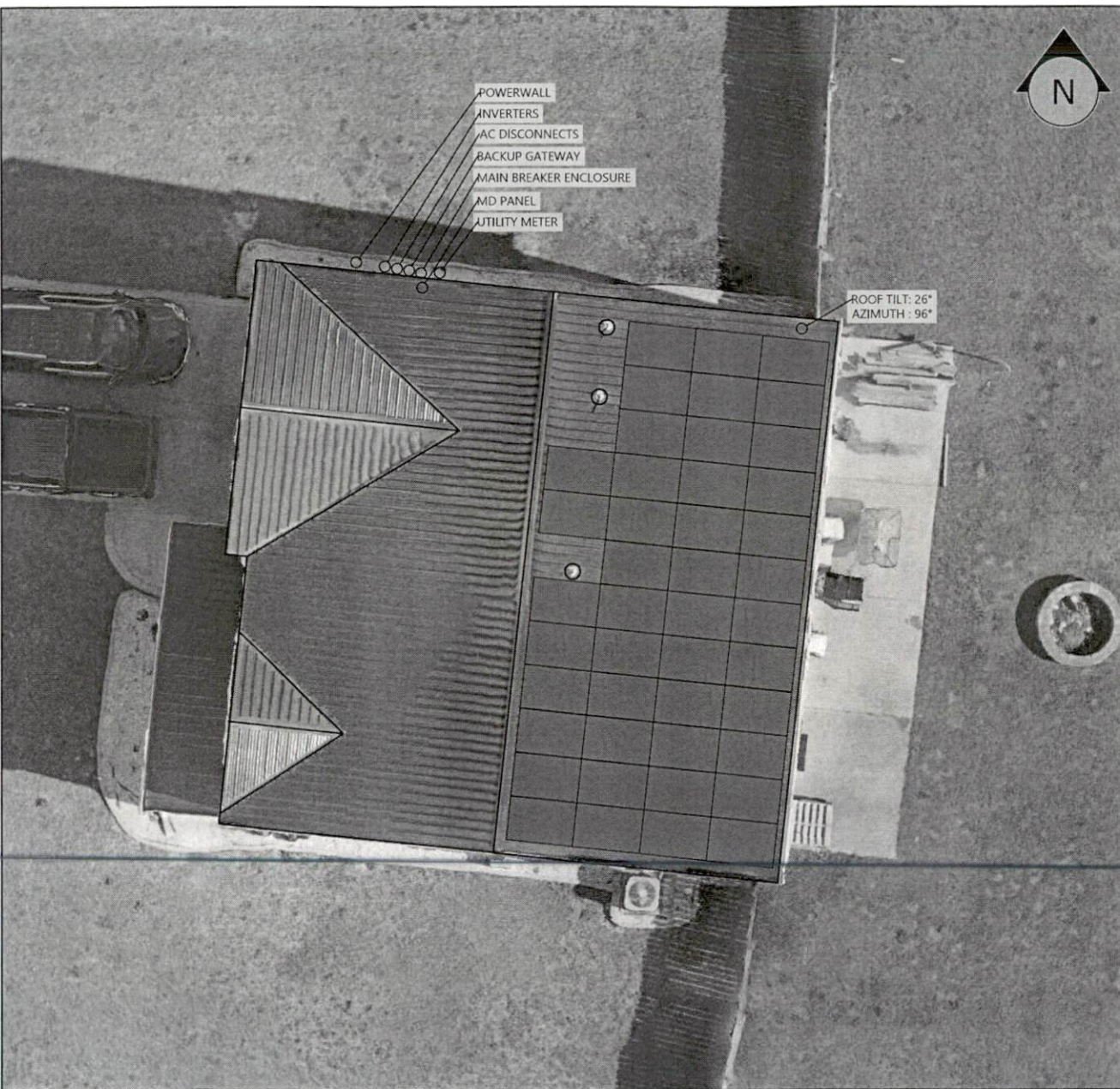


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PV MATERIAL SUMMARY: DISTRIBUTOR

Q_PEAK DUO BLK-G8+340	44
P401	44
SE7600H-US000BNU4	1
SE6000H-US000BNU4	1
SE-ZBCW-B-S1-NA	1
XR-10-168B	21
XR-10-204B	1
XR10-BOSS-01-M1	14
UFO-CL-01-B1	98
UFO-STP-32MM-B1	20
XR-LUG-03-A1	6
SOLARFOOT	169
TYPE 17-AB, SCREW (2.5")	676
LFT-03-M1	169
TESLA POWERWALL 2	1
TESLA BACKUP GATEWAY GEN 2	1

NC SOLAR NOW

CLIENT INFO
ALEGRA R HOLLEY
50 LUMINA COURT
LINDEN NC 28136

PROJECT INFO
DC INPUT: 14.96 kW
AC EXPORT: 13.60 kW
DOI INSP. METHOD: OPTION 2

CODE REFERENCES
NATION ELECTRICAL CODE v. 2017
NC FIRE PROTECTION CODE v. 2018
NC BUILDING CODE v. 2018
NC RESIDENTIAL CODE v. 2018
ACSE v. 7-10

SITE CONDITIONS
WIND SPEED: 119 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 10 PSF

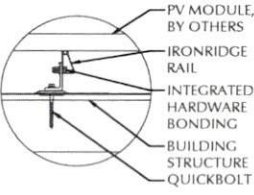
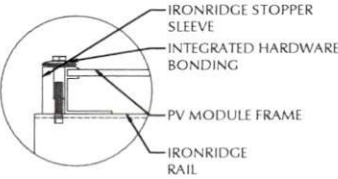
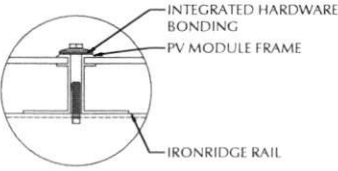
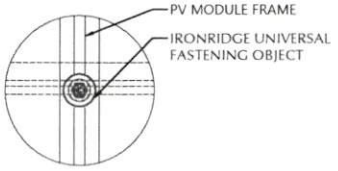
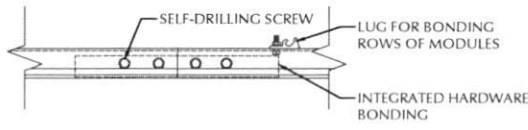
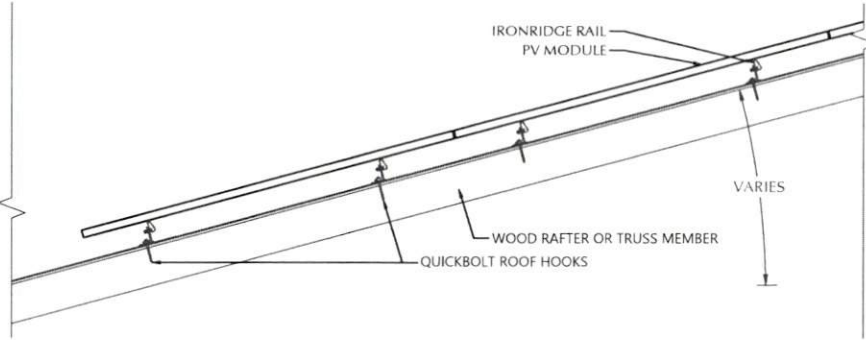
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PV-3 PV ELECTRICAL
PV-4 PV EQUIPMENT LABELS
PV-5 PV INSTALL GUIDE

DESIGNER INFO
DESIGNER: JAM
ENGINEER: AWK
DATE: 6/2/2021
VERSION: P1

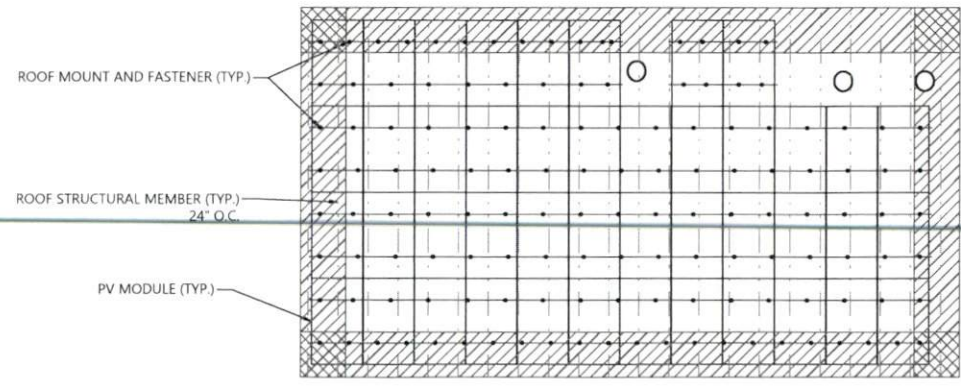
PV SYSTEM COVER PAGE

PV-1.1

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1 ROOF FASTENER DETAIL
NOT TO SCALE



2 ARRAY LAYOUT
1/8" = 1'-0"

STATEMENT OF STRUCTURAL COMPLIANCE

THE EXISTING ROOF STRUCTURE HAS BEEN DESIGNED TO SUPPORT THE ADDITIONAL LOADS OF THE PROPOSED PV SYSTEM. IN ADDITION, THE RACKING AND FASTENING SYSTEM SHALL BE CAPABLE OF SECURING THE SYSTEM TO THE STRUCTURE UNDER DESIGN CONDITIONS WHEN INSTALLED PROPERLY AND IN ACCORDANCE WITH THE RACKING AND FASTENING ARRANGEMENT DETAILED WITHIN THESE DRAWINGS.

NAME: ANDREW W. KING, PE
SIGNED: *Andrew W. King*

PV MODULES	
MAKE	HANNIBHA
MODEL	Q PEAK DUO BLK-GB+340
WIDTH	40.60 IN
LENGTH	66.50 IN
THICKNESS	32 MM
WEIGHT	41.90 LBS
ARRAY AREA	850 SQFT
ARRAY WEIGHT	2124 LBS

ROOF SUMMARY	
STRUCTURE	TRUSSES
TYPE	SOUTHERN PINE #2
MATERIAL	2 X 4
SIZE	24 IN O.C.
SPACING	88 IN
ALLOWABLE SPAN	7.612
PITCH	30 LBS./CU.FT.
DENSITY	OSB
DECKING	COMPOSITE
TYPE	7/16 IN
MATERIAL	1.60 LBS./SQFT
THICKNESS	
WEIGHT	
ROOFING	EXPOSED FASTENER METAL
TYPE	METAL
MATERIAL	1.30 LBS./SQFT
WEIGHT	

ROOF MOUNT SUMMARY		
MAXIMUM WIND	WIND ZONE 1	12 IN
WIND ZONE 1	30 IN	9 IN
WIND ZONE 2	23 IN	9 IN
WIND ZONE 3	21 IN	

ROOF LOADING	
GROUND SNOW LOAD:	15 LBS./SQFT
LIVE LOAD	20 LBS./SQFT
DEAD LOAD	
ROOFING	3.9 LBS./SQFT
PV ARRAY	2.5 LBS./SQFT
TOTAL	6.4 LBS./SQFT
WIND LOAD:	
UPLIFT ZONE 1	-24.6 LBS./SQFT
UPLIFT ZONE 2	-29.0 LBS./SQFT
UPLIFT ZONE 3	-29.0 LBS./SQFT
DOWNWARD	23.0 LBS./SQFT
FASTENER LOAD:	
UPLIFT ZONE 1	-174 LBS.
UPLIFT ZONE 2	-157 LBS.
UPLIFT ZONE 3	-144 LBS.
DOWNWARD	163 LBS.

ROOF MOUNT & FASTENER	
ROOF MOUNT	
MAKE	S-51
MODEL	SOLARFOOT
MATERIAL	
FASTENER	
MAKE	S-51
MODEL	TYPE 17-AB, SCREW (2.5")
MATERIAL	ZINC / ALUMINUM CAP
SIZE	14 - 14 X 2-1/2" (3/8" HEX)
GENERAL	
WEIGHT	
FASTENERS PER MOUNT	4
MAX. PULL-OUT FORCE	356.0 LBS.
SAFETY FACTOR	2
DESIGN PULL-OUT FORCE	178.0 LBS.

MOUNTING RAILS	
MAKE	IRONRIDGE
MODEL	XR10
MATERIAL	ALUMINUM
WEIGHT	0.425 LBS/IN
SPACING	34 IN



CLIENT INFO
ALEGRA HOLLEY
50 LUMINA COURT
LINDEN, NC 28136

PROJECT INFO
DC INPUT: 14.96 kW
AC EXPORT: 13.60 kW
DOI/INSPT. METHOD: OPTION 2

CODE REFERENCES
NATION ELECTRICAL CODE v. 2017
NC FIRE PROTECTION CODE v. 2018
NC BUILDING CODE v. 2018
NC RESIDENTIAL CODE v. 2018
ACSE v. 7-30

SITE CONDITIONS
WIND SPEED: 119 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 10 PSF

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DESIGNER INFO
DESIGNER: JAM
ENGINEER: AWK
DATE: 6/2/2021
VERSION: P1

PV SYSTEM STRUCTURAL

PV-2.1

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CONDUCTOR SCHEDULE

TAG	CURRENT CARRYING CONDUCTORS			GROUNDING CONDUCTORS			CONDUIT/RACEWAY			NOTES
	QTY.	SIZE	INSULATION	QTY.	SIZE	INSULATION	QTY.	SIZE	LOCATION	
C1	6	10 AWG	PV WIRE	1	6 AWG	BARE	-	-	FREE AIR	1
C2.1	2	10 AWG	THWN	1	10 AWG	THWN	1	3/4"	INT/EXT	2,4
C2.2	4	10 AWG	THWN	1	10 AWG	THWN	1	3/4"	INT/EXT	2,4
C3	3	8 AWG	THWN	1	10 AWG	THWN	1	3/4"	EXTERIOR	2,4
C4	3	6 AWG	THWN	-	-	-	1	3/4"	EXT/INT	2,4
C5	3	10 AWG	THWN	1	10 AWG	THWN	1	3/4"	EXT	2,4
C6	3	3/0 AWG	XH-RV	1	4 AWG	THWN	1	2"	INT/EXT	2,4
C7	3	3 AWG	XH-RV	1	6 AWG	THWN	1	1-1/4"	INT/EXT	2,4
C8	3	3/0 AWG	XH-RV	1	6 AWG	THWN	1	2"	EXTERIOR	2,4
C9	3	3/0 AWG	XH-RV	-	-	-	1	2"	EXTERIOR	2,4
XC	-	-	-	-	-	-	-	-	-	3

NOTES

1. MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED ROOFS
2. CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
3. EXISTING CONDUCTORS, FIELD VERIFY
4. EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF CONDUCTOR
5. PLEASE REFERENCE NOTES ON PV-4 FOR ADDITIONAL DETAIL

PV MODULE

MAKE	HANWHA
MODEL	Q PEAK DUO BLK-G8+340
NOM. POWER (PNOM)	340 WATTS
NOM. VOLT. (VMPP)	34.3 VOLTS
O.C. VOLT. (VOC)	40.7 VOLTS
MAX. SYS. VOLT.	1000 VOLTS
NOM. CURR. (IMPP)	9.9 AMPS
S.C. CURR. (ISC)	10.4 AMPS
TEMP. COEF. (PMPP)	-0.35 %/C
TEMP. COEF. (Voc)	-0.27 %/C
MAX. SERIES FUSE	20 AMPS
UL LIST. (VNI)	YES

JUNCTION BOX

MAKE	GENERIC
PROTECT. RATING	NEMA 1C2
UL LIST. (VNI)	YES

AC DISCONNECT 1

MAKE	GENERIC
MODEL	NA
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	60 AMPS
UL LIST. (VNI)	YES
FUSED (VNI)	YES
FUSE RATING	15 AMPS

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- SERVICE RATED
- PROVIDE NEUTRAL/GROUND BONDING JUMPER

AC DISCONNECT 2

MAKE	GENERIC
MODEL	NA
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	60 AMPS
UL LIST. (VNI)	YES
FUSED (VNI)	NO
FUSE RATING	N/A

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- 3 POLE DISCONNECT MAY BE USED

MODULE OPTIMIZER

MAKE	SOLAREDDGE
MODEL	PM01
DC INPUT:	
NOM. POWER	400 WATTS
VOLT. RANGE	8 to 60
MAX. CURR.	11.8 AMPS
DC OUTPUT:	
NOM. POWER	400 WATTS
MAX. VOLT.	60 VOLTS
MAX. CURR.	15 AMPS
MIN-MAX STRING	8-25 OPTIMIZERS
UL LIST. (VNI)	YES

ENERGY STORAGE SYSTEM

MAKE	TESLA
MODEL	POWERWALL 2
USABLE ENERGY	13.5 kWh
NOM. VOLT.	240 VOLTS
REAL POWER CONT.	5000 WATTS
UL LIST. (VNI)	YES
OCPD	30 AMPS
PROTECT. RATING	NEMA 3R

ENERGY MANAGEMENT

MAKE	TESLA
MODEL	BACKUP GATEWAY 2
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
DISCONNECT CURR.	200 AMPS
UL LIST. (VNI)	YES
MAIN BREAKER (VNI)	YES
MAIN BREAKER RATING	200 AMPS

- TROUGH MAY BE USED IF NECESSARY
- INSTALL INTERNAL PANELBOARD
- PLACE PV AND BATTERY BREAKERS ON PANELBOARD
- FEED NON-BACKUP PANEL FROM NON-BACKUP LUGS

MAIN BREAKER ENCLOSURE

MAKE	GENERIC
MODEL	NA
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
AMP RATING	200 AMPS
UL LIST. (VNI)	YES
BREAKER RATING	200 AMPS

- INTERCEPT SERVICE FEEDERS FROM METER
- TROUGH MAY BE USED AS NECESSARY
- SERVICE RATED
- PROVIDE NEUTRAL/GROUND BONDING JUMPER

DC/AC INVERTER 1

MAKE	SOLAREDDGE
MODEL	SE6000H-LUS
TECHNOLOGY	TRANSFORMER-LESS
DC INPUT:	
NOM. POWER	9300 WATTS
VOLT. RANGE	350-480 VOLTS
NOM. VOLT.	380 VOLTS
MAX. CURRENT	16.5 AMPS
STRING INPUTS	2 STRINGS
AC OUTPUT:	
NOM. POWER	6000 WATTS
NOM. VOLT.	240 VOLTS
MAX. POWER	6000 WATTS
MAX. CURR.	25 AMPS
GFP (VNI)	YES
GFCI (VNI)	YES
AFCI (VNI)	YES
DC DISC. (VNI)	YES
RAPID SHUTDOWN	YES
FUSE RATING	15 AMPS
PROTECT. RATING	NEMA 3R

DC/AC INVERTER 2

MAKE	SOLAREDDGE
MODEL	SE7600H-LUS
TECHNOLOGY	TRANSFORMER-LESS
DC INPUT:	
NOM. POWER	11800 WATTS
VOLT. RANGE	350-480 VOLTS
NOM. VOLT.	400 VOLTS
MAX. CURRENT	20 AMPS
STRING INPUTS	2 STRINGS
AC OUTPUT:	
NOM. POWER	7600 WATTS
NOM. VOLT.	240 VOLTS
MAX. POWER	7600 WATTS
MAX. CURR.	32 AMPS
GFP (VNI)	YES
GFCI (VNI)	YES
AFCI (VNI)	YES
DC DISC. (VNI)	YES
RAPID SHUTDOWN	YES
FUSE RATING	15 AMPS
PROTECT. RATING	NEMA 3R

MD PANEL (EXISTING)

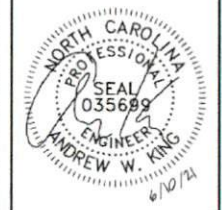
MAKE	EATON-CUTLER HAMMER
MODEL	N/A
ENCL. RATING	NEMA TYPE 1
VOLT. RATING	240
BUS RATING	225 AMPS
UL LIST. (VNI)	YES
MAIN BREAKER (VNI)	YES
MAIN BREAKER RATING	200 AMPS

- REMOVE BONDING JUMPER AND ISOLATE NEUTRAL AND GROUND BARS
- MOVE HEAT, A/C, AND STOVE BREAKERS FROM HERE TO NON-BACKUP PANEL

NON-BACKUP PANEL

MAKE	GENERIC
MODEL	NA
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	100 AMPS
UL LIST. (VNI)	YES
MAIN BREAKER (VNI)	YES
MAIN BREAKER RATING	100 AMPS

- INSTALL 100A MAIN BREAKER
- RELOCATE HEAT, A/C, AND STOVE BREAKERS FROM MD PANEL TO HERE



CLIENT INFO
ALEGRA R HOLLEY
50 LUMINA COURT
LINDEN, NC 28136

PROJECT INFO
DC INPUT: 14.96 kW
AC EXPORT: 13.60 kW
FOOT/INSP. METHOD: OPTION 2

CODE REFERENCES
NATIONAL ELECTRICAL CODE v. 2017
NC FIRE PROTECTION CODE v. 2018
NC BUILDING CODE v. 2018
NC RESIDENTIAL CODE v. 2018
ACSE v. 7-30

SITE CONDITIONS
WIND SPEED: 119 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 10 PSF

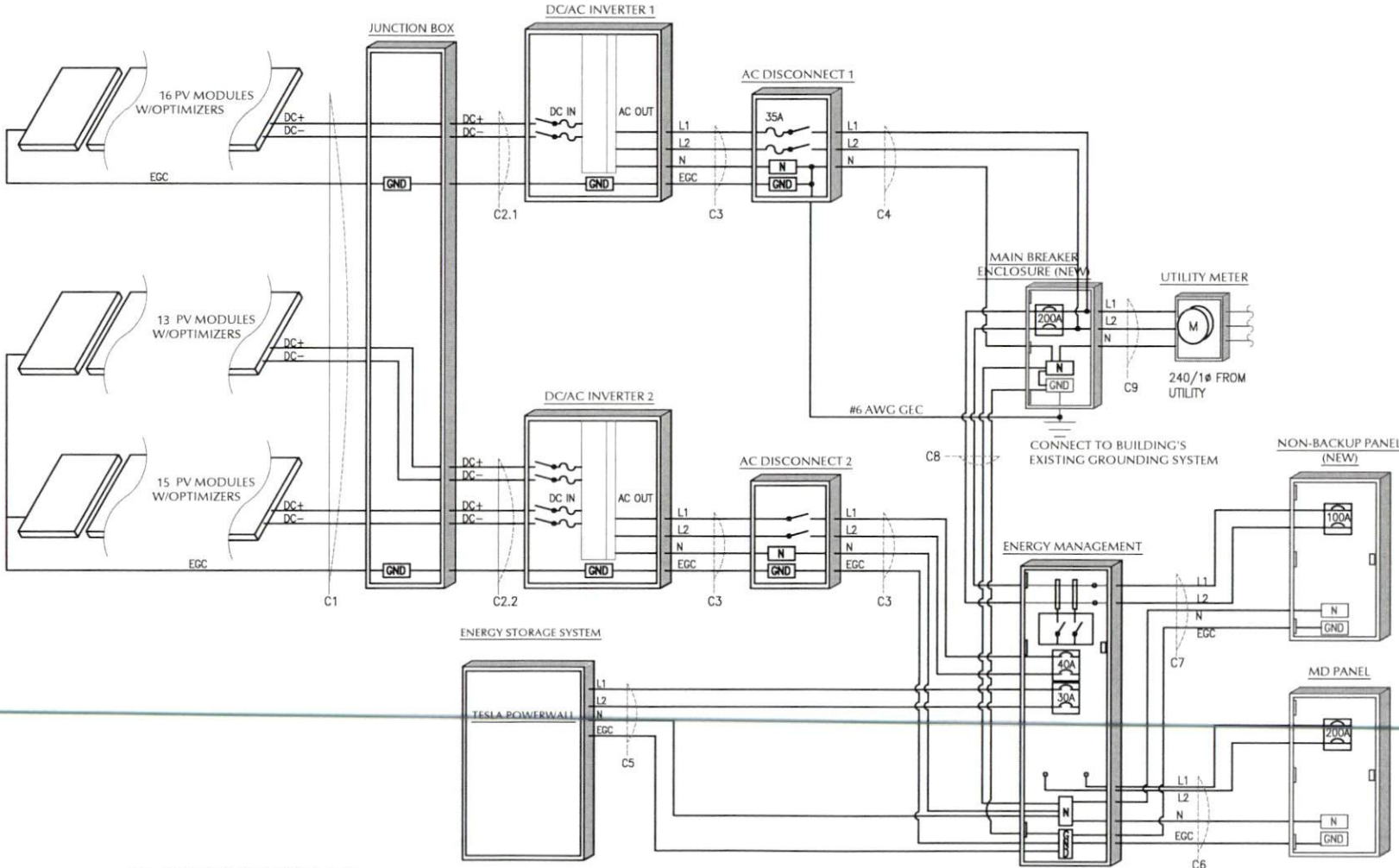
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PV-5 PV INSTALL GUIDE

DESIGNER INFO
DESIGNER: JAM
ENGINEER: AWK
DATE: 6/2/2021
VERSION: P1

PV SYSTEM ELECTRICAL

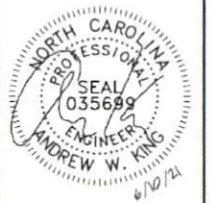
PV-3.1

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1 ELECTRICAL SCHEMATIC
NOT TO SCALE

NC SOLAR NOW



CLIENT INFO	
ALEGRA R HOLLEY 50 LUMINA COURT LINDEN, NC 28356	
PROJECT INFO	
DC INPUT	14.96 kW
AC EXPORT	13.60 kW
DOI INSPT. METHOD	OPTION 2
CODE REFERENCES	
NATION ELECTRICAL CODE v. 2017	
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NC RESIDENTIAL CODE v. 2018	
ACSE v. 7-10	
SITE CONDITIONS	
WIND SPEED:	119 MPH
RISK CATEGORY:	II
EXPOSURE:	B
SNOW:	10 PSF
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DESIGNER	JAM
ENGINEER	AWK
DATE	6/2/2021
VERSION	P1
PV SYSTEM ELECTRICAL	
PV-3.2	

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

NEC 690.13 (B)
 PLACE ON PV SYSTEM DISCONNECTING MEANS

⚠ WARNING
**POWER SOURCE
 OUTPUT CONNECTION
 DO NOT RELOCATE THIS
 OVERCURRENT DEVICE**

NEC 705.12 (B)(2)(i)(b)
 PLACE ADJACENT TO BACK-FED BREAKER

⚠ WARNING
THREE POWER SOURCES
 SOURCES: UTILITY GRID, BATTERY
 AND PV SOLAR ELECTRIC SYSTEM

NEC 705.12 (B)(3)
 PLACE ON ALL EQUIPMENT THAT IS SUPPLIED
 BY BOTH POWER SOURCES

**WARNING: PHOTOVOLTAIC
 POWER SOURCE**

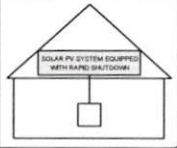
NEC 690.31 (C)(3)(4)(4)
 PLACE ON ALL JUNCTION BOXES, EXPOSED RACEWAYS, AND OTHER
 WIRING METHODS EVERY 10' AND ON EVERY SECTION SEPARATED BY
 ENCLOSURES, WALLS, PARTITIONS, CEILING, OR FLOORS.

**RAPID SHUTDOWN
 SWITCH FOR
 SOLAR PV SYSTEM**

NEC 690.56 (C)(1)
 PLACE ON RAPID SHUTDOWN SWITCH OR EQUIPMENT
 WITH INTEGRATED RAPID SHUTDOWN *EFFECTIVE*

**SOLAR PV SYSTEM EQUIPPED
 WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN
 SWITCH TO THE
 "OFF" POSITION TO
 SHUT DOWN PV SYSTEM
 AND REDUCE
 SHOCK HAZARD
 IN THE ARRAY



NEC 690.56 (C)(1)(a)
 PLACE WITHIN 1 FT OF SERVICE DISCONNECTING MEANS TO
 WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL
 INDICATE THE LOCATIONS OF RAPID SHUTDOWN SWITCHES

**PV SYSTEM
 DISCONNECT**

NEC 690.13 (B)
 PLACE ON PV SYSTEM DISCONNECTING MEANS

PHOTOVOLTAIC POWER SOURCE
 OPERATING AC VOLTAGE 240 V
 MAXIMUM OPERATING
 AC OUTPUT CURRENT 25.0 A

NEC 690.54
 PLACE ON AC DISCONNECT 1

**DIRECT CURRENT
 PHOTOVOLTAIC POWER SOURCE**
 MAXIMUM VOLTAGE 600 VDC
 MAX CIRCUIT CURRENT 15.0 AMPS

NEC 690.53
 PLACE ON INVERTER 1 DC DISCONNECTING MEANS

GENERATION PANEL:

IN THE EVENT OF AN EMERGENCY,
 TURN OFF ALL BREAKERS TO
 DISCONNECT BACKUP POWER
 SOURCE(S).

PLACE ON BACKUP GATEWAY

PHOTOVOLTAIC POWER SOURCE
 OPERATING AC VOLTAGE 240
 MAXIMUM OPERATING
 AC OUTPUT CURRENT 32.0

NEC 690.54
 PLACE ON AC DISCONNECT 1

**DIRECT CURRENT
 PHOTOVOLTAIC POWER SOURCE**
 MAXIMUM VOLTAGE 600 VDC
 MAX CIRCUIT CURRENT 30.0 AMPS

NEC 690.53
 PLACE ON INVERTER 2 DC DISCONNECTING MEANS

SERVICE DISCONNECT LOCATED:
 NORTH WALL OF HOUSE

BATTERY DISCONNECT LOCATED:
 NORTH WALL OF HOUSE

PV DISCONNECT LOCATED:
 NORTH WALL OF HOUSE

NEC 705.10
 PLACE AT SERVICE EQUIPMENT, BATTERY AND
 PV SYSTEM DISCONNECTING MEANS

⚠ WARNING
 THIS EQUIPMENT FED BY MULTIPLE SOURCES.
 THE TOTAL RATING OF ALL OVERCURRENT
 DEVICES EXCLUDING MAIN SUPPLY
 OVERCURRENT DEVICE SHALL NOT EXCEED
 THE CAPACITY OF THE BUSBAR.

NEC 705.12 (B)(2)(e)
 PLACE ON BACKUP GATEWAY

WARNING:
 IN THE EVENT OF A UTILITY OUTAGE,
 THIS PANEL IS FED FROM
 ENERGY STORAGE SYSTEM.

PLACE ON BACKED UP LOAD PANEL(S)

LABEL NOTES

1. LABELS SHOWN ARE HALF THEIR ACTUAL REQUIRED SIZE.
2. LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT.
3. DC CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET.
4. LABELS WILL BE APPLIED IN ACCORDANCE WITH THE NEC. SOME LABELS MAY NOT BE NECESSARY.

DC WIRING NOTES

1. CONDUCTORS SHALL BE COPPER, RATED AT NOT LESS THAN 600 VOLTS FOR RESIDENTIAL CONSTRUCTION AND NOT LESS THAN 1000 VOLTS FOR COMMERCIAL CONSTRUCTION.
2. MINIMUM SIZE SHALL BE #10 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. EXPOSED WIRING CONDUCTOR INSULATION SHALL BE TYPE PV WIRE, USE-2, OR RHW-2 WHERE THE OUTER LAYER OF THE INSULATION IS UV, SUNLIGHT, AND MOISTURE RESISTANT.
6. EXTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN-2 AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT) OR RIGID POLYVINYL CHLORIDE CONDUIT(PVC). ALTERNATIVELY, METAL CLAD CABLE(MC) CAN BE USED AS WELL WHEN RATED FOR USE IN WET LOCATIONS.
7. INTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THN-2 AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), FLEXIBLE METAL CONDUIT(FMC), OR METAL CLAD CABLE(MC).
6. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. USE SCHEDULE 80 PVC OUTDOORS WHERE SUBJECT TO PHYSICAL DAMAGE.
7. MINIMUM CONDUIT SIZE TO BE 1/2".
8. WIRING METHODS TO CONFORM TO ARTICLES 330, 334, 348, 350, 352, 356, AND 358 OF THE 2017 NEC.

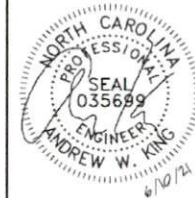
AC WIRING NOTES

1. CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #14 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. EXTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), RIGID POLYVINYL CHLORIDE CONDUIT(PVC), LIQUID-TIGHT FLEXIBLE METAL CONDUIT(LFMC), OR LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT(LFNC). ALTERNATIVELY, METAL CLAD CABLE(MC) CAN BE USED AS WELL WHEN RATED FOR USE IN WET LOCATIONS.
4. INTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THN AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), FLEXIBLE METAL CONDUIT(FMC), METAL CLAD CABLE(MC), OR ROMEX.
5. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. USE SCHEDULE 80 PVC OUTDOORS WHERE SUBJECT TO PHYSICAL DAMAGE.
6. MINIMUM CONDUIT SIZE TO BE 1/2".
7. WIRING METHODS TO CONFORM TO ARTICLES 330, 334, 348, 350, 352, 356, AND 358 OF THE 2017 NEC.

CONSTRUCTION NOTES

1. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE NEC, STATE, AND LOCAL APPLICABLE CODES.
2. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS, BEST PRACTICES, AND SPECIFICATIONS.
3. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED
4. WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS.
5. FUSES 0 - 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.
6. ALL TERMINALS/LUGS SHALL BE 75° RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
7. PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
8. ALL PENETRATIONS THROUGH EXTERIOR ROOFS SHALL BE FLASHED IN A WATERPROOF MANNER.
9. ALL PENETRATIONS THROUGH ATTIC FIRE BARRIERS SHALL BE SEALED WITH FIRE-BARRIER SEALANT CAULK.
10. SUPPORT ALL CONDUIT AND EQUIPMENT IN ACCORDANCE W/ NEC. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE.
11. METAL CONDUIT COUPLINGS CAN BE COMPRESSION TYPE, THREADED, OR BE SET-SCREW TYPE. PLASTIC CONDUIT COUPLINGS TO BE SOCKET GLUED TYPE.
12. A COMPLETE GROUNDING SYSTEM SHALL BE PRESENT OR PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
13. EACH ELECTRICAL APPLIANCE SHALL BE PROVIDED WITH A NAMEPLATE GIVING THE IDENTIFYING NAME AND THE RATING IN VOLTS AND AMPERES, OR VOLTS AND WATTS. IF THE APPLIANCE IS TO BE USED ON A SPECIFIC FREQUENCY OR FREQUENCIES, IT SHALL BE SO MARKED WHERE MOTOR OVERLOAD PROTECTION EXTERNAL TO THE APPLIANCES IS REQUIRED, THE APPLIANCE SHALL BE SO MARKED.
14. WHERE APPLICABLE, GROUNDING ELECTRODE CONDUCTOR TO BE CONTINUOUS. GROUNDING CRIMPS TO BE IRREVERSIBLE.
15. PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
16. EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT.
17. WHERE ALL TERMINALS OF A DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A WARNING SIGN SHALL BE MOUNTED ON OR ADJACENT TO THE DISCONNECT.
18. A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED AT THE DC DISCONNECT MEANS.
19. A PERMANENT PLAQUE OR DIRECTORY, DENOTING ALL ELECTRIC POWER SOURCES SERVING THE PREMISES, SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION AND AT LOCATIONS OF ALL POWER PRODUCTION SOURCES.
20. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC SECTION 690.4 (C).
21. A NORTH CAROLINA REGISTERED DESIGN PROFESSIONAL WILL BE REQUIRED TO SEAL THE STRUCTURAL DESIGN AT THE TIME OF PERMIT APPLICATION IF ANY OF THE FOLLOWING EXIST AND ARE ATTESTED TO BY THE APPLICANT:
 - I. THE WEIGHT OF THE PV SYSTEM EXCEEDS THREE (3) POUNDS PER SQUARE FOOT(PSF)
 - II. THE ROOF POSSESSES MORE THAN ONE (1) LAYER OF ASPHALT SHINGLES
 - III. THE ROOFING MATERIAL CONSISTS OF A TYPE OTHER THAN ASPHALT SHINGLES OR METAL
 - IV. THE ROOF IS LOCATED IN A 140 MPH OR GREATER WIND ZONE

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CLIENT INFO

ALEGRA R HOLLEY
 50 LUMINA COURT
 IINDEN, NC 28136

PROJECT INFO

DC INPUT 14.96 kW
 AC EXPORT 13.60 kW
 DOI INSP. METHOD: OPTION 2

CODE REFERENCES

NATION ELECTRICAL CODE v. 2017
 NC FIRE PROTECTION CODE v. 2018
 NC BUILDING CODE v. 2018
 NC RESIDENTIAL CODE v. 2018
 ACSE v. 7-10

SITE CONDITIONS

WIND SPEED: 119 MPH
 RISK CATEGORY: II
 EXPOSURE: B
 SNOW: 10 PSF

SHEET INDEX

PV-1 COVER SHEET
 PV-2 PV STRUCTURAL
 PV-3 PV ELECTRICAL
 PV-4 PV EQUIPMENT LABELS
 PV-5 PV INSTALL GUIDE

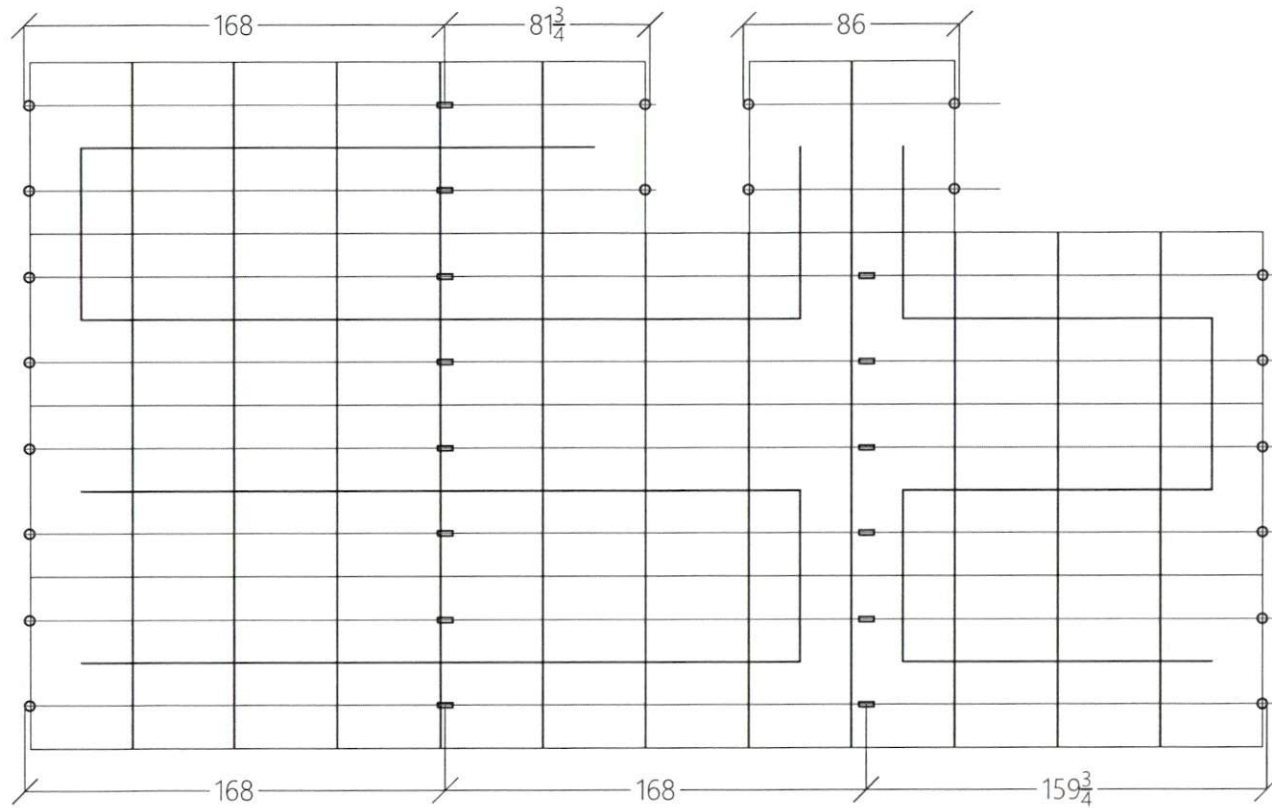
DESIGNER INFO

DESIGNER JAM
 ENGINEER AWK
 DATE 6/2/2021
 VERSION P1

**PV SYSTEM
 EQUIPMENT LABELS**

PV-4.1

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1 ARRAY LAYOUT DETAIL
NOT TO SCALE

**NC
SOLAR
NOW**



CLIENT INFO

ALEGRA R HOLLEY
50 LUMINA COURT
LINDEN, NC 28356

PROJECT INFO

DC INPUT: 14.96 kW
AC EXPORT: 13.68 kW
DOI INSPT. METHOD: OPTION 2

CODE REFERENCES

NATION ELECTRICAL CODE v. 2017
NC FIRE PROTECTION CODE v. 2018
NC BUILDING CODE v. 2018
NC RESIDENTIAL CODE v. 2018
ACSE v. 7-10

SITE CONDITIONS

WIND SPEED: 119 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 10 PSF

SHEET INDEX

PV-1: COVER SHEET
PV-2: PV STRUCTURAL
PV-3: PV ELECTRICAL
PV-4: PV EQUIPMENT LABELS
PV-5: PV INSTALL GUIDE

DESIGNER INFO

DESIGNER: JAM
ENGINEER: AWK
DATE: 6/2/2021
VERSION: P1

**PV SYSTEM INSTALL
GUIDE**

PV-5.1

powered by
Q.ANTUM DUO

Q.PEAK DUO BLK-G6

330-345

ENDURING HIGH
PERFORMANCE



www.VDEinfo.com
ID: 40032587



Q.ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.5%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

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



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

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



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty².



STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500V, 168h)

² See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



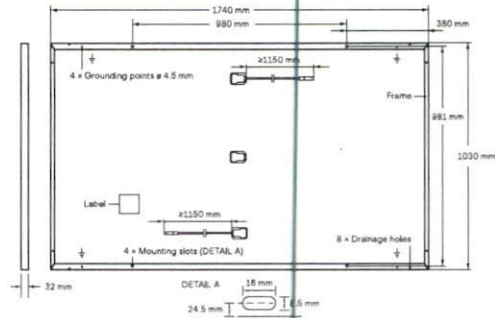
Rooftop arrays on
residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	1740 mm x 1030 mm x 32 mm (including frame)
Weight	19.9 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 x 20 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm x 32-60 mm x 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥1150 mm, (-) ≥1150 mm
Connector	Stäubli MC4, Hanwha Q CELLS HQC4; IP68

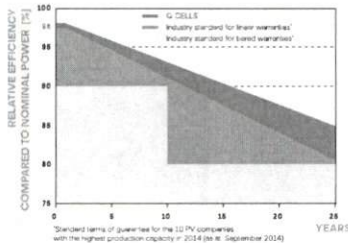


ELECTRICAL CHARACTERISTICS

POWER CLASS		330	335	340	345	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)						
Minimum	Power at MPP ¹	P_{MPP} [W]	330	335	340	345
	Short Circuit Current ¹	I_{SC} [A]	10.41	10.47	10.52	10.58
	Open Circuit Voltage ¹	V_{OC} [V]	40.15	40.41	40.66	40.92
	Current at MPP	I_{MPP} [A]	9.91	9.97	10.02	10.07
	Voltage at MPP	V_{MPP} [V]	33.29	33.62	33.94	34.25
	Efficiency ¹	η [%]	≥18.4	≥18.7	≥19.0	≥19.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²						
Minimum	Power at MPP	P_{MPP} [W]	247.0	250.7	254.5	258.2
	Short Circuit Current	I_{SC} [A]	8.39	8.43	8.48	8.52
	Open Circuit Voltage	V_{OC} [V]	37.86	38.10	38.34	38.59
	Current at MPP	I_{MPP} [A]	7.80	7.84	7.89	7.93
	Voltage at MPP	V_{MPP} [V]	31.66	31.97	32.27	32.57

¹ Measurement tolerances $P_{MPP} \pm 3\%$; I_{SC} ; $V_{OC} \pm 5\%$ at STC: 1000 W/m², 25 ± 2°C, AM 1.5 according to IEC 60904-3 • 7800 W/m², NMOT, spectrum AM 1.5

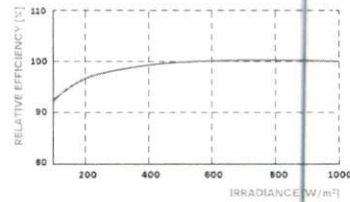
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% of nominal power up to 25 years.

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

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.36	Nominal Module Operating Temperature	NMOT [°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS} [V]	1000	PV module classification	Class II
Maximum Reverse Current	I_R [A]	20	Fire Rating based on ANSI/UL 61730	C/TYPE 2
Max. Design Load, Push/Pull	[Pa]	3600/2667	Permitted Module Temperature on Continuous Duty	-40°C - +85°C
Max. Test Load, Push/Pull	[Pa]	5400/4000		

QUALIFICATIONS AND CERTIFICATES

VDE Quality Tested.
IEC 61215:2016.
IEC 61730:2016
This data sheet complies with DIN EN 50380.



PACKAGING INFORMATION

	1780mm	1080mm	1208mm	673.8 kg	28 pallets	26 pallets	32 modules
Horizontal packaging							
Vertical packaging	1815mm	1150mm	1220mm	683 kg	28 pallets	24 pallets	32 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product. Q CELLS supplies solar modules in two different stacking methods, depending on the location of manufacture (modules are packed horizontally or vertically). You can find more detailed information in the document "Packaging and Transport Information", available from Q CELLS.

Hanwha Q CELLS GmbH

Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | TEL +49 (0)3494 66 99-23444 | FAX +49 (0)3494 66 99-23000 | EMAIL sales@q-cells.com | WEB www.q-cells.com

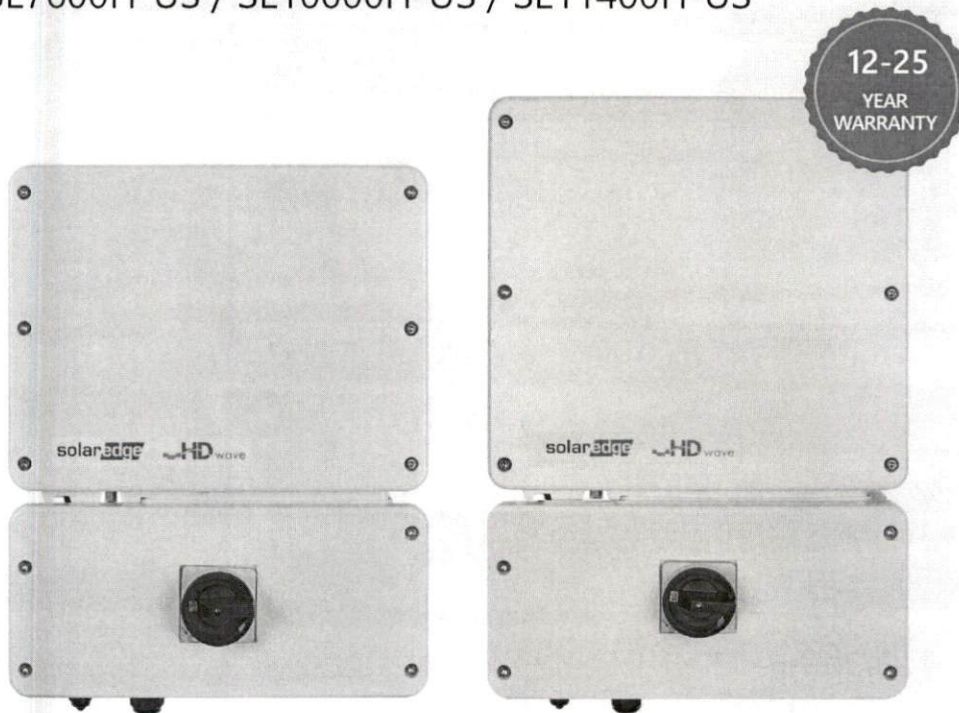
Engineered in Germany

Q CELLS

Single Phase Inverter with HD-Wave Technology

for North America

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



INVERTERS

Optimized installation with HD-Wave technology

- // Specifically designed to work with power optimizers
- // Record-breaking 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 and 2017, per article 690.11 and 690.12
- // UL1741 SA certified, for CPUC Rule 21 grid compliance
- // Extremely small
- // Built-in module-level monitoring
- // Outdoor and indoor installation
- // Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

/ 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							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	600 μ s 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 Data, ANSI C12.20	Optional ³⁾						
Inverter Commissioning	with the SetApp mobile application using built-in Wi-Fi Access Point for local connection						
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect						
STANDARD COMPLIANCE							
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCl according to T.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		
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9		38.8 / 17.6		lb / kg
Noise	< 25				< 50		
Cooling	Natural Convection						
Operating Temperature Range	-40 to +140 / -40 to +60 ⁴⁾						
Protection Rating	NEMA 4X (Inverter with Safety Switch)						

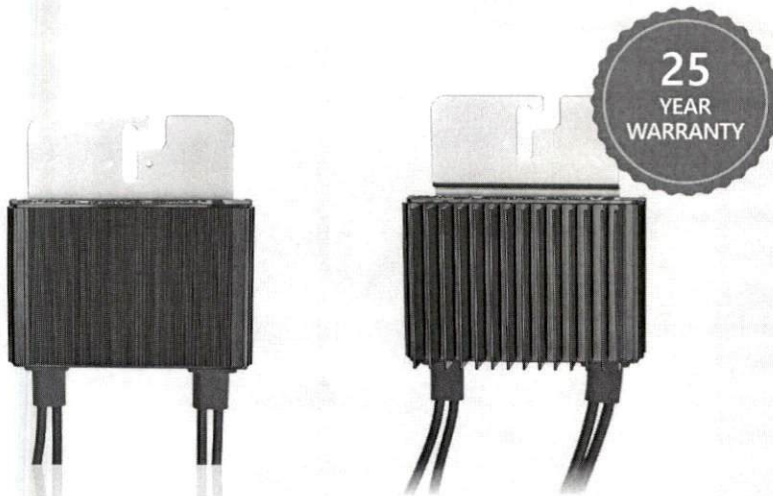
³⁾ Revenue grade inverter P/N: SExxxxH-US000BNC4

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>

Power Optimizer

For North America

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



POWER OPTIMIZER

PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- 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 (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

/ 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-cell modules)	P370 (for higher- power 60 and 72- cell modules)	P400 (for 72 & 96-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)		
INPUT										
Rated Input DC Power ⁽¹⁾	320	340	370	400		405	485	505	W	
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		60	80	60	125 ⁽²⁾		83 ⁽²⁾	Vdc	
MPPT Operating Range	8 - 48		8 - 60	8 - 80	8-60	12.5 - 105		12.5 - 83	Vdc	
Maximum Short Circuit Current (Isc)	11			10.1	11.75	11		14	Adc	
Maximum DC Input Current	13.75			12.5	14.65	12.5		17.5	Adc	
Maximum Efficiency	99.5									
Weighted Efficiency	98.8					98.6				
Overvoltage Category	II									
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)										
Maximum Output Current	15									
Maximum Output Voltage	60					85				
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)										
Safety Output Voltage per Power Optimizer	1 ± 0.1									
STANDARD COMPLIANCE										
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3									
Safety	IEC62109-1 (class II safety), UL1741									
Material	UL94 V-0, UV Resistant									
RoHS	Yes									
INSTALLATION SPECIFICATIONS										
Maximum Allowed System Voltage	1000									
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters									
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1			129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 153 x 29.5 / 5.1 x 6 x 1.16	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3		mm / in	
Weight (including cables)	630 / 1.4			750 / 1.7	655 / 1.5	845 / 1.9	1064 / 2.3		gr / lb	
Input Connector	MC4 ⁽³⁾					Single or dual MC4 ⁽³⁾⁽⁴⁾	MC4 ⁽³⁾			
Input Wire Length	0.16 / 0.52									
Output Wire Type / Connector	Double Insulated / MC4									
Output Wire Length	0.9 / 2.95			1.2 / 3.9						
Operating Temperature Range ⁽⁵⁾	-40 - +85 / -40 - +185									
Protection Rating	IP68 / NEMA6P									
Relative Humidity	0 - 100									

- (1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed.
 (2) NEC 2017 requires max input voltage be not more than 80V.
 (3) For other connector types please contact SolarEdge.
 (4) For dual version for parallel connection of two modules use P485-4NMDMRM. In the case of an odd number of PV modules in one string, installing one P485 dual version power optimizer connected to one PV module. When connecting a single module seal the unused input connectors with the supplied pair of seals.
 (5) For ambient temperature above +85°C / +185°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 ⁽⁶⁾⁽⁷⁾	Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	P320, P340, P370, P400, P401	8	10	18	
	P405, P485, P505	6	8	14	
Maximum String Length (Power Optimizers)		25	25	50 ⁽⁸⁾	
Maximum Power per String	5700 (6000 with SE7600-US - SE11400- US)	5250	6000 ⁽⁹⁾	12750 ⁽¹⁰⁾	W
Parallel Strings of Different Lengths or Orientations	Yes				

- (6) For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
 (7) It is not allowed to mix P405/P485/P505 with P320/P340/P370/P400/P401 in one string.
 (8) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement.
 (9) For 208V grid: it is allowed to install up to 6,500W per string when the maximum power difference between each string is 1,000W.
 (10) For 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.