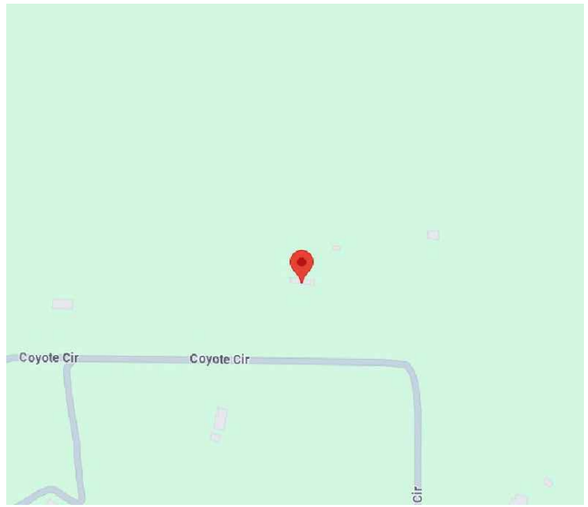
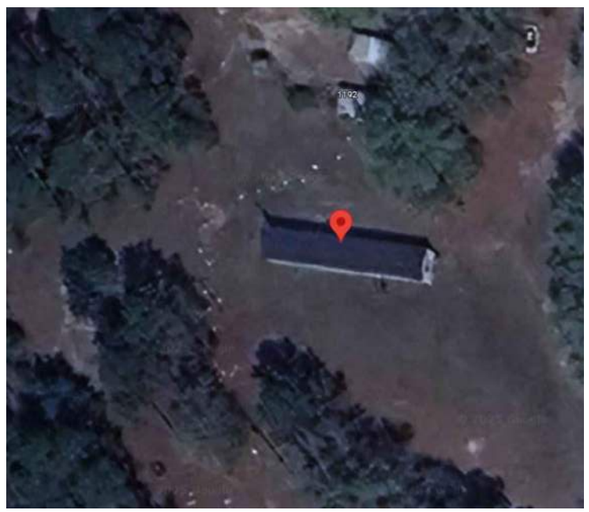
VICINITY MAP



HOUSE PHOTO



NEW ROOF MOUNT PHOTOVOLTAIC SYSTEM
SYSTEM SIZE: 10.200 KW DC, 5.760 KW AC A
1192 SW COYOTE CIR, FORT WHITE, FL 32038

Columbia County Building Department
Plans Reviewed for Code Compliance
State of Florida

SHEET INDEX

PV-1 - - - - - - - - - - - - - - - - COVER SHEET
PV-2 - - - - - - - - - - - - - - - - SITE PLAN
PV-3 - - - - - - - - - - - - - - - - ROOF PLAN
PV-4 - - - - - - - - - - - - - - - - STANDOFF PLAN
PV-5 - - - - - - - - - - - - - - - - LINE DIAGRAM
PV-6 - - - - - - - - - - - - - - - - WARNING LABELS & PLACARD
PV-7.1 TO PV-7.8 - - - - - - RESOURCE DOCUMENTS

SCOPE OF WORK

(N) 10.200 KW DC / 5.760 KW AC ROOF MOUNTED PV SYSTEM
(24) JINKO SOLAR JKM425N-54HL4-B 425W MODULES
(1) SOLAREDGE SE5700H-USMN HOME HUB (240V) INVERTER A
(24) SOLAREDGE S440 (240V) OPTIMIZERS
(1) SOLAREDGE ENERGY BANK 10KWH BATTERY
(1) SOLAREDGE BACKUP INTERFACE

SUNMODO NANO MOUNT L-FOOT ATTACHMENTS
SUNMODO SMR 100 RAIL,MILL RAILS

AUTHORITIES HAVING JURISDICTION

AHJ: COLUMBIA COUNTY, FL
UTILITY: CLAY ELECTRIC COOPERATIVE INC

GOVERNMENT CODES

2023 FBC-BUILDING 8TH EDITION
2023 FBC-RESIDENTIAL 8TH EDITION
2020 NEC (NFPA 70)
2023 FFPC 8TH EDITION

GENERAL NOTES

1. ALL COMPONENTS ARE UL LISTED AND NEC CERTIFIED, WHERE WARRANTED.
2. THE SOLAR PV SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH ARTICLE 690 OF THE NEC 2020.
3. THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION.
4. ALL CONDUCTORS OF A CIRCUIT, INCLUDING THE EGC, MUST BE INSTALLED IN THE SAME RACEWAY, OR CABLE, OR OTHERWISE RUN WITH THE PV ARRAY CIRCUIT CONDUCTORS WHEN THEY LEAVE THE VICINITY OF THE PV ARRAY.
5. WHERE METALLIC CONDUIT CONTAINING DC CONDUCTORS IS USED INSIDE THE BUILDING, IT SHALL BE IDENTIFIED AS "CAUTION: SOLAR CIRCUIT" EVERY 10FT.
6. HEIGHT OF THE AC DISCONNECT SHALL NOT EXCEED 6'-7" PER NEC CODE 240.24.
7. A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690.47 AND 250.50 THROUGH 60 AND 250-166 SHALL BE PROVIDED. PER NEC GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE OR INADEQUATE A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT. GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO LARGER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE FOR A COMPLETE SYSTEM.
8. PHOTOVOLTAIC MODULES ARE TO BE CONSIDERED NON-COMBUSTIBLE.
9. PHOTOVOLTAIC INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
10. ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE. WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF THE ROOF SURFACE.
11. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH THE LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
12. INVERTER(S) USED IN UNGROUNDED SYSTEM SHALL BE UL 1741 LISTED.
13. THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS [NEC 690.4(C)]
14. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED (OR BETTER), INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.
15. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.
16. SYSTEM GROUNDING SHALL BE IN ACCORDANCE WITH NEC 690.41.
17. PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION IN ACCORDANCE WITH NEC 690.12
18. DISCONNECTING MEANS SHALL BE LOCATED IN A VISIBLE, READILY ACCESSIBLE LOCATION WITHIN THE PV SYSTEM EQUIPMENT OR A MAXIMUM OF 10 FEET AWAY FROM THE SYSTEM [NEC 690.13(A)]
19. ALL WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC 690.31
20. WORK CLEARANCES AROUND ELECTRICAL EQUIPMENT WILL BE MAINTAINED PER NEC 110.26(A)(1), 110.26(A)(2) AND 110.26(A)(3).
21. ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED & IDENTIFIED IN ACCORDANCE WITH UL1703
22. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC.
23. IN ACCORDANCE WITH 2021 IFC 1205.5, 2018 IFC 1204.4, AND 2015 IFC 605.11.2 A CLEAR, BRUSH-FREE AREA OF 10 FEET(3048 MM) SHALL BE REQUIRED FOR GROUND-MOUNTED PHOTOVOLTAIC ARRAYS.
24. PANEL LAYOUT ORIENTATION IS SUBJECT TO CHANGE ON DESIGNED MOUNTING PLANES.
25. ALL PERMANENTLY INSTALLED LUMINARIES, EXCLUDING THOSE IN KITCHEN APPLIANCES, SHALL HAVE AN EFFICIENCY OF AT LEAST 45 LUMENS-PER-WATT OR SHALL UTILIZE LAMPS WITH AN EFFICIENCY OF NOT LESS THAN 65 LUMENS-PER-WATT.
26. MOUNTING SYSTEMS SHALL BE LISTED AND LABELLED IN ACCORDANCE WITH UL 2703 TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THEIR LISTINGS.

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

RICHARD D. PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

Richard Pantel
Digitally signed by Richard Pantel
Date: 2025.05.02 17:00:37 -04'00'

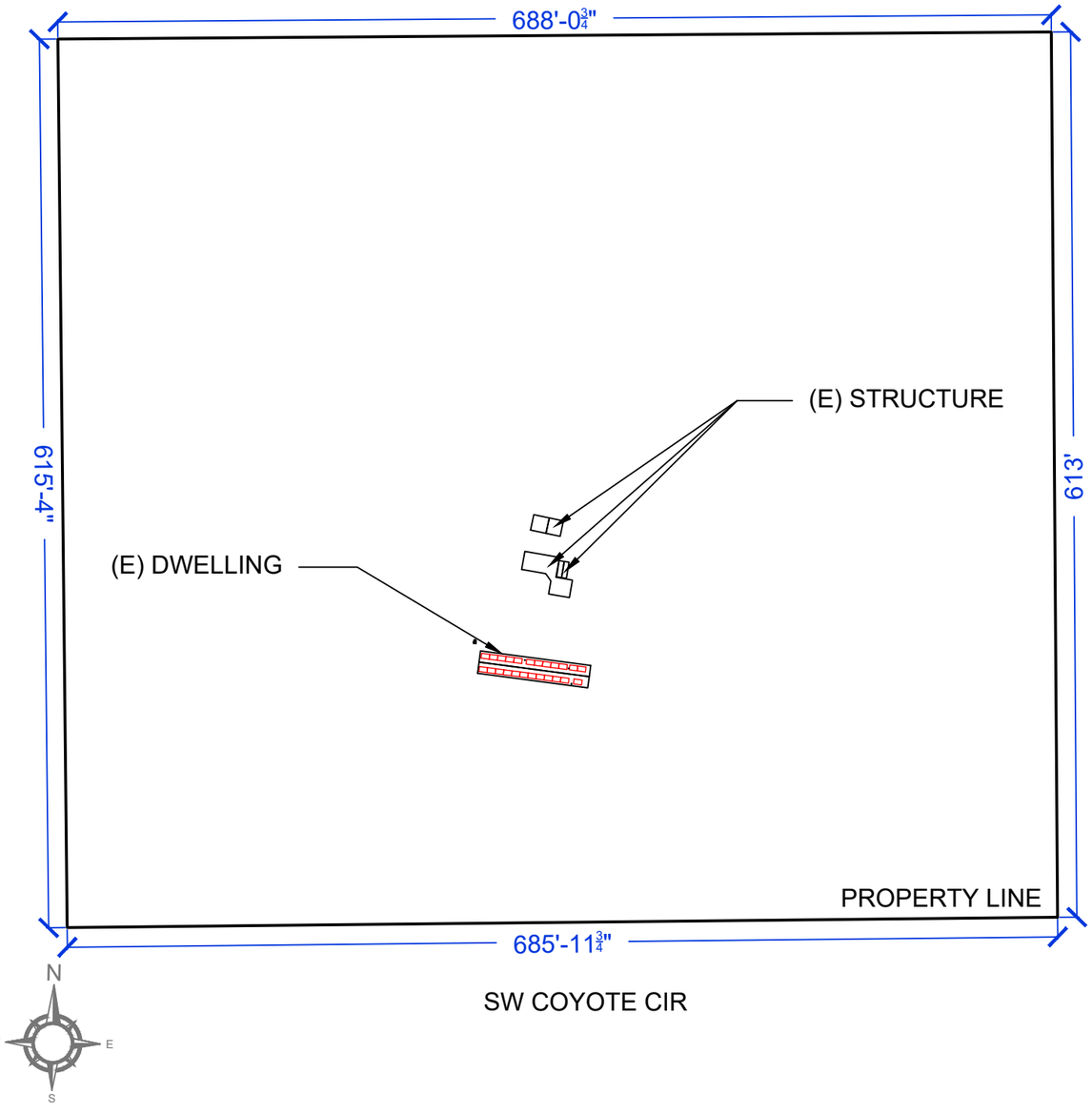
This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REVISION	
DATE	REV
4/30/2025	A

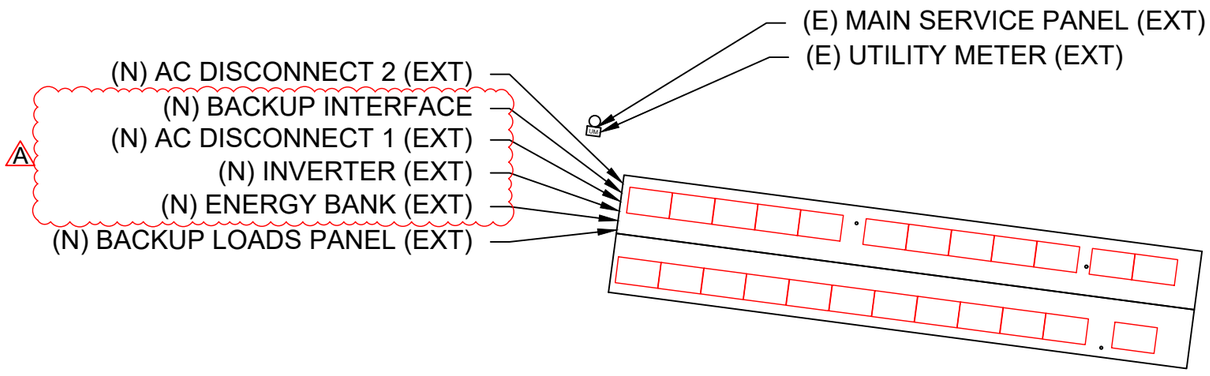
COVER SHEET

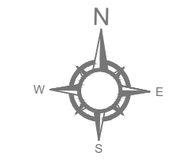
DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-1



1 **SITE PLAN**
SCALE: 1"=100'





1 **SITE PLAN**
SCALE: 1"=20'

TOTAL ROOF AREA: 1299.62 SQ.FT.
AREA OF ARRAYS: 504 SQ.FT.
ARRAY COVERAGE AREA: 38.82%

LEGEND

JINKO SOLAR
JKM425N-54HL4-B 425W
PV MODULE
A

CHIMNEY
ATTIC VENT
PIPE VENT

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

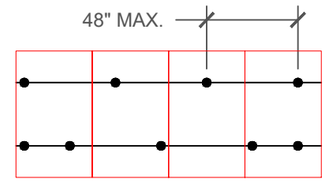
REVISION	
DATE	REV
4/30/2025	A

SITE PLAN

DRAWN BY	CDR
DATE DRAWN	02/06/2025

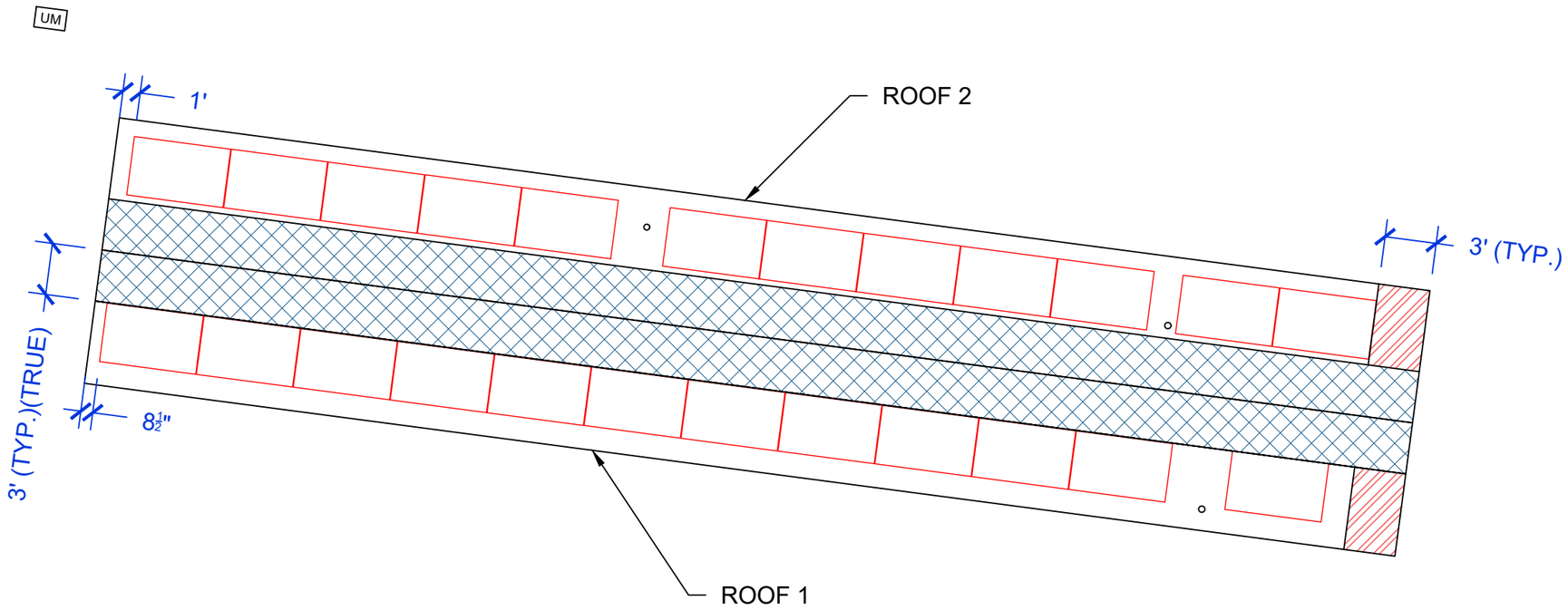
PV-2

ROOF INFORMATION							
ARRAY	PANEL COUNT	AZIMUTH	PITCH	ROOF TYPE	ATTACHMENT	FRAME TYPE & SPACING	ATTACHMENT SPACING
ROOF 1	12	188°	23°	SHINGLE	SUNMODO NANO MOUNT L-FOOT	2"X4" RAFTERS @ 24" OC	48"
ROOF 2	12	8°	23°	SHINGLE	SUNMODO NANO MOUNT L-FOOT	2"X4" RAFTERS @ 24" OC	48"



MAX. ATTACHMENT SPACING: 48"
(STAGGERED ATTACHMENTS)

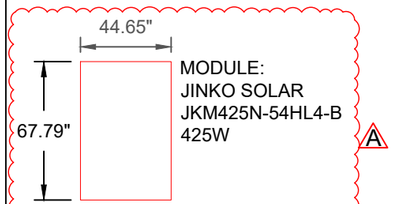
TOTAL ROOF AREA: 1299.62 SQ.FT.
AREA OF ARRAYS: 504 SQ.FT.
ARRAY COVERAGE AREA: 38.82%



1 **ROOF PLAN**
SCALE: 1"=8'

LEGEND

- CHIMNEY
- ATTIC VENT
- PIPE VENT
- UM — UTILITY METER



MODULE DIMENSION: 67.79"x 44.65"
MODULE WEIGHT: 48.5 LBS

TOTAL NO. OF PANELS: 24 MODULES

- 36" FIRE ACCESS PATHWAY
- 36" FIRE VENTILATION SETBACK

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

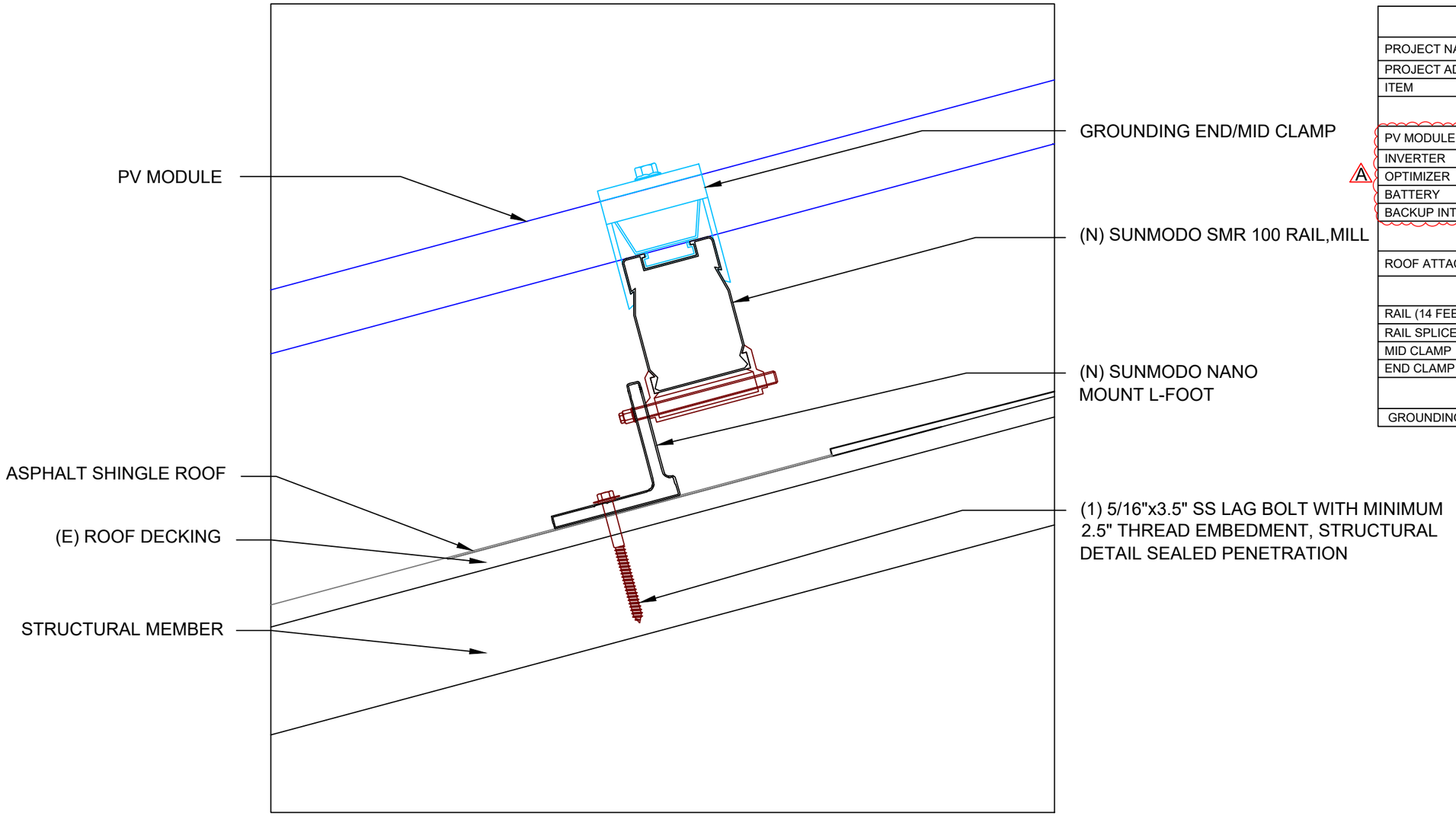
This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REVISION	
DATE	REV
4/30/2025	A

ROOF PLAN

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-3



BILL OF MATERTIALS		
PROJECT NAME	DAVID CONLEY JR	
PROJECT ADDRESS	1192 SW COYOTE CIR, FORT WHITE, FL 32038	
ITEM	ITEM DESCRIPTION	QUANTITY
ELECTRICAL EQUIPMENT		
PV MODULE	JINKO SOLAR JKM425N-54HL4-B 425W	24
INVERTER	SOLAREDGE SE5700H-USMN HOME HUB	1
A OPTIMIZER	SOLAREDGE S440	24
BATTERY	SOLAREDGE ENERGY BANK 10KWH	1
BACKUP INTERFACE	SOLAREDGE BACKUP INTERFACE	1
ROOF ATTACHMENT HARDWARE		
ROOF ATTACHMENT	SUNMODO NANO MOUNT L-FOOT	80
MOUNTING HARDWARE		
RAIL (14 FEET)	SUNMODO SMR 100 RAIL,MILL	23
RAIL SPLICE	RAIL SPLICE	14
MID CLAMP	MID CLAMP	36
END CLAMP	END CLAMP	24
GROUNDING HARDWARE		
GROUNDING LUGS	GROUNDING LUGS	6

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REVISION	
DATE	REV
4/30/2025	A

STANDOFF PLAN

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-4

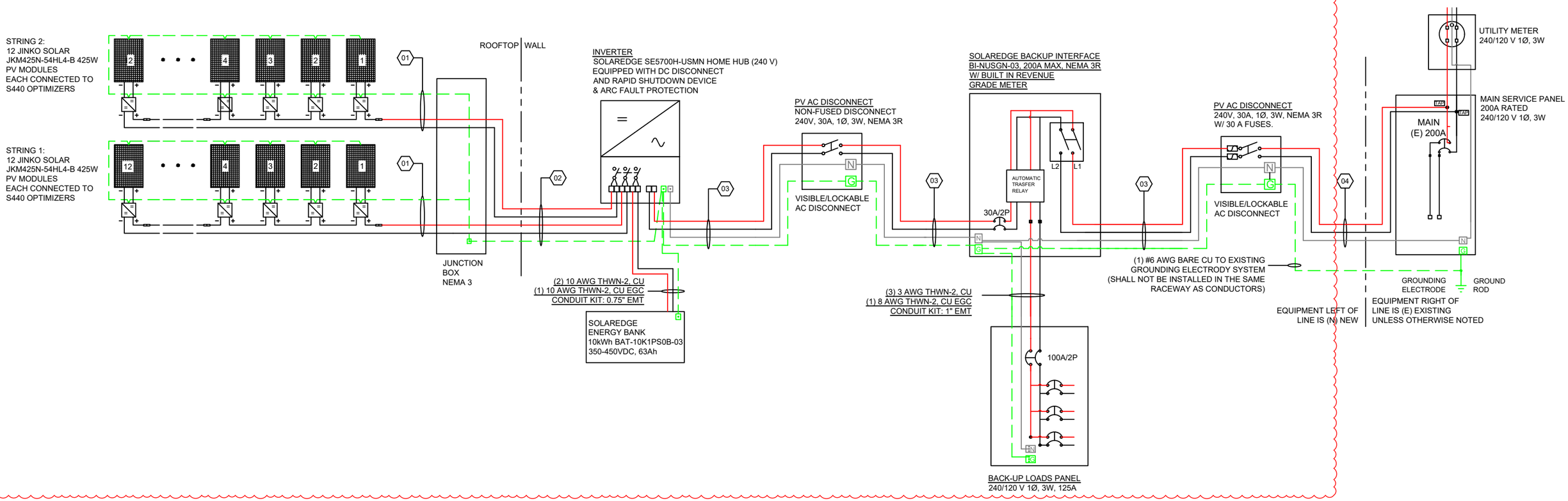
CONDUCTOR AND CONDUIT SCHEDULE W/ELECTRICAL CALCULATIONS

ID	CONDUCTOR	EGC	NEUTRAL	CONDUIT SIZE	TEMP. CORR. FACTOR	CURRENT-CARRYING CONDUCTORS IN CONDUIT	FILL FACTOR	MAX OUTPUT CURRENT (A)	REQUIRED AMPACITY (MAX OUTPUT CURRENT X125%) (A)	OCPD / FUSE (A)	CONDUCTOR BASE (A)	CONDUCTOR DERATED (A)	TERM. TEMP. RATING
01	(2) 10 AWG PV WIRE,CU	(1) 6 AWG BARE, CU	N/A	FREE AIR	.96 (32.7°C)	N/A	N/A	15	18.75	20	40	40.00	90°C
02	(4) 10 AWG THWN-2, CU	(1) 10 AWG THWN-2, CU	N/A	3/4" EMT	.96 (32.7°C)	4	0.8	15	18.75	20	40	30.72	90°C
03	(2) 10 AWG THWN-2, CU	(1) 10 AWG THWN-2, CU	(1) 10 AWG THWN-2, CU	3/4" EMT	.94 (32.7°C)	2	1.0	24	30.00	30	35	33.60	75°C
04	(2) 6 AWG THWN-2, CU	(1) 8 AWG THWN-2, CU	(1) 6 AWG THWN-2, CU	3/4" EMT	.94 (32.7°C)	2	1.0	24	30.00	30	65	62.40	75°C

NOTE: HEIGHT OF THE CONDUIT ABOVE ROOFTOP TO BE AT LEAST 7/8TH OF AN INCH PER 310.15(B)(3)(C)

DESIGN TEMPERATURES	
ASHRAE EXTREME LOW	-10.5 °C
ASHRAE 2% HIGH	32.7 °C

A



GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC

A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT
WHITE, FL 32038

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REVISION	
DATE	REV
4/30/2025	A

LINE DIAGRAM

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-5

CAUTION
PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

[NEC 705.12(D) & 690.59] PLACE LABEL ON ALL EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTORS SUPPLIED FROM MULTIPLE SOURCES

WARNING: PHOTOVOLTAIC POWER SOURCE

[NEC 690.31(G)3 & 4] PLACE ON JUNCTION BOXES AND CONDUIT EVERY 10'

WARNING
THE DISCONNECTION OF THE GROUNDED CONDUCTOR(S) MAY RESULT IN OVERVOLTAGE ON THE EQUIPMENT

[NEC 690.31(I)(E)] PLACE THIS LABEL ON **ALL** DISCONNECTING MEANS WHERE ENERGIZED IN AN OPEN POSITION

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

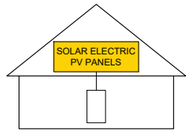
[NEC 690.15(C) & NEC 690.13(B)] PLACE THIS LABEL ON **ALL** DISCONNECTING MEANS WHERE ENERGIZED IN AN OPEN POSITION

ENERGY STORAGE SYSTEM DISCONNECT

CODE REF: [NEC 706.15(C)]
LOCATION: PLACE ON ENERGY STORAGE SYSTEMS

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



FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY: SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT:	24A MAX
NOMINAL AC OPERATING VOLTAGE:	240 VAC

[NEC 690.54] PLACE LABEL AT "INTERACTIVE POINT OF INTERCONNECTION" (AT MAIN SERVICE PANEL *AND* SUBPANEL IF APPLICABLE)
A

WARNING
DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

[NEC 705.12(C) & NEC 690.59] PLACE LABEL ON ALL EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTORS SUPPLIED FROM MULTIPLE SOURCES

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

[NEC 690.56(C)(2)] PLACE AT MAIN SERVICE PANEL

WARNING!
THIS EQUIPMENT FED BY MULTIPLE SOURCES.
TOTAL RATING OF ALL OVERCURRRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR

[NEC 705.12(B)(3)(3)] PLACE THIS LABEL AT P.O.C. TO SERVICE DISTRIBUTION EQUIPMENT

WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE THE PANEL

[NEC 110.27(C) & OSHA 1910.145(f)(7)] PLACE ON **ALL** COMBINER BOX/ENCLOSURES, MAIN SERVICE DISCONNECT, BREAKER PANEL AND PULL BOXES

PHOTOVOLTAIC
AC DISCONNECT

[NEC 690.13(B)] PLACE ON AC DISCONNECT

WARNING
POWER SOURCE OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE

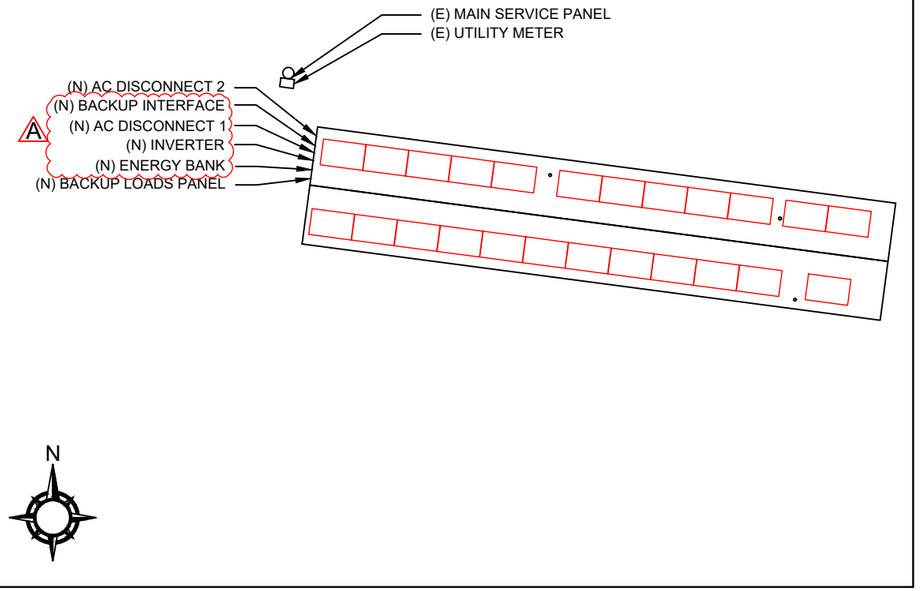
CODE REF: [NEC 705.12(B)(3)(2)]
LOCATION: PLACE LABEL ON ALL EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTORS SUPPLIED FROM MULTIPLE SOURCES

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

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

DIRECTORY
PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

CAUTION
MULTIPLE SOURCES OF POWER



(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(A)&(B), [NEC 705.10])

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

RICHARD PANTEL LICENSE No. 73222 STATE OF FLORIDA PROFESSIONAL ENGINEER

Reviewed and approved
Richard Pantel, P.E.
FL Lic. No. 73222
05/02/2025

This item has been digitally signed and sealed by Richard Pantel, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

REVISION	
DATE	REV
4/30/2025	A

WARNING LABELS & PLACARD

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-6

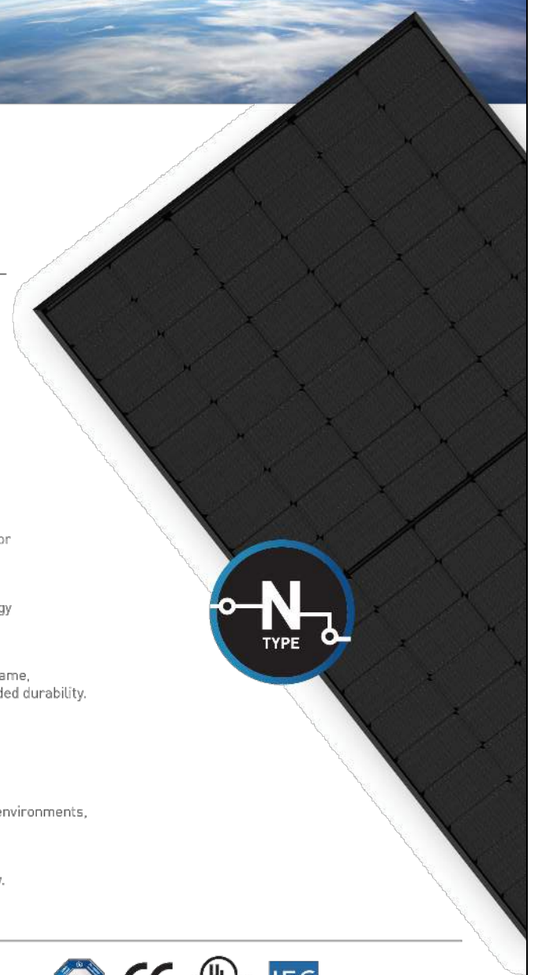
EAGLE MODULES

THE MOST DEPENDABLE SOLAR PRODUCT

EAGLE® 54 G6R

420-440 WATT • N-TYPE TOPCON

Positive power tolerance of 0~+3%



- NYSE-listed since 2010, Bloomberg Tier 1 manufacturer
- Top performance in the strictest 3rd party labs
- Automated manufacturing utilizing artificial intelligence
- Vertically integrated, tight controls on quality
- Premium solar factories in USA, Vietnam, and Malaysia

KEY FEATURES

Superior Aesthetics
Black backsheet and black frame create ideal look for residential applications.

N-Type Technology
N-type cells with Jinko's in-house TOPCon technology offers better performance and improved reliability.

Thick and Tough
Fire Type 1 rated module engineered with a thick frame, 3.2mm front side glass, and thick backsheet for added durability.

Shade Tolerant
Twin array design allows continued performance even with shading by trees or debris.

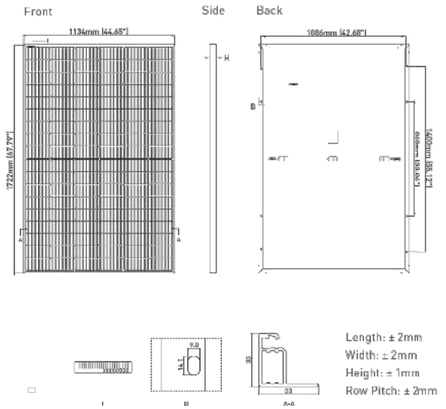
Protected Against All Environments
Certified to withstand humidity, heat, rain, marine environments, wind, hailstorms, and packed snow.

Warranty
25-year product and 30-year linear power warranty.

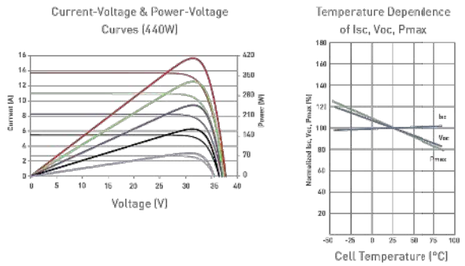
- ISO9001:2015 Quality Standards
- ISO14001:2015 Environmental Standards
- IEC61215, IEC61730 certified products
- ISO45001: 2018 Occupational Health & Safety Standards
- UL61730 certified products

BUILDING YOUR TRUST IN SOLAR. WWW.JINKOSOLAR.US

ENGINEERING DRAWINGS



ELECTRICAL PERFORMANCE & TEMPERATURE DEPENDENCE



MECHANICAL CHARACTERISTICS

No. of Half Cells	108 (2 x 54)
Dimensions	1722 × 1134 × 35mm (67.79 × 44.65 × 1.38 inch)
Weight	22.0kg (48.5lbs)
Front Glass	3.2mm, Anti-Reflection Coating High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminum Alloy
Junction Box	IP68 Rated
Output Cables	12 AWG, 1400mm (55.12in) or Customized Length
Connector	Staubli MC4
Fire Type	Type 1
Pressure Rating	5400Pa (Snow) & 2400Pa (Wind)

TEMPERATURE CHARACTERISTICS

Temperature Coefficients of Pmax	-0.29%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	0.045%/°C
Nominal Operating Cell Temperature (NOCT)	45±2°C

MAXIMUM RATINGS

Operating Temperature (°C)	-40°C~+85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse Rating	25A

PACKAGING CONFIGURATION

(Two pallets = One stack)

31pcs/pallets, 62pcs/stack, 806pcs/40 HQ Container

WARRANTY

25-year product and 30-year linear power warranty

1st year degradation not to exceed 1%, each subsequent year not to exceed 0.4%, minimum power at year 30 is 87.4% or greater.

ELECTRICAL CHARACTERISTICS

Module Type	JKM420N-54HL4-B		JKM425N-54HL4-B		JKM430N-54HL4-B		JKM435N-54HL4-B		JKM440N-54HL4-B	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	420Wp	316Wp	425Wp	320Wp	430Wp	323Wp	435Wp	327Wp	440Wp	331Wp
Maximum Power Voltage (Vmp)	32.16V	29.95V	32.37V	30.19V	32.58V	30.30V	32.78V	30.50V	32.99V	30.73V
Maximum Power Current (Imp)	13.06A	10.55A	13.13A	10.60A	13.20A	10.66A	13.27A	10.72A	13.34A	10.77A
Open-circuit Voltage (Voc)	38.74V	36.80V	38.95V	37.00V	39.16V	37.20V	39.36V	37.39V	39.57V	37.59V
Short-circuit Current (Isc)	13.51A	10.91A	13.58A	10.96A	13.65A	11.02A	13.72A	11.08A	13.80A	11.14A
Module Efficiency STC (%)	21.51%		21.76%		22.02%		22.28%		22.53%	

***STC:** Irradiance 1000W/m² · Cell Temperature 25°C · AM = 1.5
NOCT: Irradiance 800W/m² · Ambient Temperature 20°C · AM = 1.5 · Wind Speed 1m/s

*Power measurement tolerance: ±3%

The company reserves the final right for explanation on any of the information presented hereby. JKM400-420N-54HL4-B-F1-US

BUILDING YOUR TRUST IN SOLAR. WWW.JINKOSOLAR.US

A

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR	PV-7.1
DATE DRAWN	02/06/2025	

SolarEdge Home Hub Inverter

For North America

SE3800H-US / SE5700H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US[1]

HOME BACKUP

12-25 YEAR WARRANTY

Optimized battery storage with HD-Wave technology

- Record-breaking 99% weighted efficiency with 200% DC oversizing
- Supports LRA – can provide the required energy for HVAC systems starting during backup operation
- Small, lightweight, and easy to install
- Modular design, future ready with optional upgrades to:
  - DC-coupled storage for full or partial home backup
  - Built-in consumption monitoring
  - Direct connection to the SolarEdge Home EV Charger
- Multi-inverter, scalable storage solution, with enhanced battery power up to 10kW
- Integrated arc fault protection and rapid shutdown for NEC 2014 – 2023, per article 690.11 and 690.12
- Embedded revenue grade production data, ANSI C12.20 Class 0.5

solaredge.com

solaredge

SolarEdge Home Hub Inverter

For North America

SE3800H-US / SE5700H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US[1]

Applicable to inverters with part number	SExxxxH-USMNBBXXX / SExxxxH-USSNBBXXX						
	SE3800H-US	SE5700H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units
OUTPUT – AC ON GRID							
Rated AC Power	3800 @ 240V 3300 @ 208V	5760 @ 240V 5000 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11,400 @ 240V 10,000 @ 208V	W
Maximum AC Power Output	3800 @ 240V 3300 @ 208V	5760 @ 240V 5000 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11,400 @ 240V 10,000 @ 208	W
AC Output Voltage (Nominal)	208 / 240						Vac
AC Output Voltage (Range)	183 – 264						Vac
AC Frequency Range (min - nom - max)	59.3 – 60 – 60.5[2]						Hz
Maximum Continuous Output Current @ 240V	16	24	25	32	42	47.5	A
Maximum Continuous Output Current @ 208V	16	24	24	-	-	48	A
GFDI Threshold	1						A
Total Harmonic Distortion (THD)	< 3						%
Power Factor	1, adjustable -0.85 to 0.85						
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes						
Charge Battery from AC (if allowed)	Yes						
Typical Nighttime Power Consumption	< 2.5						W
OUTPUT – AC BACKUP[3][4]							
Rated AC Power in Backup Operation	7600	5760	6000	7600 *11,400*	10000 *11,400*	11,400	W
AC L-L Output Voltage Range in Backup	211 – 264						Vac
AC L-N Output Voltage Range in Backup	105 – 132						Vac
AC Frequency Range in Backup (min - nom - max)	55 – 60 – 65						Hz
Maximum Continuous Output Current in Backup Operation	32	24	25	32 47.5	42 47.5	47.5	A
GFDI	1						A
THD	< 5						%
OUTPUT – SOLAREDGE HOME EV CHARGER AC							
Rated AC Power	9600						W
AC Output Voltage Range	211 – 264						Vac
On-Grid AC Frequency Range (min - nom - max)	59.3 – 60 – 60.5						Hz
Maximum Continuous Output Current @240V (grid, PV and battery)	40						Aac
INPUT – DC (PV AND BATTERY)							
Transformer-less, Ungrounded	Yes						
Max Input Voltage	480						Vdc
Nom DC Input Voltage	380						Vdc
Reverse-Polarity Protection	Yes						
Ground-Fault Isolation Detection	600kΩ Sensitivity						
INPUT – DC (PV)							
Maximum DC Power @ 240V	7600	11,520	12,000	15,200	20,000	22,800	W
Maximum DC Power @ 208V	6600	10,000	10,000	-	-	20,000	W
Maximum Input Current[5] @ 240V	20	16	16.5	20 30	30	30	Adc
Maximum Input Current[5] @ 208V	9	13.5	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45						
Maximum Inverter Efficiency	99.2						%
CEC Weighted Efficiency	99					99 @ 240V 98.5 @ 208V	%
2-pole Disconnection	Yes						

* Supported with PN SExxxxH-USMNxxxxxx

(1) These specifications apply to inverters with part numbers SExxxxH-USMNxxxxx or SExxxxH-USSNxxxxxx and connection unit model number DCD-1PH-US-PxH-F-x

(2) For other regional settings please contact SolarEdge support.

(3) Not designed for standalone applications and requires AC for commissioning. Backup functionality is only supported for 240V grid.

(4) For LRA (Locked Rotor Amperage) values please refer to the LRA for NAM application note.

(5) A higher current source may be used; the inverter will limit its input current to the values stated

CE ETL

SolarEdge Home Hub Inverter

For North America

SE3800H-US / SE5700H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US[1]

Applicable to inverters with part number	SExxxxH-USMNBBXXX / SExxxxH-USSNBBXXX						
	SE3800H-US	SE5700H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units
OUTPUT – DC (BATTERY)							
Supported Battery Types	SolarEdge Home Battery, LG RESU Prime						
Number of Batteries per Inverter	Up to 3 SolarEdge Home Battery, up to 2 LG RESU Prime						
Continuous Power[6]	7600 @ 240V 3800 @ 208V	5760 @ 240V 5000 @ 208V	6000	11400		11,400 @ 240V 10,000 @ 208V	W
Peak Power[6]	7600 @ 240V 3800 @ 208V	5760 @ 240V 5000 @ 208V	6000	11400		11,400 @ 240V 10,000 @ 208V	W
Max Input Current	20	26.5					Adc
2-pole Disconnection	Up to inverter rated backup power						
SMART ENERGY CAPABILITIES							
Consumption Metering	Built-in[7]						
Backup & Battery Storage	With Backup Interface (purchased separately) for service up to 200A; up to 3 inverters						
EV Charging	Direct connection to SolarEdge Home EV Charger						
ADDITIONAL FEATURES							
Supported Communication Interfaces	RS485, Ethernet, Cellular[8,9], Wi-Fi[9], SolarEdge Home Network						
Revenue Grade Metering, ANSI C12.20	Built-in[9]						
Integrated AC, DC and Communication Connection Unit	Yes						
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi Access Point for local connection						
DC Voltage Rapid Shutdown (PV and Battery)	Yes, according to NEC 2014 – 2023 per article 690.11 and article 690.12						
STANDARD COMPLIANCE							
Safety	UL 1741, UL 1741SA, UL 1741SB, UL 1699B, CSA 22.2#107.1, C22.2#330, C22.2#9, ANSI/CAN/UL 9540						
Grid Connection Standards	IEEE 1547 and IEEE 1547.1, Rule 21, Rule 14H						
Emissions	FCC Part 15 Class B						
INSTALLATION SPECIFICATIONS							
AC Output and EV AC Output Conduit Size / AWG Range	1" maximum / 14 – 4 AWG						
DC Input (PV and Battery) Conduit Size / AWG Range	1" maximum / 14 – 6 AWG						
Dimensions with Connection Unit (H x W x D)	17.7 x 14.6 x 6.8 / 450 x 370 x 174	17.7 x 14.6 x 6.8 / 450 x 370 x 174**	21.06 x 14.6 x 7.3 / 535 x 370 x 185**	21.06 x 14.6 x 8.2 / 535 x 370 x 208***		21.06 x 14.6 x 8.2 / 535 x 370 x 208***	in / mm
Weight with Connection Unit	30.8 / 14	30.8 / 14**	41.7 / 18.9**	44.9 / 20.3***		44.9 / 20.3***	lb / kg
Noise	< 50						dBA
Cooling	Natural Convection						
Operating Temperature Range	(-) 40 to (+) 140 / (-) 40 to (+)60[10]						°F / °C
Protection Rating	NEMA 4X						

** Supported with PN SExxxxH-USSNBBXXX or SExxxxH-USMNBBXXX.

*** Supported with PN SExxxxH-USSNBBXXS or SExxxxH-USMNBBXXS.

(6) Discharge power is limited up to the inverter rated AC power for on-grid and backup applications, as well as up to the installed batteries' rating.

(7) For consumption metering current transformers should be ordered separately: SECT-SPL-225A-T-20 or SEACT0750-600NA-20 units per box. Revenue grade metering is only for production metering.

(8) Information concerning the Data Plan's terms & conditions is available in the SolarEdge Communication Plan Terms and Conditions.

(9) The part number SExxxxH-USXNBBXXX only supports the WiFi communication interface, and the part number SExxxxH-USXNBBLXX only supports the cellular communication interface.

(10) Full power up to at least 50°C / 122°F. For power derating information refer to the Temperature Derating for North America technical note.

CE ETL

A

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC

A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-7.2

Power Optimizer
For Residential Installations

S440, S500, S500B

POWER OPTIMIZER

Enabling PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Detects abnormal PV connector behavior, preventing potential safety issues*
- Module-level voltage shutdown for installer and firefighter safety
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Faster installations with simplified cable management and easy assembly using a single bolt
- Flexible system design for maximum space utilization
- Compatible with bifacial PV modules

* Functionality subject to inverter model and firmware version

solaredge.com

solaredge

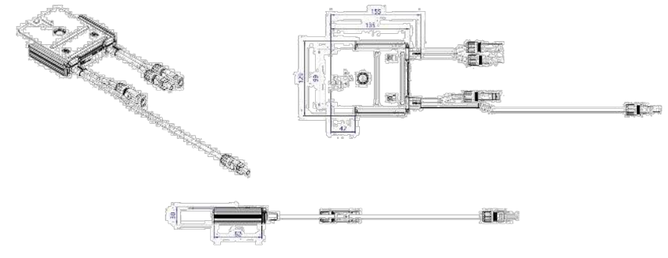
Power Optimizer
For Residential Installations
S440, S500, S500B

	S440	S500	S500B	UNIT
Rated Input DC Power[1]	440	500		W
Absolute Maximum Input Voltage (Voc)	60		125	Vdc
MPPT Operating Range	8 - 60		12.5- 105	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15		Adc
Maximum Efficiency	99.5			%
Weighted Efficiency	98.6			%
Overvoltage Category	II			
OUTPUT DURING OPERATION				
Maximum Output Current	15			Adc
Maximum Output Voltage	60		80	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)				
Safety Output Voltage per Power Optimizer	1			Vdc
STANDARD COMPLIANCE				
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3, CISPR11, EN-55011			
Safety	IEC62109-1 (class II safety), UL1741			
Material	UL94 V-0, UV Resistant			
RoHS	Yes			
Fire Safety	VDE-AR-E 2100-712:2013-05			
INSTALLATION SPECIFICATIONS				
Maximum Allowed System Voltage	1000			Vdc
Dimensions (W x L x H)	129 x 155 x 30		128.4 x 155 x 45	mm
Weight (including cables)	655			gr
Input Connector	MC4[2]			
Input Wire Length	0.1			m
Output Connector	MC4			
Output Wire Length	(+) 2.3, (-) 0.10			m
Operating Temperature Range[3]	-40 to +85			°C
Protection Rating	IP68 / NEMA6P			
Relative Humidity	0 - 100			%

(1) Rated power of the module at STC will not exceed the Power Optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed
(2) For other connector types please contact SolarEdge
(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details

PV System Design Using a SolarEdge Inverter		Single Phase HD-Wave	Three Phase	Three Phase for 277/480V Grid	
Minimum String Length (Power Optimizers)	S440, S500	8	16	18	
	S500B	6	14		
Maximum String Length (Power Optimizers)		25	50		
Maximum Nominal Power per String[4]		5700	11250[5]	12750[6]	W
Parallel Strings of Different Lengths or Orientations		Yes			

(4) If the inverters rated AC power ≤ maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power Refer to: https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf
(5) For the 230/400V grid: it is allowed to install up to 13,500W per string when the maximum power difference between each string is 2,000W
(6) For the 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W
(7) It is not allowed to mix S-series and P-series Power Optimizers in new installations



CE RoHS

A

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR	PV-7.3
DATE DRAWN	02/06/2025	

SolarEdge Home Battery 400V

USA Domestic Content Eligible*
For North America

BAT-10K1P

BATTERIES

Made in the USA from imported parts

SolarEdge's USA-manufactured offering optimized for SolarEdge Home Hub Inverters

- Eligible for domestic content: SolarEdge USA-manufactured batteries* are intended to be eligible for the enhanced federal income tax credit for domestic content
- DC coupled battery featuring outstanding overall system efficiency, generating more energy to store and use for on-grid and backup** power applications
- Integrates seamlessly with the complete SolarEdge Home ecosystem using SolarEdge Home Network, offering a single source for warranty, support, and training, to streamline logistics and operations
- Solar, storage, EV charging, and smart devices all monitored and managed by a single app to an optimized production, consumption, and backup* power
- Includes multiple safety features:
  - Continuous protection through measurement and monitoring, using a mix of software and hardware measures
  - Rapid Shutdown and SafeDC™
  - Qualified by UL9540A, the latest and most stringent UL fire safety standard
  - Featuring ThermoShield™ technology: a cell-level protection mechanism
- Simple plug and play installation, with automatic SetApp-based configuration
- Flexible installation - wall or floor mount, indoor or outdoor
- Wireless communication to the inverter, reducing wiring, labor, and installation

* Manufactured by SolarEdge with the intent to be eligible for inclusion under the elective safe harbor in calculating the Domestic Cost Percentage under the "Distributed BESS" category (under IRS Notice 2024-41). Batteries with part number UBAT-10K1PS0B-03, the Packaging, the Thermal Management System, and the Battery Management System are domestically produced and manufactured to meet the requirements of eligibility to be considered for the ITC domestic content bonus adder. SolarEdge does not provide tax and/or legal advice. You should consult with your own legal and/or tax advisor(s) regarding the eligibility of your project for the ITC or 71C, including the 10% domestic content bonus, to determine how the applicable rules apply to your particular project. The forward-looking statements in this datasheet are accurate as of the date herein and are subject to change. For more information, please contact your local SolarEdge sales representative.

** Backup applications are subject to local regulation and may require additional components and firmware upgrade.

solaredge.com

solaredge

SolarEdge Home Battery 400V

USA Domestic Content Eligible, for North America

BAT-10K1P

		UBAT-10K1PS0B-03	
BATTERY SPECIFICATION			
Usable Energy (100% depth of discharge)		9700	Wh
Continuous Output Power[1]		5000	W
Peak Output Power (for 10 seconds)		7500	W
Peak Roundtrip Efficiency		94.5	%
Warranty[2]		10	Years
Voltage Range		350 – 450	Vdc
Max Continues Output Current		14.3	A
Max Short Circuit Current / Duration		1k/10	Adc/msec
ADDITIONAL FEATURES			
Compatible Inverters[3]		SolarEdge Home Hub Inverters	
Batteries per Inverter[4]		Up to 3	
Communication Interfaces		Wireless[5] and RS485	
STANDARD COMPLIANCE			
Certification	Cell	UL 1642	
	Battery	UL 1973, UL 9540A, UL 9540, UN 38.3	
Emissions		FCC Part 15 Class B	
MECHANICAL SPECIFICATIONS			
Dimensions (W x H x D)		31.1 x 46.4 x 9.84 / 790 x 1179 x 250	in / mm
Weight		262 / 119	lb / kg
Mounting		Floor[6] or wall mount[7]	
Ambient Operating Temperature Range[8]		+14 to +122 / -10 to +50	°F / °C
Storage Temperature (limited period)[9]		-22 to +140 / -30 to +60	°F / °C
Storage Temperature (Up to 12 months since shipment date)		+14 to +86 / -10 to +30	°F / °C
Enclosure Protection		IP55 / NEMA 3R - indoor and outdoor (water and dust protection)	
Maximum Altitude		6562 / 2000	ft / m
Cooling		Natural convection	
Noise (at 1m distance)		<25	dBA

(1) Charge/discharge power may differ according to temperature range.
(2) For warranty details, see the SolarEdge Home Battery limited product warranty.
(3) For compatible inverter information, see the SolarEdge Home Hub Inverter for North America datasheet and the SolarEdge Home Hub Inverter for North America Assembled in North America datasheet.
(4) Installations with multiple SolarEdge Home Batteries connected to a single inverter require a pair of SolarEdge branch connectors (DC + and DC -) per battery, excluding the last battery. The branch connectors should be purchased separately. For more details, see the Connecting the Home Hub Inverter to Multiple Home Batteries technical note.
(5) For additional details, see the SolarEdge Home Network Plug-In datasheet.
(6) The floor stand is purchased separately. One floor stand is required per SolarEdge Home Battery. See the SolarEdge Home Battery (High Voltage) Floor Mount Stand assembly guide and the Accessories P/N table below.
(7) Wall mount installation requires handles that should be purchased separately. See the Accessories P/N table below.
(8) The SolarEdge Home Battery 400V must be installed in a location where the ambient temperature falls between +32°F to +104°F for no less than 95% of the warranty period and between +14°F to +122°F for the rest of the period. For details, see the SolarEdge Home Battery limited product warranty.
(9) For details, see the SolarEdge Home Battery 400V Transportation and Storage Guidelines application note.

SolarEdge Home Battery – Accessories (purchased separately)	
ACCESSORY	**P/N**
Floor stand	IAC-RBAT-FLRSTD-01
Branch connector set (includes 10 pairs of DC + and DC - connectors) Required for installations with multiple SolarEdge Home Battery batteries with a single inverter	IAC-RBAT-USYCBL-01
Handles	IAC-RBAT-HANDLE-01

CE

A

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC

A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR	PV-7.4
DATE DRAWN	02/06/2025	

SolarEdge Home Backup Interface

For North America

BI-E / BI-N

HOME BACKUP

Backup Interface for Flexible Backup

- Automatically provides backup power to home loads in the event of grid interruption
- Full flexibility in which loads to back up – the entire home or selected loads
- Scalable solution to support higher power and higher capacity
- Built-in Auto Transformer that supports 5kW of Phase Imbalance
- Built-in PCS certified* Energy Meter readies the Backup Interface to be part of the Busbar Current Management**
- Seamless integration with the SolarEdge Home Hub Inverter to manage and monitor both PV generation and energy storage
- Generator connection support

* Only applicable to Backup Interface with part number BI-xxxxx-03. Backup Interface with part number BI-xxxxx-02 includes a built-in Auto Transformer and Energy Meter that is NOT PCS certified.
** Only applicable to Backup Interface with part number BI-xxxxx-03

solaredge.com

solaredge

SolarEdge Home Backup Interface

For North America

BI-E / BI-N

Applicable to Backup Interface with Part Number	BI-xxxxx-02 / BI-xxxxx-03		
Model	BI-E	BI-N	Units
INPUT FROM GRID			
AC Current Input	200		A
AC Output Voltage (Nominal)	240		Vac
AC Output Voltage Range	211 – 264		Vac
AC Frequency (Nominal)	60		Hz
AC Frequency Range	59.3 – 60.5		Hz
Microgrid Interconnection Device Rated Current	200		A
Service Side AC Main Circuit Breaker Rated Current	200	N/A	A
Service Side AC Main Circuit Breaker Interrupt Current	10,000	N/A	A
Grid Disconnection Switchover Time	<100		ms
OUTPUT TO MAIN DISTRIBUTION PANEL			
Maximum AC Current Output	200		A
AC L-L Output Voltage (Nominal)	240		Vac
AC L-L Output Voltage Range	211 – 264		Vac
AC Frequency (Nominal)	60		Hz
AC Frequency Range	59.3 – 60.5		Hz
Maximum Inverters AC Current Output in Backup Operation	144		A
Imbalance Compensation in Backup Operation	5000		W
AC L-N Output Voltage in Backup (Nominal)	120		V
AC L-N Output Voltage Range in Backup	105 – 132		V
AC Frequency Range in Backup	55 – 65		Hz
INPUT FROM INVERTER			
Number of Inverter Inputs	Up to 3		#
Maximum Rated AC Power in On-Grid and Backup Operation	11,400		W
Maximum Continuous Current in On-Grid and Backup Operation	48		A
Factory Installed Inverter Input AC Circuit Breaker	40/63[2]		A
Upgradability	Up to 3 x 40A/63A[2] CB		
GENERATOR			
Maximum Rated AC Power	22,500		W
Maximum Continuous Input Current	94		Aac
Dry Contact Switch Voltage Rating	250 / 30		Vac / Vdc
Dry Contact Switch Current Rating	5		A
2-wire Start Switch	Yes		
ADDITIONAL FEATURES			
Installation Type	Suitable for use as service equipment	For main lug only	
Number of Communication Inputs	2		
Communication	RS485		
PCS Certified Energy Meter (for Import/Export)[3]	1% accuracy		
Manual Control Over Microgrid Interconnection Device	Yes		

(1) Backup Interface with part number BI-xxxxx-03 includes one 63A circuit breaker. Backup Interface with part number BI-xxxxx-02 includes one 40A circuit breaker.
(2) 63A circuit breaker supports up to one 11.4kW inverter, and 40A circuit breaker supports up to one 7.6kW inverter. 20A, 30A, and 50A breakers can be used for inverters with lower power ratings (On-Grid and Backup Operation). The circuit breaker kits are available with the following part numbers:
- For 63A, CB-UPG-63-01
- For 40A, CB-UPG-40-01

(3) Backup Interface with part number BI-xxxxx-02 includes an Energy Meter that is NOT PCS certified.

SolarEdge Home Backup Interface

For North America

BI-E/ BI-N

Applicable to Backup Interface with Part Number	BI-xxxxx-02 / BI-xxxxx-03		
Model	BI-E	BI-N	Units
STANDARD COMPLIANCE			
Safety	UL1741; CSA 22.2 NO. 107		
	UL869A	N/A	
Emissions	FCC Part 15 Class B		
INSTALLATION SPECIFICATIONS			
Supported Inverters	StorEdge Single Phase Inverter; SolarEdge Home Hub Inverter		
AC from Grid Conduit Size / AWG Range	2" conduit / 4 – 4/0 AWG		
AC to Loads Conduit Size / AWG Range	2" conduit / 4 – 4/0 AWG		
AC Inverter Conduit Size / AWG Range	1" conduit / 14 – 4 AWG		
AC Generator Input Conduit Size / AWG Range	1" conduit / 8 – 3 AWG		
Communication Conduit Size / AWG Range	3/4" conduit / 24 – 10 AWG		
Weight	73 / 33		lb / kg
Cooling	Fan (user replaceable)		
Noise	< 50		dBA
Operating Temperature Range	(-) 40 to (+) 122 / (-) 40 to (+) 50		°F / °C
Protection Rating	NEMA 3R, IP44		
Dimensions (H x W x D)	20.59 x 13.88 x 8.62 / 523.5 x 352.5 x 219		in / mm

A

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC

A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-7.5

SUNMODO
LEADING by DESIGN

SOLAR'S FASTEST ATTACHMENT

NanoMount®

Rafter or Deck Mount

Damaging roof shingles used to be one of solar installer's worst challenges.

Now, the easy, affordable solution is NanoMount®, SunModo's new and improved patented solar mounting innovation.

The mount eliminates the need for lifting shingles and dramatically reduces the installation time.

The NanoMount® Advantage

- ✓ The fastest roof attachment in solar.
- ✓ Versatile mounting options including Deck or Rafter mount.
- ✓ Eliminates the need to lift shingles and prevents damage to shingles.
- ✓ High-Velocity Hurricane Zone Approved - Passed TAS 100 (a) Wind-Driven Rain Test.
- ✓ All materials are compatible with asphalt shingles and single-ply roof membranes.

Key Features of NanoMount®

SUNMODO
LEADING by DESIGN

Technical Data

Application	Residential roof coverings, commercial single-ply roof membranes
Material	High grade aluminum, 304 stainless steel hardware
Finish	Black powder coating
Roof Attachment	Rafter and decking
Structural integrity	IBC and IRC Compliant MIAMI-DADE COUNTY APPROVED
Warranty	25 years

SunModo, Corp. Vancouver, WA., USA • www.sunmodo.com • 360.844.0048 • info@sunmodo.com

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR
DATE DRAWN	02/06/2025

PV-7.6

SunModo introduces the SMR Pitched Roof System, the best value pitched roof mounting system on the market.

With fast and easy Pop-On Clamps and L-Foot adaptors, professional installers can mount, adjust, and secure PV panels with a single tool.

Whether rafter or deck, portrait or landscape, the SMR System is the ideal solution for your solar installation. Save money on materials and installation time.

The SMR System Advantage

- ✓ The best value, best performing rail system on the market
- ✓ Lag-to-Panel single tool installation
- ✓ Pop-On universal clamps make installation fast, reliable and flexible
- ✓ A full range of roof attachments to meet every need
- ✓ Fastest install and lowest cost

Key Features of the SMR System

SUNMODO
LEADING by DESIGN

SMR 100 Rail
4' span or more up to 90 psf snow load or 190 mph winds

The SMR System represents a huge leap in racking technology.

Optimized design makes the SMR Rails not only the lightest but also the strongest rails on the market. One tool assembly and Pop-On technology allow fast and worry-free installation.

The cost and performance cannot be beaten.

Clamps & Grounding

Mid Clamp
The Bonding Pop-On Universal Mid Clamps accommodate PV module frame heights ranging from 30mm to 48mm. The fastest installing Mid Clamps on the market.

L Foot Adaptor
Fast and easy Pop-On L-Foot Adaptor speeds installation and eliminates old-fashioned T-Bolts. Install fast with full confidence in every attachment.

End Clamp
End Clamps are adjustable for different module frame heights and provide fast and secure attachment of modules.

Rail Splice
Structural bonding splice with fast and easy single bolt installation

Wire Management Clip
The clip attaches to the channel on the SMR rail to provide a neat and effective solution for PV wire management.

Grounding Lug
The Lug provides proper grounding of the PV System

Technical Data

Application	Pitched Roof
Roof Type	Composition shingle, Metal and Tile
Material	High grade aluminum and 304 stainless steel hardware
PV Modules	Compatible with all common module types
Module Orientation	Portrait and landscape
Roof Attachment	Rafter and decking
Structural Integrity	IBC compliant, stamped engineering letters available
Certificate	UL 2703 listed by ETL
Warranty	25 years

SunModo, Corp. Vancouver, WA., USA • www.sunmodo.com • 360.844.0048 • info@sunmodo.com

GENESIS SOLAR POWER

GOGENESIS SOLAR

6028 STONYBROOK CT,
TOPEKA,KS 66614
(913) 228-4495

info@gogenesissolar.com

DC SIZE: 10.200 KW DC
AC SIZE: 5.760 KW AC
A

DAVID CONLEY JR

1192 SW COYOTE CIR, FORT WHITE, FL 32038

REVISION	
DATE	REV
4/30/2025	A

RESOURCE DOCUMENTS

DRAWN BY	CDR	PV-7.7
DATE DRAWN	02/06/2025	