Rapid shutdown performance

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528183 REV C

©2020 Generac Power Systems. All rights reserved.
Specifications are subject to change without notice.

GENERAC®

2

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD
1 GENERAC INVERTER ADDED	09-14-22	DM	DM
2 ENPHASE EQUIPMENT REVISED TO GENERAC	09-20-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
RAFAEL A. GONZALEZ SOTO LICENSE No. 83104 STATE OF FLORIDA PROFESSIONAL ENGINEER
Rafael A Gonzalez Soto
2022.09.23 14:12:40 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: RAPID SHUTDOWN DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-4

GENERAC®

PWRcell

PWRcell Battery Cabinet (Ordering SKU: APKE00007)
3.0kWh PWRcell EX Battery Module
Model # / Ordering SKU: G0080000
2.85kWh PWRcell DCB Battery Module
Model #: BJ-DCB05ZKAX (Ordering SKU: A0000391219)

The PWRcell™ Battery Cabinet is a modular smart battery platform that allows for a range of configurations to suit any need, small or large. No other smart battery offers the power and flexibility of PWRcell. Whether for backup power or smart energy management, PWRcell has power and capacity options for every need, without sacrificing flexibility or function.

C ETL LISTED US
Intertek

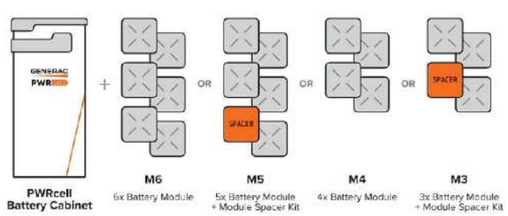
PWRcell BATTERY CABINET DESIGN

The PWRcell Battery Cabinet allows system owners the flexibility to scale from an economical 8.6kWh to a massive 18kWh by installing additional battery modules to the PWRcell Battery Cabinet. When needs change, an existing PWRcell Battery Cabinet can be upgraded with additional modules. Use the graphic below and the chart on the back of this sheet to understand what components you need for your chosen PWRcell configuration.

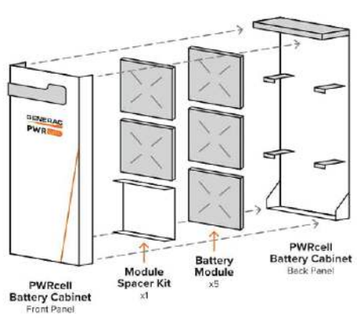
FEATURES & BENEFITS

- Connect 2 PWRcell Battery Cabinets to a single PWRcell Inverter for up to 36kWh of storage
- Best-in-class battery backup power
- Plug-and-play with PWRcell Inverter and PV Link™
- Time-of-use (TOU) and zero-export ready
- Residential and commercial application ready.
- Outdoor-rated battery cabinet available as an upgrade

BATTERY CONFIGURATION GUIDE



BATTERY CABINET ASSEMBLY



Specifications

PWRcell™ BATTERY CONFIGURATIONS								
BATTERY MODULE SERIES:	EX				DCB			
BATTERY MODULES:	3	4	5	6	3	4	5	6
USABLE ENERGY:	9 kWh	12 kWh	15 kWh	18 kWh	8.6 kWh	11.4 kWh	14.3 kWh	17.1 kWh
AVG. AC POWER OVER COMPLETE DISCHARGE CYCLE:	3.4 kW	4.5 kW	5.6 kW	6.7 kW	3.4 kW	4.5 kW	5.6 kW	6.7 kW
MAX. CONT. AC POWER @ 40°C (104°F):	4.5 kW	6 kW	7.5 kW	9 kW	4.5 kW	6 kW	7.5 kW	9 kW
PEAK MOTOR STARTING CURRENT (2 SEC) - A, RMS	25	33	42	50	25	33	42	50
REbus™ VOLTAGE - INPUT/OUTPUT:	360-420 VDC							
NOMINAL VOLTAGE:	43.2 VDC				46.8 VDC			
DC-DC ROUND-TRIP EFFICIENCY:	96.5%							
MAX. AMBIENT OPERATING TEMPERATURE RANGE:	14 to 122 °F (-10 to 50 °C)				41 to 113 °F (5 to 45 °C)			
RECOMMENDED AMBIENT OPERATING TEMPERATURE (FULL POWER)*:	32 to 104 °F (0 to 40 °C)				55 to 86 °F (13 to 30 °C)			
MAXIMUM INSTALLATION ALTITUDE - FT (M):	9834 (3000)							
DIMENSIONS, L x W x H - IN (MM):	22" x 10" x 68" (559 x 254 x 1727)							
WEIGHT, ENCLOSURE - LB (KG):	111 (50)							
WEIGHT, INSTALLED - LB (KG):	282 (128)	340 (154)	397 (180)	454 (206)	276 (125)	331 (150)	386 (175)	441 (200)
WARRANTY - LI-ION MODULES:	10 Years, (7.56MWh)							
WARRANTY - ELECTRONICS AND ENCLOSURE:	10 Years							
COMMUNICATION PROTOCOL:	REbus™ DC Nanogrid™							
COMPLIANCE:	UL 9540, UL 1973, UL 1642, CSA 22.2 #107.1							

Performance may be limited outside of recommended operating temperature range

PWRcell ACCESSORIES

The PWRcell Battery Cabinet (APKE00007) is rated for indoor use only. If installing outdoors, the PWRcell Outdoor Rated Battery Cabinet (APKE00028) must be used. Inside of the PWRcell Battery Cabinet, battery modules are stacked two deep on three levels, allowing for up to six modules to be connected in series. You can upgrade an existing PWRcell Battery Cabinet by adding Battery Modules and a Module Spacer (APKE00008). A Module Spacer is only required for battery configurations with an odd number of modules (i.e. 3 or 5).

Generac offers a convenient PWRcell Battery Upgrade Kit (APKE00009) to help replace lost or misplaced hardware.

Note: When adding modules, be sure all modules within an individual cabinet are of the same series type (i.e. EX or DCB).

PWRcell MODEL BUILDER

PRODUCT SERIES	ENCLOSURE TYPE	# OF MODULES	BATTERY SERIES
PWRcell	IR	M3	EX
	IR (Indoor Rated) OR (Outdoor Rated)	3 Modules 4 Modules 5 Modules 6 Modules	DCB EX

Sample Model Name: PWRcell IR M3 EX

Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000528139 REV F

©2020 Generac Power Systems. All rights reserved.
Specifications are subject to change without notice.

GENERAC®

DOCUMENT CONTROL		DATE	sCAD	eCAD
ISSUED FOR PERMIT		8-2-22	JH	DM
REV	DESCRIPTION	DATE	sCAD	eCAD
1	GENERAC BATTERY ADDED	09-14-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
RAFAEL A. GONZALEZ SOTO LICENSE No. 83104 STATE OF FLORIDA PROFESSIONAL ENGINEER
Rafael A Gonzalez Soto
2022.09.23 14:13:12 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: BATTERY DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-5

GENERAC®

PWRcell

AUTOMATIC TRANSFER SWITCH

100A Non-Service Entrance Rated
Model #: CXSC100A3
UPC #: 696471081701

100A Service Entrance Rated
Model #: CXSW100A3
UPC #: 696471081718

200A Service Entrance Rated
Model#: CXSW200A3
UPC #: 696471081725

Intertek

An integraged solar + storage system with load management for whole home coverage is made easy with the PWRcell™ Automatic Transfer Switch (ATS). Power the entire home and manage up to four individual HVAC (24 Vac controlled) loads with the PWRcell ATS. This built-in capability requires no additional hardware. When used in tandem with Generac Smart Management Modules (SMM) up to eight additional circuits can be controlled by the PWRcell Inverter. Make the most of your Generac solar + storage system with this comprehensive load management solution.

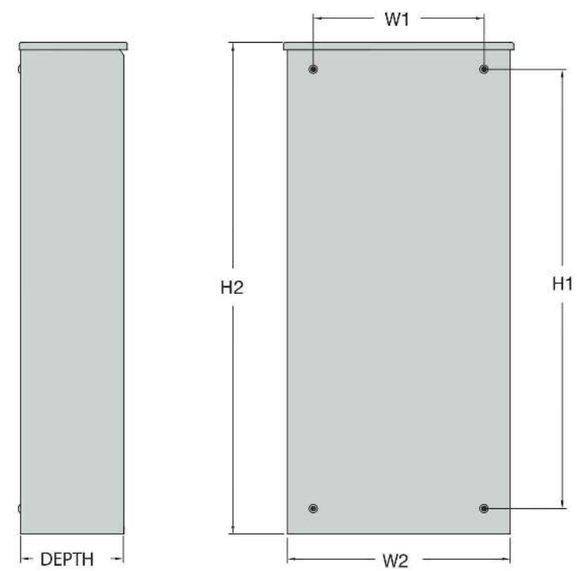
FEATURES & BENEFITS

- Unlock whole home backup power capability for PWRcell solar + storage systems
- Manage up to four HVAC systems, and an additional eight circuits with optional Smart Management Modules (SMMs)
- Aluminum type 3R enclosure with durable finish for indoor or outdoor installation
- Heavy Duty Generac Contactor is an ETL recognized device, designed for years of service and reliability

Specifications

SPECIFICATIONS	CXSC100A3	CXSW100A3	CXSW200A3
AMPS:	100	100	200
VOLTAGE	120/240 1Ø	120/240 1Ø	120/240 1Ø
LOAD TRANSITION TYPE (AUTOMATIC)	OPEN TRANSITION	OPEN TRANSITION SERVICE RATED	OPEN TRANSITION SERVICE RATED
ENCLOSURE TYPE	NEMA 3R	NEMA 3R	NEMA 3R
COMPLIANCE	UL 1008	UL 1008	UL 1008
WITHSTAND RATING (AMPS)	10,000	10,000	20,000
LUG RANGE	1/0 - #14	1/0 - #14	250 MCM - #6

DIMENSIONS		CXSC100A3	CXSW100A3	CXSW200A3
HEIGHT (IN/MM)	H1	17.24/437.9	17.24/437.9	26.75/679.4
	H2	20/508	20/508	30/762
WIDTH (IN/MM)	W1	12.5/317.5	12.5/317.5	10.5/266.7
	W2	14.6/370.8	14.6/370.8	13.5/342.9
DEPTH (IN/MM)		7.09/180.1	7.09/180.1	6.3/160.1
WEIGHT (LBS/KG)		20/9.07	22.5/10.21	39/17.69



Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888-GENERAC (436-3722)

A0000915134 REV A

©2020 Generac Power Systems. All rights reserved.
Specifications are subject to change without notice.

GENERAC®

DOCUMENT CONTROL	DATE	sCAD	eCAD
ISSUED FOR PERMIT	8-2-22	JH	DM
REV / DESCRIPTION	DATE	sCAD	eCAD
1 GENERAC ATS ADDED	09-14-22	DM	DM

ENGINEER CONTACT INFORMATION
ENGIPARTNERS LLC
C.A. 32661
1825 PONCE DE LEON BLVD #114
CORAL GABLES, FL 33134
DESIGN@ENGIPARTNERS.COM
833 - 888 - 3644

ENGINEERING STAMP
Rafael A Gonzalez Soto
2022.09.23 14:12:57 -04'00'

CONTRACTOR CONTACT INFORMATION
SUN4
2222 PONCE DE LEON BLVD,
3RD FLOOR, CORAL GABLES, FL 33134
(786) 833 -7864
#CVC57137
#EC13008093

CONTRACTOR LOGO
SUN4

CUSTOMER: ISAAC HARRIS
PROJECT ADDRESS: 456 SW HARMONY LN, LAKE CITY FL, 32025
PARCEL NUMBER: 19-4S-17-08572-001 (31851)

SHEET NAME: ATS DATA SHEET
PROJECT ID: EP15365
ENGINEER OF RECORD: ENG. RAFAEL A. GONZALEZ SOTO, PE
DATE: 8-1-22
SHEET TITLE: D-6