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Arnold Vinyard

9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024

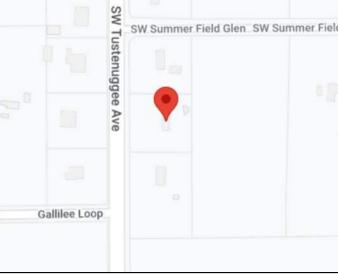
APN: 325S1709477112 SYSTEM SIZE: 6970 DC SYSTEM SIZE: 6000 AC

PROPERTY INFORMATION

SPECIFICATION PAGES

R-3/U

OWNER:	Arnold Vinyard
PHONE:	1386-965-5846
EMAIL:	arnoldvinyard85@gmail.com
CONTRACTOR:	BETTER EARTH
CONTRACTOR:	ELECTRIC INC.
PHONE:	(888) 373-9379
AUTHORITIES I	HAVING JURISDICTION
BUILDING:	LAKE CITY (FL)
UTILITY:	CLAY ELECTRIC COOPERATIVE
DESIGN SPECIF	ICATIONS





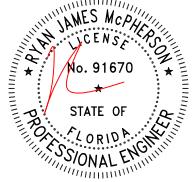
PROJECT DETAILS

CONSTRUCTION	:	V-B		INOULCI	DETAILS
NAME:		RESIDENTIAL	MODULE INFORMAT	TION	MOUNTING INFORMATION
SNOW LOAD:		0 PSF	MODULE QTY: 17	\	MOUNT FLASHING QTY: 32
WIND EXPOSURI	E:	С	MODULE MFG: QCEI		MOUNT FLASHING MFG: UNIRAC
WIND SPEED:		156 MPH	MODULE TYPE: Q.PEA	AK DUO BLK ML-G10+ 410	MOUNT FLASHING TYPE S-5! SOLARFOOT
ROOF SURFACE:		2073 SQ.FT.			
PV SQ FOOTAGE	:	359.1 SQ.FT.	INVERTER INFORMA	ATION	RAILING INFORMATION
PV COVERAGE:		17.32 %	INVERTER MFG:	SOLAREDGE	RAILING MFG: UNIRAC
WEIGHT OF EQU	IPMENT:	810.7 LBS	INVERTER QTY:	1	RAILING TYPE: UNIRAC SM LIGHT
WEIGHT PER AT	TACHMENT:	25.33 LBS	INVERTER MODEL:	6000H-US (ENERGY HUB)	
DISTRIBUTED W	EIGHT:	2.26 PSF			ENERGY STORAGE SYSTEM INFORMATION
NO. OF STORIES:	:	1	INVERTER TYPE:	RGM	BATTERY OTY: 1
FIRE SPRINKLER	RS:	NO	INVERTER VOLTAGE:	240V	BATTERY MFG: FRANKLIN WH
LOT INFORMAT	TION	•		~~~~~~	BATTERY TYPE: APOWER X - 13.6kWh
APN:	325S1709477112		POWER OPTIMIZER	INFORMATION \	EXISTING SOLAR INFORMATION - N/A
LOT AREA:	47044.8		OPTIMIZER QTY: 17		
	1248		OPTIMIZER MFG: SOI	LAREDGE <	

OPTIMIZER TYPE: S440

JURISDICTION STAMPS:





EXP. 2/28/25

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ADDITIONAL SCOPE OF WORK

MAIN PANEL UPGRADE: N/A

DERATE MAIN BREAKER: N/A

UPSIZE MAIN BREAKER: N/A

EV CHARGER: N/A

ESS: OUTDOORS ON EXTERIOR WALL - (1) FRANKLIN WH APOWER X AT 13.6kWh EACH

BATTERY TO BE INSTALLED AT LEAST 3' FROM WINDOWS, DOORS, VENTS, AND GAS.

ESS IS NOT SUBJECT TO VEHICLE IMPACT.

INSTALLER NOTES:

1248

LIVING AREA:

OCCUPANCY:



Roger Daydou

NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

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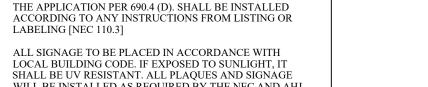
DRAWING TITLE:

001 CS

COVER SHEET

TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel SCALE:

GENERAL NOTES THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE 2020 NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION 3. ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4: PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 NEC REFERS SPECIFICALLY TO "UNGROUNDED" PV SYSTEMS. ALSO DESIGNATED AS "TRANSFORMERLESS" BY INVERTER MANUFACTURERS AND "NON-ISOLATED" BY UNDERWRITERS LABORATORY INVERTER(S) USED IN UNGROUNDED SYSTEM SHALL BE LISTED FOR THIS USE AS SPECIFIED BY THE AHJ, EQUIPMENT USED IN UNGROUNDED SYSTEMS LABELED ACCORDING TO NEC MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE. MAX DC VOLTAGE CALCULATED ACCORDING TO NEC ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3] ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH 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



- 10. SOLAR PV MODULES (PANELS) CANNOT BE INSTALLED OVER OR BLOCK ANY ATTIC VENTS, PLUMBING VENTS, FURNACE OR WATER HEATER VENTS ETC
- 11. 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
- 12. ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE. GROUND MOUNTED SYSTEMS, WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF OF THE ROOF SURFACE

JURISDICTION NOTES

PV SOURCE CIRCUIT(S) ARE TO BE SUNLIGHT-RESISTANT PV-WIRE AS PERMITTED BY CEC 690.31(B).

ALL DIRECT CURRENT CIRCUITS ARE TO BE INSTALLED IN METAL RACEWAY FROM THE POINT OF PENETRATION OF THE SURFACE OF THE BUILDING OR STRUCTURE TO THE MAIN SERVICE PANEL AS MANDATED BY NEC 690.31(E).

ELECTRICAL NOTES

- WEATHERPROOF J-BOX NEMA 3R.
- ROOFTOP CONDUIT SHALL BE A MINIMUM OF 7/8" ABOVE THE ROOF SURFACE.
- ALL WORK SHALL COMPLY WITH THE 2020 NATIONAL ELECTRICAL CODE AND 2020 FL STATE AMENDMENTS

CODE REFERENCES

2020 NATIONAL ELECTRIC CODE - NFPA 70 8TH EDITION 2020 FLORIDA BUILDING CODE - RESIDENTIAL 8TH EDITION 2020 FLORIDA BUILDING CODE - BUILDING 8TH EDITION 2020 FLORIDA BUILDING CODE - ENERGY 8TH EDITION 2020 FLORIDA BUILDING CODE - TEST PROTOCOL 8TH EDITION 2020 FLORIDA BUILDING CODE - PLUMBING 8TH EDITION 2020 FLORIDA BUILDING CODE - MECHANICAL 8TH EDITION 2020 FLORIDA BUILDING CODE - EXISTING BUILDING 8TH EDITION 2020 FLORIDA BUILDING CODE - FUEL GAS 8TH EDITION 2020 FLORIDA BUILDING CODE - ACCESSIBILITY 8TH EDITION 2020 FLORIDA FIRE PREVENTION CODE FAIR HOUSING GUIDELINES

UTILITY NOTES

CONSTRUCTION NOTES

JURISDICTION STAMPS:

- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R RATING.
- ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
- THE SOLAR INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING OR MECHANICAL VENTS.
- A LADDER WILL BE IN PLACE FOR INSPECTIONS IN COMPLIANCE WITH OSHA REGULATIONS.
- MODULE MOUNTING STRUCTURE WILL BE TIED DIRECTLY INTO STRUCTURAL ELEMENTS OF SINGLE FAMILY DWELLING ROOF TRUSSES / RAFTERS OR BEAMS ACCORDING TO MOUNTING STRUCTURE DIRECTIONS.
- ROOF COVERING PENETRATIONS SHALL BE DESIGNED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH BUILDING CODE AND THE APPROVED MANUFACTURER'S INSTRUCTIONS SUCH THAT THE ROOF COVERINGS SHALL SERVE TO PROTECT THE BUILDING STRUCTURE.
- CONDUIT, WIRING SYSTEMS, AND RACEWAYS FOR PHOTOVOLTAIC CIRCUITS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE RIDGE, HIP, OR VALLEY. THIS EQUIPMENT SHALL ALSO BE LOCATED AS CLOSE AS POSSIBLE TO AN OUTSIDE WALL TO REDUCE TRIP HAZARDS AND MAXIMIZE VENTILATION OPPORTUNITIES.
- MODULES MUST HAVE 6" CLEARANCE FROM ALL VENTS AND OBSTRUCTIONS.

EXP. 2/28/25

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BETTER EARTH ELECTRIC INC. 4040 N COMBEE ROAD, STE. 12

NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

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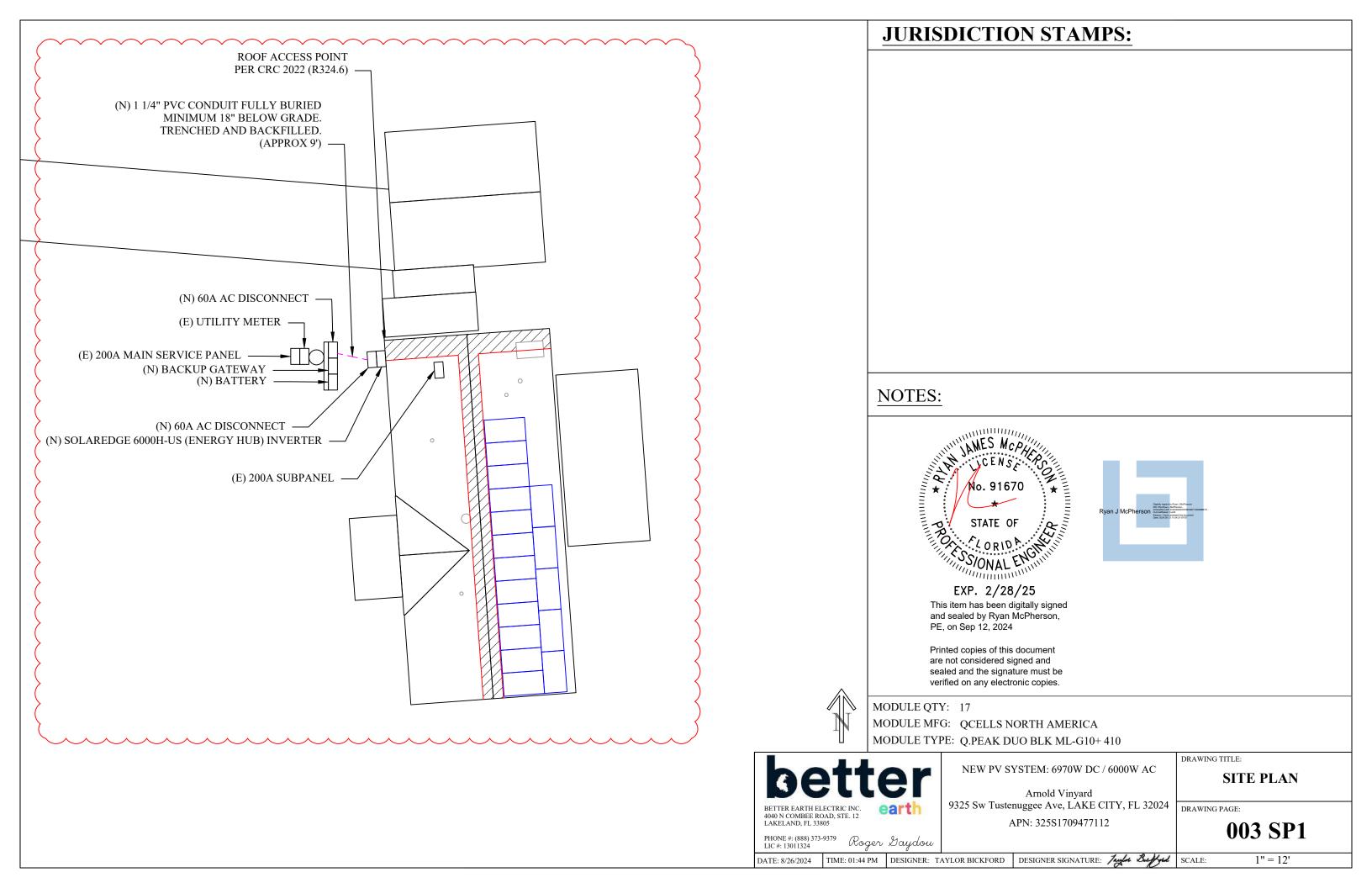
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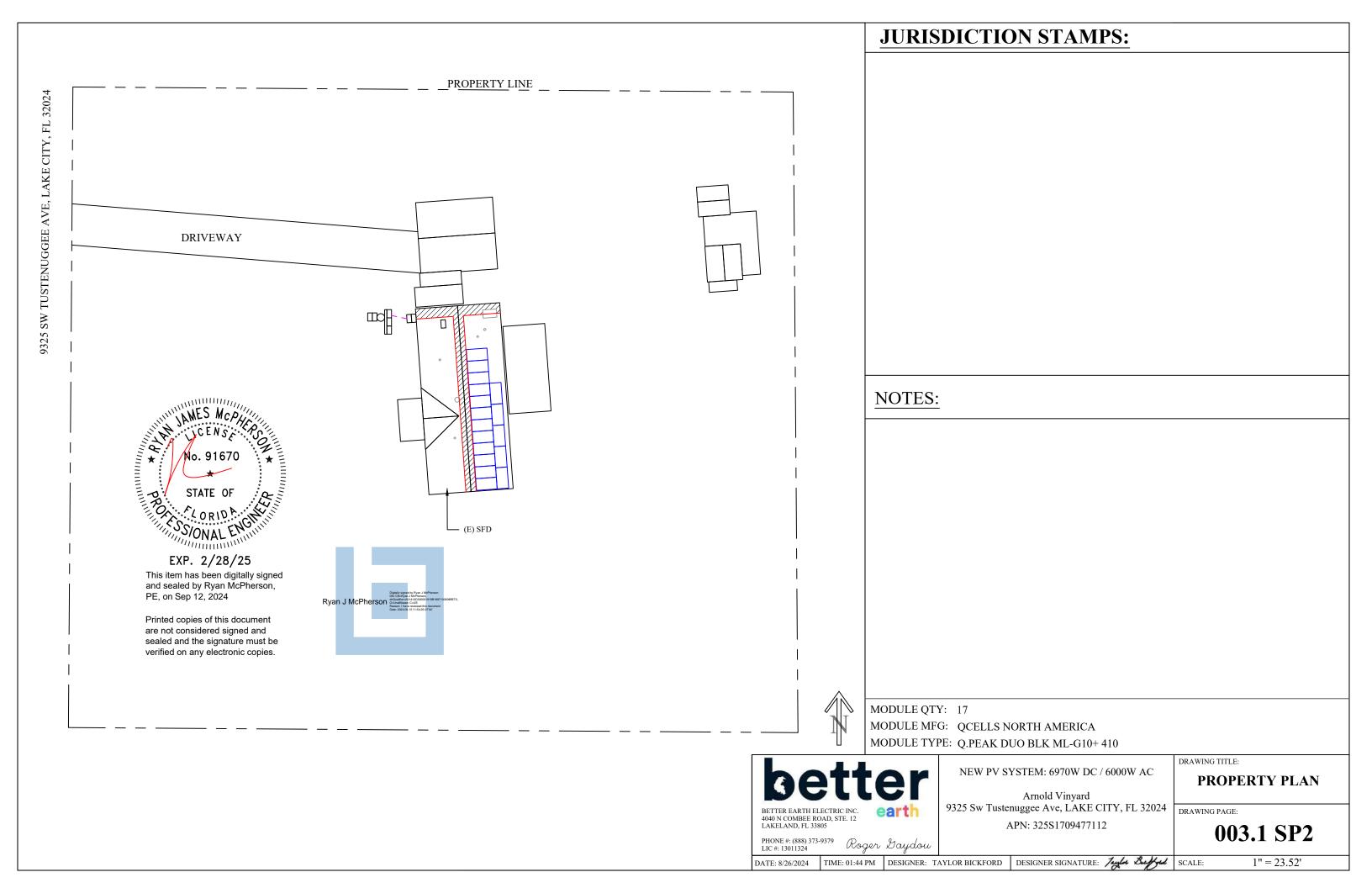
002 NS1

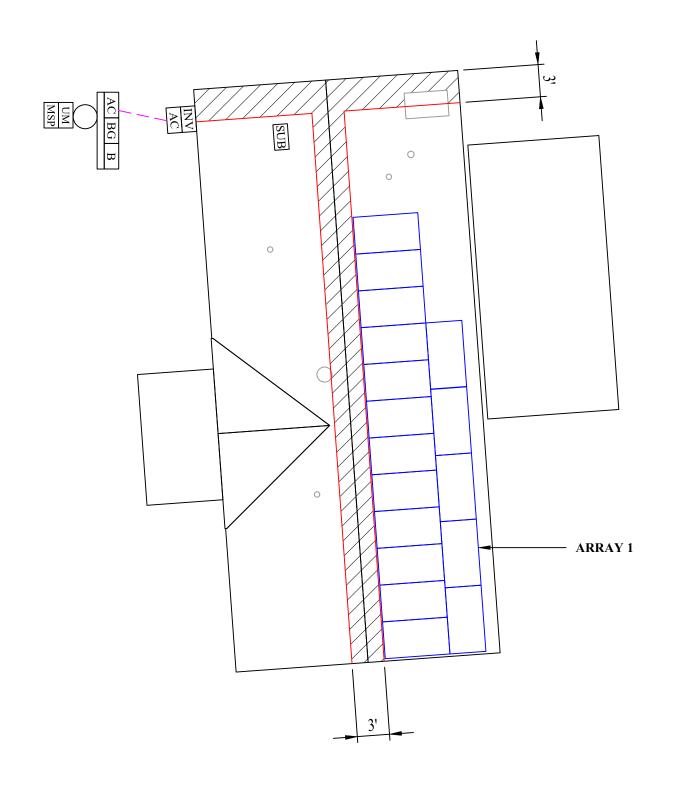
NOTES SHEET

DATE: 8/26/2024

Roger Daydou TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: Julie Buffiel





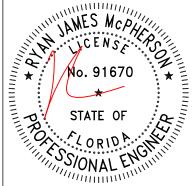


ROOF DETAILS:

ARRAY 1: MODULE QTY: 17 TILT: AZIMUTH: MATERIAL: Metal Corrugated/Tin

JURISDICTION STAMPS:





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LEGEND:

MSP (E) 200A MAIN SERVICE PANEL UM UTILITY METER (IF SEPARATED)

INV (N) SOLAREDGE 6000H-US (ENERGY HUB) INVERTER

SUB SUB PANEL B BATTERY

AC COMBINER PANEL BACKUP GATEWAY

AC DISCONNECT EV EV CHARGER

DC DISCONNECT JUNCTION BOX JB

PV PV METER FIRE CODE SETBACK

PVC TRENCH

CONDUIT RUN TO BE DETERMINED IN FIELD



NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

ROOF PLAN

DRAWING TITLE:

004 RP1

(E) SOLAR MODULE

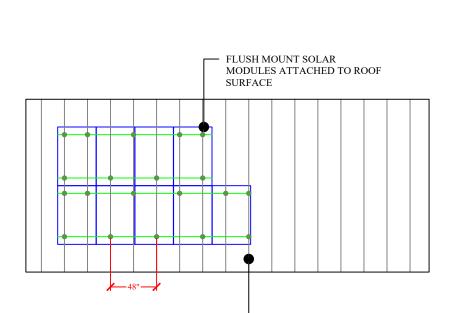
EMT CONDUIT

DATE: 8/26/2024 TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: Julia Bufful SCALE:

1'' = 8.93'

ATTACHMENT DETAIL (4) 1/4"-14 'HWH SELF **TÁPPING TEK SCREWS** W/ 1.5" MIN. EMBED INTO ROOF FRAMING **General Notes:** 1. SolarFoot

TYP ROOF ATTACHMENT PLAN



2x2 TRUSS

@ 24" O.C.

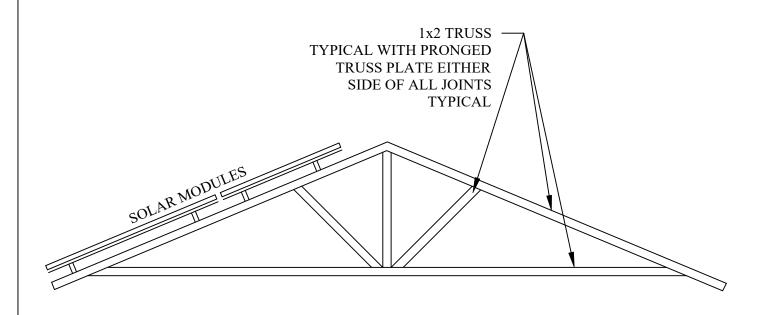
JURISDICTION STAMPS:

FRONT VIEW TYP FRAMING DETAIL

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

2. M8-1.25 Stainless Steel Hex Flange Nut (13mm Socket)

4. Example roof



SONAL ENG EXP. 2/28/25

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INSTALLER NOTES:



NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

RACKING & FRAMING DETAILS

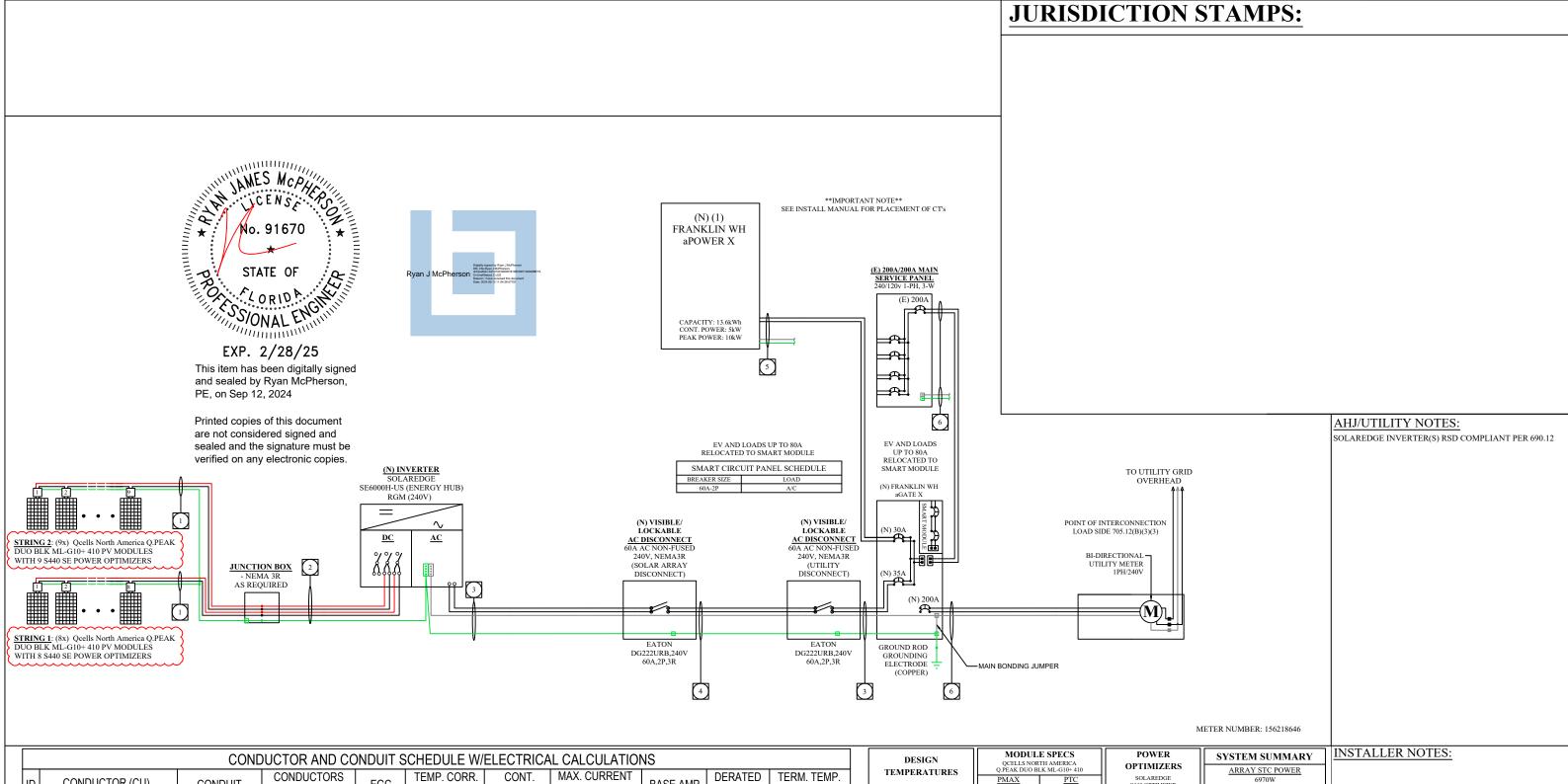
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DRAWING TITLE:

005 RF1

DATE: 8/26/2024

TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel SCALE:



	CONDUCTOR AND CONDUIT SCHEDULE W/ELECTRICAL CALCULATIONS												
ID	CONDUCTOR (CU)	CONDUIT	CONDUCTORS IN CONDUIT	EGC	TEMP. CORR. FACTOR	CONT. CURRENT	MAX. CURRENT (125%)	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING			
1	#10 PV Wire, in open air	N/A	N/A	#6	0.91	15	18.75	40	36.4	90			
2	#10 THWN-2, in conduit	3/4" EMT	4 & (1)G	#8	0.91	15	18.75	40	36.4	90			
3	#8 THWN-2, in conduit	3/4" EMT	3 & (1)G	#8	0.91	25	31	55	55	90			
4	#8 THWN-2, in conduit (18" UG)	1 1/4" PVC	3 & (1)G	#8	0.91	25	31	55	55	90			
5	#10 THWN-2, in conduit	3/4" EMT	3 & (1)G	#8	0.91	21	26	40	36.4	90			
6	2/0 THWN-2, in conduit	2" PVC	3 & (1)G	#4	0.91			195	177.45	90			

L			<u></u>
-3-C		FF. OF VOC 122	1[
ASHRAE EXTREME LOW	<u>VOC</u> 45.37V	<u>VMP</u> 37.64V	
ASHRAE 2% HIGH 37°C	<u>ISC</u> 11.2A	<u>IMP</u> 10.89A	

SOLAREDGE S440 OPTIMIZER ARRAY PTC POWER RATED INPUT MAX OUTPU 15A MAX AC CURRENT MAX ISC MAX DC 60V MAX AC POWER

BETTER EARTH ELECTRIC INC. 4040 N COMBEE ROAD, STE. 12 LAKELAND, FL 33805

PHONE #: (888) 373-9379 Roger Daydou NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

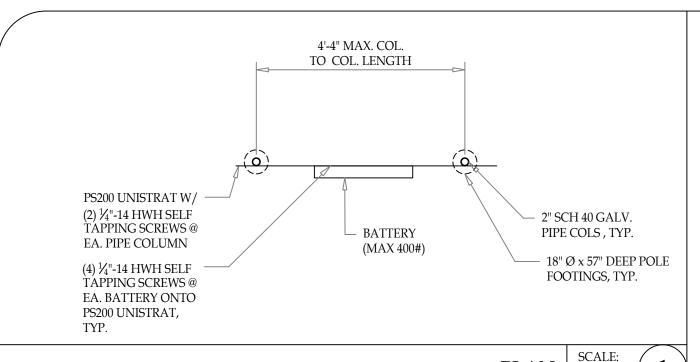
LINE DIAGRAM & **DESIGN TABLES**

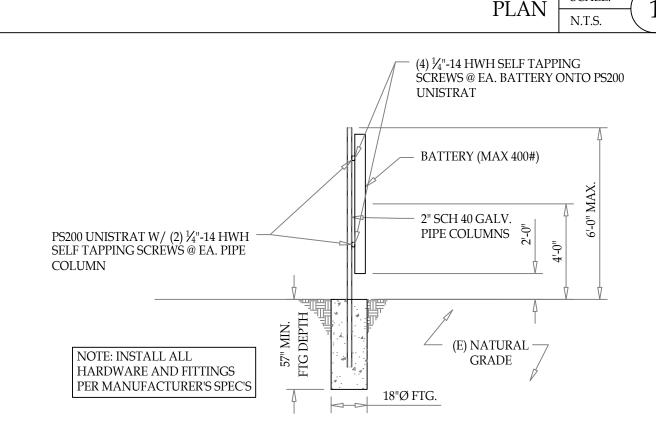
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006 LD1

DATE: 8/26/2024 TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Bufful SCALE:





FOUNDATION NOTES:

- 1. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL OR BUILDING DEPARTMENT APPROVED COMPACTED FILL.
- 2. ALL FOOTING STEEL SHALL HAVE 3" MINIMUM CLEARANCE TO EARTH.
- 3. SOIL SHALL HAVE A MINIMUM BEARING VALUE OF 1,500 P.S.F. OR PER APPROVED GEOTECHNICAL RECOMMENDATIONS.
- 4. SHOULD UNUSUAL OR UNEXPECTED SOIL CONDITIONS BE ENCOUNTERED, A GEOTECHNICAL ENGINEER SHOULD BE NOTIFIED TO PROVIDE ADDITIONAL RECOMMENDATIONS.

CONCRETE NOTES:

- 1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 P.S.I. @ 28 DAYS UNLESS NOTED.
- 2. KEEP CONCRETE DAMP CONTINUOUSLY FOR 14 DAYS.
- 3. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C 33.
- 4. WATER USED IN CONCRETE SHALL BE CLEAN AND FREE FROM DELETERIOUS SUBSTANCES.
- 5. HYDRATED LIME SHALL CONFORM TO ASTM C 51.
- 6. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO CBC/IBC CHAP. 19 DIV. II AND BE TYPE I OR II.
- 7. NO ADMIXTURES OF ANY KIND ARE ALLOWED WITHOUT APPROVAL FROM THIS OFFICE PRIOR TO CONSTRUCTION.
- 8. SHOULD PROVISIONS FOR SEVERE SULFATE EXPOSURE BE REQUIRED BY THE BUILDING AUTHORITY, CONCRETE IN CONTACT WITH SOIL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 P.S.I. TYPE V CEMENT, AND A WATER/CEMENT RATIO OF 0.45.

DESIGN CRITERIA:

- FBC 2023
- CONCRETE: 2,500 P.S.I.
- STEEL: SCH 40 ASTM A53 GRADE B
- DEAD LOAD: 400 LBS
- S_s: 0.081
- S₁: 0.049
- SITE CLASS: D
- S.D.C.: D
- M.L.F.R.S.: CANTILEVER STEEL COL
- R: 2.0
- RISK CATEGORY: I
- WIND SPEED: 156M.P.H.
- EXPOSURE CATEGORY: C

GENERAL NOTES:

- 1. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER DRAWING SCALE.
- 2. THIS PLAN IS NOT INTENDED TO BE APPLICABLE FOR NON STRUCTURAL ITEMS INCLUDING BUT NOT LIMITED TO ELECTRICAL, WATERPROOFING, DRAINAGE, OR CONCRETE DECKING ON GRADE.
- 3. CONTRACTOR OR OWNER SHALL VERIFY AND IS ULTIMATELY RESPONSIBLE FOR ALL FIELD CONDITIONS AND DIMENSIONS AT THE JOB SITE. IF THE SITE CONDITIONS CHANGE OR ARE NOT AS SHOWN, CONTRACTOR OR OWNER SHALL CONTACT THE ENGINEER BEFORE CONSTRUCTION.
- 4. NO DEVIATIONS FROM STRUCTURAL DETAILS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. APPROVAL BY THE CITY INSPECTOR/PLAN REVIEWER DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM PLANS OR SPECIFICATIONS.
- 5. OWNER, ARCHITECT OR CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND CHECKING STRUCTURAL PLANS AND DETAILS HEREIN FOR CORRECTNESS OF DESIGN INTENT PRIOR TO SUBMITTING FOR PERMIT, INITIATION OF WORK OR ORDERING OF MATERIALS. VARIANCES OR ERRORS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING.
- 6. THE PLANS AND SPECIFICATIONS REPRESENT THE COMPLETED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO BRACING, SHORING, AND DEMOLITION.
- 7. CONTRACTOR TO VERIFY WITH THE ENGINEER ANY CHANGES MADE TO THE PROJECT THAT DEVIATE FROM THIS PLAN PRIOR TO CONSTRUCTION.



McPHERSON ENGINEERING

RYAN JAMES McPHERSON, P.E. 9240 LIMONITE AVE, JURUPA VALLEY, CA 92509 (909) 566-0066 SE@MCPE.GROUP

PROJECT LOCATION:

THE VINYARD RESIDENCE

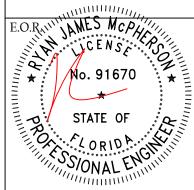
9325 SW TUSTENUGGEE AVE, LAKE CITY, FL 32024

PROJECT DESCRIPTION:

FREESTANDING BATTERY STRUCTURE

SHEET DESCRIPTION:

NOTES & PLAN



EXP. 2/28/25

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N.T.S.

SCALE:

N.T.S.

LABELING PLAN

WARNING: PHOTOVOLTAIC POWER SOURCE

[690.31(D)(2)] PLACE ON JUNCTION BOXES AND CONDUIT EVERY 10'

DC DISCONNECT

DC PHOTOVOLTAIC POWER SOURCE

IMUM SYSTEM VOLTAGE: AXIMUM CIRCUIT CURRENT: 25 AMPS MAX RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER 15 AMPS OR DC-DC CONVERTER

[690.53] AT EACH DC DISCONNECT MEANS (INVERTER 1)

WARNING! ELECTRIC SHOCK HAZARD MINALS ON BOTH LINE AND LO (3)

> [690.13(B)] PLACE THIS LABEL ON ALL DISCONNECTING MEANS WHERE ENERGIZED IN AN OPEN POSITION

RAPID SHUTDOWN SWITCH (4)FOR SOLAR PV SYSTEM

[690.56(C)(2)] PLACE ON INVERTER

AC DISCONNECT AC PHOTOVOLTAIC POWER SOURCE (5)AX AC OPERATING CURRENT: 25A MAX

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

THIS PANEL IS FED BY MULTIPLE SOURCES (UTILITY & SOLAR)

> [690.64(B)(4)] PLACE LABEL ON ALL EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTORS SUPPLIED FROM MULTIPLE SOURCES

PLACE THIS LABEL AT P.O.C. TO SERVICE DISTRIBUTION EQUIPMENT (I.E. MAIN PANEL AND SUBPANEL IF APPLICABLE)

AC DISCONNECT (8) C PHOTOVOLTAIC POWER SOURCE

[690.14(C)(2)] PLACE ON AC DISCONNECT

WARNING! 9 OTAL RATING OF ALL OVERCURRENT

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

V SOLAR BREAKER (11)DO NOT RELOCATE THIS OVERCURRENT

> LABEL LOCATED INSIDE PANEL NEXT TO PV BREAKER

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. [690.56(C)]

<u>LABELING NOTES:</u>
1.1 LABELING REQUIREMENTS BASED ON THE NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD

1910.145, ANSI Z535. 12 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.

PROPERTY MAP

6"X6" DISCONNECT DIRECTORY PLAQUE INSTALL AT MAIN SERVICE PANEL

NOTES:

FORMAT

1. WHITE LETTERING ON A RED BACKGROUND

2. MINIMUM 3/8 INCHES LETTER HEIGHT

JURISDICTION STAMPS:

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**

ADDITIONAL PLACARDS FOR ENERGY STORAGE SYSTEM

ENERGY STORAGE SYSTEM DISCONNECT

PLACE ON ACCESSIBLE ESS DISCONNECT

BACKUP LOAD CENTER [NEC 408.4] PLACE ON BACKUP LOAD CENTER

CAUTION DO NOT ADD NEW LOADS

[NEC 220] PLACE ON BACKUP LOAD CENTER

ONLY 1 REQUIRED

[312.8(A)(3)] PLACE ON MAIN PANEL IF POINT

CAUTION TRI POWER SOURCE.

[705.12(D)(3)] PLACE ON MAIN PANEL IF PV SYSTEM IS ALSO CONNECTED TO PANEL

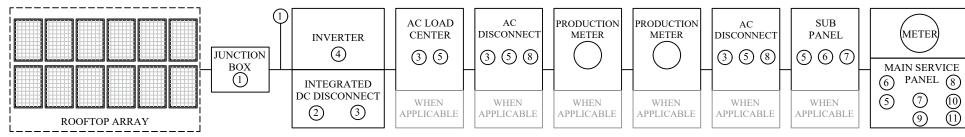
PLACE ON MAIN PANEL IF ESS IS IN LINE OF SIGHT PLACE ON MAIN PANEL IF ESS IS ON ADJACENT WALL

PLACE ON MAIN PANEL IF ESS IS ON OPPOSITE WALL

Mo. 91670 STATE OF CORIDA SONAL ENG EXP. 2/28/25

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NEW PV SYSTEM: 6970W DC / 6000W AC

Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 APN: 325S1709477112

DRAWING TITLE: PLACARD & PLACARD MAP

DRAWING PAGE:

007 PP1

DATE: 8/26/2024

TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel



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		BETTER EARTH ELECTRIC INC. 62 TT 9323 SW TUSTEN	uggee Ave, LAKE CITY, FL 32024 PN: 325S1709477112	DRAWING PAGE
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# NALYSIS

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OB HAZARD ANALYSIS

09 JH1

DATE: 8/26/2024 TIME: 01:44 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: Taylor Buffel TEMPLATE VERSION: B41

# Q.PEAK DUO BLK ML-G10+ SERIES



385-410 Wp | 132 Cells 20.9% Maximum Module Efficiency

MODEL Q.PEAK DUO BLK ML-G10+





6 busbar 12 busbar cell technology cell technology



### Breaking the 20% efficiency barrier

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.



### A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty¹.



### **Enduring high performance**

Long-term yield security with Anti LeTID Technology, Anti PID Technology² and Hot-Spot Protect.



### Extreme weather rating

High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



### Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



# The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry. The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

¹ See data sheet on rear for further information. ² APT test conditions according to IEC/TS 62804-1:2015, method A (-1500 V, 96 h)

The ideal solution for:







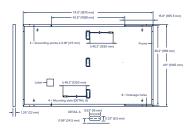




### Q.PEAK DUO BLK ML-G10+ SERIES

### ■ Mechanical Specification

Format	74.0 in × 41.1 in × 1.26 in (including frame) (1879 mm × 1045 mm × 32 mm)
Weight	48.5 lbs (22.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥49.2 in (1250 mm), (-) ≥49.2 in (1250 mm)
Connector	Stäubli MC4; IP68

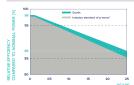


### ■ Electrical Characteristics

C	WER CLASS	385   390   395   400   405	410						
MIN	NIMUM PERFORMANCE AT STANDARD TEST COM	NDITIONS, ST	C1 (POWER 1	OLERANCE +5\	V/-0W)				
	Power at MPP ¹	P _{MPP}	[W]	385	390	395	400	405	410
. '	Short Circuit Current ¹	I _{sc}	[A]	11.04	11.07	11.10	11.14	11.17	11.20
	Open Circuit Voltage ¹	V _{oc}	[V]	45.19	45.23	45.27	45.30	45.34	45.37
	Current at MPP	I _{MPP}	[A]	10.59	10.65	10.71	10.77	10.83	10.89
	Voltage at MPP	V _{MPP}	[V]	36.36	36.62	36.88	37.13	37.39	37.64
	Efficiency ¹	η	[%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6	≥20.9

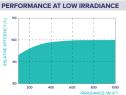
IVIII	NIMOM PERFORMANCE AT NORMAL OPERATING C	ONDITION	5, NIMOT						
mnum.	Power at MPP	P _{MPP}	[W]	288.8	292.6	296.3	300.1	303.8	307.6
	Short Circuit Current	I _{sc}	[A]	8.90	8.92	8.95	8.97	9.00	9.03
	Open Circuit Voltage	Voc	[V]	42.62	42.65	42.69	42.72	42.76	42.79
Ē	Current at MPP	I _{MPP}	[A]	8.35	8.41	8.46	8.51	8.57	8.62
	Voltage at MPP	V _{MPP}	[V]	34.59	34.81	35.03	35.25	35.46	35.68

### Qcells PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective



indard terms of guarantee for the 5 PV companies with the

Typical module performance under low irradiance conditions in

TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of V _{oc}	β	[%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.34	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3°C)

### ■ Properties for System Design

Maximum System Voltage	$V_{\text{sys}}$	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	20	Fire Rating based on ANSI/UL 61730	TYPE 2
Max. Design Load, Push/Pull ³		[lbs/ft ² ]	75 (3600 Pa)/55 (2660 Pa)	Permitted Module Temperature	-40°F up to +185°F
Max. Test Load. Push/Pull ³		[lbs/ft²]	113 (5400 Pa) / 84 (4000 Pa)	on Continuous Duty	(-40°C up to +85°C)

■ Qualifications and Certificates

UL 61730. CE-compliant.

Quality Controlled PV - TÜV Rheinland, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9,893,215 (solar cells),

3 See Installation Manual









# SolarEdge Home Hub Inverter

### For North America

SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US⁽¹⁾



### Optimized battery storage with HD-Wave technology

- Record-breaking 99% weighted efficiency with 200% DC oversizing
- Small, lightweight, and easy to install
- Modular design, future ready with optional
  - DC-coupled storage for full or partial home
  - Built-in consumption monitoring

solaredge.com

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, NEC 2017 and NEC 2020, per article 690.11 and 690.12
- Embedded revenue grade production data, ANSI C12.20 Class 0.5



# / SolarEdge Home Hub Inverter

### For North America

SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US(1)

Applicable to inverters with part number		SEXXXXH-I	JSSNBBXX4		SE11400H – XXXXXBXX5					
	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units				
OUTPUT – AC ON GRID										
Rated AC Power	3800 @ 240V 3300 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208	W				
Maximum AC Power Output	3800 @ 240V 3300 @ 208V	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208	W				
AC Frequency Range (min - nom - max)			59.3 - 60 - 60.5 ⁽²⁾			Hz				
Maximum Continuous Output Current @ 240V	16	25	32	42	47.5	Α				
Maximum Continuous Output Current @ 208V	16	24	-	-	48.5	Α				
GFDI Threshold			1			A				
Total Harmonic Distortion (THD)			< 3			%				
Power Factor		1	l, adjustable -0.85 to 0.8	35						
Utility Monitoring, Islanding Protection, Country Configurable Thresholds		Yes								
Charge Battery from AC (if allowed)			Yes							
Typical Nighttime Power Consumption	l		< 2.5			W				
OUTPUT – AC BACKUP ⁽³⁾										
Rated AC Power in Backup Operation ⁽⁴⁾	3800 7600*	6000	7600 10300*	10300	10300	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	16	25	32	43	43	А				
Operation	32*	23	43*	43	43	А				
GFDI			1			A				
THD			< 5			%				
OUTPUT - SOLAREDGE HOME EV CHA	ARGER 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 15200*	12000	15200 22800*	22000	22800	W				
Maximum DC Power @ 208V	6600	10000	-	-	20000	W				
Maximum Input Current ⁽⁵⁾ @ 240V	10.5 20*	16.5	20 31*	27	31	Adc				
Maximum Input Current ⁽⁵⁾ @ 208V	9	13.5	-	-	27	Adc				
Max. Input Short Circuit Current			45							
Maximum Inverter Efficiency			99.2			%				
CEC Weighted Efficiency		ç	99		99 @ 240V 98.5 @ 208V	%				
2-pole Disconnection			Yes		30.3 G 200V					

^{*} Supported with PN SExxxH-USMMxxxxx or SExxxH-USMNxxxxxx.

⁽¹⁾ These specifications apply to inverters with part numbers SExxxx1-USSMxxxx or SExxxx1-USSNxxxx 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) Rated AC power in Backup Operation is valid for installations with multiple inverters. For a single backup inverter operation, rated AC power in Backup is 90% of the value stated.

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

# / SolarEdge Home Hub Inverter

### For North America

SE3800H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US(1)

Applicable to inverters with part number	SEXXXXH-USSNBBXX4				SE11400H – XXXXXBXX5	
	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units
OUTPUT – DC (BATTERY)		,	"		,	
Supported Battery Types		SolarEdo	ge Home Battery, LG RE:	SU Prime ⁽⁶⁾		
Number of Batteries per Inverter		Up to 3 SolarEd	lge Home Battery, up to	2 LG RESU Prime		
Continuous Power ⁽⁷⁾	7600		10	000		W
Peak Power ⁽⁷⁾	7600		10	000		W
Max Input Current	20		2	6.5		Adc
2-pole Disconnection			Yes			
SMART ENERGY CAPABILITIES						
Consumption Metering			Built-in ⁽⁸⁾			
Backup & Battery Storage	With Ba	ackup Interface (purcha	sed separately) for servi	ice up to 200A; up to 3 i	nverters	
EV Charging		Direct conn	ection to SolarEdge Hon	ne EV Charger		
ADDITIONAL FEATURES						
Supported Communication Interfaces	RS48	35, Ethernet, Cellular ⁽⁹⁾ ,	Wi-Fi (optional), SolarEo	dge Home Network (opt	ional)	
Revenue Grade Metering, ANSI C12.20		Built-in ⁽⁸⁾				
Integrated AC, DC and Communication		Yes				
Connection Unit	14801.01					
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi Access Point for local connection  Yes, according to NEC 2014, NEC 2017 and NEC 2020 690.12					
DC Voltage Rapid Shutdown (PV and Battery)  STANDARD COMPLIANCE		res, according to	NEC 2014, NEC 2017 ar	IG NEC 2020 690.12		
Safety	UL17			B, UL1998, UL9540, CSA	22.2	
Grid Connection Standards		IEE	E1547-2018, Rule 21, Rul	e 14H		
Emissions			FCC part 15 class B			
INSTALLATION SPECIFICATIONS						
AC Output and EV AC Output Conduit Size / AWG Range			1" maximum / 14-4 AW	G		
DC Input (PV and Battery) Conduit Size / AWG Range			1" maximum / 14-6 AW	G		
			17.7 x 14.6 x 6.8 /			
Dimensions with Connection Unit (H x W x D)	17.7 x 14.6 v 6.8	/ 450 x 370 x 174	450 x 370 x 174	21.06 x 14.6 x 7.3 /	21.06 x 14.6 x 8.2 /	in/
omensors was connection one (17, 17, 12)	11.1 X 11.0 X 0.0 )	, 130 x 370 x 11 1	17.7 x 14.6 x 6.8 / 450 x 370 x 174*	535 x 370 x 185	535 x 370 x 208 ⁽¹⁰⁾	mm
Weight with Connection Unit	26/	11.8	26 / 11.8 41.7 / 18.9*	41.7 / 18.9	44.9 / 20.3(10)	lb/kg
	< 25					
Noise	< 25 < 50* < 50*			dBA		
Cooling			Natural Convection			
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽¹¹⁾				*F/*	
Protection Rating			NEMA 4			

⁽⁶⁾ The part numbers SExxxxH-USxMxxxxx only support the SolarEdge Home Battery. The part numbers SExxxx+USxNxxxx support both SolarEdge Home Battery and LG RESU Prime batteries. Requires supporting inverter firmware.



⁽⁷⁾ Discharge power is limited up to the inverter rated AC power for on-grid and backup applications.

⁽⁸⁾ For consumption metering current transformers should be ordered separately: SECT-SPL-225A-T-20 or SEACT0750-400NA-20 units per box.

Revenue grade metering is only for production metering.

⁽II) SEH400H-U5xxxxxx is the Data Plan's terms & conditions is available in the following link: SolarEdge Communication Plan Terms and Conditions)
(III) SEH400H-U5xxxxxxx is the updated PN; though SEH400H-U5xxxxxxx will still be available. All specifications are similar for both models, EXCLUDING the weight and dimensions [HxWxD]; The

weight and dimensions of SE1400H-USxxx8xx8 are 17.6 [kg] and 21.06-14.6-7.3 ( 535-370-188 [in/mm], accordingly.

(11) Full power up to at least 50°C / 122°F; for power de-rating information refer to the Temperature De-Rating Technical Note for North America.

# **Power Optimizer**

### For North America

S440 / S500 / S500B / S650B



### 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



# / Power Optimizer

### For Residential Installations

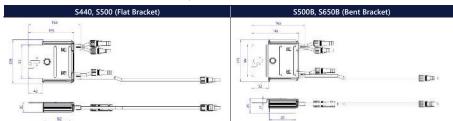
S440 / S500 / S500B / S650B

	S440	S500	S500B	S650B	UNIT
INPUT	· · · · · · · · · · · · · · · · · · ·			,	
Rated Input DC Power ⁽¹⁾	440		500	650	W
Absolute Maximum Input Voltage (Voc)	60		125	85	Vdc
MPPT Operating Range	8 - 60	)	12.5 - 105	12.5 - 85	Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5		15		Adc
Maximum Efficiency		9	19.5		%
Weighted Efficiency		9	18.6		%
Overvoltage Category			II		
OUTPUT DURING OPERATION					
Maximum Output Current			15		Adc
Maximum Output Voltage	60		8	30	Vdc
<b>OUTPUT DURING STANDBY (POWER OPTIMIZER</b>	DISCONNECTED FF	ROM INVERTER	OR INVERTER OF	F)	
Safety Output Voltage per Power Optimizer	1 ± 0.1				Vdc
STANDARD COMPLIANCE(2)					
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 21	100-712:2018-12		
INSTALLATION SPECIFICATIONS					
Maximum Allowed System Voltage		1	000		Vdc
Dimensions (W x L x H)	129 x 155 :	x 30	129 x 1	165 x 45	mm
Weight	720		7	90	gr
Input Connector		M	C4 ⁽³⁾		
Input Wire Length			0.1		m
Output Connector		N	AC4		
Output Wire Length	(+) 2.3, (-) 0.10		· · · · · · · · · · · · · · · · · · ·	m	
Operating Temperature Range ⁽⁴⁾	·	-40	to +85	·	*C
Protection Rating	IP68				
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 details about CE compliance, see <u>Declaration of Conformity ~ CE</u>.

Power Ontimizers Temperature De-Rating Technical Note for details

PV System Design Usi	ng a SolarEdge Inverter ⁽⁵⁾	SolarEdge Home Wave Inverter Single Phase	SolarEdge Home Short String Inverter Three Phase	Three Phase for 230/400V Grid	Three Phase for 277/480V Grid	
Minimum String Length	S440, S500	8	9	16	18	
(Power Optimizers)	S500B, S650B	6	8	1	4	
Maximum String Length (Power Optimizers)		25	20	50		
Maximum Continuous Pow	er per String	5700	5625	11,250	12,750	W
	ted Power per String ⁽⁶⁾ naximum is permitted only when the between strings is 2,000W or less)	6800 ⁽⁷⁾	See ⁽⁶⁾	13,500	15,000	W
Parallel Strings of Different	Lengths or Orientations	Yes				



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⁽³⁾ For other connector types please contact SolarEdge.
(4) Power de-rating is applied for ambient temperatures above +85°C for S440 and S500, and for ambient temperatures above +75°C for S500B. Refer to the

⁽⁶⁾ If the inverter's rated AC power s maximum continuous power per string, then the maximum connected power per string will be able to reach up to the inverters maximum input DC power. Refer to the

### FRANKLINWH

### aGate

### Intelligent energy management system

Serves as the controller for all home power sources by interconnecting solar, grid, batteries, and a standby generator to supply electricity to the home. Seamlessly transitions the home supply from grid power to backup power so that always-on appliances, such as the refrigerator and network router, will not be affected when grid goes down.



- ✓ Micro-grid interconnect device (MID)
- ✓ Integrated PV and grid metering
- ✓ Auto load-shedding

### PERFORMANCE SPECIFICATIONS

Coupling	AC-coupled
Nominal AC Voltage	120 / 208 V, 120 / 240 V, 60 Hz
Phase	2 W+N+PE
aPower Over Current Protection Devi	ce 100 A Max
Solar Input Over Current Protection D	Nevice 80 A Max
Backup Load Port Over Current Prote Device	ction 200 A Max
Generator Over Current Protection De	evice ¹ 200 A Max
Smart Circuits Over Current	Opt. a 1 × 80 A Max @ 208 V / 240 V & 1 × 50 A Max @ 208 V / 240 V
Protection Device ²	Opt. b 1 × 80 A Max @ 208 V / 240 V & 2 × 50 A Max @ 120 V
Maximum Supply Fault Current	20 kA
Busbar Rating	280 A
Work Modes	Self-Consumption, Time of Use, Emergency Backup
Communications	Ethernet / 4G / Wifi
User Interface	FranklinWH App
Warranty	12 years

### COMPLIANCE INFORMATION

Certifications	UL 1741³, UL 1741 PCS³, UL 67³, UL 869A³, UL 916³, CAN/CSA C22.2 No. 107.1-16, CSA C22.2 No. 29, CSA C22.2 No. 0.19
Seismic	AC 156, OSHPD, IEEE 693-2005 (high)
Environmental	California Proposition 65 RoHS Directive 2011 / EU
Emissions	ECC Part 15 Class B ICES 003

- Generator Module is optional.
- . Smart circuit module is optional. . Sections from these standards were used during the safety evaluation and included in the UL 1741 listin

- ✓ Compatible with micro and string solar inverter
- ✓ Optional Smart-Circuits Module
- ✓ Optional Generator Module

 $\frac{\text{Dimensions} \left( \text{H} \times \text{W} \times \text{D} \right)}{\text{Weight}}$ 

### MECHANICAL SPECIFICATIONS

Mounting		Wall mount or floor mount
21.7 in (550 mm) (550 mm) (550 mm)	6.3 in (160 mm)	217 in (S50 mm) (60 mm) (60 mm)

31.5 in × 21.7 in × 6.3 in (800 mm × 550 mm × 160 mm)

50 lb (23 kg)

### **ENVIRONMENTAL SPECIFICATIONS**

Enclosure Type	NEMA 3R
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Operating Humidity (RH)	Up to 100% RH, condensing
Altitude	Maximum 9,843 ft (3,000 m)
Environment	Indoor and outdoor rated

### FRANKLINWH

### aPower

### AC-coupled battery

Store solar generated power while the sun is shining. Use the stored energy when needed to lower electric bills. Run heavy loads such as air conditioners and water heaters as usual even during grid outages. Provide homeowner peace of mind by fully charging before severe weather events.



- ✓ Safe LFP chemistry
- ✓ Built-in inverter
- ✓ 13.6 kWh per unit, up to 204 kWh (15 units) per aGate
- ✓ 5 kW continuous / 10 kW peak for 10s (discharge)

### PERFORMANCE SPECIFICATIONS

Battery Chemistry	Lithium Iron Phosphate (LFP)			
Usable System Energy	13.6 kWh per unit, up to 15 units¹ per aGat			
Aggregate Throughput	43 MWh			
Real Power (charge)	5 kW continuous, 7.6 kW peak for 30 minutes			
Real Power (discharge)	5 kW continuous, 10 kW peak for 10 seconds			
Load Start Capability	118 A LRA ²			
Nominal AC Voltage	120 / 208 V, 120 / 240 V, 60 Hz			
Coupling	AC-coupled			
Phase	2 W+N+PE			
Round Trip Efficiency	89%3			
Work Modes	Self-Consumption, Time of Use, Emergency Backup			
Noise Emission	<30 dB (A) ⁴			
User Interface	FranklinWH App			
Warranty	12 years			

### COMPLIANCE INFORMATION

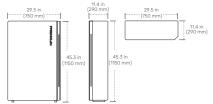
Certifications	UL 9540, UL 9540A, UL 1741, UL 1973, IEEE 1547 IEEE 1547.1, UN 38.3,CAN/CSA C22.2 No. 107.1-1
Seismic	AC 156, OSHPD, IEEE 693-2005 (high)
Environmental	California Proposition 65 RoHS Directive 2011 / EU
Emissions	ECC Part 15 Class B ICES 003

- For 120 / 208V applications, max. 4 aPowers per aGate can be connected in parallel. Please contact u
  if you have large capacity requirements.
- 2 Load start canability may yang

- ✓ Normal operations down to -4°F (-20°C)
- ✓ IP67 protection
- ✓ Single aPower capable of starting a 4-Ton AC
- ✓ First-of-its-kind 208 V compliant battery for multi-family housing

### MECHANICAL SPECIFICATIONS

Dimensions (H $\times$ W $\times$ D)		45.3 in × 29.5 in × 11.4 in (1150 mm × 750 mm × 290 mm) 395 lb (179 kg)		
Weight				
Mounting	lounting			
Cooling		Natural air-cooled design		
29.5 in (290 mm) (750 mm) (290 mm)		29.5 in		



### ENVIRONMENTAL SPECIFICATIONS

Ingress Protection	IP67 (Battery and power converter system), IP56 (Wiring compartment)			
Operating Temperature	-4°F to 122°F (-20°C to 50°C) Up to 100% RH, condensing			
Operating Humidity (RH)				
Altitude	Maximum 9,843 ft (3,000 m)			
Environment	Indoor and outdoor rated			

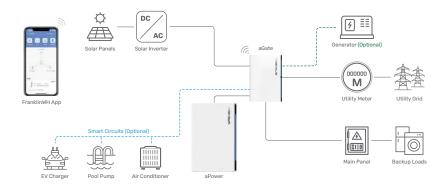
3. At beginning of life, AC to battery to AC, 50% power rating.

4. 5 kW discharge power, no fan running.

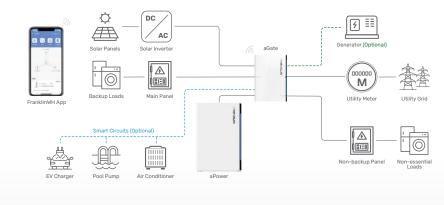
### DATASHEET

### Franklin Home Power Solution

### Whole Home Backup



### Partial Home Backup



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ofs!

The right way to attach almost anything to metal

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.

### SolarFoot Features:

Manufactured in the U.S.A. from certified raw material

Fabricated in our own ISO 9002 certified factory

All aluminum and stainless components

Lifetime limited warranty

Compatible with all commercial L-Foot products on the market

Factory applied 40-year isobutylene/ isoprene crosslink polymer sealant for reliable weathertightness

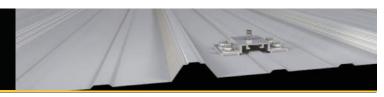
compression of sealant

Load-to-failure tested Normal to Seam by a nationally accredited laboratory on thousands of metal roof manufacturers, profiles and materials

Four points of attachment into structure or deck with tested holding strength for engineered applications

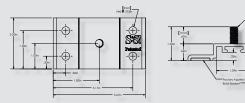
888-825-34

Integrated with M8-1.25x17mm stud and M8-1.25 stainless steel hex flange nut included



## 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.



*Fasteners sold separately. Fastener type varies with substrate. Contact S-5! on how to purchase fasteners and obtain our test results. L-Foot also sold separately.

### **Fastener Selection**





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!

The independent lab test data found at www.S-5.com can be used for load-critical designs and applications.

Products are protected by multiple U.S. and foreign patents. For published data regarding holding strength, fastener torque, patents, and trademarks, visit the S-5! website at www.S-5.com, Copyright 2021, Metal Roof Innovations, Ltd. S-5! products are patent protected.

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### SolarFoot Advantages:

Exposed fasten mounting platform for solar arrays attached via L-Foot and Rails

Weatherproof attachment to exposed fastener roofing

Butyl sealant reservoir provides long-term waterproof 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 1/2" Hex Socket

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 substratespecific (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

### Distributed by:

# **SOLAR**MOUNT



### FEATURING SOLARMOUNT

- Designed for Unirac's Solarmount rail systems and certified to UL2703A for lowslope AND steep-slope roofs
- One-step butyl application for easy install and reliable waterproofing

## **DIFFERENT CLAMPS FOR DIFFERENT NEEDS**

- Universal AF mid clamps and end clamps adjust to module heights from 30-46mm in a great looking, easy to install fastener
- Pro-series clamps feature hidden fasteners for fantastic aesthetics
- Standard clamps feature tight row spacing and various clamps to accommodate module frames up to 51mm in height

## **OPTIONS FOR ANY APPLICATION**

- Solarmount Standard and Solarmount Light rails profiles for installations across the country, including Puerto Rico
- Huge selection of attachments for any roof form comp shingle to tile
- Adjustable tilt legs certified to UL2703 to dial in your system just right



Two rail profiles for light and heavy duty applications



UNIVERSAL END CLAMP



UNIVERSAL MID CLAMP



CONCEALED SM END CLAMP



SM PRO SERIES MID CLAMP



SOLARMOUNT BUTYL



SOLARMOUNT PROFILE AND LIGHT PROFILE

## WHY SOLARMOUNT?

SOLARMOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SOLARMOUNT is a complete solution with universal clamps, tons of attachment options, full system UL 2703 certification, and 25-year warranty. Sleek rails for both light and heavy duty applications, with optional trim, make for a reliable, cost-effective, great looking racking solution.

