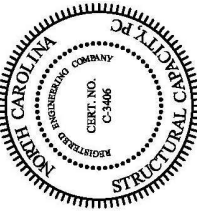
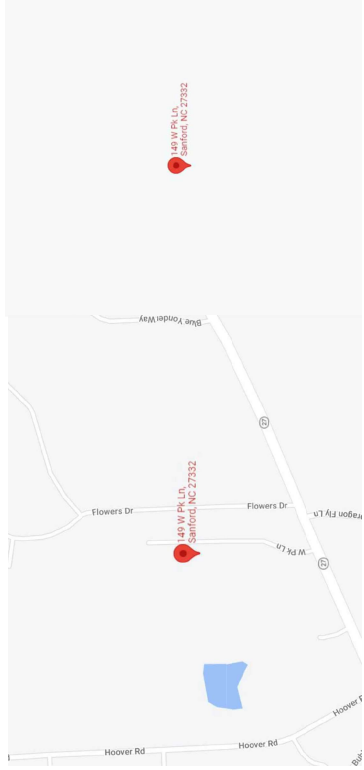


Building Codes: 2017 NEC, 2018 NORTH CAROLINA RESIDENTIAL CODE, 2018 NORTH CAROLINA BUILDING CODE and AHJ Amendments

AERIAL MAP
SCALE: NTS



TOMASSINI, LEE PV SYSTEM
149 W PK LN .
SANFORD, NC, 27332
APN: 039587 1028 26
JURISDICTION: HARNETT COUNTY (NC)
GENERAL INFORMATION

SYSTEM SIZE: 7.200 kW-DC-STC
6.000 kW-AC
ROOF PITCHED: 22 DEGREES
INVERTER: (1) SOLAREEDGE SE6000H-US W/ P401 OPTIMIZERS
MODULES: (18) Q PEAK DUO BIK ML G10+ 400W
STRINGS: (2) x 9 MODULE SERIES STRINGS
200A
ELECTRICAL SERVICE RATING: 35A
PV SYSTEM OVERCURRENT RATING: EATON DG222UR8 (60A / 2P)
PV SYSTEM DISCONNECT SWITCH: COMP SHINGLE
ROOF TYPE: ENGINEERED TRUSS
ROOF FRAMING: K2 SYSTEMS
RACKING: MIN. 5/16" x 3 1/2 LAG SCREWS EA. STANDOFF
ATTACHMENT METHOD:

NOTES

- EQUIPMENT LOCATION**
- ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26.
 - WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31(A),(C) AND NEC TABLES 310.15(B)(2)(A) AND 310.15(B)(3)(C).
 - JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34.
 - ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.
 - ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.
 - ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.
- WIRING & CONDUIT NOTES**
- ALL CONDUITS AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
 - CONDUCTORS SIZED ACCORDING TO NEC 690.8; NEC 690.7.
 - DC WIRING LIMITED TO MODULE FOOTPRINT. MICRO INVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE WIRING CLIPS.
 - AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1 - BLACK, PHASE B OR L2 RED, OR OTHER CONVENTION IF THREE PHASE, PHASE C OR L3-BLUE, YELLOW, ORANGE, OR OTHER CONVENTION NEUTRAL- WHITE OR GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH THE HIGHER VOLTAGE TO BE MARKED ORANGE NEC 110.15.

GENERAL NOTES

- MODULES ARE LISTED UNDER UL 1703 AND CONFORM TO THE STANDARDS.
- INVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE STANDARDS.
- DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT OF THE PV SYSTEM AND THE ACTUAL SITE CONDITION MIGHT VARY.
- WORKING CLEARANCES AROUND THE NEW PV ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.
- ALL GROUND WIRING CONNECTED TO THE MAIN SERVICE GROUNDING IN MAIN SERVICE PANEL/SERVICE COMPONENT.
- ALL CONDUCTORS SHALL BE 600V, 75° C STANDARD COPPER UNLESS OTHERWISE NOTED.
- WHEN REQUIRED, A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
- THE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND/OR THE UTILITY.
- ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREES, WIRES OR SIGNS.
- PV ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM ARRAY WIRING TO CONDUIT WIRING.

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LOCATION & QUANTITY OF PACKING & STANDOFFS	PV 3
RACKING LOAD & UPLIFT CALCULATIONS	PV 4
DETAILS	PV 5
ROOF ATTACHMENT DETAILS	PV 6
ONE LINE	PV 5 & 6
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ELECTRICAL 3 LINE DIAGRAM	PV 5 & 6
OCP & WIRE SIZING CALCULATIONS	PV 7
ARRAY & INVERTER ELECTRICAL SPECIFICATIONS	PV 7
EQUIPMENT SPECIFICATIONS	PV 7
LABEL NOTES	PV 7
LABELS	PV 7
PV EQUIPMENT LABELING DETAIL	PV 8
DIRECTORY LABEL	PV 9
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PV EQUIPMENT SPECIFICATIONS	
DATA SHEETS & ADDITIONAL INFORMATION	
EQUIPMENT SPEC.	
SUPPLEMENTAL MATERIAL	

TITAN
SOLAR POWER
525 W BASELINE RD., MESA AZ, 85210
CONTRACTOR LIC# U.34445

TOMASSINI, LEE RESIDENCE
149 W PK LN., SANFORD, NC, 27332
LAT:35.326788, LON:-79.067648
TSP150816

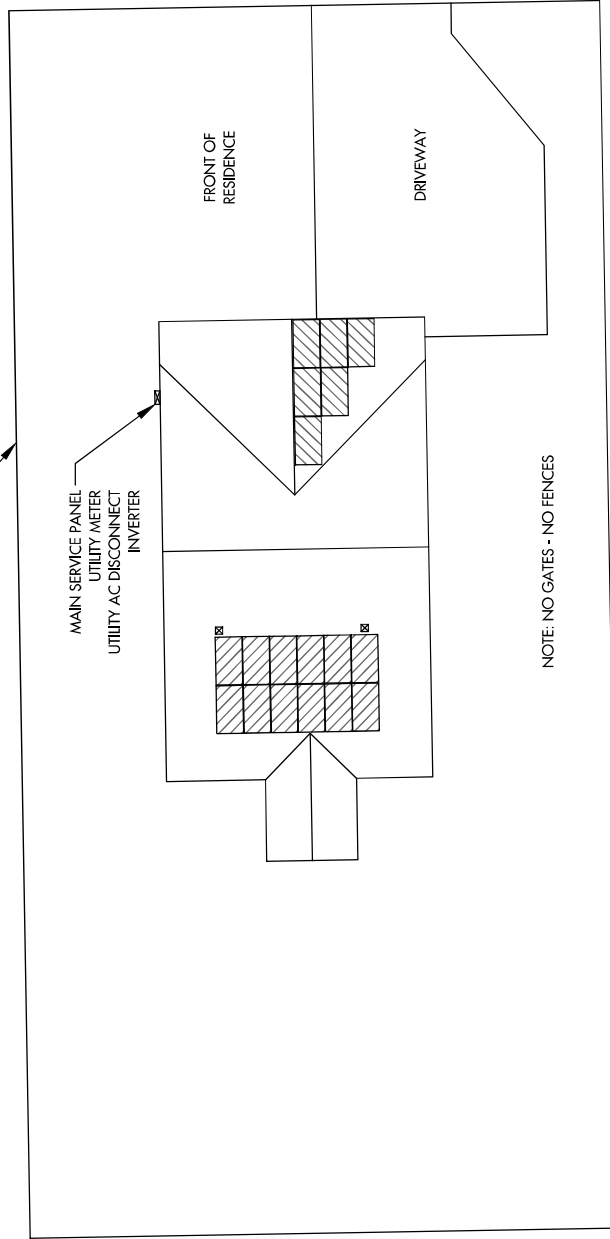
(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREEDGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

DATE: 12/12/2022
REV: A
DRAWN BY: CA

COVER PAGE
PV 1
SEAL:



PROPERTY BOUNDARY TYP.



149 W PK LN

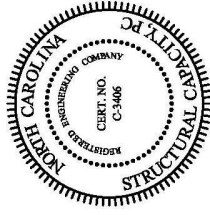
FRONT OF RESIDENCE

DRIVEWAY

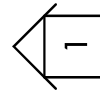
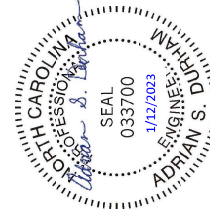
NOTE: NO GATES - NO FENCES

PROJECT NOTES

1. UTILITY SHALL HAVE 2-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC COMPONENTS LOCATED AT SES EQUIPMENT
2. NO LOCKED GATES, DOGS, ETC SHALL IMPEDE ACCESS TO SES EQUIPMENT
3. WORKSPACE IN FRONT OF AC ELECTRICAL SYSTEM COMPONENTS SHALL BE IN ACCORDANCE WITH CENTRAL ELECTRIC MEMBERSHIP CORPORATION AND NEC REQUIREMENTS.



ENGINEER SEAL ARE FOR STRUCTURAL ITEMS ONLY



TITAN
SOLAR POWER
 525 W BASELINE RD., MESA AZ, 85210
 CONTRACTOR LIC# U.34445

TOMASSINI, LEE RESIDENCE
 149 W PK LN, SANFORD, NC, 27332
 LAT:35.326788, LON:-79.067648
 TSPI 50816

(18) Q PEAK DUO BIK ML G10+ 400W
 (1) SOLAREGE SE6000H-US
 7.200 KW DC SYSTEM SIZE
 6.000 KW AC SYSTEM SIZE

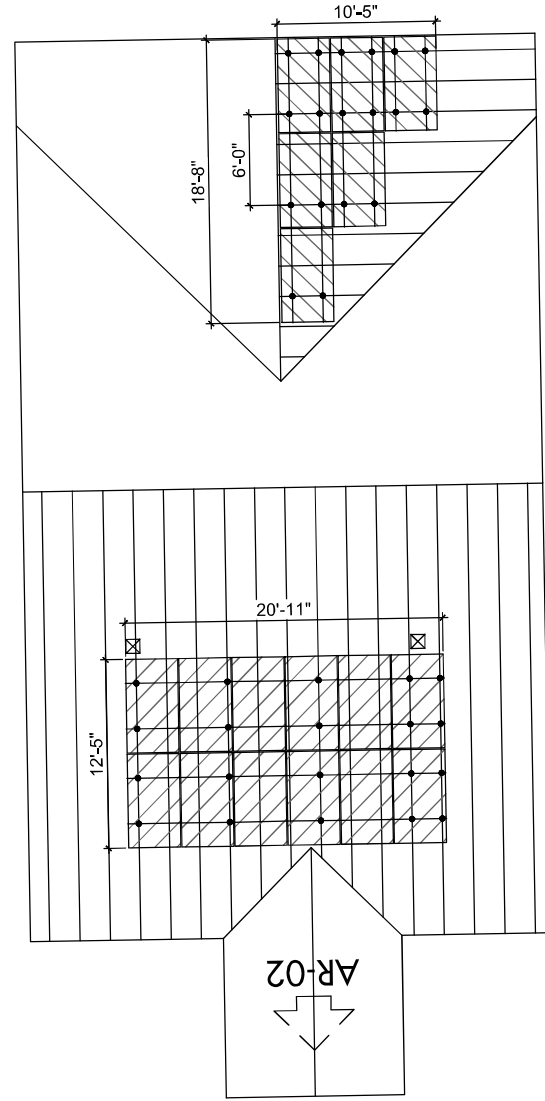
SCALE: 1/16" = 1'-0"
 DATE: 12/12/2022
 REV: A
 DRAWN BY: CA

SITE PLAN
PV 2

SEAL:

ARRAY INFORMATION

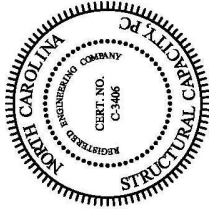
AR-01	
QUANTITY:	6
MOUNTING TYPE:	FLUSH
ARRAY TILT:	22°
AZIMUTH:	178°
ATTACHMENT SPACING:	4'
ROOF TYPE:	COMP SHINGLE
AR-02	
QUANTITY:	12
MOUNTING TYPE:	FLUSH
ARRAY TILT:	22°
AZIMUTH:	268°
ATTACHMENT SPACING:	4'
ROOF TYPE:	COMP SHINGLE



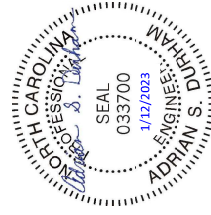
AR-01

AR-02

- NOTES**
- ROOF VENTS, SKYLIGHTS, WILL NOT BE COVERED UPON PV INSTALLATION
 - TOTAL ROOF AREA = 2153 SQ-FT
 - TOTAL ARRAY AREA = 380.18 SQ-FT
 - ARRAY COVERAGE = 17.66%



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STRUCTURAL ITEMS ONLY



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CONTRACTOR LIC# U.34445

TOMASSINI, LEE RESIDENCE
149 W PK LN., SANFORD, NC, 27332
LAT:35.326788, LON:-79.067648
TSPI 50816

(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

SCALE: 31/256" = 1'-0"
DATE: 12/12/2022
REV: A
DRAWN BY: CA

PV LAYOUT
PV 3

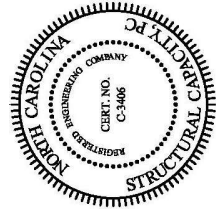
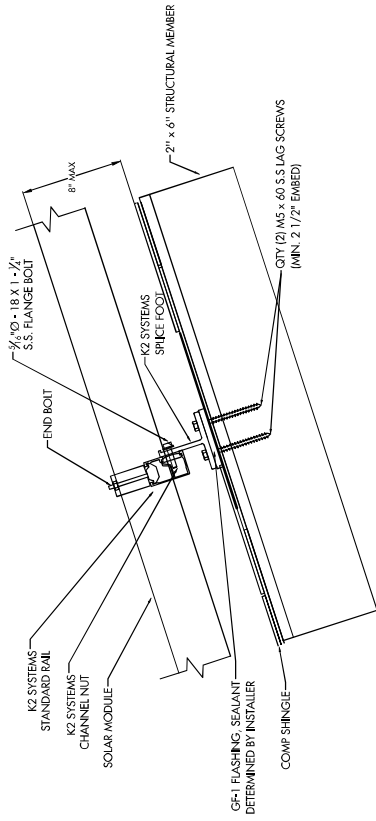
SEAL:

MODULE & RACKING INFORMATION
 MODULE: G PEAK DUO BLK ML G10+ 400W
 MODULE WEIGHT: 48.50 LBS
 MODULE DIMENSIONS: 74"x 41.1" x 1.5"
 RACKING/RAIL: K2 SYSTEMS / K2 SYSTEMS

ARRAY 01: 6 MODULES
UPLIFT = 3801.75 LBS.
POINT LOAD = 17.33 LBS. PER MOUNTING POINT
PULLOUT STRENGTH = 9450.00 LBS.
DISTRIBUTED LOAD = 2.46 PSF
MODULE & RACKING WEIGHT = 312.00 LBS

ARRAY 02: 12 MODULES
UPLIFT = 7603.50 LBS.
POINT LOAD = 31.20 LBS. PER MOUNTING POINT
PULLOUT STRENGTH = 10500.00 LBS.
DISTRIBUTED LOAD = 2.46 PSF
MODULE & RACKING WEIGHT = 624.00 LBS

ROOF & FRAMING INFORMATION
 MATERIAL: COMP SHINGLE
 RAFTER/TRUSS SIZE: 2" x 6"
 RAFTER/TRUSS SPACING: 2'



ENGINEER SEAL ARE FOR
 STRUCTURAL ITEMS ONLY

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SOLAR POWER
 525 W BASELINE RD., MESA AZ, 85210
 CONTRACTOR LIC# U. 34445

TOMASSINI, LEE RESIDENCE
 149 W PK LN., SANFORD, NC, 27332
 LAT:35.326788, LON:-79.067648
 TSP150816

(18) G PEAK DUO BLK ML G10+ 400W
 (1) SOLAREGE SE6000H-US
 7.200 kW DC SYSTEM SIZE
 6.000 kW AC SYSTEM SIZE

DATE: 12/12/2022
 REV: A
 DRAWN BY: CA

DETAILS
PV 4

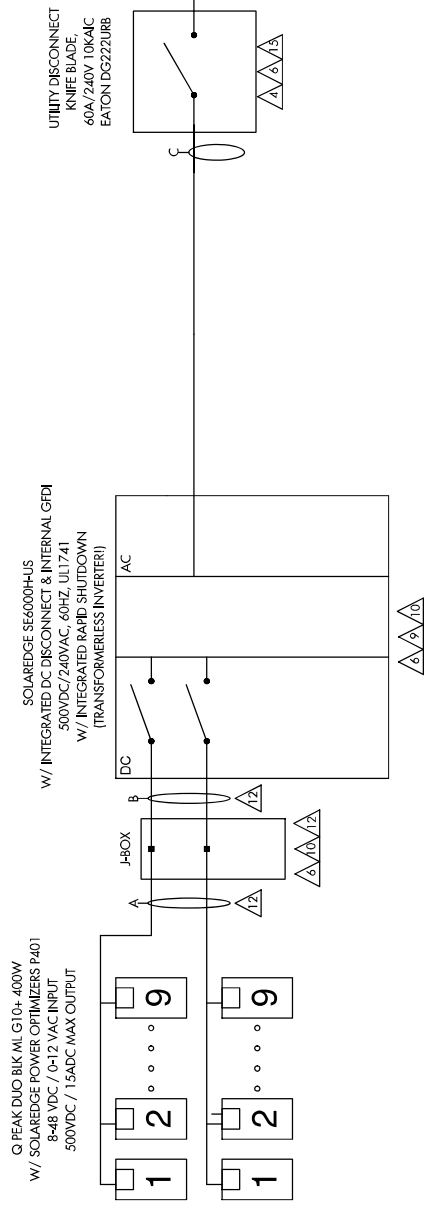
SEAL:

MAIN SERVICE PANEL

BUS RATING	=	200A
MAX. CURRENT RATING	=	240A (200A X 1.2)
SOLAR BACKFEED	=	31A
MAIN BREAKER	=	200A
TOTAL	=	231A

WIRE SCHEDULE

- PV MODULE
 - Q PEAK DUO BIK ML G10+ 400W
 - W = 400 W
 - ISC = 11.14 ADC
 - VOC = 45.30 VDC
 - IMP = 10.77 ADC
 - VMP = 37.13 VDC
 - TVOC = -0.270% / °C
- A - (4) #10 AWG-CU PV WIRE (HR)
- IN FREE AIR
- B - (4) #10 AWG-CU THWN-2 WIRE (HR)
- (1) #10 AWG-CU THWN-2 WIRE (GND)
- (1) #10 AWG-CU THWN-2 WIRE (HR)
- 3/4" EMT
- C - (3) #8 AWG-CU THWN-2 WIRE (HR)
- (1) #8 AWG-CU THWN-2 WIRE (GND)
- 3/4" EMT
- D - (3) #6 AWG-CU THWN-2 WIRE (HR)
- (1) # AWG-CU THWN-2 WIRE (GND)
- 3/4" EMT



NOTE:

- NMEC 250-51 - IF A CONCRETE ENCASED ELECTRODE IS NOT PRESENT, THEN AT LEAST 20' OF 2AWG BARE COPPER IN DIRECT CONTACT WITH THE EARTH AT A DEPTH BELOW THE EARTH'S SURFACE OF NOT LESS THAN THIRTY INCHES SHALL BE INSTALLED IN A CONTINUOUS TRENCH THAT IS AT LEAST TWO 8" GROUND RODS ONE AT EACH END OF THE 2AWG CONDUCTOR

WIRE SIZE CALCULATIONS

TEMP CORRECTION FACTOR: 0.87 (43° AMBIENT)
 ROOFTOP TEMP CORRECTION FACTOR: 1.00 (43° ADJUSTED)
 [2° ABOVE ROOFTOP / 0° TEMP ADJUSTERS - AS OCCURS]
 (TEMP DATA TAKEN FROM ASHRAE 2% AVG HIGH TEMP)

DC WIRING
 CONDUIT FILL FACTOR = 0.80
 OPTIMIZER MAX. CURRENT = 18.75A DC (15.00A X 1 X 1.25)
 #10- AWG-CU AMPACITY = 47.85A (55A X 0.87)
 FREE AIR
 #10 - AWG CU AMPACITY = 27.84A (40A X 0.87 X 0.80)
 ROOFTOP CONDUIT

AC WIRING
 CONDUIT FILL FACTOR = 1 (3) CONDUCTORS
 MAX. INVERTER CURRENT = 25A (PER INVERTER SPECS)
 MIN. INVERTER OCP = 31.25A (25A X 1.25)
 INVERTER OCP = 35A
 #8 - AWG CU AMPACITY = 47.85A (55A X 1 X 0.87)

TITAN
SOLAR POWER
 525 W BASELINE RD., MESA AZ, 85210
 CONTRACTOR LIC# U. 34445

TOMASSINI, LEE RESIDENCE
 149 W PK LN., SANFORD, NC, 27332
 LAT:35.326788, LON:-79.067648
 TSP150816

DATE: 12/12/2022
 REV: A
 DRAWN BY: CA

ONE LINE
PV 5

SEAL:

MAIN SERVICE PANEL

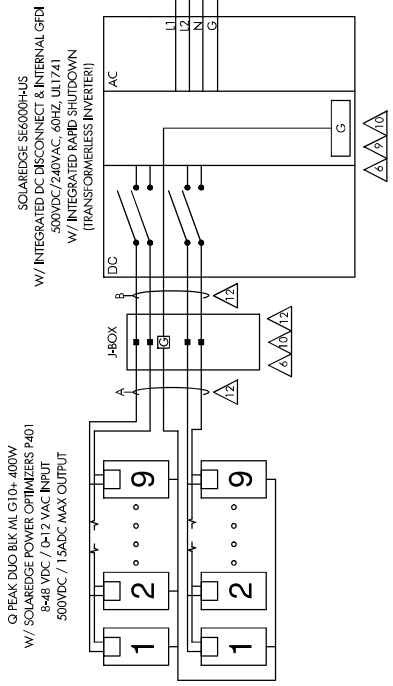
BUS RATING	=	200A
MAX. CURRENT RATING	=	240A (200A X 1.2)
SOLAR BACKFEED MAIN BREAKER	=	31A
TOTAL	=	200A
	=	231A

WIRE SCHEDULE

- PV MODULE
 - Q PEAK DUO BIK ML G10+ 400W
 - W = 400 W
 - ISC = 11.14 ADC
 - VOC = 45.30 VDC
 - IMP = 10.77 ADC
 - VMP = 37.13 VDC
 - TVOC = -0.270% / °C
- A - (4) #10 AWG-CU PV WIRE (HR)
 - (1) #10 AWG-CU BARE COPPER WIRE (HR)
 - IN FREE AIR
- B - (4) #10 AWG-CU THWN-2 WIRE (HR)
 - (1) #10 AWG-CU THWN-2 WIRE (GND)
 - 3/4" EMT
- C - (3) #8 AWG-CU THWN-2 WIRE (HR)
 - (1) #8 AWG-CU THWN-2 WIRE (GND)
 - 3/4" EMT
- D - (3) #6 AWG-CU THWN-2 WIRE (HR)
 - (1) #6 AWG-CU THWN-2 WIRE (GND)
 - 3/4" EMT

NOTE:

- NMEC 250.51 - IF A CONCRETE ENCASED ELECTRODE IS NOT PRESENT, THEN AT LEAST 20' OF 2AWG BARE COPPER IN DIRECT CONTACT WITH THE EARTH AT A DEPTH BELOW THE EARTH'S SURFACE OF NOT LESS THAN THIRTY INCHES SHALL BE INSTALLED IN A CONTINUOUS TRENCH THAT IS AT LEAST TWO 8" GROUND RODS ONE AT EACH END OF THE 2AWG CONDUCTOR



UTILITY DISCONNECT
KNIFE BLADE
40A/240V/10KAC
EATON DQ2220RB

SOLAREGE SE6000H-US
W/ INTEGRATED DC DISCONNECT & INTERNAL GFI
500VDC/240VAC, 60HZ, UL1741
W/ INTEGRATED RAPID SHUTDOWN
(TRANSFORMERLESS INVERTER)

Q PEAK DUO BIK ML G10+ 400W
W/ SOLAREGE POWER OPTIMIZERS P401
8-48 VDC / 0-12 VAC INPUT
500VDC / 15ADC MAX OUTPUT

(E) 200A MAIN SERVICE PANEL
1Ø, 3W, 120/240V, 60HZ

(N) 35A PV BREAKER

(E) GROUNDING ELECTRODE

WIRE SIZE CALCULATIONS

TEMP CORRECTION FACTOR: 0.87 (43° AMBIENT)
ROOFTOP TEMP CORRECTION FACTOR: 1.00 (43° ADJUSTED)
[2" ABOVE ROOFTOP / 0° TEMP ADDERS - AS OCCURS]
(TEMP DATA TAKEN FROM ASHRAE 2% AVG HIGH TEMP)

AC WIRING
CONDUIT FILL FACTOR = 1 (3) CONDUCTORS
MAX. INVERTER CURRENT = 25A (PER INVERTER SPECS)
MIN. INVERTER OCP = 31.25A (25A X 1.25)
INVERTER OCP = 35A
#8 - AWG CU AMPACITY = 47.85A (55A X 1 X 0.87)

DC WIRING
CONDUIT FILL FACTOR = 0.80
OPTIMIZER MAX. CURRENT = 18.75A DC (15.00A X 1 X 1.25)
#10 - AWG CU AMPACITY = 47.85A (55A X 0.87)
FREE AIR
#10 - AWG CU AMPACITY = 27.84A (40A X 0.87 X 0.80)
ROOFTOP CONDUIT

TITAN
SOLAR POWER
525 W BASELINE RD., MESA AZ, 85210
CONTRACTOR LIC # U.34445

TOMASSINI, LEE RESIDENCE
149 W PK LN., SANFORD, NC, 27332
LAT:35.326788, LON:-79.067648
TSP150816

DATE: 12/12/2022
REV:A
DRAWN BY: CA

THREE LINE
PV 6
SEAL:

CAUTION
PHOTOVOLTAIC SYSTEM CIRCUITS IS BACKED

LOCATION: BACKED BREAKER
CODE REF: NEC 705.12(A)

WARNING
INVERTER OUTPUT CONNECTION:
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LOCATION: BACKED BREAKER
CODE REF: 2017 NEC 705.12(D)(3)(a)

WARNING
A GENERATOR SOURCE IS CONNECTED TO THE SURVEY
(UTILITY) SIDE OF THE MAIN SERVICE DISCONNECT. FOLLOW
THE PROPER LOCKOUT/TAG-OUT PROCEDURES TO ENSURE
THE MAIN SERVICE DISCONNECT IS OPENED PRIOR TO PERFORMING WORK ON THIS SYSTEM.

LOCATION: (IF APPLICABLE)
SERVICE METER
LOAD PANEL
CODE REF: UTILITY

PHOTOVOLTAIC AC DISCONNECT
RATED AC OPERATING CURRENT: 25A AC
NOMINAL OPERATING AC VOLTAGE: 240VAC

LOCATION: MAIN PANEL
AC DISCONNECT(S)
CODE REF: NEC 690.54

**RAPID SHUTDOWN
SWITCH FOR
SOLAR PV SYSTEM**

LOCATION: MAIN PANEL (EXTERIOR)
PV BREAKER (INTERIOR)
CODE REF: NEC 690.56(C)(2)

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

LOCATION: COMBINE PANEL
AC DISCONNECT
JUNCTION BOX
INVERTER(S)
CODE REF: NEC 690.13(B)

**PHOTOVOLTAIC
SYSTEM METER**

LOCATION: DEDICATED kWh METER
CODE REF: NEC 690.4(B) UTILITY

WARNING
PHOTOVOLTAIC SYSTEM
COMBINE PANEL
DO NOT ADD LOADS

LOCATION: AC COMBINE PANEL
CODE REF: NEC 690.13(B)

PHOTOVOLTAIC SYSTEM DC DISCONNECT
MAXIMUM VOLTAGE: 480VDC
MAXIMUM CIRCUIT CURRENT:
15,000DC
MAX. CHARGED OUTPUT CURRENT OF
THE CHARGE CONTROLLER OR DC-
TO-DC CONVERTER (IF INSTALLED):
15,000DC

LOCATION: DC DISCONNECT
INVERTER
CODE REF: UTILITY

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

LOCATION: DC DISCONNECT, COMBINE BOX
CODE REF: NEC 690.13(B)

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

THIS RAPID SHUTDOWN
SWITCH TO SHUT DOWN
THE SYSTEM AND REMOVE
SHOCK HAZARD IN THE
AREA.

LOCATION: MAIN SERVICE (OUTSIDE COVER)
CODE REF: NEC 690.12
NEC 690.56(C)(1)(a)
YELLOW STICKER

WARNING PHOTOVOLTAIC POWER SOURCE

LOCATION: DC COMBINE
JUNCTION BOX
NO MORE THAN 10FT
CODE REF: NEC 690.31(D)(2)
REFLECTIVE AND WEATHER RESISTANT
LETTERS ON RED BACKGROUND
ENCLOSURES, AND CABLE ASSEMBLIES
MOUNTED ON ROOFING ASSEMBLIES AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF
ROOFING ASSEMBLIES, WALLS OR BARBERS.

CAUTION
DUAL POWER SOURCE
SECOND SOURCE IS
PHOTOVOLTAIC

LOCATION: SERVICE METER
MAIN PANEL

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LOCATION: (IF APPLICABLE)
SERVICE PANEL
CODE REF: NEC 705.12(7)

**PHOTOVOLTAIC SYSTEM
UTILITY DISCONNECT SYSTEM**

LOCATION: AC DISCONNECT
CODE REF: UTILITY

PV SOLAR BREAKER
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LOCATION: MAIN PANEL (EXTERIOR)
PV BREAKER (INTERIOR)
CODE REF: NEC 705.12(B)(2)(3)(B)



TITAN
SOLAR POWER
525 W BASELINE RD., MESA AZ, 85210
CONTRACTOR LIC# U. 34445

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LAT:35.326788, LON:-79.067648
TSP150816

(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREDGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

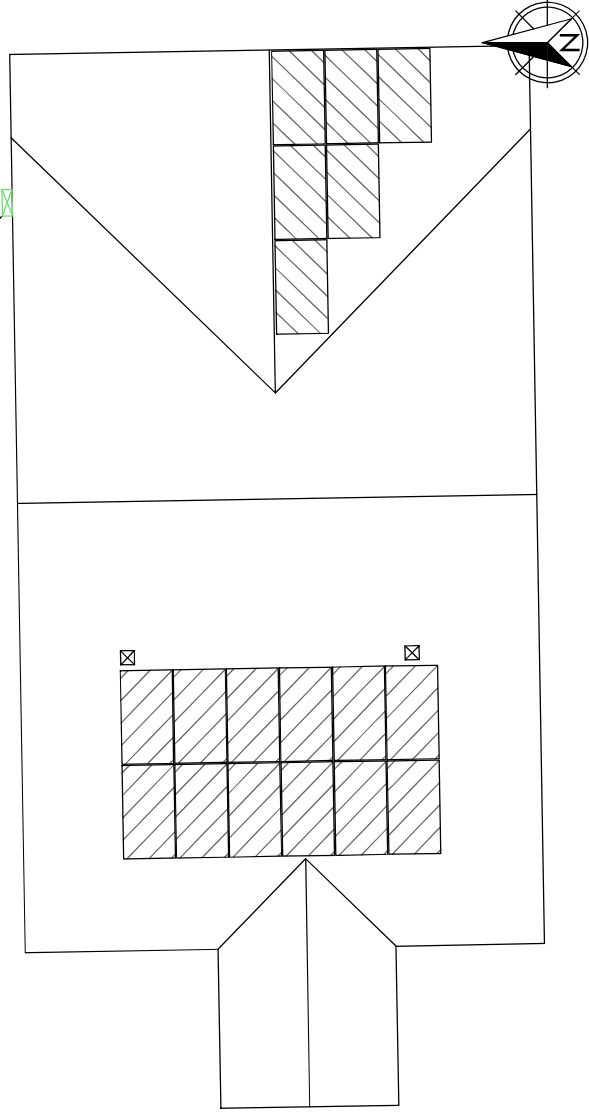
DATE: 12/12/2022
REV: A
DRAWN BY: CA

LABELS
PV 7
SEAL:

CAUTION

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

MAIN SERVICE PANEL
UTILITY METER
UTILITY AC DISCONNECT
INVERTER



DIRECTORY PLAQUE IN
ACCORDANCE WITH
NEC690.56(A)(B), 705.10



TOMASSINI, LEE RESIDENCE
149 W PK LN., SANFORD, NC, 27332
LAT:35.326788, LON:-79.067648
TSPI 50816

(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

DATE: 12/12/2022
REV: A
DRAWN BY: CA

SEAL:

PLACARD
PV 8

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

12-25 WARRANTY



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
- Small, lightweight and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in production metering (1% accuracy) and consumption revenue grade metering (0.5% accuracy, ANSI C12.20)
- Integrated arc fault protection and rapid shutdown for NEC 2017 and NEC 2020 per article 690.11 and 690.12



solarEdge.com

Single Phase Inverter with HD-Wave Technology for North America

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

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

APPLICABLE TO INVERTERS	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
Model AC Power Output	3000	3800	5000	6000	7600	10000	11400
Maximum AC Power Output	3000	3800	5000	6000	7600	10000	11400
AC Output Voltage Min./Nom./Max.	✓	✓	✓	✓	✓	✓	✓
AC Output Voltage Min./Nom./Max. (100-208V)	✓	✓	✓	✓	✓	✓	✓
Maximum Continuous Output Current @200V	13.5	16	21	25	32	41	41.5
Power Factor	-	1	1	1	1	1	1
Utility Monitoring, Islanding Protection, Ground Fault Protection	✓	✓	✓	✓	✓	✓	✓
UL1741 SA Certified, for CPUC Rule 21 grid compliance	✓	✓	✓	✓	✓	✓	✓
Maximum DC Power @200V	4650	5900	7750	9300	11800	15000	16650
Maximum DC Power @250V	-	-	-	-	-	-	-
Maximum Input Voltage	500	500	500	500	500	500	500
Maximum Input Current @200V	23	28	35	43	54	70	77
Maximum Input Current @250V	-	-	-	-	-	-	-
Max. Input Short Circuit Current	45	45	45	45	45	45	45
Ground Fault Protection Detection	99%	99%	99%	99%	99%	99%	99%
CTC Weighted Efficiency	99%	99%	99%	99%	99%	99%	99%
Nighttime Power Consumption	0.5W	0.5W	0.5W	0.5W	0.5W	0.5W	0.5W
Grid Type (select monitoring for each inverter and list for each inverter in the model name)	Grid	Grid	Grid	Grid	Grid	Grid	Grid

Single Phase Inverter with HD-Wave Technology for North America

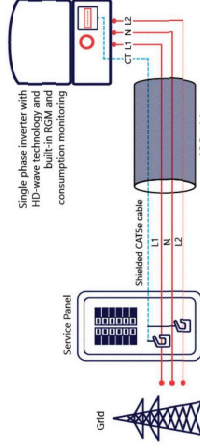
SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

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	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US
Model AC Power Output	3000	3800	5000	6000	7600	10000	11400
Maximum AC Power Output	3000	3800	5000	6000	7600	10000	11400
AC Output Voltage Min./Nom./Max.	✓	✓	✓	✓	✓	✓	✓
AC Output Voltage Min./Nom./Max. (100-208V)	✓	✓	✓	✓	✓	✓	✓
Maximum Continuous Output Current @200V	13.5	16	21	25	32	41	41.5
Power Factor	-	1	1	1	1	1	1
Utility Monitoring, Islanding Protection, Ground Fault Protection	✓	✓	✓	✓	✓	✓	✓
UL1741 SA Certified, for CPUC Rule 21 grid compliance	✓	✓	✓	✓	✓	✓	✓
Maximum DC Power @200V	4650	5900	7750	9300	11800	15000	16650
Maximum DC Power @250V	-	-	-	-	-	-	-
Maximum Input Voltage	500	500	500	500	500	500	500
Maximum Input Current @200V	23	28	35	43	54	70	77
Maximum Input Current @250V	-	-	-	-	-	-	-
Max. Input Short Circuit Current	45	45	45	45	45	45	45
Ground Fault Protection Detection	99%	99%	99%	99%	99%	99%	99%
CTC Weighted Efficiency	99%	99%	99%	99%	99%	99%	99%
Nighttime Power Consumption	0.5W	0.5W	0.5W	0.5W	0.5W	0.5W	0.5W
Grid Type (select monitoring for each inverter and list for each inverter in the model name)	Grid	Grid	Grid	Grid	Grid	Grid	Grid

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



RoHS

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CONTRACTOR LIC# U. 34445

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LAT:35.326788, LON:-79.067648
TSP150816

(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREDGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

DATE: 12/12/2022
REV: A
DRAWN BY: CA

EQUIPMENT SPECIFICATIONS
PV 10
SEAL:

POWER OPTIMIZER

Power Optimizer
For North America
P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505



PV power optimization at the module-level

- ✓ Specifically designed to work with SolarEdge inverters
- ✓ Up to 7% more energy
- ✓ Superior efficiency (98.5%)
- ✓ Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- ✓ Flexible system design for maximum space utilization
- ✓ Fast installation with a single bolt
- ✓ Next generation maintenance with module-level monitoring
- ✓ Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRS)
- ✓ Module level voltage shutdown for installer and firefighter safety



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TSPI 50816

Power Optimizer For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high power 60 and 72-cell modules)	P370 (for high power 80 and 72-cell modules)	P400 (for 72-cell modules)	P401 (for high power 60 and 72-cell modules)	P405 (for high-voltage modules)	P485 (for high-voltage modules)	P505 (for higher current modules)
Mount Type: Y, Power*	1/2"	3/4"	3/8"	4/0"	4/0"	4/0"	4/0"	5/8"
Maximum Module Voltage	48	60	60	60	60	120 [†]	120 [†]	120 [†]
Maximum Module Current	8.4A	8.4A	8.4A	8.4A	8.4A	10.2A	10.2A	10.2A
Maximum Short-Circuit Current (ISC)	11	11	11	11	11	11	11	14
Maximum Efficiency	98.5							
Overvoltage Category	III							
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)	Maximum Output Current: 15 A							
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)	Steady Output Voltage per Power Optimizer: 1.1-1.01 Vdc							
STANDARD COMPLIANCE								
UL	ULC, IEC60321-1, IEC60321-2, IEC60321-3							
RoHS	RoHS 10 (Class 1), RoHS 2, RoHS 3							
INSTALLATION SPECIFICATIONS								
Temperature Rating	-40°C to +105°C							
Relative Humidity	5% to 100%							
Weight (including cables)	1.85 kg (4.08 lbs)							
Dimensions (W x L x H)	129 x 103 x 27.5 mm (5.1 x 4.1 x 1.1 in)							
Input Connections	MC4							
Output Connections	MC4							
Input Wire Length	0.91 m (3.0 ft)							
Output Wire Length	0.91 m (3.0 ft)							
Mounting Hardware	None (included)							
Installation Notes	1) Refer to the Power Optimizer Installation Manual for more details. 2) The Power Optimizer must be installed in a shaded area. 3) The Power Optimizer must be installed in a shaded area. 4) For dual voltage, a single module can be connected to the inverter or disconnected from the inverter. 5) The Power Optimizer must be installed in a shaded area. 6) The Power Optimizer must be installed in a shaded area. 7) The Power Optimizer must be installed in a shaded area. 8) The Power Optimizer must be installed in a shaded area. 9) The Power Optimizer must be installed in a shaded area. 10) The Power Optimizer must be installed in a shaded area.							

PV System Design Using a SolarEdge Inverter	Single Phase 120V/240V	Single Phase 208V/240V	Three Phase for 277/480V grid	Three Phase for 277/480V grid
Minimum String Length	120V: 120V, 240V	208V: 208V, 240V	10	10
Maximum String Length	120V: 120V, 240V	208V: 208V, 240V	8	8
Maximum Power (Power Optimizer)	5700 (6000 with 10)	5700 (6000 with 10)	23	23
Maximum String Length (Power Optimizer)	5700 (6000 with 10)	5700 (6000 with 10)	23	23
Maximum Power (Power Optimizer)	5700 (6000 with 10)	5700 (6000 with 10)	23	23
Maximum String Length (Power Optimizer)	5700 (6000 with 10)	5700 (6000 with 10)	23	23



DATE: 12/12/2022
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(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREDGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

SEAL:

EQUIPMENT SPECIFICATIONS
PV 12

We support PV systems
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Splice Foot X

Patent Pending

TECHNICAL SHEET

Item Number	Description	Part Number
1	Splice Foot X	4000113 Splice Foot X Kit, Mtl
2	K2 FlexFlash Buryl	
3	M5 x 60 lag screws	
4	T-Bolt & Hex Nut Set	

Technical Data

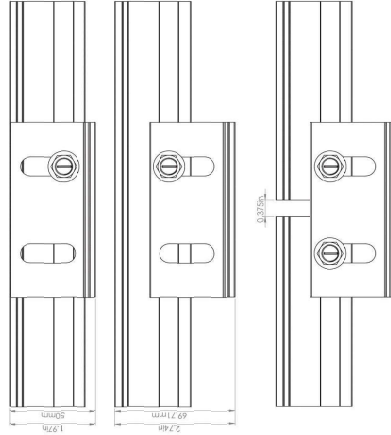
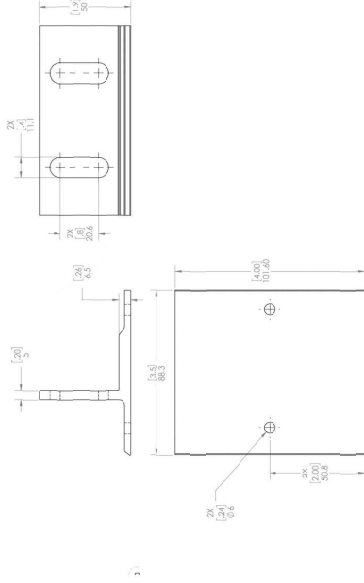
Roof Type	Splice Foot X
Material	Composition shingle
Finish	Aluminum with stainless steel hardware
Roof Connection	Mill
Code Compliance	M5 x 60 lag screws
Compatibility	UL 2703
	CrossRail 44-X, 48-X, 48-XL, 80

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Units: [m] mm



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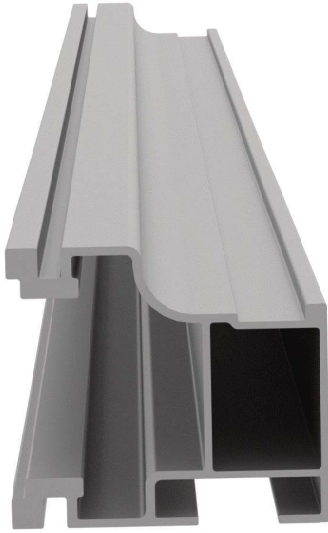
(18) Q PEAK DUO BIK ML G10+ 400W
(1) SOLAREGE SE6000H-US
7.200 kW DC SYSTEM SIZE
6.000 kW AC SYSTEM SIZE

DATE: 12/12/2022
REV: A
DRAWN BY: CA

SEAL:

EQUIPMENT
SPECIFICATIONS
PV 14

Mounting systems for solar technology



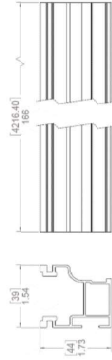
NEW PRODUCT

CrossRail 44-X

- ▶ Optimized rail profile
- ▶ One rail for all markets
- ▶ Built-in wire management
- ▶ Maintains same structural integrity as 48-X
- ▶ Tested up to 200 mph winds
- ▶ Tested up to 100 PSF snow loads



Part Number	Description
4000019	CrossRail 44-X 166", Mill
4000020	CrossRail 44-X 166", Dark
4000021	CrossRail 44-X 180", Mill
4000022	CrossRail 44-X 180", Dark
4000051	RailConn Set, CR 44-X, Mill
4000052	RailConn Set, CR 44-X, Dark
4000067	End Cap, Black, CR 44-X



www.everest-solersystems.com
 CrossRail 44-X Product Sheet US01 | 0820 - Subject to change - Product illustrations are exemplary and may differ from the original.

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EQUIPMENT
 SPECIFICATIONS
PV 15



85

Recommended OCPD Size per Grid

Inverter	Maximum Output Current (A)	Minimum Fuse Rating (A)	Maximum Fuse Rating (A)
SE3000H-US	12.5	20	50
SE3800H-US	16	20	50
SE5000H-US	24 @ 208V 21 @ 240V	30	50
SE6000H-US	24 @ 208V 25 @ 240V	30 @ 208V 35 @ 240V	50
SE7600H-US	32	40	50
SE10000H-US	42	60	80
SE11400H-US	48.5 @ 208V 47.5 @ 240V	70 @ 208V 60 @ 240V	80

SolarEdge Single Phase Inverter with HD-Wave Technology Installation MAN-01-00541-1.1



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EQUIPMENT
SPECIFICATIONS
PV 16