WYSSLING CONSULTING
CORPORATE EXPERIENCE WITH SMALL BUSINESS VALUE
Scott E. Wyssling, PE
Coleman D. Larsen, SE, PE
Gregory T. Elvestad, PE

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/27/2023 12:49:48

Andrea Sessler
Digitally signed by Andrea Sessler
DN: CN=Andrea Sessler, OU=Development, OU=LS Users, DC=COLS, DC=LOC
Date: 2023.12.27 14:10:49-06'00'

76 North Meadowbrook Drive
Alpine, UT 84004
office (201) 874-3483
swyssling@wysslingconsulting.com

October 27, 2023
Revised December 21, 2023

Fluent Solar, LLC
2578 W 600 N
Lindon, UT 84042

Re: Engineering Services
Mcneely Residence
1812 SW Merryman Drive, Lees Summit, MO
6.480 kW System

To Whom It May Concern:

We have received information regarding solar panel installation on the roof of the above referenced structure. Our evaluation of the structure is to verify the existing capacity of the roof system and its ability to support the additional loads imposed by the proposed solar system.

A. Site Assessment Information

1. Site visit documentation identifying attic information including size and spacing of framing for the existing roof structure.
2. Design drawings of the proposed system including a site plan, roof plan and connection details for the solar panels. This information will be utilized for approval and construction of the proposed system.

B. Description of Structure:

Roof Framing:	Prefabricated wood trusses at 24" on center. All truss members are constructed of 2x4 dimensional lumber.
Roof Material:	Composite Asphalt Shingles
Roof Slope:	40 degrees
Attic Access:	Accessible
Foundation:	Permanent

C. Loading Criteria Used

- **Dead Load**
  - Existing Roofing and framing = 7 psf
  - New Solar Panels and Racking = 3 psf
  - TOTAL = 10 PSF
- **Live Load** = 20 psf (reducible) – 0 psf at locations of solar panels
- **Ground Snow Load** = 20 psf
- **Wind Load** based on ASCE 7-16
  - Ultimate Wind Speed = 109 mph (based on Risk Category II)
  - Exposure Category C

Analysis performed of the existing roof structure utilizing the above loading criteria is in accordance with the 2018 IRC, including provisions allowing existing structures to not require strengthening if the new loads do not exceed existing design loads by 105% for gravity elements and 110% for seismic elements. This analysis indicates that the existing framing will support the additional panel loading without damage, if installed correctly.

D. Solar Panel Anchorage

1. The solar panels shall be mounted in accordance with the most recent Quickbolt installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
2. The maximum allowable withdrawal for a 5/16" wood screw in ½" plywood is 55 lbs per screw (per APA technical note E830d). Connection on the roof is utilizing four (4) 5/16" wood screws into the existing decking to resist uplift forces. Contractor to verify installation to be performed in accordance with the manufacturer's recommendations. Based on four (4) 5/16" wood screws into ½" plywood, 220 lbs of uplift resistance is provided per attachment.
3. Considering the wind speed, roof slopes, size and spacing of framing members, and condition of the roof, the panel supports shall be placed no greater than 36" on center.

Based on the above evaluation, this office certifies that with the racking and mounting specified, the existing roof system will adequately support the additional loading imposed by the solar system. This evaluation is in conformance with the 2018 IRC, current industry standards, and is based on information supplied to us at the time of this report.

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,

Scott E. Wyssling, PE
Missouri License No. 2019011786
COA #2020037943

SYSTEM SIZE: 6.48 KW

SCOPE OF WORK:

FLUENT SOLAR INSTALL THE PROPOSED GRID-TIED PHOTOVOLTAIC SYSTEM. FLUENT SOLAR WILL BE RESPONSIBLE FOR COLLECTING THE NEEDED SITE INFORMATION TO DESIGN AND INSTALL THE PROPOSED PHOTOVOLTAIC SYSTEM.

THE PHOTOVOLTAIC SYSTEM INCLUDES:

(16) SEG – SEG405BMDHV (CS-1)
(1) SOLAREDGE – SE5000H-US000BNU4 (CS-2)
(16) SOLAREDGE – S440 (CS-3)

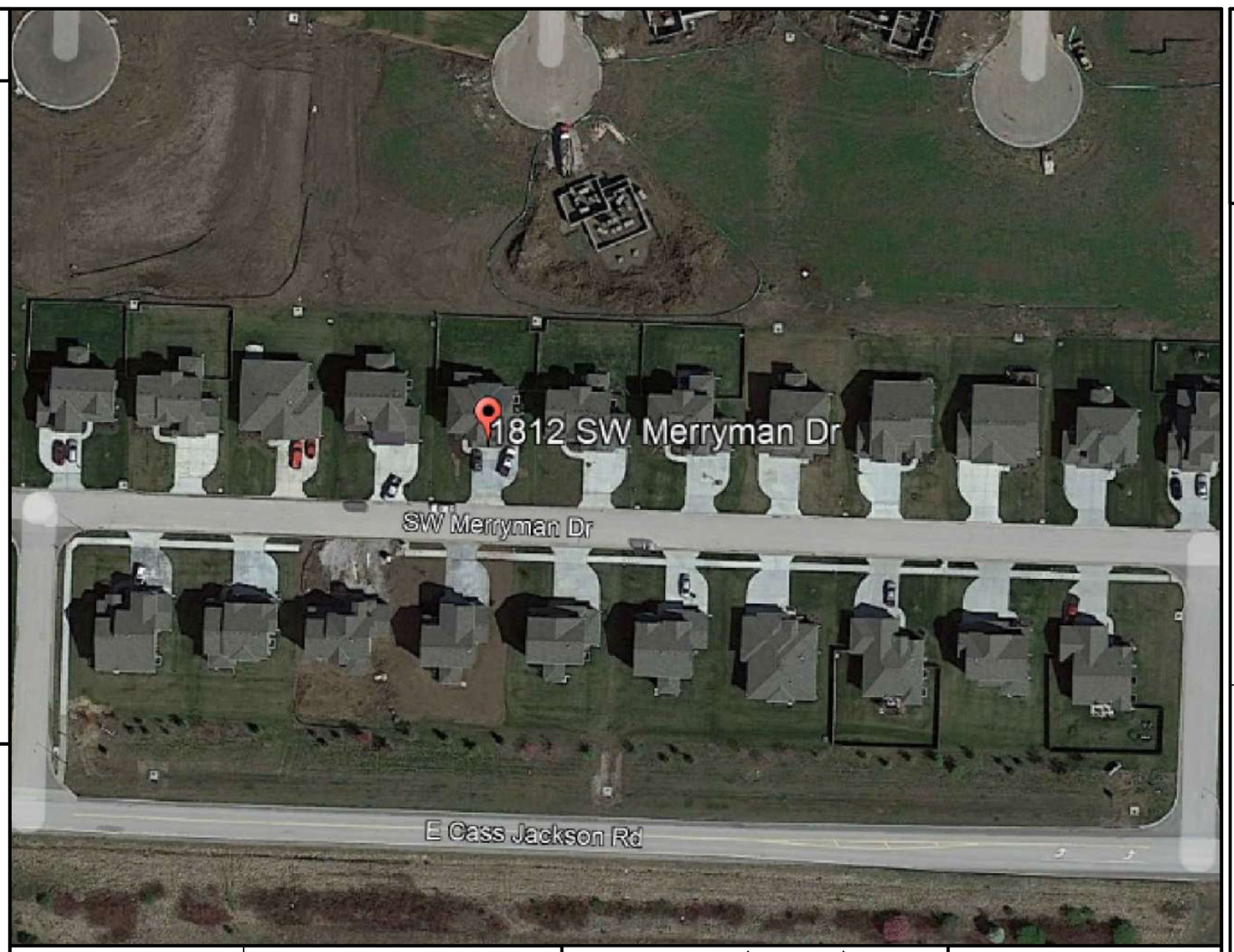
THE MODULES SHALL BE FLUSH MOUNTED USING

APPROX. (55) QUICKBOLT #16318 MOUNTS
ON UNIRAC 315168M RAIL

THE PHOTOVOLTAIC SYSTEM SHALL BE INTERCONNECTED BY PERFORMING A PV BREAKER
INTO THE EXISTING 125 A MAIN SERVICE PANEL

INSTALL SHALL INCLUDE:

- MODULE INSTALLATION
- OPTIMIZER INSTALLATION
- INVERTER INSTALLATION
- MOUNTING AND RACKING INSTALLATION
- AC/DC DISCONNECTS
- GROUNDING AND PV GROUNDING ELECTRODE AND BONDING TO EXISTING GEC
- SYSTEM WIRING
- NET METERING (IF NEEDED)
- PV LABELS (THAT ARE APPLICABLE TO PROJECT)



ASCE 7-16 WIND SPEED:	109PSF, EXPOSURE CATEGORY C
GROUND SNOW LOAD:	20 PSF, EXPOSURE CATEGORY C

GENERAL NOTES

1. EACH MODULE TO BE GROUNDED USING THE SUPPLIED CONNECTION POINT PER MANUFACTURER'S REQUIREMENTS. ALL SOLAR MODULES, EQUIPMENT, AND METALLIC COMPONENTS ARE TO BE BONDED. IF THE EXISTING GROUNDING ELECTRODE SYSTEM CANNOT BE VERIFIED OR IS ONLY METALLIC WATER PIPING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
2. ALL PLAQUES AND SIGNAGE REQUIRED BY THE ADOPTED NATIONAL ELECTRIC CODE SHALL BE METAL OR PLASTIC, ENGRAVED OR MACHINED IN A CONTRASTING COLOR TO THE PLAQUE/LABEL. ALL PLAQUES/LABELS SHALL BE UV & WEATHER RESISTANT (SEE PV-2).
3. DC CONDUCTORS SHALL BE RUN IN EMT AND/OR MC (METAL CLAD CABLE) AND SHALL BE LABELED A MINIMUM OF EVERY 10' (SEE E2-E2.1)
4. EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH 250.134 OR 250.136(A).
5. CONFIRM LINE SIDE VOLTAGE AT ELECTRIC UTILITY SERVICE PRIOR TO CONNECTING INVERTER. VERIFY SERVICE VOLTAGE IS WITHIN INVERTER VOLTAGE OPERATIONAL RANGE.
6. ALL SIGNAGE MUST BE PERMANENTLY ATTACHED AND BE WEATHER/SUNLIGHT RESISTANT AND CANNOT BE HAND-WRITTEN(SEE E2-E2.1)
7. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC.
8. ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE, AND FOR ROOF-MOUNTED SYSTEMS, WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF OF THE ROOF SURFACE. NEC 110.2 – 110.4 / 300.4
9. ALL PV METERS AND RAPID SHUTDOWNS TO BE WITHIN 5' OF ANOTHER. AC DISCONNECT TO BE WITHIN 10' OF UTILITY METER. PV METER CENTER OF GLASS TO BE AT 5'
10. PV METERS TO BE INSTALLED CORRECTLY, SUPPLIED FROM THE TOP JAWS.
11. ALL ROOF PENETRATIONS MUST BE FLASHED. SIMPLY CAULKING DOES NOT SUFFICE.
12. ALL DC CONDUCTORS RUN INSIDE OF THE STRUCTURE SHALL BE INSTALLED A MINIMUM OF 18" BELOW THE ROOF DECK.
13. ALL WORK WILL COMPLY WITH THE 2018 IBC AND 2018 IRC
14. ALL ELECTRICAL WORK WILL COMPLY WITH THE 2017 NATIONAL ELECTRIC CODE.
15. EQUIPMENT MAY BE SUBSTITUTED FOR SIMILAR EQUIPMENT BASED ON AVAILABILITY. SUBSTITUTED EQUIPMENT SHALL COMPLY WITH DESIGN CRITERIA

STAMPS (IF NEEDED)

STATE OF MISSOURI
SCOTT E WYSSLING
NUMBER PE-2019011786
PROFESSIONAL ENGINEER

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
Missouri COA # 2020037943
Signed 12/21/2023

CONTENTS:

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)	
CUSTOMER LAST NAME: MCNEELY	
ADDRESS: 1812 SW MERRYMAN DR	
CITY: LEES SUMMIT	
STATE: MO	
ZIP: 64082	
JURISDICTION: LEES SUMMIT	
UTILITY COMPANY: EVERGY(MO)	
(16) SEG – SEG405BMDHV (CS-1)	
(1) SOLAREDGE – SE5000H-US000BNU4 (CS-2)	
(16) SOLAREDGE – S440 (CS-3)	
ROOF TYPE: COMP SHINGLE (PV-2)	
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)	
INTERCONNECTION METHOD: PV BREAKER	

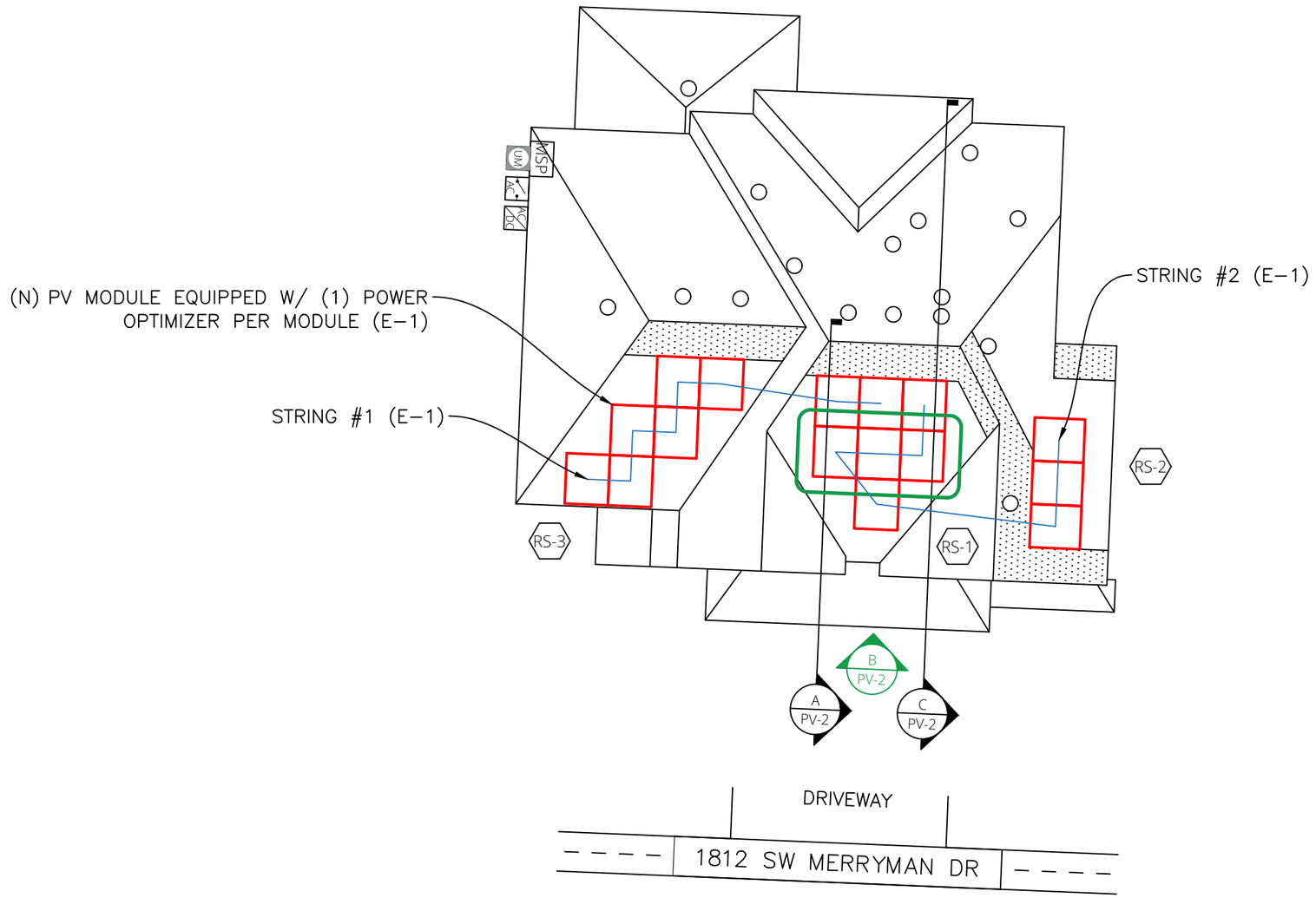
DESIGNED BY: MR
DESIGNED ON
12/20/2023

COVER PAGE

C-1

LEGEND:

- =UTILITY METER
- =MAIN SERVICE PANEL
- =AC DISCONNECT
- =INVERTER



TRUE NORTH

	TILT	AZIMUTH
ROOF SECTION 1	40	182
ROOF SECTION 2	40	92
ROOF SECTION 3	40	182
ROOF SECTION 4	N/A	N/A
ROOF SECTION 5	N/A	N/A
ROOF SECTION 6	N/A	N/A

DESIGN ADDENDUMS TO STANDARD TEMPLATE BASED ON CITY, STATE, UTILITY, AHJ, OR PREVIOUS PLAN REVIEWER COMMENTS IF THERE ARE CONFLICTING NOTES, ADDENDUMS TAKE PRECEDENCE OVER STANDARD TEMPLATE NOTES

MODULE WATTAGE= 405W
INVERTER WATTAGE= 5000W
SYSTEM SIZE= 6480W

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Missouri COA # 2020037943
Signed 12/21/2023

DESIGNED BY: MR
DESIGNED ON 12/20/2023

SITE PLAN

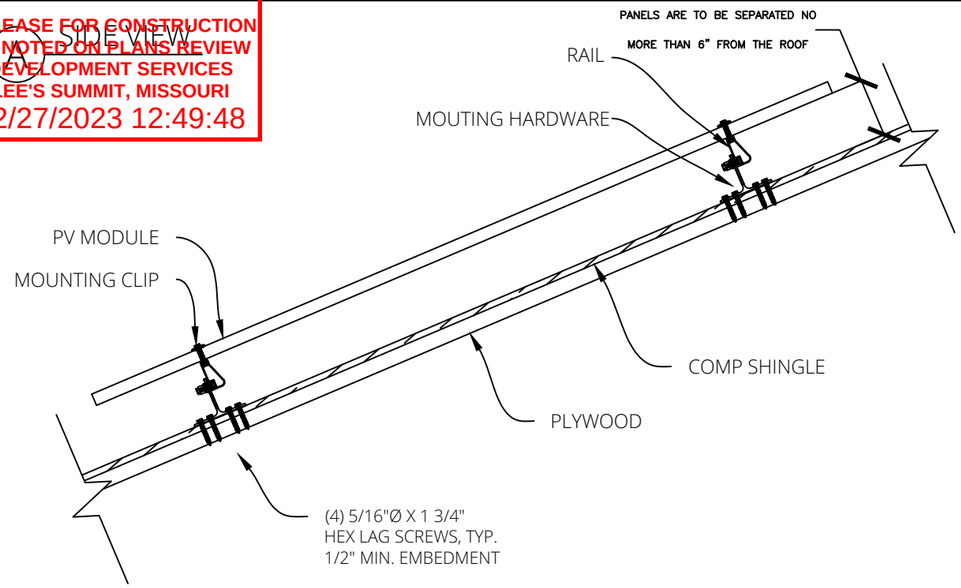
PV-1

SITE PLAN NOTES:

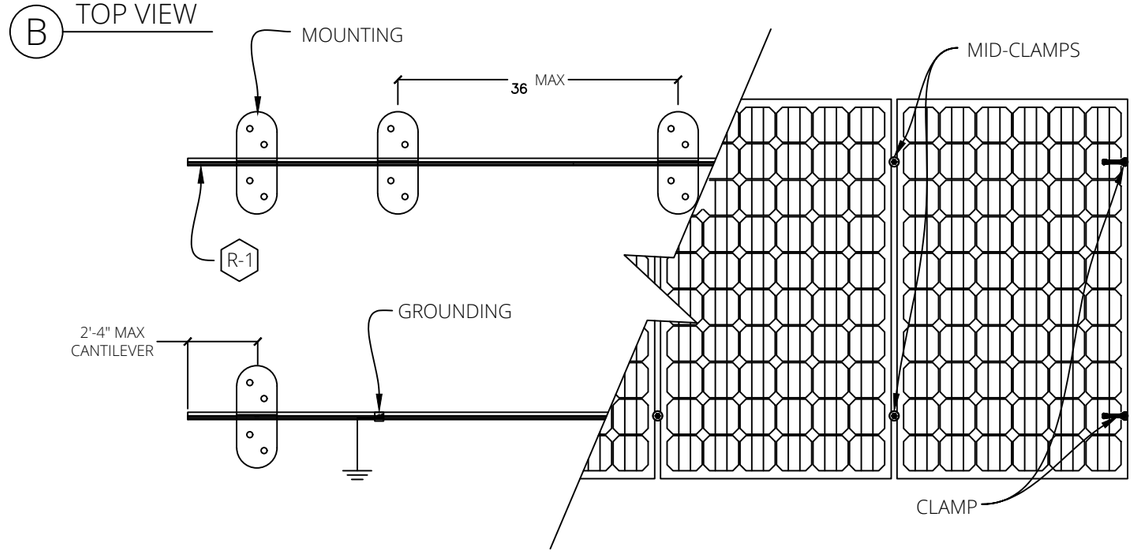
- VERIFY ALL OBSTRUCTIONS IN THE FIELD.
- VERIFY ALL DIMENSIONS IN THE FIELD.
- PROVIDE RAIL SPLICES AS REQUIRED BY MANUFACTURER'S GUIDELINES.
- NO SIGNIFICANT SHADING WILL RESULT FROM EXISTING ROOF OBSTRUCTIONS.
- PV MODULES CANNOT BE INSTALLED OVER OR BLOCK ATTIC VENTS, PLUMBING VENTS, FURNACE OR WATER HEATER VENTS ETC.
- SCALE $\frac{3}{32}$"=1'

HATCHED AREA WILL PROVIDE A 3' FIRECODE PATHWAY TO COMPLY WITH 2018 IFC

A SIDE VIEW

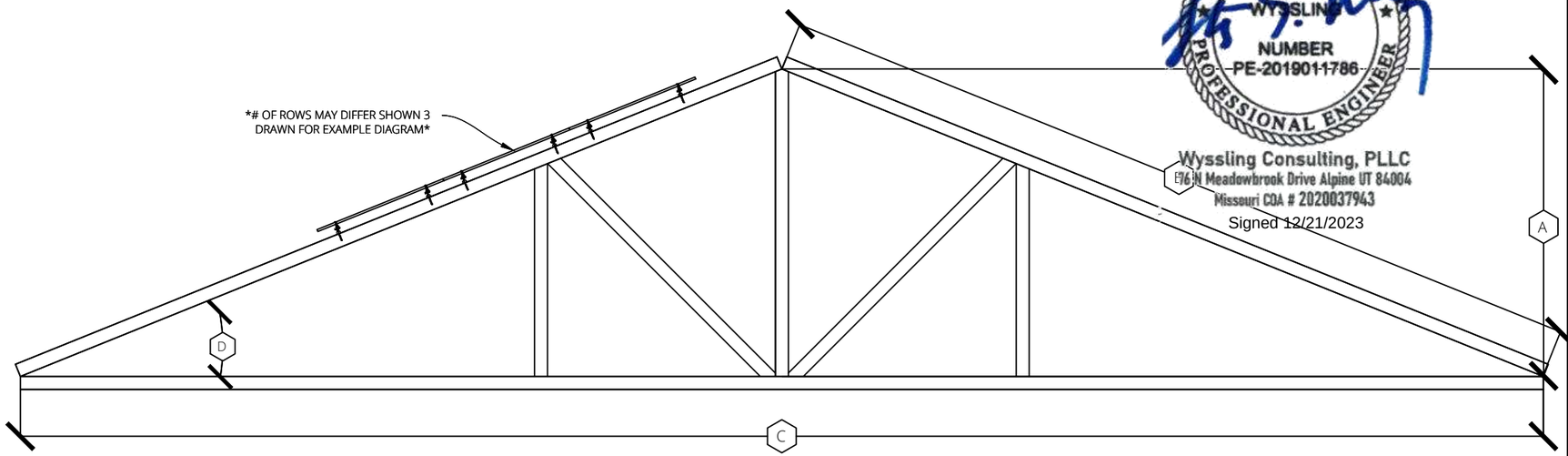


B TOP VIEW



C ATTIC INFO

NOT TO SCALE



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PREFABRICATED TRUSSES	SIZE:	2X4	SPACING:	24

ROOF INFO IN INCHES & DEGREES		TAG ID
ROOF HEIGHT:	196	A
ROOF FACE SPAN:	305	B
ROOF LENGTH:	468	C
ROOF TILT:	40	D

PV ARRAY STRUCTURAL INFO			
TOTAL PV MODULE COUNT:	(TOTAL NUMBER OF MODULES BEING INSTALLED)	16	MODULES
APPROX. ATTACHMENT POINTS:	(ROUND UP (TOTAL ROWS WIDTH) / (MOUNT SPACING)) +2	55	MOUNTS
INDIVIDUAL ARRAY AREA:	(MODULE LENGTH) X (MODULE WIDTH)	21.01	FT^2
TOTAL ARRAY AREA:	(INDIVIDUAL ARRAY AREA) X (TOTAL MODULE COUNT) = FT^2	336.24	FT^2
TOTAL ROOF AREA:	(ROOF AREA TOTAL) = FT^2	724	FT^2
% ARRAY/ROOF:	(AREA AREA) / (ROOF AREA) = %	46.4	%
TOTAL ARRAY WEIGHT:	(TOTAL MODULE COUNT) X (MODULE WEIGHT) = LBS	758.24	LBS
TOTAL DISTRIBUTED LOAD ON ROOF:	(TOTAL ARRAY WEIGHT) / (ARRAY AREA) = LBS / FT^2	2.26	LBS / FT^2
LOAD ON EACH MOUNT	(TOTAL ARRAY WEIGHT) / (TOTAL NUMBER OF ATTACHMENTS)	13.79	LBS / ATTACH.

GENERAL STRUCTURAL NOTES:

THE FOLLOWING CALCULATIONS ARE INITIAL CALCULATIONS BASED OFF OF THE SITE SURVEY INFORMATION, AND THE EQUIPMENT CUT SHEETS. REFER TO STRUCTURAL LETTER FOR FINAL CALCULATIONS, SNOW AND WIND SPEEDS

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
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ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
INTERCONNECTION METHOD: PV BREAKER

CUSTOMER LAST NAME: MCNEELY
ADDRESS: 1812 SW MERRYMAN DR
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON 12/20/2023

ROOF INFO

PV-2

RELEASE FOR CONSTRUCTION
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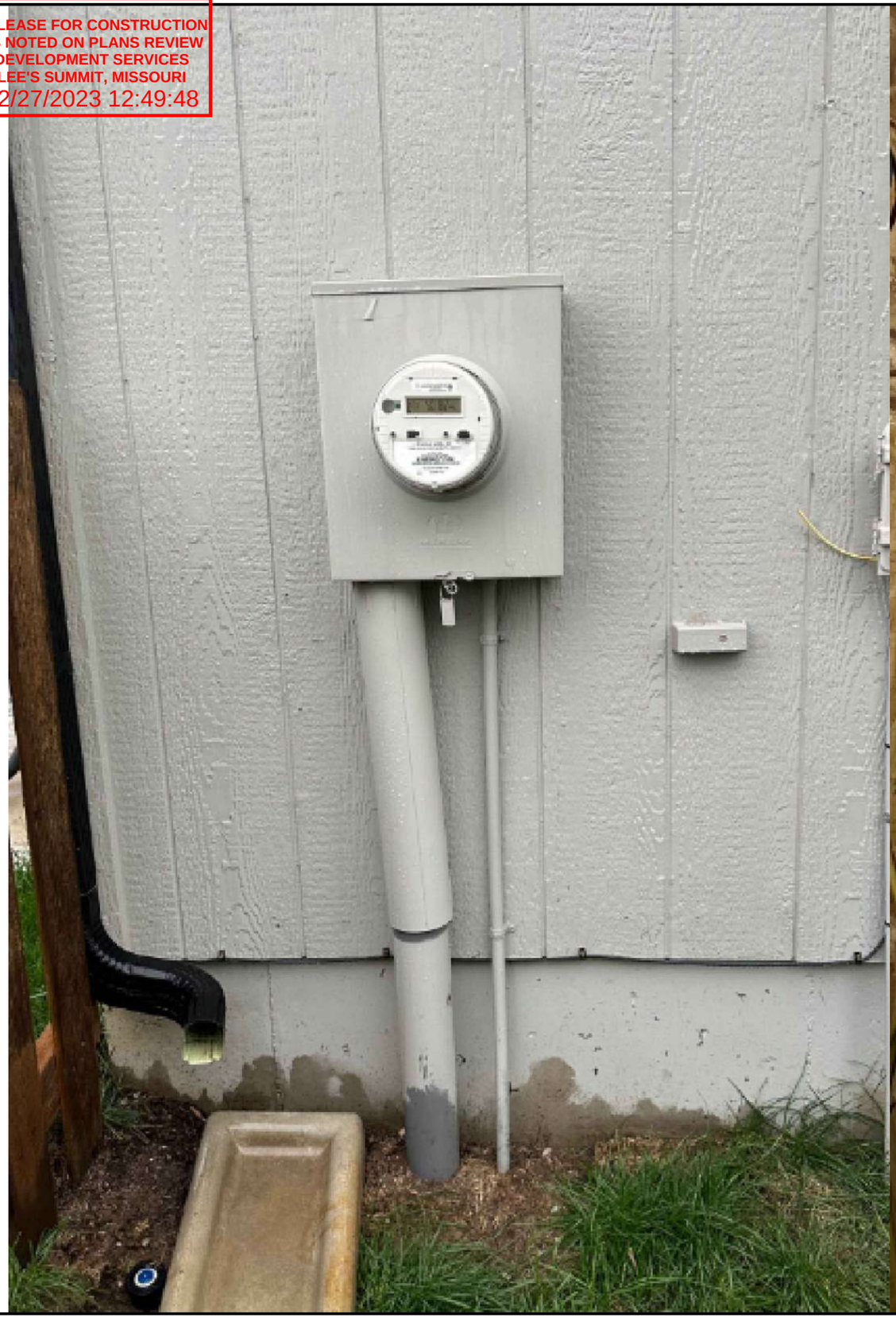
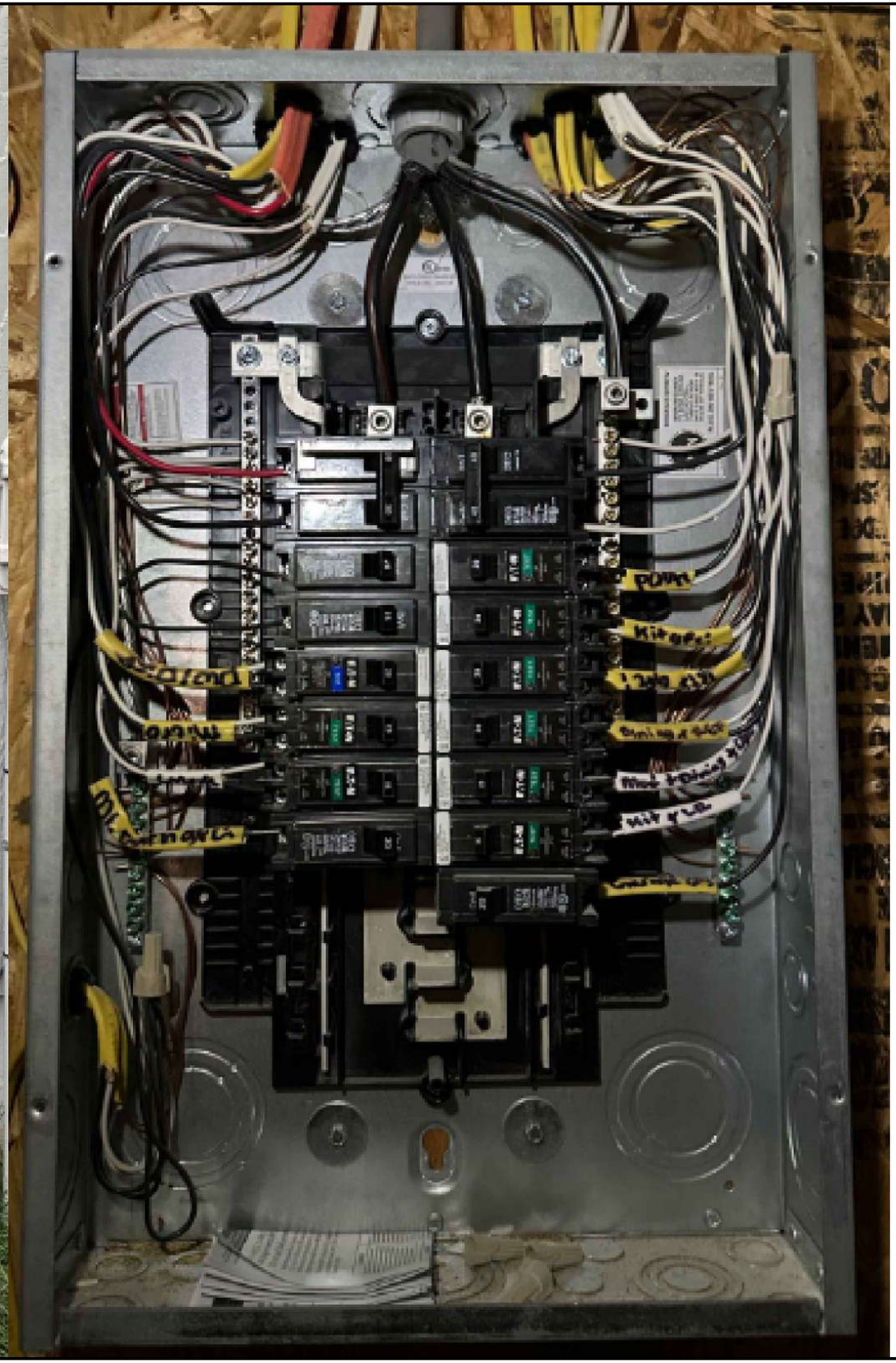
12/27/2023 12:49:48





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CITY:	LEES SUMMIT
STATE:	MO
ZIP:	64082
JURISDICTION:	LEES SUMMIT
UTILITY COMPANY:	EVERGY(MO)

DESIGNED BY: MR

DESIGNED ON
12/20/2023

SITE PHOTOS

PV-3

CONDUCTOR SCHEDULE

TAG	CONDUCTORS			GROUND			CONDUIT
	WIRES IN CONDUIT	WIRE AWG	TYPE, MATERIAL	WIRE 75°C (167°F) AMPERAGE RATING TABLE 310.15 (B)(16)	SIZE	RATING TABLE 250.122	TYPE, MATERIAL	
A	5	#10 AWG	PV CABLE, CU	35	#6 AWG	200	BARE, CU	3/4" CONDUIT
B	5	#10 AWG	THWN-2, CU	35	#10 AWG	60	THWN-2, CU	3/4" CONDUIT
C	4	#10 AWG	THWN-2, CU	35	#10 AWG	60	THWN-2, CU	3/4" CONDUIT
D	4	#6 AWG	THWN-2, CU	65	#8 AWG	100	THWN-2, CU	3/4" CONDUIT

* TAG D ONLY IF APPLICABLE *

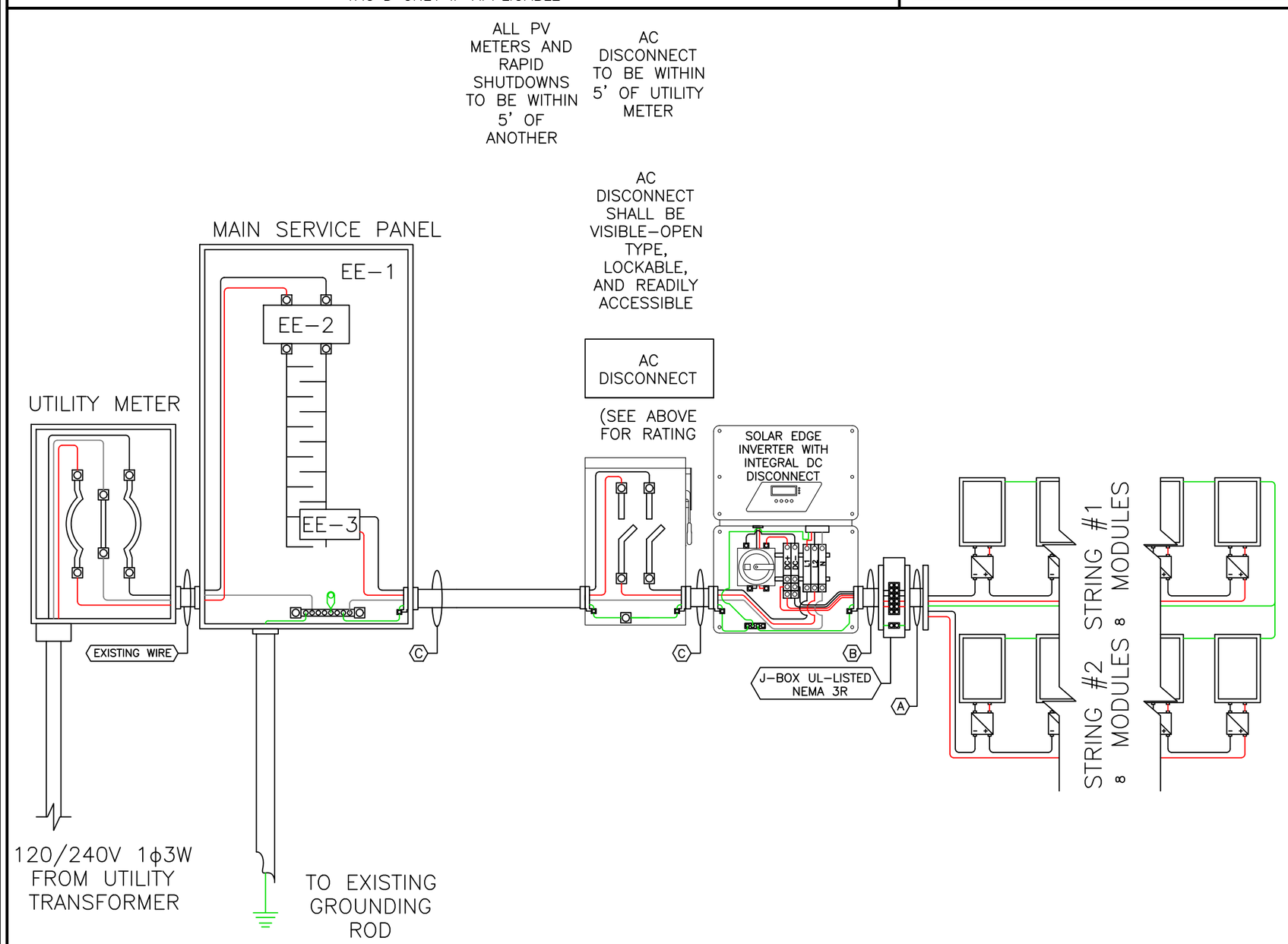
AC DISCONNECT SIZE:	ENCLOSURE TYPE:	SPECIAL NOTES:
60A NON-FUSED	NEMA 3R	

ELECTRICAL EQUIPMENT

EE-1	EXISTING	125A	BUS BAR RATING
EE-2	EXISTING	100A	MAIN BREAKER RATING
EE-3	NEW	30A	PV BREAKER
EE-4			
EE-5			

PRODUCTION METER:

NO PM REQUIRED



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MODULE WATTAGE= 405W
INVERTER WATTAGE= 5000W
SYSTEM SIZE= 6480W

INSTALLATION NOTES:

INSTALL A NEW 100A MAIN BREAKER AND THEN INTERCONNECT WITH A NEW LOAD SIDE PV BREAKER

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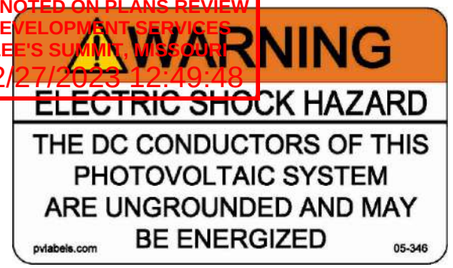
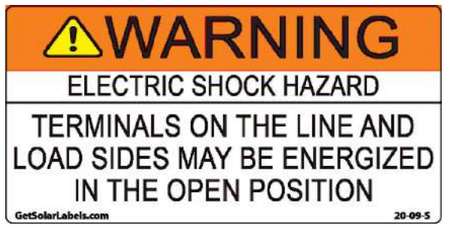
3-LINE DIAGRAM

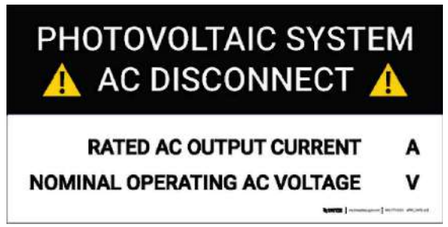
E-1



LABEL 1
AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED UNGROUNDED CONDUCTORS MAY BE EXPOSED DURING SERVICE. NEC. 690.35(F)

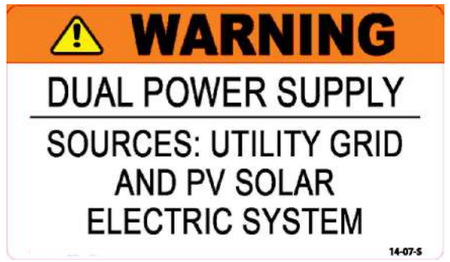


LABEL 2
FOR PV DISCONNECTING MEANS WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION.
NEC 690.17(E), NEC 705.22



LABEL 3
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.
NEC 690.54, NEC 690.13 (B)

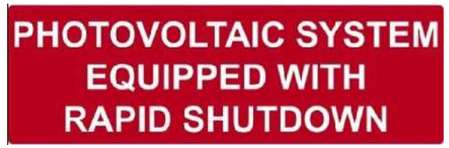
FOR VALUES SEE ELECTRICAL CALCS PAGE, VALUES TO BE PRINTED AND NOT HAND WRITTEN



LABEL 4
AT POINT OF INTERCONNECTION FOR EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUTS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FORM MULTIPLE SOURCES, EACH
SERVICE EQUIPMENT AND ALL ELECTRIC POWER PRODUCTION SOURCE LOCATIONS.
NEC 705.12(D)(3)

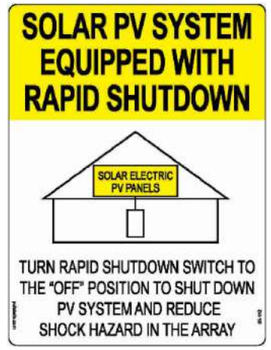
LABEL 5
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.
NEC 690.31(G)(3&4)

LABEL 6
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
NEC 705.12(D)(2)(3)(B)

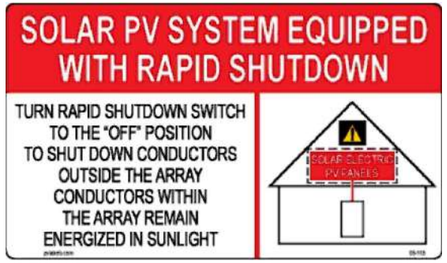


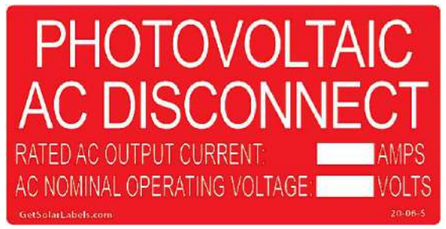
LABEL 7
SIGN LOCATED AT UTILITY SERVICE EQUIPMENT.
NEC 690.56(C)

LABEL 8
(ONLY IF 3 OR MORE SUPPLY SOURCES TO A BUSBAR)
SIGN LOCATED AT LOAD CENTER IF CONTAINS 3 OR MORE POWER SOURCES. NEC 705.12(D)(2)(3)(C)



LABEL 9
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY: SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]





LABEL 10
FOR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY: SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(B)]

LABEL 11
A PERMANENT LABEL FOR THE DC PV POWER SOURCE INDICATING THE INFORMATION SPECIFIED IN (1) THROUGH (3) SHALL BE PROVIDED BY INSTALLER AT DC PV SYSTEM DISCONNECTING MEANS AND AT EACH DC EQUIPMENT DISCONNECTING MEANS REQUIRED BY 690.15. WHERE A DISCONNECTING MEANS HAS MORE THAN ONE DC PV POWER SOURCE, THE VALUES IN 690.53(1) THROUGH (3) SHALL BE SPECIFIED FOR EACH SOURCE.

FOR VALUES SEE ELECTRICAL CALCS PAGE, VALUES TO BE PRINTED AND NOT HAND WRITTEN

LABEL 12
A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 1M (3FT) FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM" THE LABEL SHALL BE REFLECTIVE WITH ALL LETTERS CAPITALIZED AND HAVING A MINIMUM HEIGHT OF 9.5MM (3/8 IN.), IN WHITE ON RED BACKGROUND)

Fluent
SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
(16) SOLAREDGE - S440 (CS-3)
ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
INTERCONNECTION METHOD: PV BREAKER

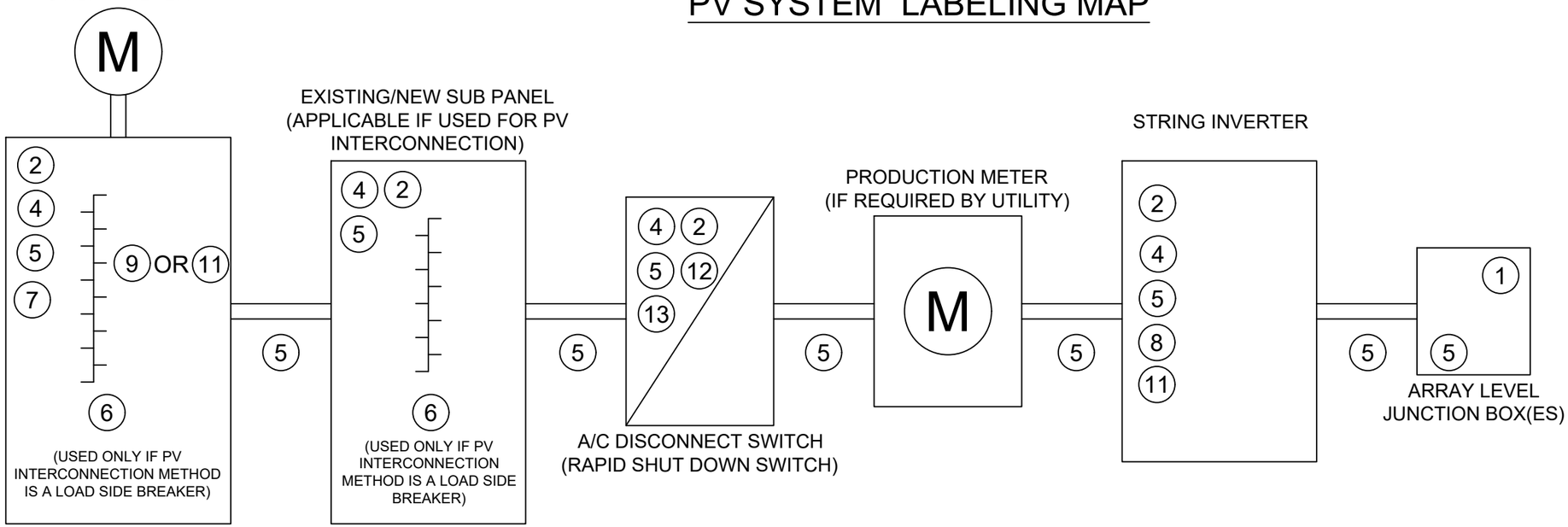
CUSTOMER LAST NAME: MCNEELY
ADDRESS: 1812 SW MERRYMAN DR
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

LABELS

E-2

PV SYSTEM LABELING MAP



* DIRECTORY PLACARD REQUIRED BY NEC 705.10, TO BE PLACED ON THE MAIN SERVICE PANEL COVER (SHOWN AS LABEL "DP"). SEE DIRECTORY PLACARD ATTACHED TO PLANSET FOR REFERENCE.

LABELING NOTES:

1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS IN ADOPTED NATIONAL ELECTRIC CODE (SEE C-1). ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER DESIGN CONFIGURATION, CURRENT, NEC, AND LOCAL CODES.

2. LABELING REQUIREMENTS BASED ON THE ADOPTED NATIONAL ELECTRIC CODE (SEE C-1), OSHA STANDARD 19010.145, ANSI Z535.

3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21] THEY SHALL BE PERMANENTLY ATTACHED, WEATHER/SUNLIGHT RESISTANT, AND WILL NOT BE HAND WRITTEN NEC 11.21(B)

5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

6. FOR LOCATION OF LABEL SEE CODE REFERENCED NEXT TO LABEL FOR.

**PV SYSTEM
DISCONNECT FOR
UTILITY OPERATION**

LABEL 13
TO BE PLACED AT AC DISCONNECT
PER NEC 690.13(B)

Fluent
SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)	
(16) SEG - SEG405BMDHV (CS-1)	
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)	
(16) SOLAREDGE - S440 (CS-3)	
ROOF TYPE: COMP SHINGLE (PV-2)	
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)	
INTERCONNECTION METHOD: PV BREAKER	
CUSTOMER LAST NAME: MCNEELY	
ADDRESS: 1812 SW MERRYMAN DR	
CITY: LEES SUMMIT	
STATE: MO	
ZIP: 64082	
JURISDICTION: LEES SUMMIT	
UTILITY COMPANY: EVERGY(MO)	

DESIGNED BY: MR
DESIGNED ON
12/20/2023

LABELS

E-2.1

SYSTEM SIZE

AC SYSTEM SIZE:	5 KW
DC SYSTEM SIZE:	6.48 KW

LABEL VALUES

AC OPERATING CURRENT =	21A
AC OPERATING VOLTAGE =	240V
MAX CIRCUIT CURRENT AMPS =	20A
DC MAXIMUM VOLTAGE =	60V

INTERCONNECTION CALCULATIONS

ITEM	UNIT	PANEL
BUS RATING	AMPS	125A
MAIN OCPD	AMPS	100A
ALLOWED PV PER NEC	AMPS	50A

CONDUCTOR CALCULATIONS

TAG A ELECTRICAL CALCS (SEE E-1)
UNDER MODULES, NOT IN CONDUIT
#10 AWG MAX CURRENT= 35A
35A * .96= 33.6A
SOLAREDGE SE5000H-US000BNU4 MAX CIRCUIT CURRENT
13.5A FOR STRING 1
13.5A FOR STRING 2

TAG B ELECTRICAL CALCS (SEE E-1)
#10 AWG MAX CURRENT = 35A
35A * .96 = 33.6A (ASHRAE 2% AVERAGE HIGH =32° C)
33.6A PER CONDUCTOR
SOLAREDGE SE5000H-US000BNU4 MAX CIRCUIT CURRENT
13.5A FOR STRING 1
13.5A FOR STRING 2

TAG C ELECTRICAL CALCS (SEE E-1)
#10 AWG MAX CURRENT = 35A
35A * .96 = 33.6A (ASHRAE 2% AVERAGE HIGH =32° C)
33.6A PER CONDUCTOR
SOLAREDGE SE5000H-US000BNU4 MAX CIRCUIT CURRENT
13.5A FOR STRING 1
13.5A FOR STRING 2

CONDUCTOR NOTES	J-BOX NOTE
TAG A= SOLAREDGE MC CABLE WILL RUN THROUGH ATTIC WHERE POSSIBLE	MULTIPLE J-BOXES MAY BE USED AND WILL BE DETERMINED AT INSTALL ONLY ONE SHOWN FOR CLARITY OF DESIGN

TAG D (IF APPLICABLE) ELECTRICAL CALCS (SEE E-1)
#6 AWG MAX CURRENT = 65A
65A * .96 = 62.4A (ASHRAE 2% AVERAGE HIGH =32° C)
62.4A PER CONDUCTOR
SOLAREDGE SE5000H-US000BNU4 MAX OUTPUT =21A
21A * 1.25 (SAFETY FACTOR) = 26.25A
SOLAREDGE RECCOMENDED OCPD= 30A

DESIGN CRITERIA AND CALCULATIONS BASED UPON:
NEC TABLE CEC/NEC 310.15(B)(16) 75° C (167° F)
ASHRAE 2% AVERAGE HIGH =32° C
NEC TABLE 310.15(B)(2)(a) 90° C DERATE FACTOR = .96

EQUIPMENT INFO

MODULE

MANUFACTURER	SEG	
MODEL	SEG405BMDHV	
PMAX	405	W
VOC	37.22	V
VMP	30.93	V
IMP	13.1	A
ISC	13.7	A
TEMPERATURE COEFFICENT OF PMAX	-0.35	%/°C
TEMPERATURE COEFFICENT OF VOC	-0.27	%/°C

INVERTER / MICRO-INVERTER

# OF INVERTERS	1
MANUFACTURER	SOLAREDGE
MODEL	SE5000H-US 000BNU4
MAX AC OUTPUT	21A
AC OUTPUT VOLTAGE	240V
MAX DC INPUT VOLTAGE	240V
NOMINAL DC INPUT VOLTAGE	380V
MAX INPUT CURRENT	13.5A
MAX OUTPUT CURRENT	21A
WEIGHTED CEC EFFICIENCY	99%
MIN AC CONDUCTOR SIZE	#10 AWG
MIN AC GROUND SIZE	#10 AWG
PV BREAKER	30A
INVERTER WATTAGE	5000W

OPTIMIZER / COMBINER PANEL

MANUFACTURER	SOLAREDGE	
MODEL	S440	
MAX. INPUT POWER	440	W
MAX. VOC	60	V
OUTPUT CURRENT	15	A
OUTPUT VOLTAGE	60	V
MIN. STRING LENGTH	8	
MAX. STRING LENGTH	15	
MAX. STRING POWER	14.5	

BATTERY INFO (IF APPLICABLE)

BATTERY INFO	
MANUFACTURER	
PART NUMBER	NO BATTERY
TOTAL ENERGY (kWh)	
USABLE ENERGY (kWh)	
CAPACITY (Ah)	
NOMINAL VOLTAGE (V)	
VOLTAGE RANGE (V)	
MAX POWER (kW)	
WEIGHT	

Fluent SOLAR
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(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
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ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
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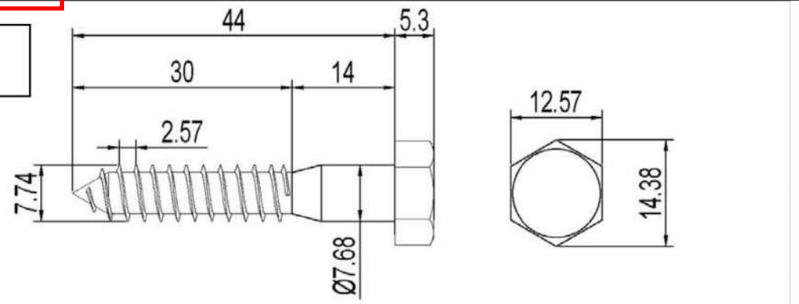
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

ELECTRICAL CALCS AND EQUIPMENT INFO

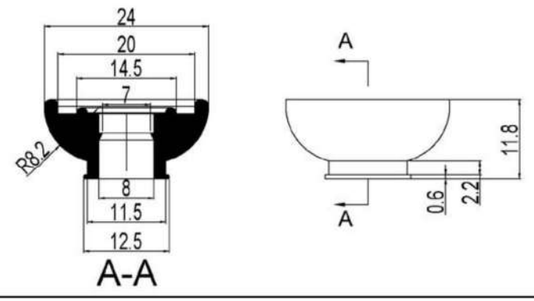
E-3

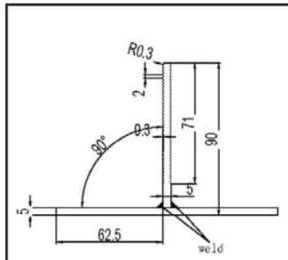
PN# 16318
Screws

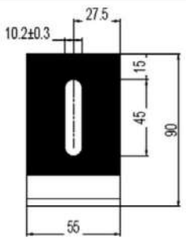


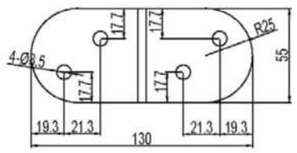
Tolerance Range						
Baiting tolerance	±2 mm		QuickBOLT			
Hole tolerance	±0.3 mm					
Hole distance tolerance	±0.5 mm	Design			Scale	Quantity
Form tolerance	±2 mm	Drawing			Material	SUS304
Thicknessness tolerance	±0.1 mm	Confirm			Drawing No.	
Angle tolerance	±1° mm	Verify			Finish	

PN# 16318
Umbrella Washer



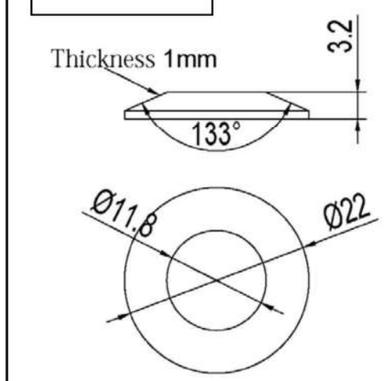






PN# 16318
Black T-Foot

PN# 16318
Silicone backing



5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

INSTALL INSTRUCTIONS

BLACK DECK MOUNT (16318)

RECOMMENDED MATERIALS

- MFG approved sealant
- 1/2" Nut Setter

INSTALLATION INSTRUCTIONS

1. Install anywhere on roof. No need to locate rafters
2. Place sealant around the bottom of the T-Foot
3. Place the T-Foot onto the roof
4. Insert first 5/16" x 1-3/4" Hex Lags into T-Foot
5. Drive the screw until the Umbrella Washer is compressed
6. Repeat with remaining screws

* Do not predrill

* To Drive Screws and Set Umbrella Washers Properly Torque PSI should not Exceed 57 Lbs/Inch

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Fluent SOLAR
ADDRESS: 2578 W 600 N
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SYSTEM SIZE: 6.48 KW (E-1)
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ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

MOUNT

M-1

UL CERTIFICATION

CERTIFICATE OF COMPLIANCE

Certificate Number 20191115-E493748
Report Reference E493748-20170817
Issue Date 2019-NOVEMBER-15

Issued to: QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP
5830 Las Positas Rd
Livermore, CA 94551

This is to certify that representative samples of COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS
(See Adendum for Additional Information.)

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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Page 1 of 2

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QuickBOLT is a division of Quickscrews International Corp.

CERTIFICATE OF COMPLIANCE

Certificate Number 20191115-E493748
Report Reference E493748-20170817
Issue Date 2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16317 16318 16988 16990 16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520 17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543 17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559 17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585 17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612 17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628 17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649 17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686 17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711 17712 17717 17718 17759 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS 17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15894SS 15891SS 15987BSS 17660 17661 17662 17663

Ratings: Overcurrent Protection Rating – 25 Amps

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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Fluent SOLAR
ADDRESS: 2578 W 600 N
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PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
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INTERCONNECTION METHOD: PV BREAKER

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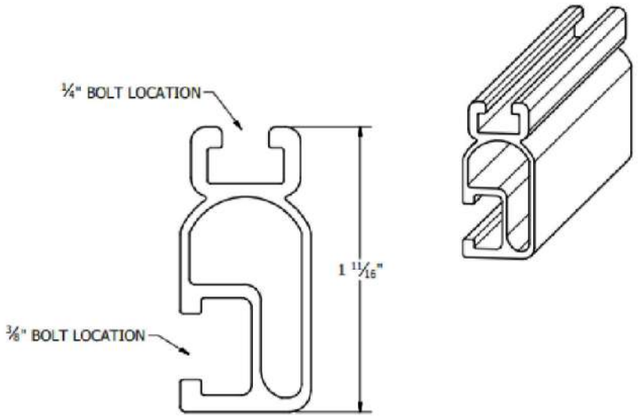
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

MOUNT CONT.

M-2



PART # TABLE		
P/N	DESCRIPTION	LENGTH
315168M	SM LIGHT RAIL 168" MILL	168"
315168D	SM LIGHT RAIL 168" DRK	168"
315240M	SM LIGHT RAIL 240" MILL	240"
315240D	SM LIGHT RAIL 240" DRK	240"

UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

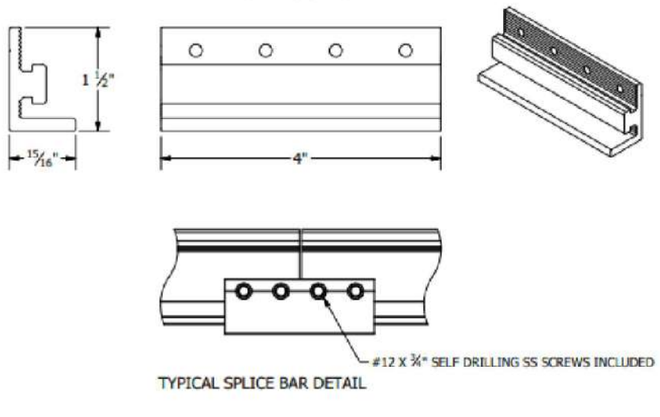
PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART DETAIL
DESCRIPTION:	LIGHT RAIL
REVISION DATE:	9/11/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

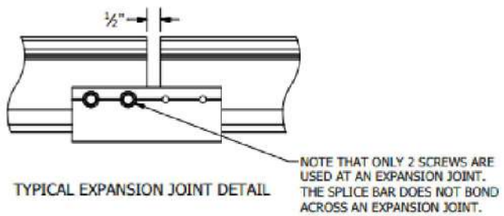
PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-P02
SHEET

BONDING SPLICE BAR



TYPICAL SPLICE BAR DETAIL



TYPICAL EXPANSION JOINT DETAIL

PART # TABLE	
P/N	DESCRIPTION
303018C	BND SPLICE BAR SERRATED CLR
303018D	BND SPLICE BAR SERRATED DRK

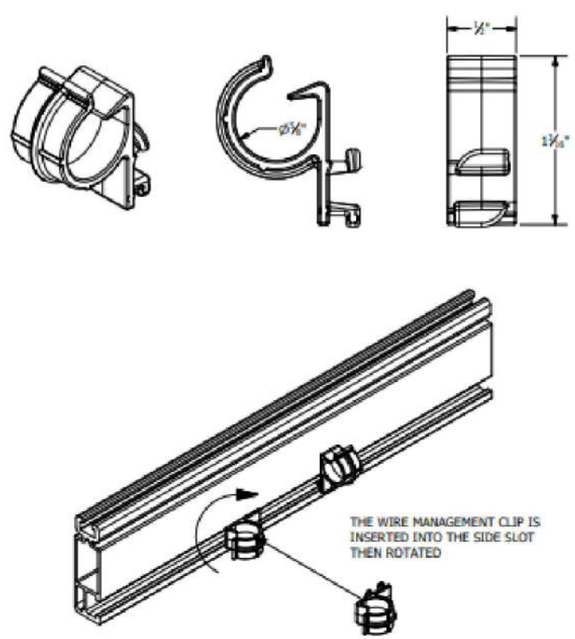
UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART & ASSEMBLY
DESCRIPTION:	BONDING SPLICE BAR
REVISION DATE:	9/27/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-A05
SHEET



PART # TABLE	
P/N	DESCRIPTION
008012P	MICRO WIRE MGMT CLIP UV PLSTC

UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	ASSEMBLY
DESCRIPTION:	WIRE MGMT CLIP
REVISION DATE:	9/27/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-A06
SHEET

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE:	6.48 KW (E-1)
	(16) SEG - SEG405BMDHV (CS-1)
	(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
	(16) SOLAREDGE - S440 (CS-3)
	ROOF TYPE: COMP SHINGLE (PV-2)
	PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
	INTERCONNECTION METHOD: PV BREAKER
CUSTOMER LAST NAME:	MCNEELY
ADDRESS:	1812 SW MERRYMAN DR
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STATE:	MO
ZIP:	64082
JURISDICTION:	LEES SUMMIT
UTILITY COMPANY:	EVERGY(MO)

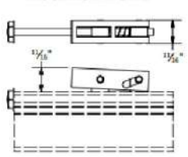
DESIGNED BY: MR

DESIGNED ON
12/20/2023

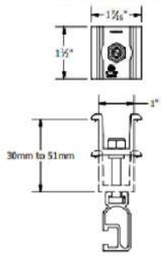
EQUIPMENT

EQ-1

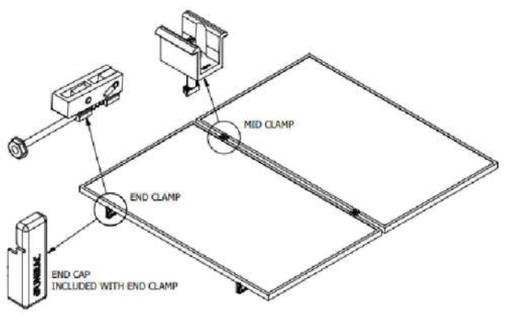
PRO SERIES END CLAMP



PRO SERIES MID CLAMP



PART # TABLE	
P/N	DESCRIPTION
302035M	SM END CLAMP ASSEMBLY, MILL
302030M	MID CLAMP ASSEMBLY, MILL
302030D	MID CLAMP ASSEMBLY, DRK



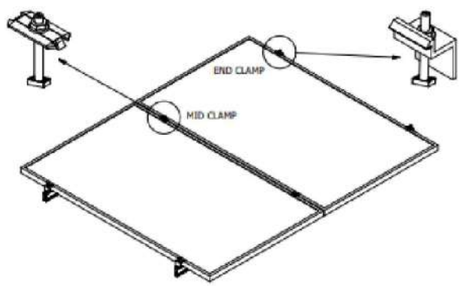
UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART & ASSEMBLY
DESCRIPTION:	BONDING CLAMPS
REVISION DATE:	9/14/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-A07
SHEET



PART # TABLE	
P/N	DESCRIPTION
302027C	SM BND MIDCLAMP BC SS
302027D	SM BND MIDCLAMP BC DRK SS
302028C	SM BND MIDCLAMP EF SS
302028D	SM BND MIDCLAMP EF DRK SS
302029C	SM BND MIDCLAMP DK SS
302029D	SM BND MIDCLAMP DK DRK SS
	FOR BONDING END CLAMP REFER TO SHEET SM-P05

BONDING SM MID CLAMP BONDING SM END CLAMP

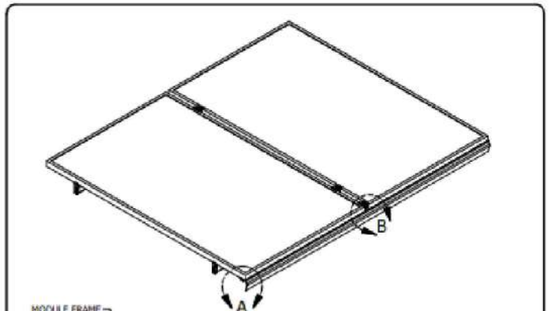
UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART & ASSEMBLY
DESCRIPTION:	BONDING TOP CLAMPS
REVISION DATE:	10/26/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-A01A
SHEET



DETAIL A
TRIM END CLIP

TRIM

DETAIL B
MID CLAMP TRIM CONNECTION

PART # TABLE		
P/N	DESCRIPTION	LENGTH
206072D-B	SM TRIM DRK	168"
008025S	SM TRIM END CLIP	-

UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

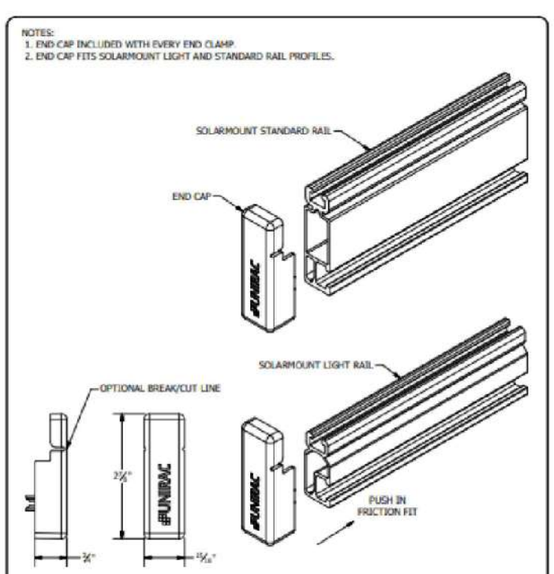
PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART & ASSEMBLY
DESCRIPTION:	SM TRIM END CLIP
REVISION DATE:	9/27/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-A02
SHEET

NOTES:
1. END CAP INCLUDED WITH EVERY END CLAMP.
2. END CAP FITS SOLARMOUNT LIGHT AND STANDARD RAIL PROFILES.



UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SOLARMOUNT
DRAWING TYPE:	PART DETAIL
DESCRIPTION:	END CAPS
REVISION DATE:	9/27/2017

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

SM-P04
SHEET

Fluent SOLAR

ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
(16) SOLAREDGE - S440 (CS-3)
ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
INTERCONNECTION METHOD: PV BREAKER

CUSTOMER LAST NAME: MCNEELY
ADDRESS: 1812 SW MERRYMAN DR
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

EQUIPMENT

EQ-2

UNIRAC SPLICE T-BOLT AND NUT - 009020S

UniRac, SolarMount Integrated Bonding, T-Bolt & Nut, 3/8" X 3/4", Clear SS, Qty. 1, 009020S

SolarMount defined the standard in solar racking. Recent enhancements are designed to get installers off the roof faster than ever before. Components are pre-assembled and optimized to reduce installation steps and save labor time. Our new grounding & bonding process reduces copper wire and eliminates grounding straps or bonding jumpers to reduce costs.

Features

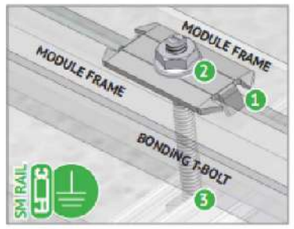
- **Highlights** - Easy installation, and high compatibility.

General Information	
Manufacturer:	UniRac
Product Line:	SolarMount
Model ID:	009020S
Certifications and Safety Ratings:	UL

Mechanical Data	
Technology:	T-Bolt and Nut
Dimensions:	1.50 x 1.25 x 0.75 Inches
Weight:	0.05 lbs
Application:	Integrated Bonding

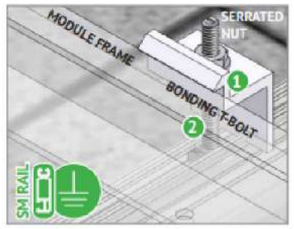
SM SOLAR MOUNT BONDING CONNECTION GROUND PATHS

INSTALLATION GUIDE | M PAGE



BONDING MIDCLAMP ASSEMBLY

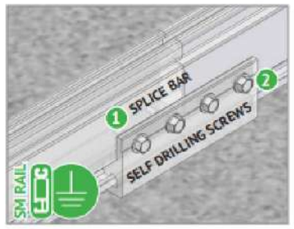
1. Stainless steel Midclamp points, 2 per module, pierce module frame anodization to bond module to module through clamp.
2. Serrated flange nut bonds stainless steel clamp to stainless steel T-bolt
3. Serrated T-bolt head penetrates rail anodization to bond T-bolt, nut, clamp, and modules to grounded SM rail.



ENDCLAMP ASSEMBLY

1. Serrated flange nut bonds aluminum Endclamp to stainless steel T-bolt
2. Serrated T-bolt head penetrates rail anodization to bond T-bolt, nut, and Endclamp to grounded SM rail

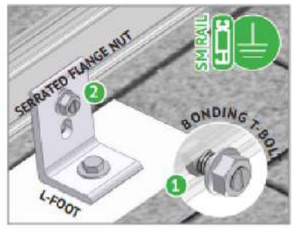
Note: End clamp does not bond to module frame.



BONDING RAIL SPLICE BAR

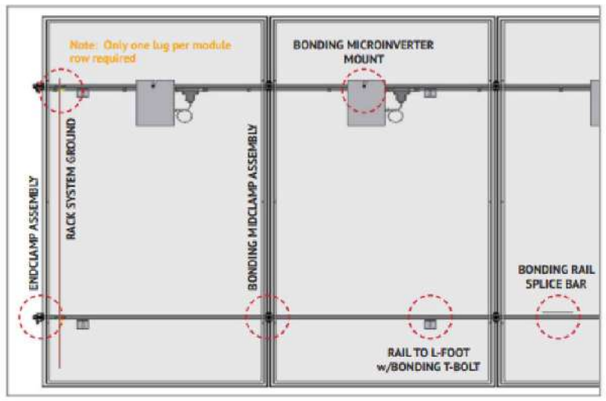
1. Stainless steel self drilling screws drill and tap into splice bar and rail creating bond between splice bar and each rail section
2. Aluminum splice bar spans across rail gap to create rail to rail bond. Rail on at least one side of splice will be grounded.

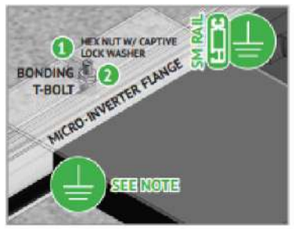
Note: Splice bar and bolted connection are non-structural. The splice bar function is rail alignment and bonding.



RAIL TO L-FOOT w/BONDING T-BOLT

1. Serrated flange nut removes L-foot anodization to bond L-Foot to stainless steel T-bolt
2. Serrated T-bolt head penetrates rail anodization to bond T-bolt, nut, and L-foot to grounded SM rail





BONDING MICROINVERTER MOUNT

1. Hex nut with captive lock washer bonds metal microinverter flange to stainless steel T-bolt
2. Serrated T-bolt head penetrates rail anodization to bond T-bolt, nut, and L-foot to grounded SM rail

System ground including racking and modules may be achieved through the trunk cable of approved microinverter systems. See page I for details

RACK SYSTEM GROUND

1. WEEB washer dimples pierce anodized rail to create bond between rail and lug
2. Solid copper wire connected to lug is routed to provide final system ground connection.

NOTE: Ilsco lug can also be used when secured to the side of the rail. See page I-3 for details

Fluent SOLAR
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PHONE: 866-736-1253

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ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

EQUIPMENT

EQ-3

Certificate of Compliance

Certificate: 70131735 **Master Contract:** 266909 (266909)

Project: 70185553 **Date Issued:** 2018-10-08

Issued to: **Unirac**
1411 Broadway NE
Albuquerque, New Mexico 87102
USA
Attention: Klaus Nicolaedis

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Michael Hoffnagle
Michael Hoffnagle

PRODUCTS
CLASS - C531302 - POWER SUPPLIES- PHOTOVOLTAICS--PV Racking
CLASS - C531382 - POWER SUPPLIES- PHOTOVOLTAICS-PV Racking and clamping systems-Certified to US Standards

Models: SM SOLARMOUNT Flush-to-Roof is an extruded aluminum rail PV racking system that is installed parallel to the roof in landscape or portrait orientations.

ULA Unirac Large Array is a ground mount system using the SolarMount (SM) platform for the bonding and grounding of PV modules.

SOLARMOUNT

The system listed is designed to provide bonding/grounding, and mechanical stability for photovoltaic modules. The system is secured to the roof with the L-Foot components through the roofing material to building structure. Modules are secured to the racking system with stainless steel or aluminum mid clamps and Aluminum end clamps. The modules are bonded to the racking system with the stainless steel bonding mid clamps with piercing points. The system is grounded with 10 AWG copper wire to bonding/grounding lugs. Fire ratings of Class A with Type 1, 2, 3, or 10 for steep slope. Tested at 5" interstitial gap which allows installation at any stand-off height.

The grounding of the system is intended to comply with the latest edition of the National Electrical Code, to include NEC 250 & 690. Local codes compliance is required, in addition to national codes. All grounding/bonding connections are to be torqued in accordance with the Installation Manual and the settings used during the certification testing for the current edition of the project report.

The system may employ optimizers/micro-inverters and used for grounding when installed per installation instructions.

Mechanical ratings:

Downward Design Load (lb/ft²)	113.4
Upward Design Load (lb/ft²)	50.4
Down-Slope Load (lb/ft²)	14.7

Conditions of acceptability: Installation is subject to acceptance of the local inspection authorities having jurisdiction. The certification of these products relates only to the methods of installation, bonding, and grounding as outlined in the Installation Manual for each product.

Unirac Large Array

ULA is a ground mount system using the SolarMount (SM) platform for the bonding and grounding of PV modules. ULA aluminum components merge with SM rails and installer-supplied steel pipe. The SM rail system is secured to the horizontal Pipe using the Rail Bracket components. The Rear and Front cap secures the horizontal Pipe to the vertical Pipe. The Front cap is also used to secure the Cross brace. A Slider is attached to the vertical Pipe to secure the Cross brace. The SM rails, caps, slider, rail brackets, and cross braces materials are 6105-T5 aluminum extrusion. Fasteners materials are 304 stainless steel. Horizontal and vertical pipe materials meet the minimum requirements of ASTM A53 for galvanized steel pipe in 2" and 3" diameter.

The mechanical load ratings from the SM test data will be applied to the ULA model.

Fire Testing is not applicable due to being a ground mount system.

APPLICABLE REQUIREMENTS

UL 2703-1st Edition - Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
LTR AE-001-2012 - List of Technical Requirements for Photovoltaic Module and Panel racking Systems

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The following markings appear on the rail by adhesive label:

1. Submitter's name and/or CSA Master Contract number "266909";
2. Model designation;
3. Manufacturing date;
4. System fire class rating/designation of information location in Installation Manual;
5. Design load rating/designation of information location in Installation Manual;

The following markings appear on the Mid clamp by stamping:

1. Submitter's name and/or CSA Master Contract number "266909";
2. CSA mark
3. Mil ID for factory location

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

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(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
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ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
INTERCONNECTION METHOD: PV BREAKER

CUSTOMER LAST NAME: MCNEELY
ADDRESS: 1812 SW MERRYMAN DR
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

EQUIPMENT

EQ-4

SM SOLAR MOUNT

APPENDIX A | Q PAGE

System Certification

The SOLARMOUNT system has been certified and listed to the UL 2703 standard (Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels). This standard included electrical grounding, electrical bonding, mechanical load and fire resistance testing.

In conducting these tests, specific modules are selected for their physical properties so that the certifications can be broadly applied. The following lists the specific modules that were tested and the applicability of those certifications to other modules that might come onto the market.

In addition to UL 2703 certification, Unirac performs internal testing beyond the requirements of certification tests in order to establish system functional limits, allowable loads, and factors of safety. These tests include functional system tests, and destructive load testing.

Mechanical Load Test Modules

The modules selected for UL 2703 mechanical load testing were selected to represent the broadest range possible for modules on the market. The tests performed cover the following basic module parameters:

- Frame thicknesses greater than or equal to 1.0 mm
- Basic single and double wall frame profiles (some complex frame profiles could require further analysis to determine applicability)
- Clear and dark anodized aluminum frames
- UL2703 Certification Load Ratings:
  - o Down – 113.4 PSF , Up – 50.4 PSF , Down-Slope – 14.7 PSF
- Tested Loads:
  - o Down – 170.10 PSF , Up – 75.60 PSF, Down-Slope – 22.05 PSF
- Maximum Area of Module = 21.06 sqft

Tested Modules	
Module Manufacturer	Model/Series
Hyundai	HiS-S325TI

System Level Fire Classification

The system fire class rating requires installation in the manner specified in the SOLARMOUNT Installation Guide. SOLARMOUNT has been classified to the system level fire portion of UL 1703. This UL 1703 classification has been incorporated into our UL 2703 product certification. Class A system level fire performance is inherent in the SOLARMOUNT design, and no additional mitigation measures are required. The fire classification rating is only valid on roof pitches greater than 2:12 (slopes ⩾ 2 inches per foot, or 9.5 degrees). There is no required minimum or maximum height limitation above the roof deck to maintain the system fire rating for SOLARMOUNT. Module Types & System Level Fire Ratings are listed below:

Rail Type	Module Type	System Level Fire Rating	Rail Direction	Module Orientation	Mitigation Required
Standard Rail	Type 1, Type 2, Type 3, & Type 10	Class A, B, & C	East-West North-South	Landscape OR Portrait	None Required
Light Rail	Type 1 & Type 2	Class A, B, & C	East-West North-South	Landscape OR Portrait	None Required

PZSE structural ENGINEERS

August 7, 2019

UniRac
1411 Broadway Boulevard NE
Albuquerque, New Mexico 87102-1545
TEL: (505) 242-6411
FAX: (505) 242-6412

Attn.: Engineering Department,

Re: Engineering Certification for UniRac's PUB16JAN05 edition of the "SolarMount Design & Engineering Guide"

PZSE, Inc.-Structural Engineers has reviewed UniRac's "SolarMount Design & Engineering Guide" published January 05, 2016 and specifically the enhancements of the SolarMount Flush-to-Roof System, Pressure Lookup Tables, and Downward & Upward Span Length Tables.

This certification excludes connections to building structures and the effects on building structure components. All information, data and analysis contained within the Design & Engineering Guide are based on, and comply with the following:

1. 2006, 2009, 2012, 2015 International Building Code, by International Code Council, Inc.
2. ASCE/SEI 7-05 & ASCE/SEI 7-10 Minimum Design Loads for Buildings and other Structures, by ASCE
3. 2005, 2010, 2015 Aluminum Design Manual, by The Aluminum Association

This letter certifies that the structural calculations contained within UniRac's "SolarMount Design & Engineering Guide" are in compliance with the above Codes.

If you have any questions on the above, do not hesitate to call.

Prepared By:
PZSE, Inc. - Structural Engineers
Roseville, CA

STATE OF TEXAS · PAUL K. ZACHER · 112228 · LICENSED PROFESSIONAL ENGINEER

FIRM NUMBER F-15844

1478 Stone Point Drive, Suite 190, Roseville, CA 95661
T 916.961.3960 F 916.961.3965 W www.pzse.com
Experience | Integrity | Empowerment

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
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CITY: LEES SUMMIT
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ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

EQUIPMENT

EQ-5

SIV SERIES

SEG Solar INC. (SEG) redefined the high-efficiency module series by integrating 182mm silicon wafers with multi-busbar and half-cut cell technologies. SEG panel combined creative technology effectively and extremely improved the module efficiency and power output.

KEY FEATURES

- Less mismatch to get more power
- Less power loss by minimizing the shading impact
- Competitive low light performance
- 3 times EL test to ensure best quality
- Ideal choice for utility and commercial scale projects by reduced BoS and improved ROI
- Outstanding reliability proven by PVEL for stringent environment condition:
  - Sand, acid, salt and hailstones
  - Anti-PID

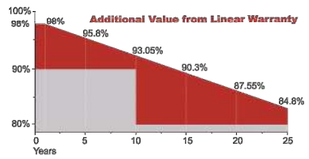
PRODUCT CERTIFICATION

IEC61215:2016; IEC 61730:2016;	UL1703; UL61730/CSA/CEC
IEC62804	PID
IEC61701	Salt Mist
IEC62716	Ammonia Resistance
IEC60068	Dust and Sand
IEC61215	Hailstone(25mm)
Fire Type (UL61730):1/29 (Type1-HV Type29-BG)	
ISO14001:2015; ISO9001:2015; ISO45001:2018	

INSURANCE

PICC

WARRANTY



25 YEARS Guarantee on product material and workmanship

25 YEARS Linear power output warranty

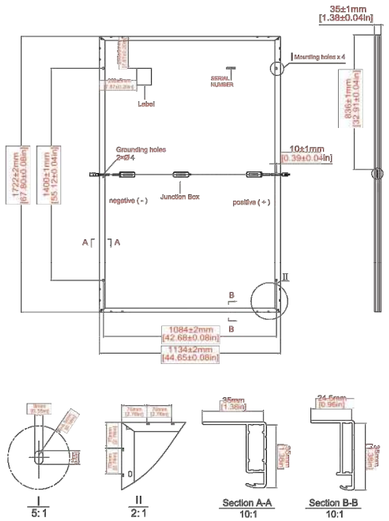
SEG SOLAR INC. (SEG)
SEG Headquarter California office: 6200 Stoneridge Mall Rd., Ste 300 Pleasanton, CA 94588
SEG San Antonio, Texas office: 973 Isom Road San Antonio, TX 78216
Tel: 925-468-4198 Web: www.segsolar.com

SEG SOLAR INC. (SEG)
www.segsolar.com

Electrical Characteristics

Module Type	SEG-405-BMD-HV		SEG-410-BMD-HV		SEG-415-BMD-HV		SEG-420-BMD-HV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power at STC (Pmp)	405	304	410	308	415	311	420	315
Open Circuit Voltage (Voc)	37.22	34.73	37.32	34.81	37.42	34.90	37.52	34.99
Short Circuit Current (Isc)	13.70	11.07	13.80	11.15	13.90	11.23	14.00	11.32
Maximum Power Voltage (Vmp)	30.93	28.91	31.05	29.05	31.16	29.19	31.28	29.33
Maximum Power Current (Imp)	13.10	10.51	13.21	10.59	13.32	10.66	13.43	10.74
Module Efficiency at STC(ηm)	20.74		21.00		21.25		21.51	
Power Tolerance	(0, +3%)							
Maximum System Voltage	1500V DC							
Maximum Series Fuse Rating	25 A							

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5
NOCT: Irradiance 800W/m² ambient temperature 20°C module temperature 45°C wind speed: 1m/s
Power measurement tolerance: +/-3%



**Refer to SEG installation Manual for details*

Temperature Characteristics

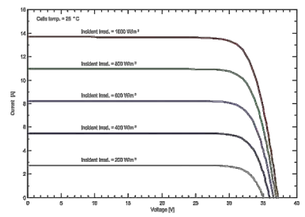
Pmax Temperature Coefficient	-0.35 %/°C
Voc Temperature Coefficient	-0.27 %/°C
Isc Temperature Coefficient	+0.05 %/°C
Operating Temperature	-40～+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

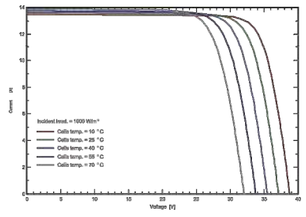
Mechanical Specifications

External Dimensions	1722 x 1134 x 35 mm
Weight	21.5 kg
Solar Cells	PERC Mono (108 pcs)
Front Glass	3.2 / mm AR coating tempered glass / low iron
Frame	Black anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	MC4
Cable Type / Length	12 AWG PV Wire (UL/IEC) / 1200 mm
Mechanical Load (Front)	5400 Pa / 113 psf*
Mechanical Load (Rear)	3600 Pa / 75 psf*

**Refer to SEG installation Manual for details*

I-V Curve





Packing Configuration

	1722 x 1134 x 35 mm	
Container	20'GP	40'HQ
Pieces per Pallet	31	31
Pallets per Container	6	26
Pieces per Container	186	806

For details, please consult SEG.

SEG SOLAR INC. (SEG)
SEG Headquarter California office: 6200 Stoneridge Mall Rd., Ste 300 Pleasanton, CA 94588
SEG San Antonio, Texas office: 973 Isom Road San Antonio, TX 78216
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DESIGNED BY: MR
DESIGNED ON
12/20/2023

MODULE

CS-1

Power Optimizer
For Residential Installations

S440, S500

POWER OPTIMIZER

Enabling PV power optimization at the module level

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

* Functionality subject to inverter model and firmware version

solaredge.com

solaredge

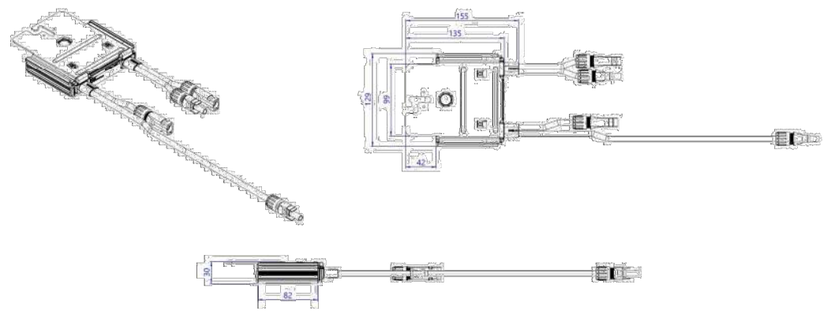
Power Optimizer
For Residential Installations
S440, S500

	S440	S500	UNIT
Rated Input DC Power(1)	440	500	W
Absolute Maximum Input Voltage (Voc)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15	Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		%
Overvoltage Category	II		
OUTPUT DURING OPERATION			
Maximum Output Current	15		Adc
Maximum Output Voltage	60		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer	1		Vdc
STANDARD COMPLIANCE			
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3, CISPR11, EN-55011		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL94 V-0, UV Resistant		
RoHS	Yes		
Fire Safety	VDE-AR-E 2100-712:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 155 x 30		mm
Weight (including cables)	655 / 1.5		gr / lb
Input Connector	MC4(2)		
Input Wire Length	0.1		m
Output Connector	MC4		
Output Wire Length	(+) 2.3, (-) 0.10		m
Operating Temperature Range(3)	-40 to +85		°C
Protection Rating	IP68 / NEMA6P		
Relative Humidity	0 - 100		%

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

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

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



CE RoHS

Fluent SOLAR
ADDRESS: 2578 W 600 N
SUITE 100 LINDON, UT 84042
PHONE: 866-736-1253

SYSTEM SIZE: 6.48 KW (E-1)
(16) SEG - SEG405BMDHV (CS-1)
(1) SOLAREDGE - SE5000H-US000BNU4 (CS-2)
(16) SOLAREDGE - S440 (CS-3)
ROOF TYPE: COMP SHINGLE (PV-2)
PREFABRICATED TRUSSES, 2X4 @ 24" (PV-2)
INTERCONNECTION METHOD: PV BREAKER

CUSTOMER LAST NAME: MCNEELY
ADDRESS: 1812 SW MERRYMAN DR
CITY: LEES SUMMIT
STATE: MO
ZIP: 64082
JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

OPTIMIZER

CS-2

INVERTERS

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking 99% weighted efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

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Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current @240V[2]	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V[2]	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600kΩ Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

(1) For other regional settings please contact SolarEdge support
(2) A higher current source may be used; the inverter will limit its input current to the values stated

Single Phase Inverter with HD-Wave Technology

for North America

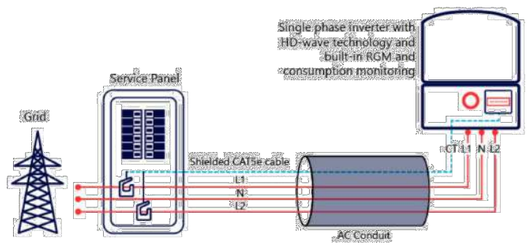
SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Metering, ANSI C12.20	Optional[3]							
Consumption metering								
Inverter Commissioning	With the SetApp mobile application using Built-in Wi-Fi Access Point for Local Connection							
Rapid Shutdown - NEC 2014, NEC 2017 and NEC 2020, 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741 SA, UL16998, CSA C22.2, Canadian AFCI according to T.I.L. M-07							
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)							
Emissions	FCC Part 15 Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG					1" Maximum /14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG					1" Maximum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174					21.3 x 14.6 x 7.3 / 540 x 370 x 185		in / mm
Weight with Safety Switch	22 / 10		25.1 / 11.4		26.2 / 11.9	38.8 / 17.6		lb / kg
Noise	< 25					<50		dBA
Cooling	Natural Convection							
Operating Temperature Range	-40 to +140 / -40 to +60[4]							°F / °C
Protection Rating	NEMA 4X (Inverter with Safety Switch)							

(3) Inverter with Revenue Grade Meter P/N: SExxxxH-US000BNC4; Inverter with Revenue Grade Production and Consumption Meter P/N: SExxxxH-US000BNI4 . For consumption metering, current transformers should be ordered separately: SEACT0750-200NA-20 or SEACT0750-400NA-20. 20 units per box
(4) Full power up to at least 50°C / 122°F; for power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf

How to Enable Consumption Monitoring

By simply wiring current transformers through the inverter's existing AC conduits and connecting them to the service panel, homeowners will gain full insight into their household energy usage helping them to avoid high electricity bills



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JURISDICTION: LEES SUMMIT
UTILITY COMPANY: EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

INVERTER

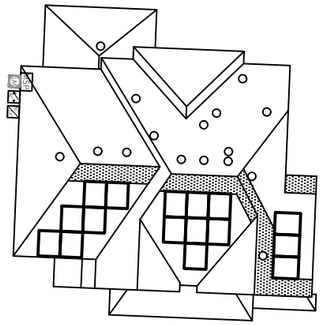
CS-3

CAUTION

MULTIPLE SOURCES OF POWER

LEGEND:
- UM =UTILITY METER
- MSP =MAIN SERVICE PANEL
- =AC DISCONNECT
- =INVERTER

TRUE NORTH

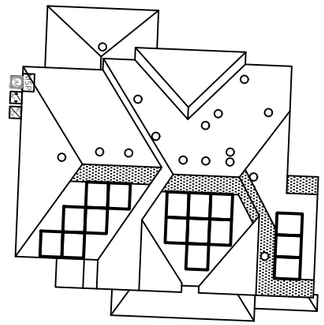


CAUTION

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

LEGEND:
- UM =UTILITY METER
- MSP =MAIN SERVICE PANEL
- =AC DISCONNECT
- =INVERTER

TRUE NORTH



2020 NEC
LABEL (FOR FIELD USE ONLY)

2017 NEC
LABEL (FOR FIELD USE ONLY)

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JURISDICTION:	LEES SUMMIT
UTILITY COMPANY:	EVERGY(MO)

DESIGNED BY: MR
DESIGNED ON
12/20/2023

PLACARD

PL-1