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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

SS

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

DESIGN SPECIFICATIONS OCCUPANCY: R-3/U

OCCULANCI.		K-3/ U	<u> </u>		PR
CONSTRUCTION	J:	V-B			
NAME:		RESIDENTIAL	MODULE INFO	RMAT	ION
SNOW LOAD:		0 PSF	MODULE QTY:		
WIND EXPOSUR	E:	С	MODULE MFG:		LS NORTH AMER
WIND SPEED:		156 MPH	MODULE TYPE:	Q.PEA	AK DUO BLK ML-
ROOF SURFACE	:	2073 SQ.FT.			
PV SQ FOOTAGE	Ξ:	359.05 SQ.FT.	INVERTER INFO	ORMA	TION
PV COVERAGE:		17.32 %	INVERTER MFG:		SOLAREDGE
WEIGHT OF EQU	JIPMENT:	810.73 LBS	INVERTER QTY:		1
WEIGHT PER ATTACHMENT:		25.34 LBS	INVERTER MODEL:		6000H-US (ENER
DISTRIBUTED W	VEIGHT:	2.26 PSF			
NO. OF STORIES	S:	1	INVERTER TYPE	l:	RGM
FIRE SPRINKLE	RS:	NO	INVERTER VOLTAGE:		240V
LOT INFORMA	TION				
APN:	325S1709477112		POWER OPTIM	IZER I	INFORMATION
LOT AREA:	47044.8		OPTIMIZER QTY		
LIVING AREA: 1248			OPTIMIZER MFG		
EIVING MEET.	12 10		OPTIMIZER TYP	E: S50	0
				•	

		WS		SW Summer Field Gl
		SW Tustenuggee Ave		SW. Summer Field Gil
		gee Ave	D	
G	allilee Loop			
			DI	OIFCT



PROJECT DETAILS

MODULE INFORMAT	TON	MOUNTING INFORMATION				
MODULE QTY: 17		MOUNT FLASHING QTY: 32				
MODULE MFG: QCEL		MOUNT FLASHING MFG: UNIRAC				
MODULE TYPE: Q.PEAK DUO BLK ML-G10+ 410		MOUNT FLASHING TYPE: S-5! VERSABRACKET				
INVERTER INFORMA	TION	RAILING INFORMATION				
INVERTER MFG:	SOLAREDGE	RAILING MFG: UNIRAC				
INVERTER QTY:	1	RAILING TYPE: UNIRAC SM LIGHT				
INVERTER MODEL:	6000H-US (ENERGY HUB)					
		ENERGY STORAGE SYSTEM INFORMATION - N/A				
INVERTER TYPE:	RGM					

EXISTING SOLAR INFORMATION - N/A

JURISDICTION STAMPS:

ADDITIONAL SCOPE OF WORK

MAIN PANEL UPGRADE: N/A

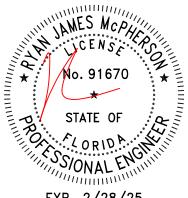
DERATE MAIN BREAKER: N/A

UPSIZE MAIN BREAKER: N/A

EV CHARGER: N/A

ESS: N/A





EXP. 2/28/25

This item has been digitally signed and sealed by Ryan McPherson, PE, on May 21, 2024

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INSTALLER NOTES:



Roger Daydou

NEW PV SYSTEM: 6970W DC / 6000W AC

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

COVER SHEET

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001 CS

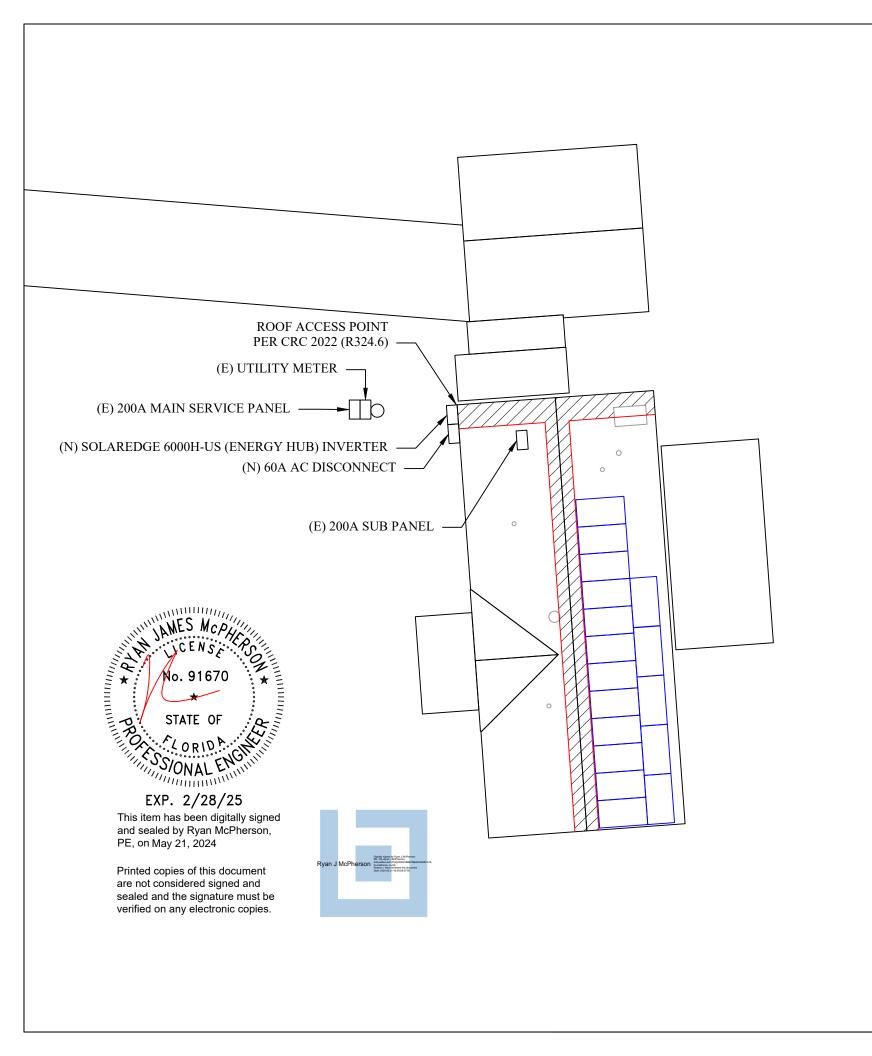
TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel SCALE:

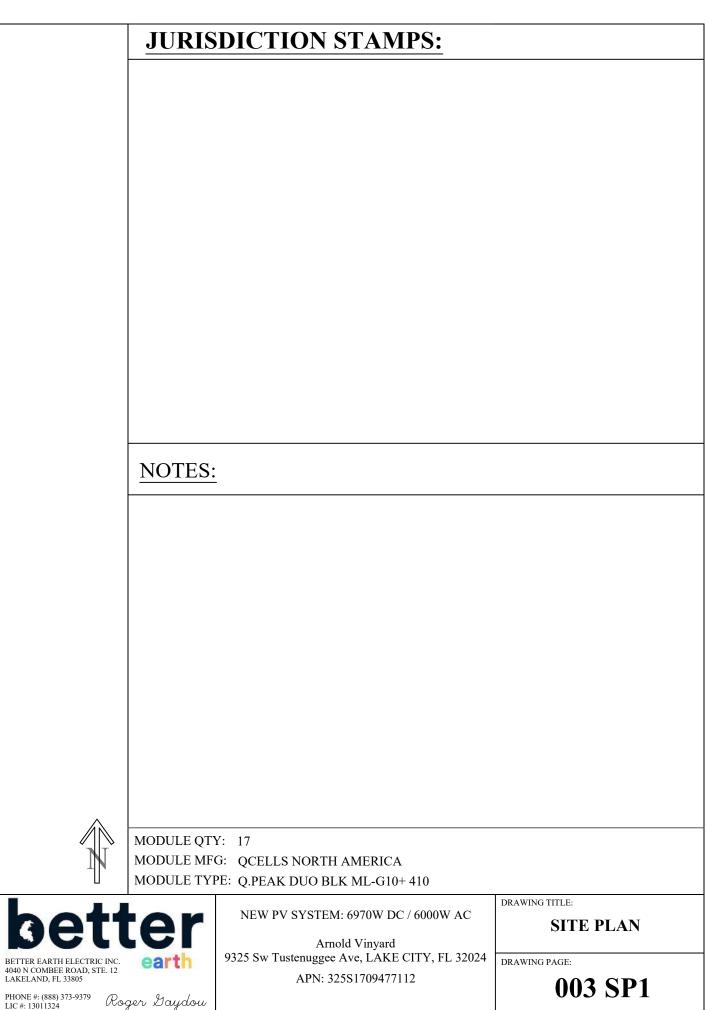
GENERAL NOTES JURISDICTION NOTES ELECTRICAL NOTES JURISDICTION STAMPS: THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH PV SOURCE CIRCUIT(S) ARE TO BE THE 2020 NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, SUNLIGHT-RESISTANT PV-WIRE AS ALL MANUFACTURERS'S LISTING AND INSTALLATION PERMITTED BY CEC 690.31(B). INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED ALL DIRECT CURRENT CIRCUITS ARE TO BE BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) INSTALLED IN METAL RACEWAY FROM THE APPLICABLE CODES POINT OF PENETRATION OF THE SURFACE OF THE UTILITY INTERCONNECTION APPLICATION MUST BE THE BUILDING OR STRUCTURE TO THE MAIN APPROVED AND PV SYSTEM INSPECTED PRIOR TO SERVICE PANEL AS MANDATED BY NEC PARALLEL OPERATION 690.31(E). WEATHERPROOF J-BOX – NEMA 3R. 3. ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT ROOFTOP CONDUIT SHALL BE A MINIMUM COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE OF 7/8" ABOVE THE ROOF SURFACE. IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4: ALL WORK SHALL COMPLY WITH THE 2020 PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA NATIONAL ELECTRICAL CODE AND 2020 FL 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 STATE AMENDMENTS NEC REFERS SPECIFICALLY TO "UNGROUNDED" PV SYSTEMS. ALSO DESIGNATED AS "TRANSFORMERLESS" BY INVERTER MANUFACTURERS AND "NON-ISOLATED" BY **CODE REFERENCES** UNDERWRITERS LABORATORY INVERTER(S) USED IN UNGROUNDED SYSTEM SHALL BE LISTED FOR THIS USE 2020 NATIONAL ELECTRIC CODE - NFPA 70 AS SPECIFIED BY THE AHJ, EQUIPMENT USED IN 8TH EDITION 2020 FLORIDA BUILDING CODE - RESIDENTIAL UNGROUNDED SYSTEMS LABELED ACCORDING TO NEC 8TH EDITION 2020 FLORIDA BUILDING CODE - BUILDING 8TH EDITION 2020 FLORIDA BUILDING CODE - ENERGY MAX DC VOLTAGE CALCULATED USING MANUFACTURER 8TH EDITION 2020 FLORIDA BUILDING CODE - TEST PROTOCOL PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE. 8TH EDITION 2020 FLORIDA BUILDING CODE - PLUMBING MAX DC VOLTAGE CALCULATED ACCORDING TO NEC **CONSTRUCTION NOTES** 8TH EDITION 2020 FLORIDA BUILDING CODE - MECHANICAL 8TH EDITION 2020 FLORIDA BUILDING CODE - EXISTING BUILDING 8TH EDITION 2020 FLORIDA BUILDING CODE - FUEL GAS ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT 8TH EDITION 2020 FLORIDA BUILDING CODE - ACCESSIBILITY ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 8TH EDITION 2020 FLORIDA FIRE PREVENTION CODE COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC MANUFACTURER'S INSTALLATION INSTRUCTIONS. FAIR HOUSING GUIDELINES POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR RATING. LABELING [NEC 110.3] ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION. THE SOLAR INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING OR ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT MECHANICAL VENTS. **UTILITY NOTES** SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE A LADDER WILL BE IN PLACE FOR INSPECTIONS IN COMPLIANCE WITH OSHA WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ REGULATIONS. 10. SOLAR PV MODULES (PANELS) CANNOT BE INSTALLED MODULE MOUNTING STRUCTURE WILL BE TIED DIRECTLY INTO STRUCTURAL OVER OR BLOCK ANY ATTIC VENTS, PLUMBING VENTS, ELEMENTS OF SINGLE FAMILY DWELLING ROOF TRUSSES / RAFTERS OR BEAMS FURNACE OR WATER HEATER VENTS ETC ACCORDING TO MOUNTING STRUCTURE DIRECTIONS. ROOF COVERING PENETRATIONS SHALL BE DESIGNED, INSTALLED AND 11. ALL CONDUCTORS OF A CIRCUIT, INCLUDING THE EGC, No. 91670 MUST BE INSTALLED IN THE SAME RACEWAY OR CABLE, MAINTAINED IN ACCORDANCE WITH BUILDING CODE AND THE APPROVED OR OTHERWISE RUN WITH THE PV ARRAY CIRCUIT MANUFACTURER'S INSTRUCTIONS SUCH THAT THE ROOF COVERINGS SHALL CONDUCTORS WHEN THEY LEAVE THE VICINITY OF THE SERVE TO PROTECT THE BUILDING STRUCTURE. PV ARRAY CONDUIT, WIRING SYSTEMS, AND RACEWAYS FOR PHOTOVOLTAIC CIRCUITS 12. ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE RIDGE, HIP, OR VALLEY. THIS OR MECHANICAL MEANS DESIGNED AND LISTED FOR EQUIPMENT SHALL ALSO BE LOCATED AS CLOSE AS POSSIBLE TO AN OUTSIDE SUCH USE. GROUND MOUNTED SYSTEMS, WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF OF THE WALL TO REDUCE TRIP HAZARDS AND MAXIMIZE VENTILATION OPPORTUNITIES. ROOF SURFACE MODULES MUST HAVE 6" CLEARANCE FROM ALL VENTS AND OBSTRUCTIONS. EXP. 2/28/25 This item has been digitally signed and sealed by Ryan McPherson, PE, on May 21, 2024 Printed copies of this document are not considered signed and DRAWING TITLE: sealed and the signature must be NEW PV SYSTEM: 6970W DC / 6000W AC verified on any electronic copies **NOTES SHEET** Arnold Vinyard 9325 Sw Tustenuggee Ave, LAKE CITY, FL 32024 BETTER EARTH ELECTRIC INC. DRAWING PAGE: 4040 N COMBEE ROAD, STE. 12 APN: 325S1709477112 002 NS1

Roger Daydou

DATE: 5/21/2024

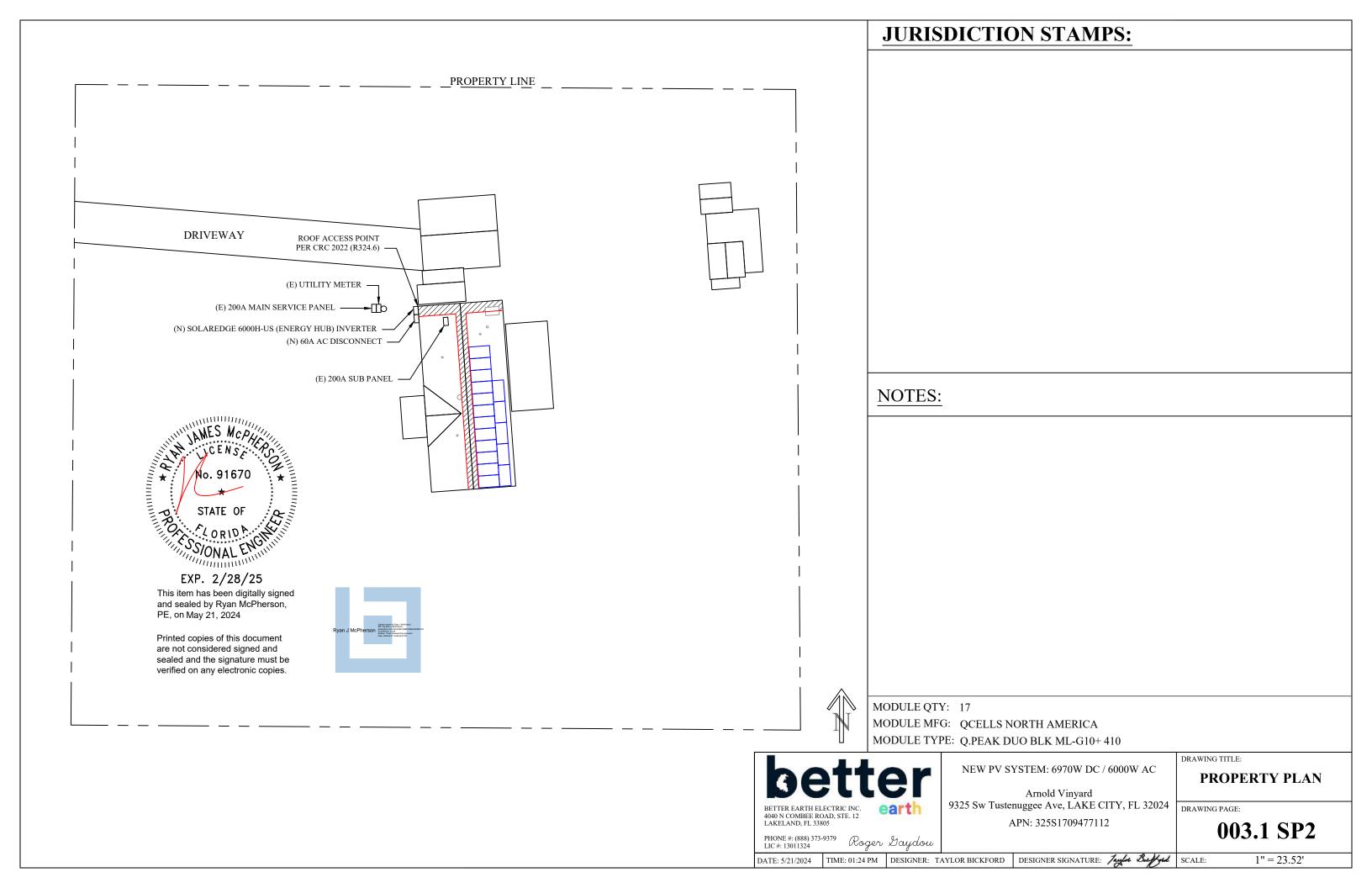
TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel SCALE:

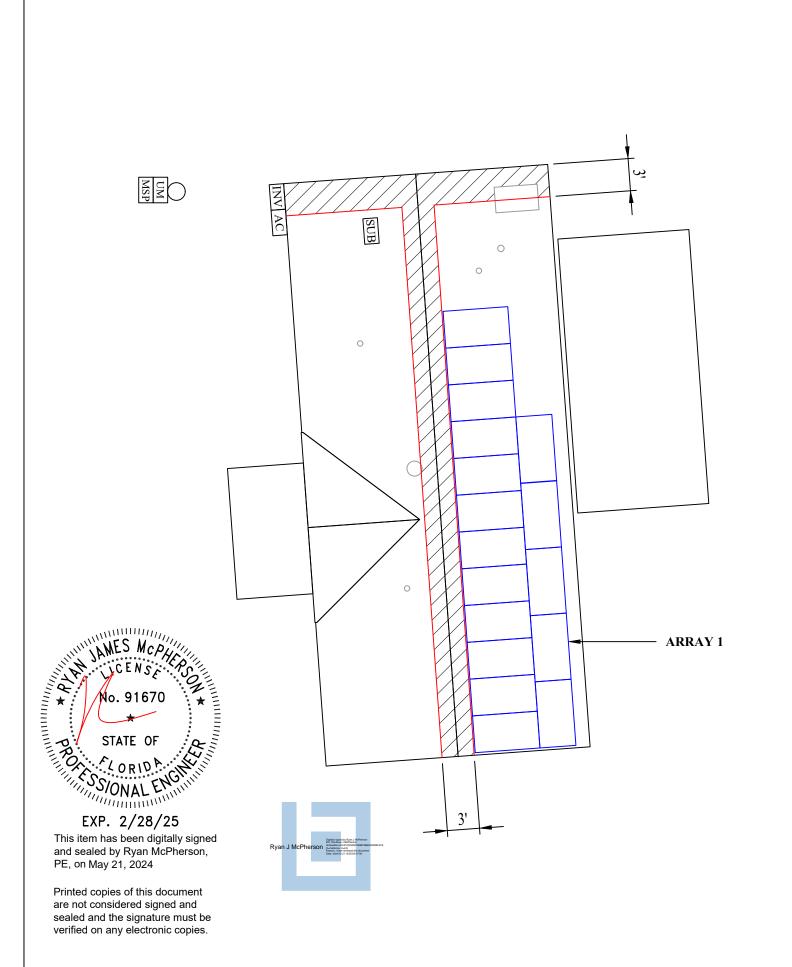




1" = 12'

DATE: 5/21/2024 TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel SCALE:





JURISDICTION STAMPS: ROOF DETAILS: ARRAY 1: MODULE QTY: 17 TILT: AZIMUTH: 86° MATERIAL: Metal Corrugated/Tin 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 DC DISCONNECT JUNCTION BOX JB PV PV METER FIRE CODE SETBACK

CONDUIT RUN TO BE DETERMINED IN FIELD

PVC TRENCH



NEW PV SYSTEM: 6970W DC / 6000W AC

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

DRAWING TITLE: **ROOF PLAN**

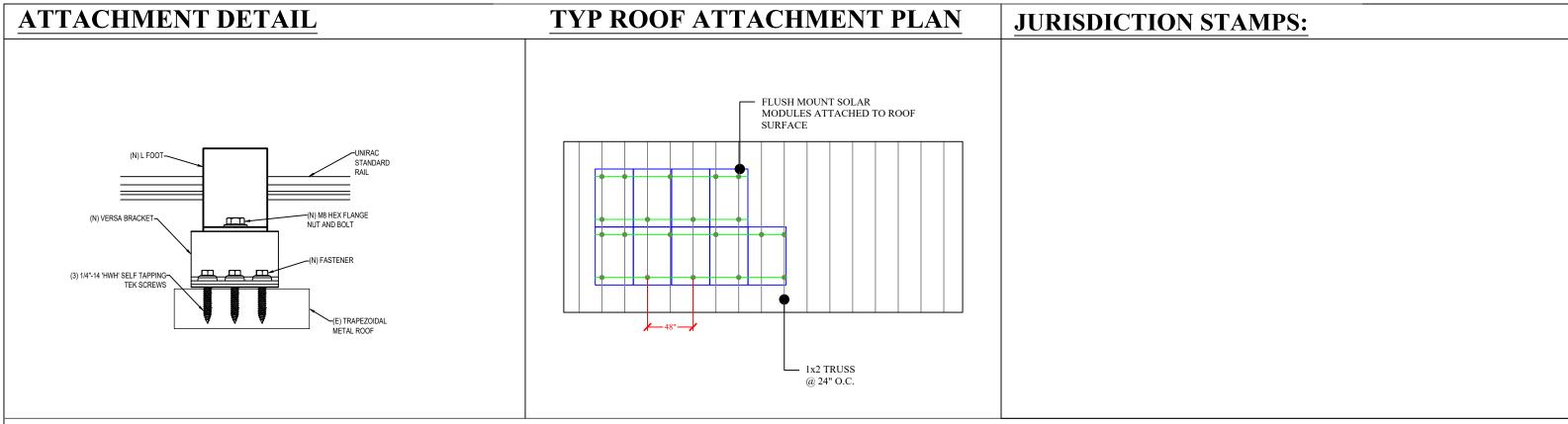
004 RP1

(E) SOLAR MODULE

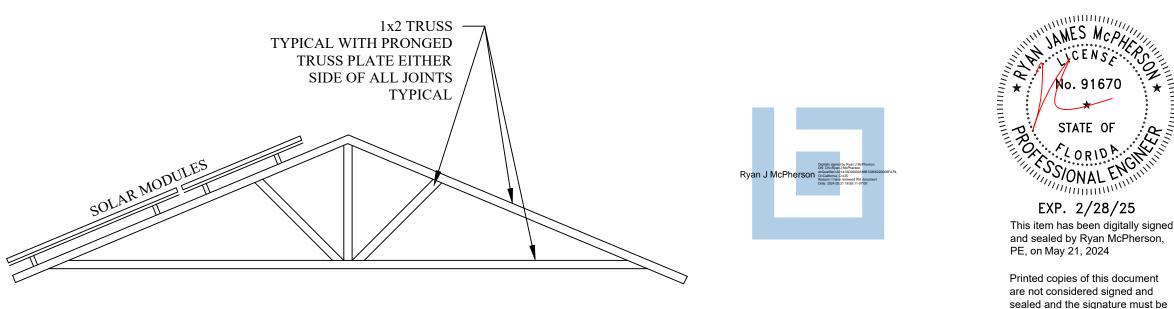
EMT CONDUIT

DATE: 5/21/2024 TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Bufful SCALE:

1'' = 8.93'



FRONT VIEW TYP FRAMING DETAIL



verified on any electronic copies.

INSTALLER NOTES:

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

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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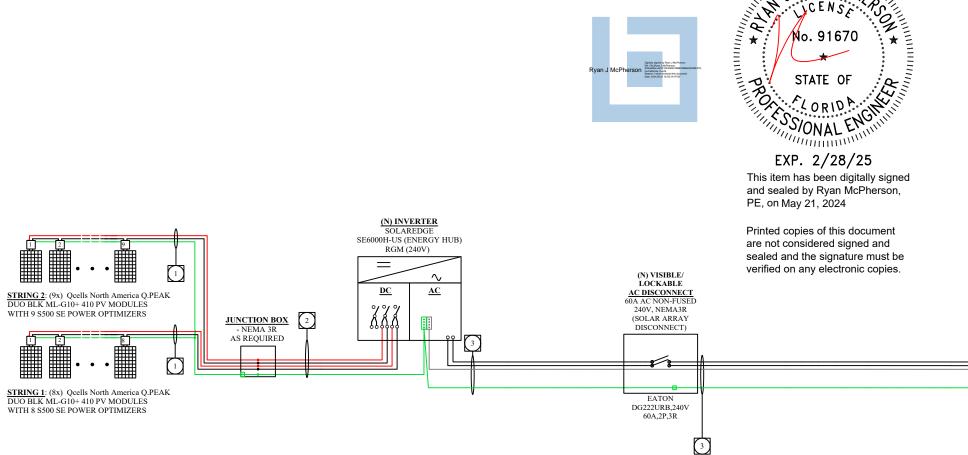
005 RF1

DATE: 5/21/2024

TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: Jugar Buffel SCALE:

STRING CALCUL	INVERTER 1 SPECS 6000H-US (ENERGY HUB)_RGM				
STRING DETAILS	STRING 1	STRING 2		AC VOLTAGE 240V	GROUND
POWERBOX MAX OUTPUT CURRENT	15A	15A		MAX OCPD 35A	RATED POWE 6000W
OPTIMIZERS IN SERIES	8	9	╛	MAX OUTPUT	MAX INPUT
NOMINAL STRING VOLTAGE	380V	380V		25A MAX INPUT	17A EFFICIENCY
ARRAY OPERATING CURRENT	25A	25A	╛	480V	CEC

JURISDICTION STAMPS:



(E) 200A/200A MAIN <u>SERVICE PANEL</u> 240/120v 1-PH, 3-W POINT OF INTERCONNECTION LOAD SIDE 705.12(B)(3)(2) (E) 200A SUB PANEL BI-DIRECTIONAL 120/240V NEMA 3R UL LISTED UTILITY METER 1PH/240V MAX BREAKER CALC.: 200A X 1.2 - 200A = 40A (E) 200A TO UTILITY GRID (OVERHEAD) MAIN (E) 200A **-**A LUG KIT MAIN BONDING JUMPER SOLAR BREAKER LOCATED AT THE FURTHEST END OF BUS BAR FROM THE MAIN GROUND (E) GROUNDING ELECTRODE

AHJ/UTILITY NOTES: SOLAREDGE INVERTER(S) RSD COMPLIANT PER 690.12

	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

				M	ETER NUMBER: 156218646	
DESIGN TEMPERATURES	MODUL QCELLS NOR Q.PEAK DUO BI	TH AMERICA		VER HIZERS	SYSTEM SUMMARY ARRAY STC POWER	
ASHRAE 2% HIGH	PMAX		TIMIZER	6970W ARRAY PTC POWER		
37°C	ISC 11.2A VOC	10.89A VMP	500W MAX ISC	MAX OUTPUT 15A MAX DC	6477W MAX AC CURRENT	
ASHRAE EXTREME LOW -3°C	45.37V	37.64V FF. OF VOC	15A	60V EFFICIENCY	25A MAX AC POWER	

INSTALLER NOTES:

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

NEW PV SYSTEM: 6970W DC / 6000W AC

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

LINE DIAGRAM & **DESIGN TABLES**

DRAWING PAGE:

DRAWING TITLE:

006 LD1

PHONE #: (888) 373-9379

Roger Daydou

DATE: 5/21/2024 TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Bufful SCALE:

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 OR DC-DC CONVERTER (IF INSTALLED) 15 AMPS

[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

(8)

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

AC DISCONNECT 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
- 3. ALL LETTERS SHALL BE CAPITALIZED
- 4. ARIAL OR SIMILAR FONT (NON-BOLD)

JURISDICTION STAMPS:

CAUTION: MULTIPLE SOURCES OF POWER POWER TO THIS BUILDING ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN 9325 SW TUSTENUGGEE AVE, LAKE CITY, FL 32024 SERVICE BY OLIALIEIED PERSONNEL ONLY

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

"minimin" √o. 91670 STATE OF SONAL ENGINE

EXP. 2/28/25

This item has been digitally signed and sealed by Ryan McPherson, PE, on May 21, 2024

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AC LOAD ACPRODUCTION PRODUCTION SUB AC(METER DISCONNECT **PANEL** CENTER METER METER INVERTER DISCONNEC' 4 JUNCTION 3 5 3 5 8 3 5 8 $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$ BOX 1 MAIN SERVICE PANEL (8) INTEGRATED 6 DC DISCONNECT 7 (3) (10)WHEN WHEN WHEN WHEN WHEN WHEN 2 3 PPLICABLE APPLICABL PPLICABLE APPLICABL APPLICABLI APPLICABLE (1) (9) ROOFTOP ARRAY

INSTALLER NOTES:



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: 5/21/2024

TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: July Buffel



	LEGEND		JOB HAZA	RD ANALYSIS
H	HAZARD		Use the space belo	ow to draft a JHA. Be sure
A	ANCHOR POINT		to include all indic	eators found in the Legend.
L	LADDER			
E	ENTRY / EXIT			
``\	WORK ANGLE			
	ELECTRICAL ZONE	(F) DDV		
~~~~	WORK ZONE	(E) DRIVEWAY		
	1 ½" PVC TRENCH			
NEAREST NAME:  PHONE:  ADDRESS:  CREW LEAD:	MEDICAL FACILITY:	(E) ENTRANCE		
CREW:				
INSTALL	ER NOTES:	BETTER EARTH ELECTRIC INC.	970W DC / 6000W AC  Vinyard	DRAWING TITLE:  JOB HAZARD ANALYSIS  DRAWING PAGE:  009 JH1

DATE: 5/21/2024 TIME: 01:24 PM DESIGNER: TAYLOR BICKFORD DESIGNER SIGNATURE: Tuffe 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+



#### 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).



12 busbar cell technology

#### 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.

#### The ideal solution for:



6 busbar

cell technology









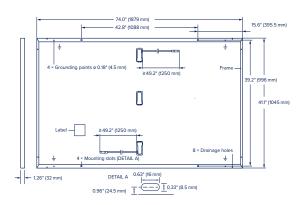
¹ See data sheet on rear for further information.

² APT test conditions according to IEC/TS 62804-1:2015, method A (–1500 V, 96 h)

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

#### ■ Mechanical Specification

Format	74.0 in $\times$ 41.1 in $\times$ 1.26 in (including frame) (1879 mm $\times$ 1045 mm $\times$ 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	$4  \text{mm}^2$ Solar cable; (+) $\geq 49.2  \text{in}$ (1250 mm), (-) $\geq 49.2  \text{in}$ (1250 mm)
Connector	Stäubli MC4; IP68



#### ■ Electrical Characteristics

PC	OWER CLASS			385	390	395	400	405	410
MII	NIMUM PERFORMANCE AT STANDARD TEST CON	DITIONS, ST	C1 (POWER	TOLERANCE +5\	W/-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
μm	Open Circuit Voltage ¹	$V_{oc}$	[V]	45.19	45.23	45.27	45.30	45.34	45.37
Mini	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
MII	NIMUM PERFORMANCE AT NORMAL OPERATING (	CONDITION	S, NMOT ²						
	Power at MPP	$P_{MPP}$	[W]	288.8	292.6	296.3	300.1	303.8	307.6
Ę	Short Circuit Current	I _{sc}	[A]	8.90	8.92	8.95	8.97	9.00	9.03
Ē	Open Circuit Voltage	V _{oc}	[V]	42.62	42.65	42.69	42.72	42.76	42.79

8.35

34.59

 $^{1}\text{Measurement tolerances P}_{\text{MPP}}\pm3\%; I_{\text{Sc}}; V_{\text{OC}}\pm5\% \text{ at STC: } 1000 \text{ W/m}^{2}, 25\pm2\text{ °C}, \text{AM 1.5 according to IEC } 60904-3 \bullet ^{2}800 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC } 1000 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC } 1000 \text{ W/m}^{2}, \text{NMOT, spectrum AM 1.5 } 10000 \text{$ 

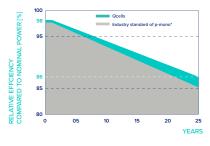
[A]

[V]

#### **Qcells PERFORMANCE WARRANTY**

**Current at MPP** 

Voltage at MPP



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.

 $I_{\mathrm{MPP}}$ 

 $V_{MPP}$ 

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



8.46

35.03

8.51

35.25

8.57

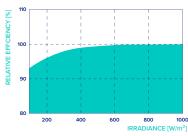
35.46

8.62

35.68

8.41

34.81



Typical module performance under low irradiance conditions in comparison to STC conditions ( $25\,^{\circ}\text{C}$ ,  $1000\,\text{W/m}^2$ ).

*Standard terms of guarantee for the 5 PV companie	s with the
highest production capacity in 2021 (February 2021)	

TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of $V_{\rm oc}$	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	$V_{SYS}$	[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/ft²]	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)

³ See Installation Manual

#### 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),











**ocells** 

# SolarEdge Home Hub Inverter

# For North America

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



# HOME BACKUP

# 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 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, 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		SE11400H – XXXXXBXX5							
	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units			
OUTPUT – AC ON GRID			1						
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	1	II.	Α			
Total Harmonic Distortion (THD)	< 3								
Power Factor		1	, 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			< 2.5			W			
OUTPUT – AC BACKUP ⁽³⁾	1								
	3800		7600						
Rated AC Power in Backup Operation ⁽⁴⁾	7600*	6000	10300*	10300	10300	W			
AC L-L Output Voltage Range in Backup	7000		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			
1 , 3 1 ,	16		32			ПZ			
Maximum Continuous Output Current in Backup Operation	32*	25	43*	43	43	Α			
	32."		1			А			
GFDI THD	< 5								
OUTPUT – SOLAREDGE HOME EV CHA	ARGER AC		< 3			%			
Rated AC Power	ARGER AC		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)	T.								
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)	T.		<u> </u>			•			
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	99 @ 240V 99 98.5 @ 208V								
2-pole Disconnection	1		Yes		30.5 @ 2001	1			

^{*} Supported with PN SExxxxH-USMMxxxxxx or SExxxxH-USMNxxxxxx.

⁽¹⁾ These specifications apply to inverters with part numbers SExxxxH-USSMxxxx or SExxxxH-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		SE11400H – XXXXXBXX5						
	SE3800H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	Units		
OUTPUT – DC (BATTERY)		"						
Supported Battery Types		SolarEdge Home Battery, LG RESU Prime ⁽⁶⁾						
Number of Batteries per Inverter		Up to 3 SolarEdge 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	ce up to 200A; up to 3 i	inverters			
EV Charging		Direct conne	ction to SolarEdge Hon	ne EV Charger				
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS48	35, Ethernet, Cellular ⁽⁹⁾ , 1	Wi-Fi (optional), SolarEd	lge Home Network (opt	tional)			
Revenue Grade Metering, ANSI C12.20			Built-in ⁽⁸⁾					
Integrated AC, DC and Communication Connection Unit		Yes						
Inverter Commissioning	With the	SetApp mobile applica	tion using built-in Wi-Fi	Access Point for local o	onnection			
DC Voltage Rapid Shutdown (PV and Battery)	With the	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						
STANDARD COMPLIANCE	I	, ,	·					
Safety	UL 17	741 UI 1741 SA UI 1741 '	SB. UI 1741 PCS. UI 1699	B, UL1998, UL9540, CSA	. 22.2	I		
Grid Connection Standards	02		1547-2018, Rule 21, Rule					
Emissions			FCC part 15 class B					
INSTALLATION SPECIFICATIONS	I							
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 AWG						
Dimensions with Connection Unit (H x W x D)	1//v146v68/450v3/0v1/4		21.06 x 14.6 x 8.2 / 535 x 370 x 208 ⁽¹⁰⁾	in / 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		
Noise	< 25 < 50* < 50				dBA			
Cooling	Natural Convection							
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽¹⁾					°F/°C		
Protection Rating	NEMA 4							

⁽⁶⁾ The part numbers SExxxxH-USxMxxxxx only support the SolarEdge Home Battery. The part numbers SExxxxH-USxNxxxxx support both SolarEdge Home Battery and LG RESU Prime batteries.

(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.

⁽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.

(9) Information concerning the Data Plan's terms & conditions is available in the following link: <u>SolarEdge Communication Plan Terms and Conditions.</u>)

⁽¹⁰⁾ SE11400H-USxxxBxx5 is the updated PN, though SE11400H-USxxxBxx4 will still be available. All specifications are similar for both models, EXCLUDING the weight and dimensions [HxWxD]; The weight and dimensions of SE11400H-USxxxBxx4 are 17.6 [kg] and 21.06-14.6-7.3 / 535-370-185 [in/mm], accordingly.

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SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

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# Rapid Shutdown Kit - Installation and Configuration (Single Phase Inverters)

This document describes how to install the rapid shutdown kit in the SolarEdge Safety Switch, and how to enable the rapid shutdown feature in the inverter in order to provide the functionality described in the Rapid Shutdown clause of NEC2014 690.12 (1) through (4).

#### **Kit Contents**

- Rapid shutdown cables
- Micro-SD card and SD card adapter with firmware files (Note: DO NOT THROW AWAY THE CARD AND THE ADAPTER; keep them for installation of other rapid shutdown kits)

#### **Cable Installation**

Perform this procedure before connecting the strings to the Safety Switch [Chapter 4: Connecting the AC and the Strings to the Safety Switch in the SolarEdge Installation Guide].

- 1 Turn the inverter ON/OFF switch to OFF. If installing the kit in an inverter that is already operating, wait until the LCD indicates that the DC voltage is safe (<50V), or wait five minutes before continuing to the next step.
- 2 Turn the Safety Switch and the AC switch on the main circuit board to OFF.



#### WARNING!

Rapid Shutdown Kit Installation - MAN-01-00186-1.6

If you cannot see the inverter panel, or if a malfunction is indicated on the LCD panel, wait five minutes for the input capacitors of the inverter to discharge.

- 3 Loosen the four Allen screws on the front cover of the Safety Switch, and open the cover.
- **4** Carefully disconnect the two DC cables from the left side of the switch and from the DC connection spring clamp terminals, as illustrated below¹. Use a standard straight-bladed screwdriver to disconnect the cables from the terminals.

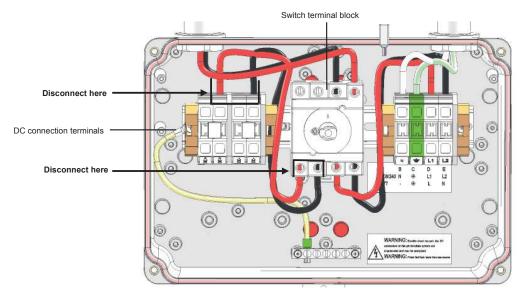


Figure 1: Inside the AC/DC Safety Switch

Rapid Shutdown Kit Installation - MAN-01-00186-1.6

solar<u>edge</u>

Rapid Shutdown Kit - Installation and Configuration (Single Phase Inverters)

- The rapid shutdown cables have a resistor connected to one end (on the red cable). Connect these ends to the switch, making sure that the red and black cables are <u>reversed</u> relative to the cables connected at the top of the switch (going into the DC side conduit between the inverter and the Safety Switch), as detailed below. Apply a torque of 2 N*m (18 lb*in):
- If the cables at the top are red and black from left to right, connect as shown below.

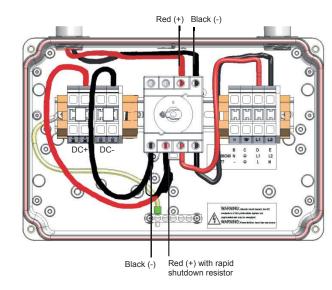


Figure 2: Rapid shutdown cable connected - option 1

If the cables at the top are black and red from left to right, connect as shown below.

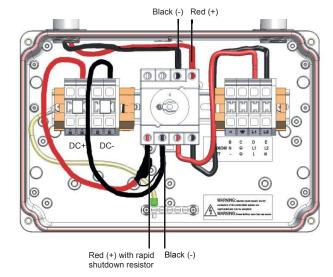


Figure 3: Rapid shutdown cable connected - option 2

- **6** Use a standard straight-bladed screwdriver to connect the other end of the rapid shutdown cables to the DC connection spring-clamp terminals: Connect the black cable from the switch to the DC- terminal block, and connect the red cable from the switch to the DC+ terminal block.
- 7 Check that the cables are located and connected in the correct positions to ensure the rapid shutdown functionality.
- 8 Close the cover: Attach the switch cover and secure it by tightening the four screws with a torque of 0.9 ft.*lb / 1.2 N*m.

¹ The internal components may vary depending on the Safety Switch model; the figures in this documents show the AC/DC Safety Switch for single phase 7.6-11.4 kW inverters.

# Power Optimizer For North America

S440 / S500 / S500B / S650B



# 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

# / Power Optimizer

# For Residential Installations

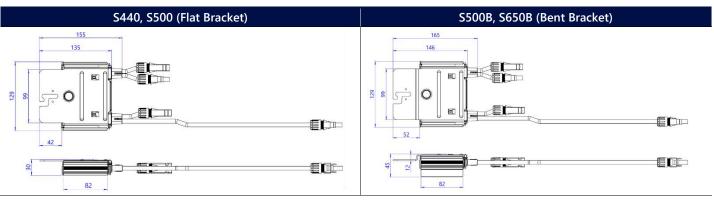
S440 / S500 / S500B / S650B

	S440	S500	S500B	S650B	UNIT
INPUT			"		
Rated Input DC Power ⁽¹⁾	440	5	00	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		99	9.5		%
Weighted Efficiency		98	3.6		%
Overvoltage Category			I		
OUTPUT DURING OPERATION					
Maximum Output Current		1	5		Adc
Maximum Output Voltage	60			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 2100-712:2018-12				
INSTALLATION SPECIFICATIONS					
Maximum Allowed System Voltage		10	00		Vdc
Dimensions (W x L x H)	129 x 155 :	x 30	129 x ⁻	165 x 45	mm
Weight	720		7	90	gr
Input Connector		MC	(4 ⁽³⁾		
Input Wire Length		C	.1		m
Output Connector		М	C4		
Output Wire Length		(+) 2.3,	(-) 0.10		m
Operating Temperature Range ⁽⁴⁾		-40 t	o +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  $\underline{\text{Declaration of Conformity}-\text{CE}}.$
- (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 Power Optimizers Temperature De-Rating Technical Note for details.

PV System Design Using 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	14		
Maximum String Length (Power Optimizers)		25	20	50		
Maximum Continuous Power per String		5700	5625	11,250	12,750	W
Maximum Allowed Connected Power per String ⁽⁶⁾ (In multiple string designs, the maximum is permitted only when the difference in connected power between strings is 2,000W or less)		6800 ⁽⁷⁾	See ⁽⁶⁾	13,500	15,000	W
Parallel Strings of Different Lengths or Orientations			Yes			

- $(5) \ It is not allowed to \ mix \ S-series \ and \ P-series \ Power \ Optimizers \ in \ new \ installations \ in \ the \ same \ string.$
- (6) If the inverter's rated AC power  $\leq$  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 Single String Design Guidelines application note.
- (7) For inverters with a rated AC power ≥ 8000W that are connected to at least two strings.





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**SOLAR**MOUNT is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. **SOLAR**MOUNT is a complete solution with revolutionary universal clamps, **FLASHKIT** PRO, full system UL 2703 certification and 25-year warranty. Not only is **SOLAR**MOUNT easy to install, but best-in-class aesthetics make it the most attractive on any block!





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# **SOLAR**MOUNT

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Quickly set modules flush to the roof on steep pitched roofs. Orient a large variety of modules in Portrait or Landscape. Tilt the system up on flat or low slow roofs. Components available in mill, clear, and dark finishes to optimize your design financials

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#### **MAXIMIZE PROFITABILITY ON EVERY JOB**

Trust Unirac to help you minimize both system and labor costs from the time the job is quoted to the time your teams get off the roof. Faster installs. Less Waste. More Profits.

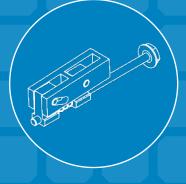
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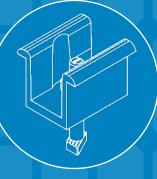
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Unirac is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to first class business practices.

#### **BANKABLE WARRANTY**

Don't leave your project to chance. Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are providing products of exceptional quality. SOLARMOUNT is covered by a 25 year limited product warranty and a 5 year limited finish warranty.

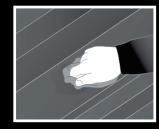
# The Right Way!

# VersaBracket™

VersaBracket[™] can be used to mount almost anything to an exposed-fastened roof system and is compatible with almost any trapezoidal exposed-fastened profile. No messy sealants to apply! No chance for leaks! The VersaBracket comes with factory-applied butyl sealant already in the base, and the S-5!® patented reservoir conceals the sealant from UV exposure, preventing drying and cracks.

Installation is simple! VersaBracket is mounted in the flat of the panel, directly into the supporting structure of the roof, i.e. wood decking, wood or steel purlins or trusses. No surface preparation is necessary; simply wipe away excess oil and debris, peel the release paper from the base, align, and apply. Secure through the pre-punched holes using the appropriate screws for the supporting structure.

VersaBracket is so strong, it will even support heavy-duty applications like snow retention. For exposed-fastened trapezoidal profiles, the VersaBracket is the perfect match for our ColorGard® snow retention systems (for corrugated roofs use CorruBracket™). VersaBracket is extremely economical and facilitates quick and easy installation.









S-5!® VersaBracket™ is the right way to attach almost anything to exposed-fastened roof profiles, including PV through rail methods.

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VersaBracket[™] can be used for almost any attachment need, including S-5![®] ColorGard[®], on all types of exposed-fastened metal roofing. No messy sealants to apply. The factory-applied butyl sealant waterproofs and makes installation a snap!

To accommodate various rib heights, VersaBracket™ comes in two heights—the 2.65" VersaBracket-67™ and the 1.86" VersaBracket-47™. The VersaBracket-67 mounting face has no holes or slots; thus, ancillary items are typically secured using self-tapping screws. The VersaBracket-47 comes with a 1" slot on top as the standard part. Other hole and slot configurations available with minimum purchase requirements (contact your distributor for available configurations). Each VersaBracket comes with factory-applied butyl sealant in the base. A structural aluminum attachment bracket, VersaBracket is compatible with most common metal roofing materials. For design assistance, ask your distributor, or use our web-based calculator at www.S-5.com for job-specific system engineering and design of your next snow retention project. Also, please visit our website for more information including CAD details, metallurgical compatibilities, and specifications.

The VersaBracket has been tested for load-to-failure results on wood decking, metal, and wood purlins. The independent lab test data found at www.S-5.com can be used for load-critical designs and applications. S-5!® holding strength is unmatched in the industry.

#### **Example Profile**

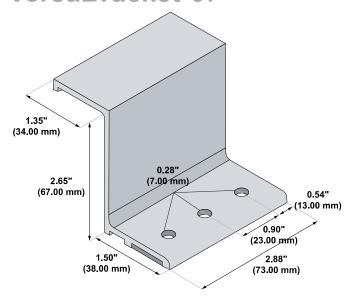


# **Example Applications**

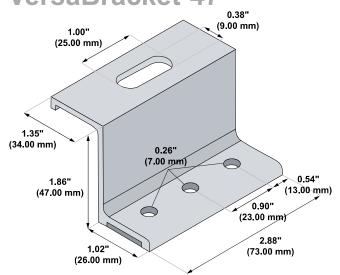
ColorGard



# VersaBracket-67™



# VersaBracket-47



3 holes are provided for versatility. Some installations require only 2 fasteners. See the load table on the S-5! website and the installation instructions for more details.

Due to varied applications, mounting hardware is not furnished with part.

Please note: All measurements are rounded to the second decimal place.

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

Products are protected by multiple U.S. and foreign patents. For published data regarding holding strength, bolt torque, patents and trademarks visit the S-5! website at www.S-5.com.

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