

CHARLES WOODS
NEW GRID-INTERACTIVE PHOTOVOLTAIC SYSTEM
DC SYSTEM SIZE (10.22 KW)

SYSTEM DETAILS

DESCRIPTION	NEW GRID-INTERACTIVE PHOTOVOLTAIC SYSTEM WITH BATTERY STORAGE
DC RATING OF SYSTEM	SYSTEM SIZE :10.22 KW DC STC
AC RATING OF SYSTEM	7.6 KW
AC OUTPUT CURRENT	32 A
NO. OF MODULES	(28) LG365N1K-A6 (365W) LG NEON 2 MODULES
NO. OF OPTIMIZER	(4) GENERAC PV LINK
NO. OF INVERTERS	(1) GENERAC PWRCELL INVERTER APKE0014 MICROINVERTERS
POINT OF CONNECTION	LINE SIDE TAP IN THE MSP
ARRAY STRINGING	(4) BRANCHES OF 7 MODULES
NO. OF BATTERIES	(6) GENERAC PWRCELL BATTERY
NO. SMM	(3) GENERAC PWRCELL SMM

SITE DETAILS

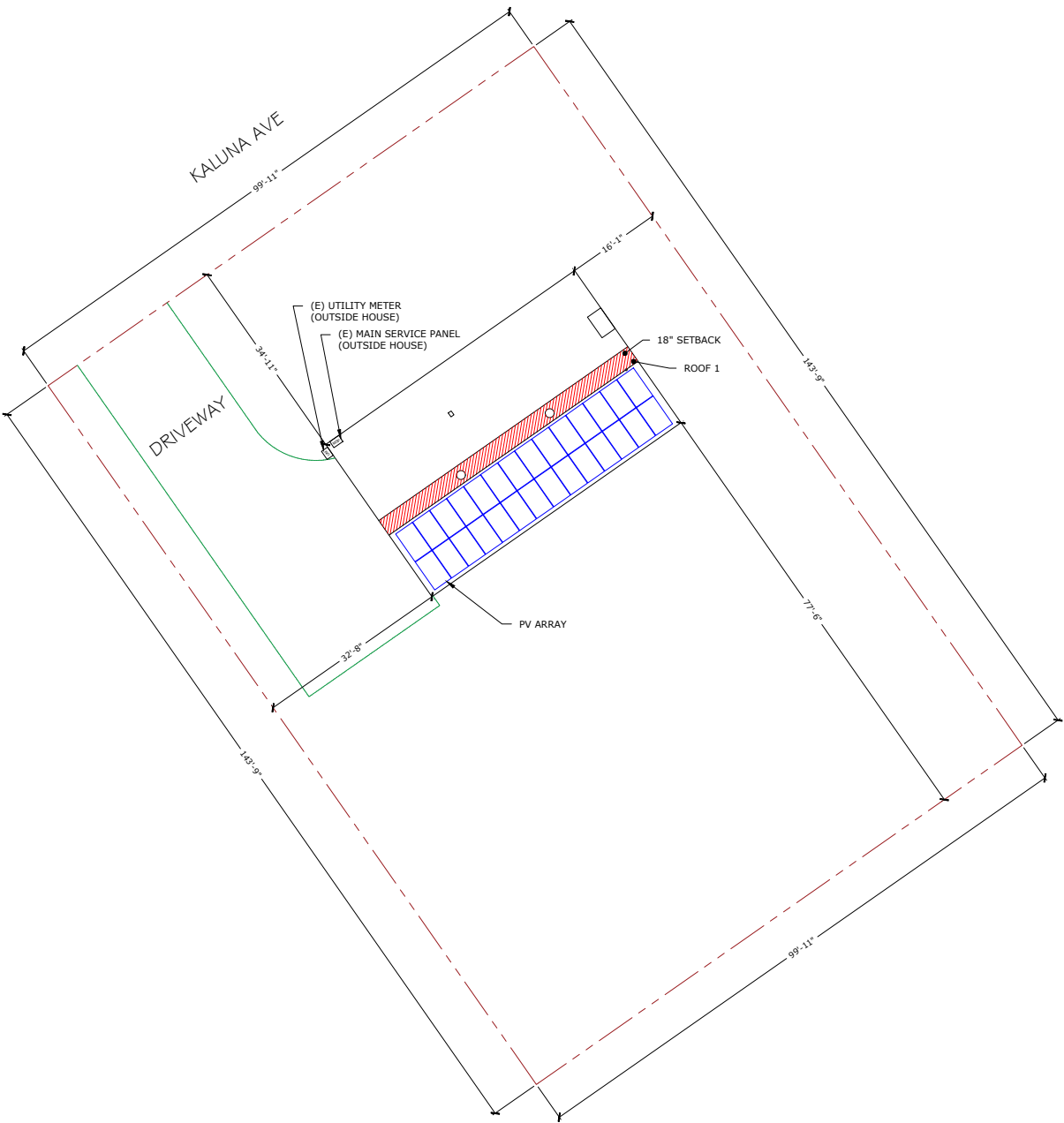
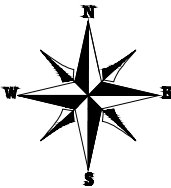
ASHRAE EXTREME LOW	-17°C
ASHRAE 2% HIGH	32°C
GROUND SNOW LOAD	15 PSF
WIND SPEED	150MPH
RISK CATEGORY	II
WIND EXPOSURE CATEGORY	B

GOVERNING CODES

INTERNATIONAL BUILDING CODE 2012
INTERNATIONAL RESIDENTIAL CODE 2009
INTERNATIONAL FIRE CODE 2018
NATIONAL ELECTRIC CODE, NEC 2017 CODE BOOK, NFPA 70

SHEET INDEX

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DS - 03	OPTIMIZER DATASHEET
DS - 04	BATTERY DATASHEET
DS - 05	INVERTER DATASHEET
DS - 06	ATS DATASHEET
DS - 07	SOFT STARTER DATASHEET
DS - 08	SMM DATASHEET
DS - 09	ATTACHMENT DATASHEET



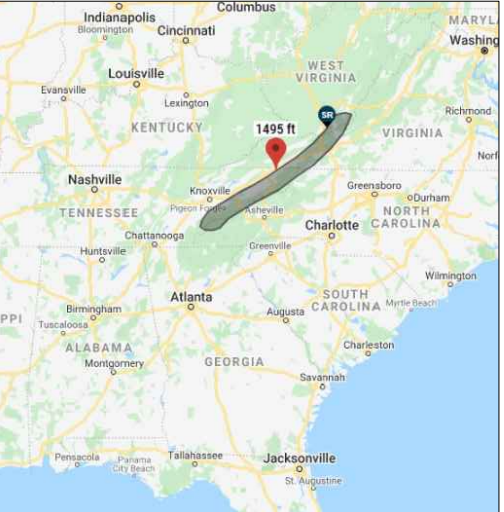
SITE MAP (N.T.S)



VICINITY MAP



WIND FLOW MAP



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TN 37618, USA

REVISIONS

REV	ENG	DESCRIPTION	DATE

PERMIT DEVELOPER

DATE 05/21/2021

DESIGNER OSM

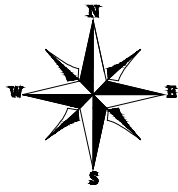
REVIEWER

SHEET NAME

SITE MAP &
VICINITY MAP

SHEET NUMBER

A-01



MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 28 MODULES
MODULE TYPE = LG365N1K-A6 (365W) LG NEON 2 MODULES
WEIGHT = 41 LBS / 18.6 KG.
MODULE DIMENSIONS = 41" X 68.5" = 19.5 SF

NUMBER OF INVERTER = 1 INVERTER
INVERTER TYPE = GENERAC PWRCELL INVERTER APKEO0014
DC SYSTEM SIZE: 10.22 KW
AC SYSTEM SIZE: 7.6 KW

GENERAL INSTALLATION PLAN NOTES:

1) ROOF ATTACHMENTS TO TRUSSES SHALL BE INSTALLED AS SHOWN IN SHEET S-01 AND AS FOLLOWS FOR EACH WIND ZONE:.

WIND ZONE 1: MAX SPAN 6'-0" O.C.
WIND ZONE 2: MAX SPAN 4'-0" O.C.
WIND ZONE 3: MAX SPAN 2'-0" O.C.

2) EXISTING RESIDENTIAL BUILDING ROOF WITH MEAN ROOF HEIGHT 25 FT AND 2"x4" WOOD ROOF TRUSSES SPACED 24" O.C.

CONTRACTOR TO FIELD VERIFY AND SHALL REPORT TO THE ENGINEER IF ANY DISCREPANCIES EXIST BETWEEN PLANS AND IN FIELD CONDITIONS.

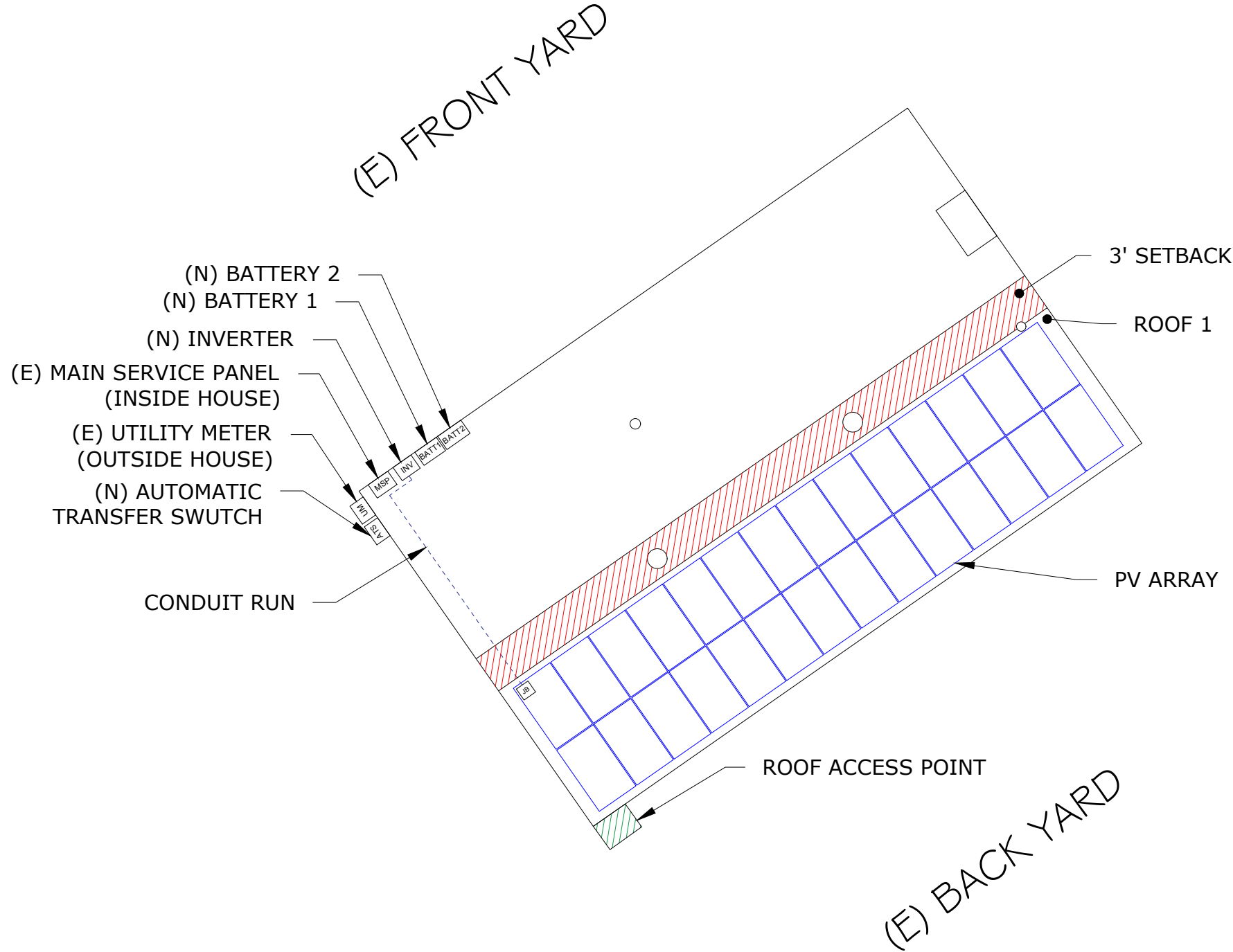
I CERTIFY THAT THE INSTALLATION OF THE MODULES IS IN COMPLIANCE WITH IBC: RESIDENTIAL BUILDING STRUCTURE WILL SAFELY ACCOMMODATE LATERAL AND UPLIFT WIND LOADS, AND EQUIPMENT DEAD LOADS. *



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LEGENDS

- UM - UTILITY METER
- MSP - MAIN SERVICE PANEL
- M - METER MAIN COMBO
- JB - JUNCTION BOX
- ACD - AC DISCONNECT
- INV - INVERTER
- BATT - BATTERY
- PM - PRODUCTION METER
- CP - COMBINER PANEL
- [Red Hatched Box] - FIRE SETBACK
- [Green Square] - MICROINVERTER
- [Circle with X] - VENT, ATTIC FAN (ROOF OBSTRUCTION)
- [Dashed Line] - CONDUIT

REVISIONS

REV	ENG.	DESCRIPTION	DATE

PERMIT DEVELOPER

DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME

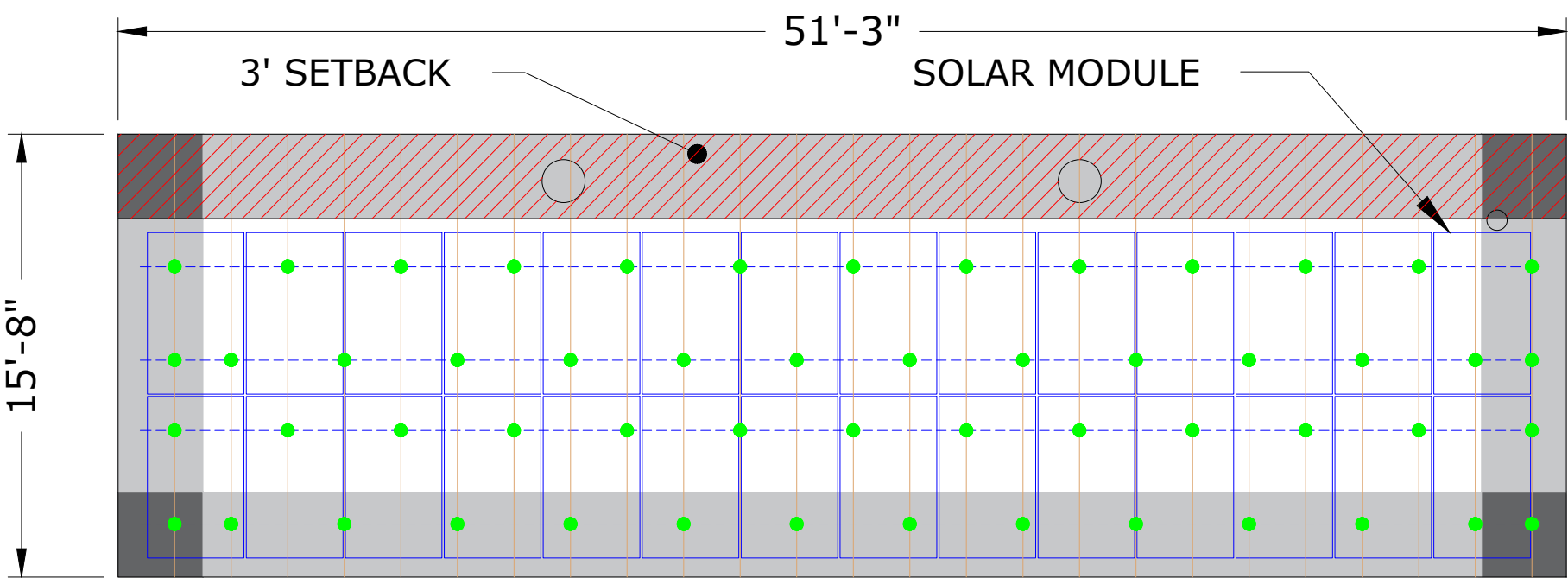
ROOF PLAN & MODULES

SHEET NUMBER

A-02

ROOF DESCRIPTION:

(ROOF #1)
MODULES - 28
ROOF TILT - 23°
ROOF AZIMUTH - 143°
TRUSSES SIZE - 2"X4" @ 24" O.C.



ROOF #1

LEGENDS

- FIRE SETBACK
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- PV ROOF ATTACHMENT
- COUPLING
- RAILS
- RAFTERS / TRUSSES
- WIND ZONE 1
- WIND ZONE 2
- WIND ZONE 3



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REV	ENG	DESCRIPTION	DATE				

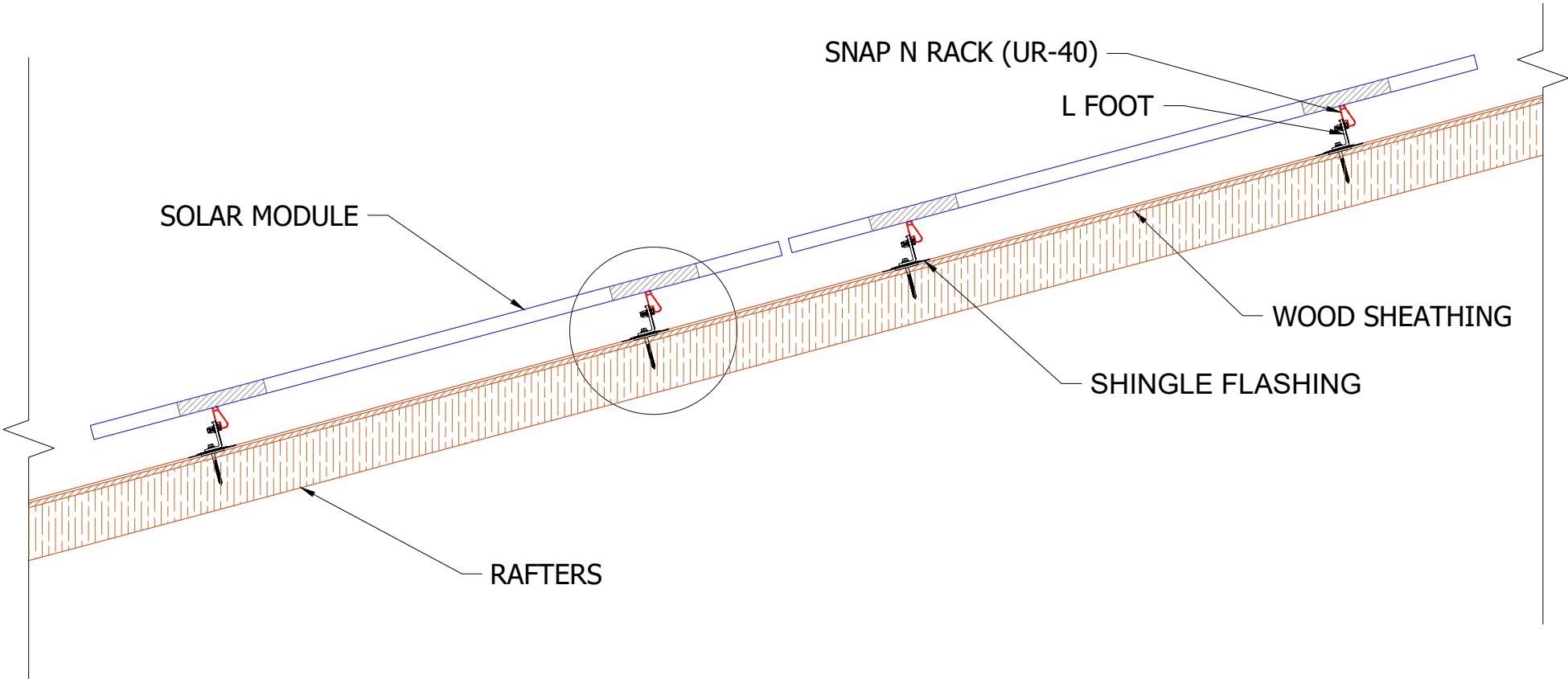
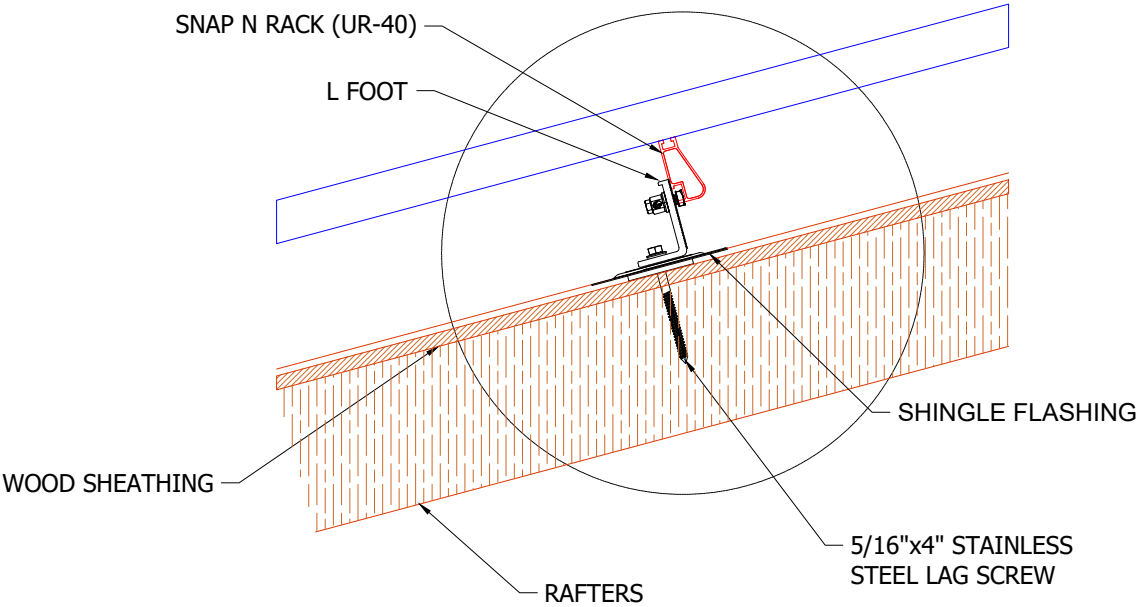
PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
ARRAY LAYOUT

SHEET NUMBER
S-01

PHOTOVOLTAIC MODULE GENERAL NOTES:

- 1. APPLICABLE CODE: INTERNATIONAL BUILDING CODE 2012
MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES
- 2. BOLT DIAMETER AND EMBEDMENT LENGTHS ARE DESIGNED PER NDS(2012)
REQUIREMENTS. ALL BOLT CAPACITIES ARE BASED ON A
WOOD ROOF TRUSS AS EMBEDMENT MATERIAL.
- 3. ALL WIND DESIGN CRITERIA AND PARAMETERS ARE FOR HIP AND GABLE
RESIDENTIAL ROOFS, CONSIDERING FROM A 7° TO A MAXIMUM 27° (2/12 TO A
MAXIMUM 6/12 PITCH) ROOF IN SCHEDULE. ALL RESIDENTIAL ROOFS SHALL NOT
EXCEED 30'-0" MEAN ROOF HEIGHT.
- 4. ROOF SEALANTS SHALL CONFORM TO ASTM C920 AND ASTM 6511.
- 5. THIS SHEET REFLECTS STRUCTURAL CONNECTIONS ONLY. REFER TO
MANUFACTURERS' MANUAL FOR ALL ARCHITECTURAL, MECHANICAL,
ELECTRICAL, AND SOLAR SPECS.
- 6. ALL ALUMINUM COMPONENTS SHALL BE ANODIZED ALUMINUM 6105-T5 UNLESS
OTHERWISE NOTED.
- 7. LAG BOLTS SHALL BE ASTM A276 STAINLESS STEEL UNLESS OTHERWISE NOTED.
- 8. ALL RAILING AND MODULES SHALL BE INSTALLED PER
MANUFACTURERS' INSTRUCTIONS.
- 9. I CERTIFY THAT THE INSTALLATION OF THE MODULES IS IN COMPLIANCE
WITH IBC:BUILDING 2012 AND IBC: RESIDENTIAL 2009
BUILDING STRUCTURE WILL SAFELY ACCOMMODATE CALCULATED
WIND LATERAL AND UPLIFT FORCES, AND EQUIPMENT DEAD LOADS.



STRUCTURAL ATTACHMENT DETAILS



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	DESCRIPTION				
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DATE	05/21/2021
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REVIEWER	

SHEET NAME
STRUCTURAL ATTACHMENT DETAILS

SHEET NUMBER
S-02

INVERTER SPECIFICATIONS	
MANUFACTURER	GENERAC
MODEL NO.	SKU:APKE00014
MAX DC INPUT VOLTAGE	420 V
MAX OUTPUT POWER	7600 W
NOMINAL AC OUTPUT VOLTAGE	240 V
NOMINAL AC OUTPUT CURRENT	32 A

MODULE SPECIFICATION	
MODEL NO.	LG365N1K-A6 LG NEON 2
PEAK POWER	365 W
RATED VOLTAGE (Vmpp)	35.1 V
RATED CURRENT (Imp)	10.41 A
OPEN CIRCUIT VOLTAGE (Voc)	41.8 V
SHORT CIRCUIT CURRENT (Isc)	10.92 A

OPTIMIZER SPECIFICATION	
MODEL NO.	GENERAC PV LINK OPTIMIZER
OPEN CIRCUIT VOLTAGE (Voc)	420 V
SHORT CIRCUIT CURRENT (Isc)	18 A
MAX. DC OUTPUT CURRENT	8 A

NOTE:
1. SUBJECT PV SYSTEMS HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE NEC 2017, NFPA 70 INCLUDING MAXIMUM NUMBER OF MODULE STRINGS, MAXIMUM NUMBER OF MODULES PER STRING, MAXIMUM OUTPUT, MODULE MANUFACTURER AND MODEL NUMBER, INVERTER MANUFACTURER AND MODEL NUMBER, AS APPLICABLE.
2. PROVIDE TAP BOX IN COMPLIANCE WITH 312.8 IF PANEL GUTTER SPACE IS INADEQUATE.

SOLAR ARRAY (10.22 KW-DC STC)

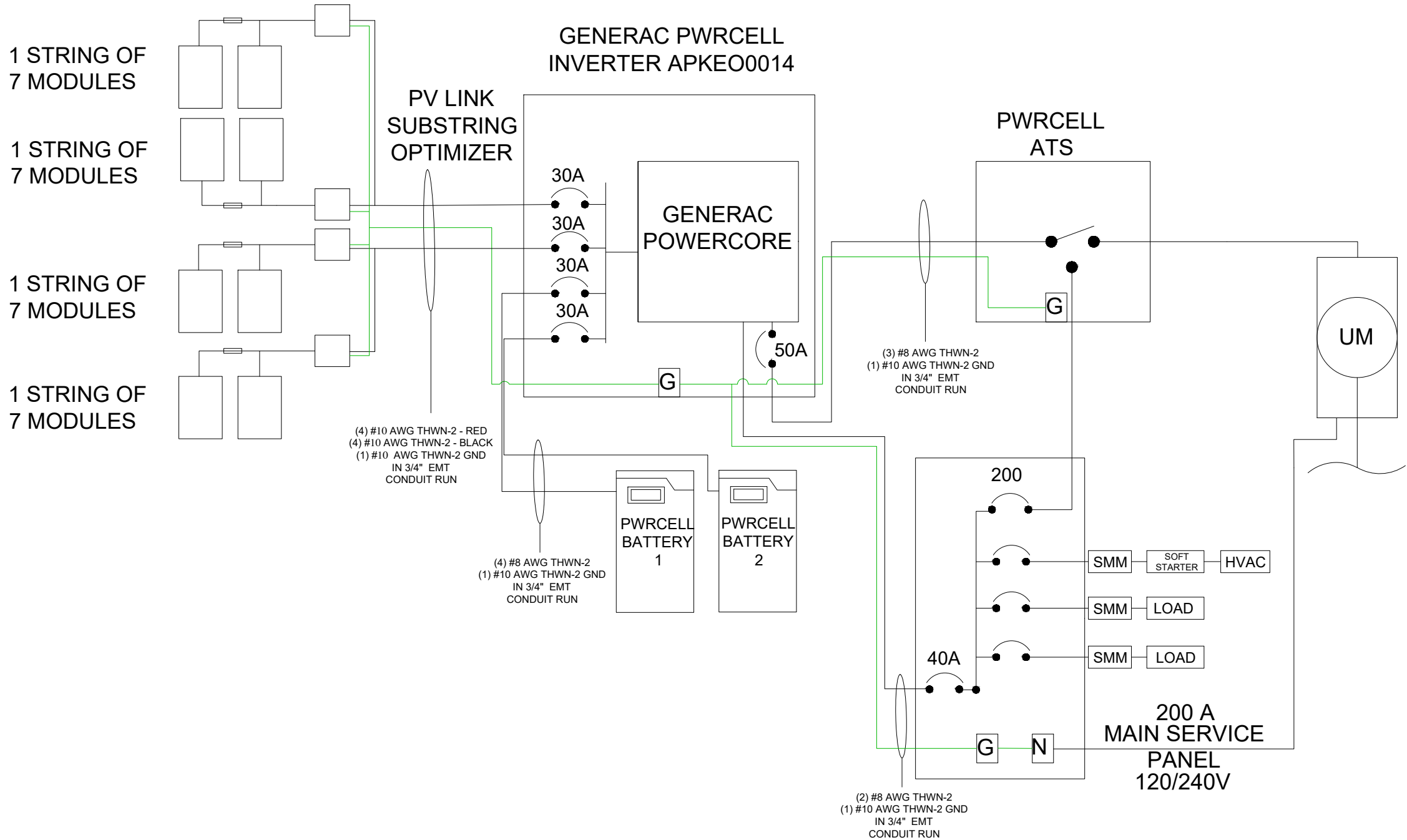
(28) LG365N1K-A6 (365W) LG NEON 2 MODULES
(4) BRANCHES OF 07 MODULES



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REVISIONS	DATE				
	DESCRIPTION				
	REV	ENGG.			

PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
ELECTRICAL LINE DIAGRAM

SHEET NUMBER
E-01

ELECTRICAL CALCULATIONS:

1. CURRENT CARRYING CONDUCTOR

(A) BEFORE IINVERTER

AMBIENT TEMPERATURE = 32°C
CONDUIT INSTALLED AT MINIMUM DISTANCE OF 7/8 INCHES ABOVE ROOFNEC 310.15(B)(3)(c)
TEMPERATURE DERATE FACTOR - 0.96 ...NEC 310.15(B)(2)(a)
GROUPING FACTOR - 0.7...NEC 310.15(B)(3)(a)

CONDUCTOR AMPACITY
= (INV O/P CURRENT) x 1.25 / A.T.F / G.F ...NEC 690.8(B)
= [(8 x 1.56] / 0.96 / 0.7
= 18.57 A
SELECTED CONDUCTOR - #10THWN-2 ...NEC 310.15(B)(16)

(B) AFTER INVERTER

TEMPERATURE DERATE FACTOR - 0.96
GROUPING FACTOR - 1

CONDUCTOR AMPACITY
=(TOTAL INV O/P CURRENT) x 1.25 / 0.96 / 1 ...NEC 690.8(B)
=[(32) x 1.25] /0.96 / 1
=41.67 A
SELECTED CONDUCTOR - #8 THWN-2 ...NEC 310.15(B)(16)

2. PV OVER CURRENT PROTECTION ..NEC 690.9(B)

=TOTAL INVERTER O/P CURRENT x 1.25
=(32) x 1.25 = 40 A
SELECTED OCPD = 40A

SELECTED EQUIPMENT GROUND CONDUCTOR (EGC) = #10 THWN-2 ... NEC 250.122(A)

ELECTRICAL NOTES

1. ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
2. ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.THE TERMINALS ARE RATED FOR 75 DEGREE C.
3. CONDUCTOR TERMINATION AND SPLICING AS PER NEC 110.14
4. WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
5. WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
6. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
7. WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
8. ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
9. MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
10. MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
11. THE POLARITY OF THE GROUNDED CONDUCTORS IS NEGATIVE .
12. UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.
13. MODULES CONFORM TO AND ARE LISTED UNDER UL 1703.
14. RACKING CONFORMS TO AND IS LISTED UNDER UL 2703.
15. CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C) (1) AND ARTICLE 310.10 (D).
16. CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).



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	REV	ENG.			

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DATE	05/21/2021
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REVIEWER	

SHEET NAME
WIRING CALCULATIONS

SHEET NUMBER
E-02




WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL LOCATION:
AC DISCONNECT, POINT OF INTERCONNECTION,
COMBINER PANEL
(PER CODE: NEC 690.13(B))

**WARNING PHOTOVOLTAIC
POWER SOURCE**

LABEL LOCATION:
CONDUIT RUNWAY
(PER CODE: NEC690.31(G)(3)(4))




WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION:
MAIN SERVICE DISCONNECT
(NEC 705.12(B)(3-4) & NEC 690.59)

ADHESIVE FASTENED SIGNS:

- ANSI Z535.4-2011 PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR SUITABLE FONT SIZES, WORDS, COLORS, SYMBOLS, AND LOCATION REQUIREMENTS FOR LABELS. NEC 110.21(B)(1)
- THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. NEC 110.21(B)(3)
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT. IFC 605.11.1.3



CAUTION
TRI POWER SOURCES
SECOND SOURCE IS AC BATTERY
THIRD SOURCE IS PV SYSTEM

PHOTOVOLTAIC SYSTEM AC DISCONNECT
RATED AC OPERATING CURRENT 32 AMPS
AC NOMINAL OPERATING VOLTAGE 240 VOLTS

LABEL LOCATION:
AC DISCONNECT, INVERTER
(PER CODE: NEC 690.54)

WARNING
INVERTER OUTPUT CONNECTION DO NOT
RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
POINT OF INTERCONNECTION, MAIN SERVICE DISCONNECT
(PER CODE: NEC 705.12 (B)(2)(c))
[Not required if panelboard is rated not less than sum of ampere ratings
of all overcurrent devices supplying it]

**PHOTOVOLTAIC SYSTEM
EQUIPPED WITH RAPID
SHUTDOWN**

LABEL LOCATION:
AC DISCONNECT, DC DISCONNECT, POINT OF
INTERCONNECTION
(PER CODE: NEC 690.56(C)(3))



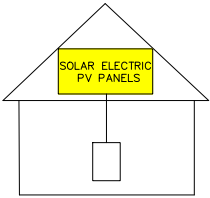
WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE



WARNING
DEDICATED SOLAR PANELS DO
NOT CONNECT ANY OTHER LOADS

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

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



IFC 605.11.3.1(1) & 690.56(C)(1)(a) Label for PV Systems that
Shut down the array and the conductors leaving the array



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REVISIONS	DATE				
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PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
SYSTEM LABELING

SHEET NUMBER
E-03



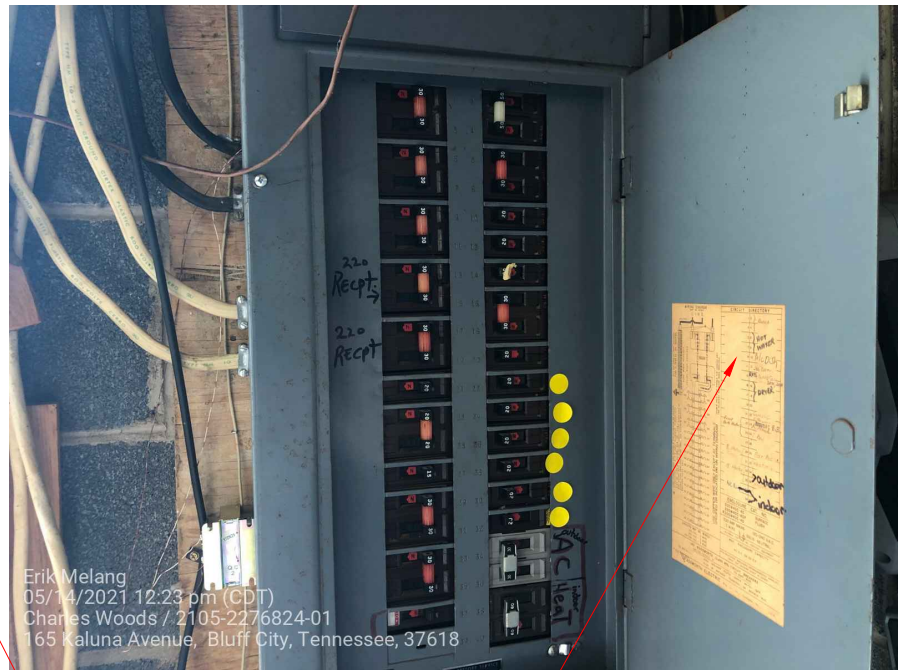
Erik Melang
05/14/2021 12:42 pm (CDT)
Charles Woods / 2105-2276824-01
165 Kaluna Avenue, Bluff City, Tennessee, 37618

METER & ATS



Erik Melang
05/14/2021 12:40 pm (CDT)
Charles Woods / 2105-2276824-01
165 Kaluna Avenue, Bluff City, Tennessee, 37618

MSP LOCATION

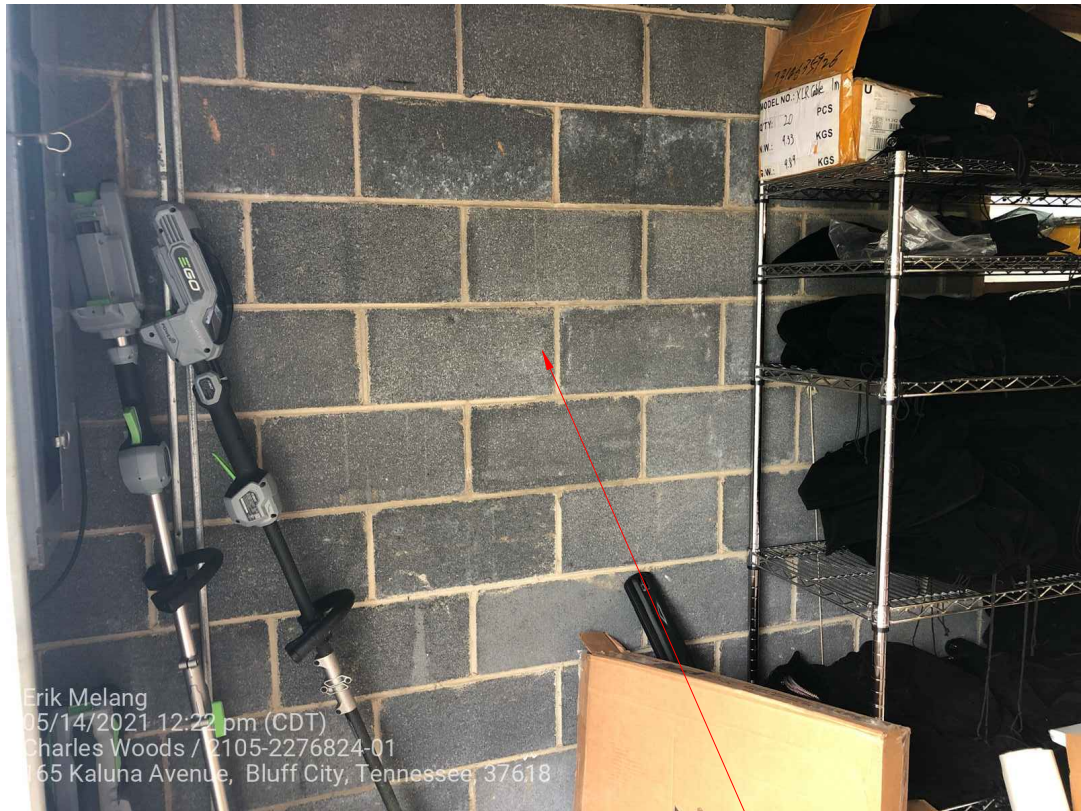


Erik Melang
05/14/2021 12:23 pm (CDT)
Charles Woods / 2105-2276824-01
165 Kaluna Avenue, Bluff City, Tennessee, 37618



Erik Melang
05/14/2021 12:34 pm (CDT)
Charles Woods / 2105-2276824-01
165 Kaluna Avenue, Bluff City, Tennessee, 37618

ARRAY LOCATION



Erik Melang
05/14/2021 12:22 pm (CDT)
Charles Woods / 2105-2276824-01
165 Kaluna Avenue, Bluff City, Tennessee, 37618

PROPOSED INVERTER
& BATTERY LOCATION



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REVISIONS	REV	ENG	DESCRIPTION	DATE
	1	2	3	4

PERMIT DEVELOPER	
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REVIEWER	

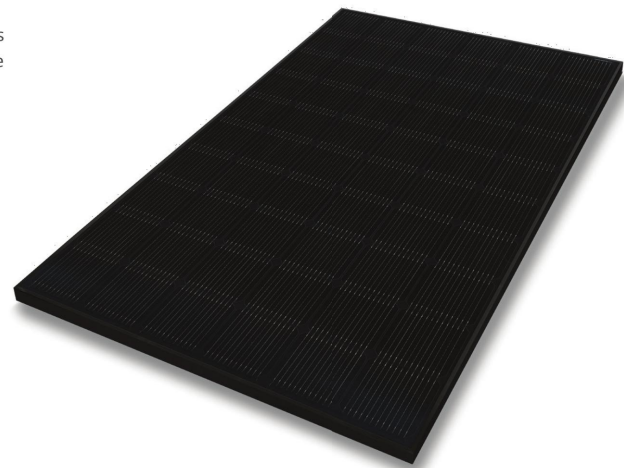
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SITE IMAGES	
SHEET NUMBER	
E-04	

LG NeON[®] 2 Black

LG365N1K-A6

365W

The LG NeON[®] 2 is LG's best selling solar module and one of the most powerful and versatile modules on the market today. The cells are designed to appear all-black at a distance, and the performance warranty guarantees 90.6% of labeled power output at 25 years.



Features



Enhanced Performance Warranty

LG NeON[®] 2 Black has an enhanced performance warranty. After 25 years, LG NeON[®] 2 Black is guaranteed at least 90.6% of initial performance.



25-Year Limited Product Warranty

The NeON[®] 2 Black is covered by a 25-year limited product warranty. In addition, up to \$450 of labor costs will be covered in the rare case that a module needs to be repaired or replaced.



Solid Performance on Hot Days

LG NeON[®] 2 Black performs well on hot days due to its low temperature coefficient.



Roof Aesthetics

LG NeON[®] 2 Black has been designed with aesthetics in mind using thinner wires that appear all black at a distance.

When you go solar, ask for the brand you can trust: LG Solar

About LG Electronics USA, Inc.

LG Electronics is a global leader in electronic products in the clean energy markets by offering solar PV panels and energy storage systems. The company first embarked on a solar energy source research program in 1985, supported by LG Group's vast experience in the semi-conductor, LCD, chemistry and materials industries. In 2010, LG Solar successfully released its first Mono[®] series to the market, which is now available in 32 countries. The NeON[®] (previous Mono[®] NeON), NeON[®]2, NeON[®]2 BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG's leadership and innovation in the solar industry.



LG NeON[®] 2 Black

LG365N1K-A6

General Data

Cell Properties (Material/Type)	Monocrystalline/N-type
Cell Maker	LG
Cell Configuration	60 Cells (6 x 10)
Number of Busbars	12EA
Module Dimensions (L x W x H)	1,740mm x 1,042mm x 40 mm
Weight	18.6 kg
Glass (Material)	Tempered Glass with AR coating
Backsheet (Color)	Black
Frame (Material)	Anodized Aluminium
Junction Box (Protection Degree)	IP 68 with 3 Bypass Diodes
Cables (Length)	1,100mm x 2EA
Connector (Type/Maker)	MC 4/MC

Certifications and Warranty

Certifications*	IEC 61215-1/-1-1/2: 2016, IEC 61730-1/2: 2016, UL 61730-1: 2017, UL 61730-2: 2017 ISO 9001, ISO 14001, ISO 50001 OHSAS 18001
Salt Mist Corrosion Test	IEC 61701:2012 Severity 6
Ammonia Corrosion Test	IEC 62716:2013
Module Fire Performance	Type 2 (UL 61730)
Fire Rating	Class C (UL 790, ULC/ORD C 1703)
Solar Module Product Warranty	25 Year Limited
Solar Module Output Warranty	Linear Warranty*

*Improved: 1st year 98.5%, from 2-24th year: -0.33%/year down, 90.6% at year 25

Temperature Characteristics

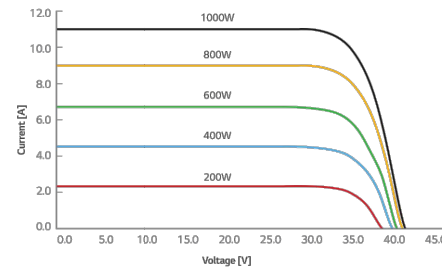
NMOT*	[°C]	42 ± 3
Pmax	[%/°C]	-0.35
Voc	[%/°C]	-0.26
Isc	[%/°C]	0.03

*NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m², Ambient temperature 20°C, Wind speed 1 m/s, Spectrum AM 1.5

Electrical Properties (NMOT)

Model		LG365N1K-A6
Maximum Power (Pmax)	[W]	274
MPP Voltage (Vmpp)	[V]	33.0
MPP Current (Impp)	[A]	8.30
Open Circuit Voltage (Voc)	[V]	39.4
Short Circuit Current (Isc)	[A]	8.78

I-V Curves



LG Electronics USA, Inc.
Solar Business Division
2000 Millbrook Drive
Lincolnshire, IL 60069
www.lg-solar.com

Product specifications are subject to change without notice.
LG365N1K-A6_AUS.pdf
011821

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Electrical Properties (STC*)

Model		LG365N1K-A6
Maximum Power (Pmax)	[W]	365
MPP Voltage (Vmpp)	[V]	35.1
MPP Current (Impp)	[A]	10.41
Open Circuit Voltage (Voc ± 5%)	[V]	41.8
Short Circuit Current (Isc ± 5%)	[A]	10.92
Module Efficiency	[%]	20.1
Power Tolerance	[%]	0 ~ +3

*STC (Standard Test Condition): Irradiance 1000 W/m², cell temperature 25°C, AM 1.5
Measurement Tolerance of Pmax: ± 3%

Operating Conditions

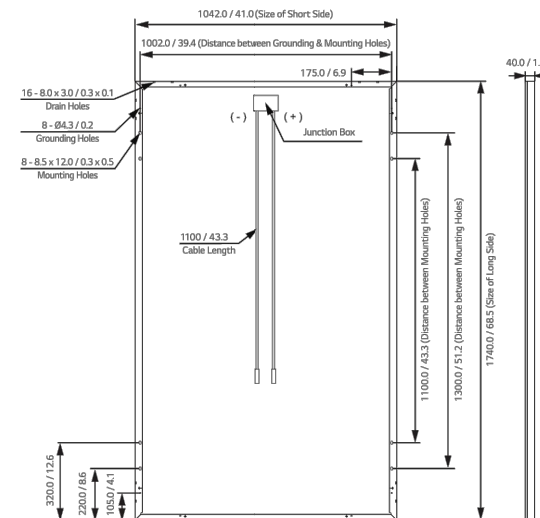
Operating Temperature	[°C]	-40 ~+85
Maximum System Voltage	[V]	1,000 (UL/IEC)
Maximum Series Fuse Rating	[A]	20
Mechanical Test Load* (Front)	[Pa/psf]	5,400
Mechanical Test Load* (Rear)	[Pa/psf]	4,000

*Based on IEC 61215-2: 2016 (Test Load = Design Load x Safety Factor (1.5))
Mechanical Test Loads 6,000Pa/5,400Pa based on IEC 61215:2005

Packaging Configuration

Number of Modules per Pallet	[EA]	25
Number of Modules per 40' Container	[EA]	650
Number of Modules per 53' Container	[EA]	850
Packaging Box Dimensions (L x W x H)	[mm]	1,790 x 1,120 x 1,213
Packaging Box Dimensions (L x W x H)	[in]	70.5 x 44.1 x 47.8
Packaging Box Gross Weight	[kg]	500
Packaging Box Gross Weight	[lb]	1,102

Dimensions (mm/inch)



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REV. ENGG.	REVISIONS	DESCRIPTION	DATE					

PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
MODULE DATASHEET

SHEET NUMBER
DS-01

GENERAC®

SnapRS™

Inline Disconnect Switch
Model: APKE00011
Certification Model Reference: RS801

Generac SnapRS are a simple way to satisfy rapid shutdown compliance for solar + storage systems. Generac SnapRS are 2017/2020 NEC 690.12 compliant, don't require any extra hardware to mount, and need no pairing or fussy digital communications.

FEATURES & BENEFITS

- Fast, easy, and simple to install
- One SnapRS device per PV module
- Achieves PVRSS Compliance
- Low cost, high efficiency solution

SYSTEM DESIGN

Snap a Generac SnapRS disconnect device (RS) to the negative lead (-) of each module in the solar array for simple module-level rapid shutdown compliance. SnapRS devices isolate array voltage when a rapid shutdown is initiated at a PWRcell™ Inverter. When rapid shutdown is initiated, SnapRS units isolate each PV module in the array, reducing array voltage to <80V in seconds.

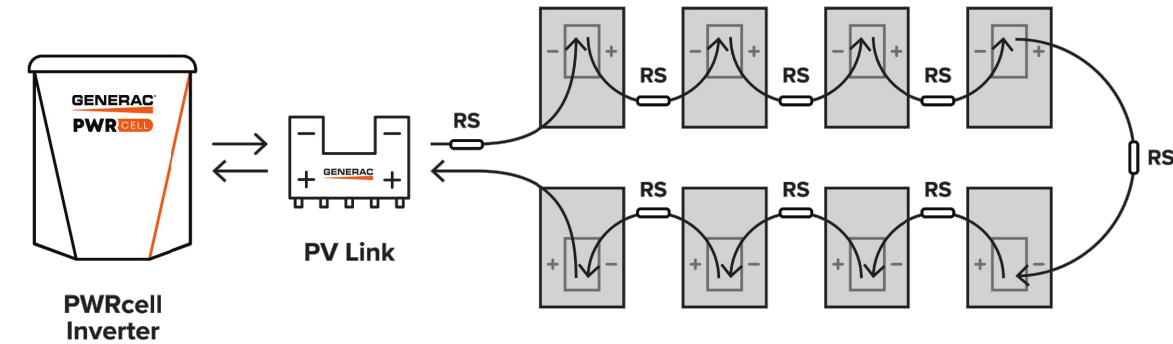


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.



Specifications

SnapRS™ (APKE00011)	
PV MODULE MAX VOC:	75 V
EFFICIENCY:	99.8%*
MAX INPUT CURRENT:	13 A
SHUTDOWN TIME:	< 10 Seconds
ENCLOSURE RATING:	NEMA 6P
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-40 to 158 °F (-40 to 70 °C)
CERTIFICATIONS:	UL1741
PROTECTIONS:	PVRSE
WEIGHT - LB (KG):	0.17 (0.08)
DIMENSIONS, L x W x H - IN (MM):	7" x 1" x 1" (177.8 x 25.4 x 25.4)
WARRANTY:	25 Years

*When used with a 50V panel

Connect one SnapRS device to the negative lead of each PV module in the PV Link controlled array for complete PV Rapid shutdown performance



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DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME	
SNAPRS DATASHEET	
SHEET NUMBER	
DS-02	

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	DESCRIPTION				
REV	ENG.				

PERMIT DEVELOPER

DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME

OPTIMIZER
DATASHEET

SHEET NUMBER

DS-03

GENERAC®

PV Link™

2500W MPPT Substring Optimizer
Model #: S2502 (Ordering SKU: APKE00010)

PV Link is the simple solar optimizer for quick installation and long-lasting performance. Connect PV modules to each PV Link to overcome shading and challenging roof lines.

FEATURES & BENEFITS

- Fast, simple installation
- Lower failure risk than module-level optimizers
- 2017/2020 NEC rapid shutdown compliant with SnapRS™
- Quick connections with MC4 connectors
- Exports up to 2500W
- Compatible with PWRcell™ Inverters
- Cost-effective solution for high-performance PV
- Ground-fault protection

SINGLE-STRING PV ARRAY WITH SnapRS DEVICES

Where PV module-level rapid shutdown is required (NEC 690.12), a SnapRS device (RS) is installed to negative (-) lead of each PV module.

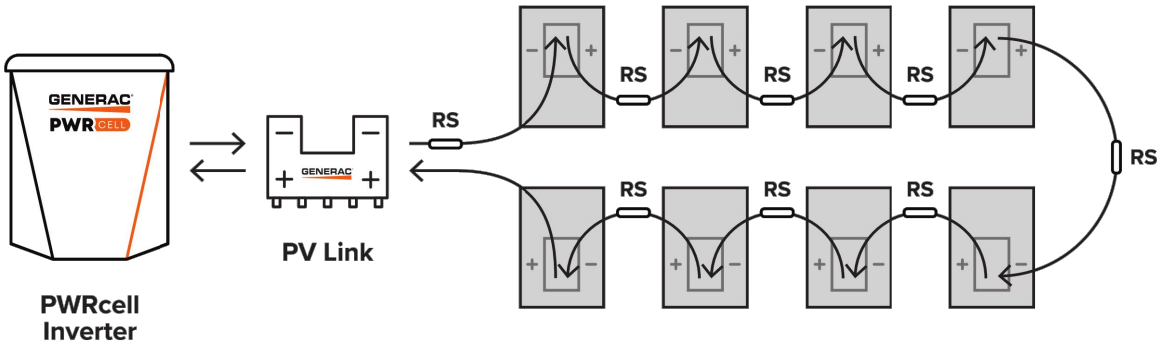


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.



Specifications

PV Link™ (APKE00010)	
RATED POWER*:	2500W
PEAK EFFICIENCY:	99%
MPPT VOLTAGE RANGE:	60-360 VMP
MAX INPUT VOLTAGE:	420 VOC; max when cold
MAX OUTPUT:	420 VOC
NOMINAL OUTPUT (REbus™):	380 VDC
MAX OUTPUT CURRENT (CONTINUOUS):	8 A
MAX OUTPUT CURRENT (FAULT):	10 A
MAX INPUT CURRENT (CONTINUOUS):	13 A @ 50°C, 10 A @ 70°C
MAX INPUT SHORT CIRCUIT CURRENT (ISC):	18 A
STANDBY POWER:	< 1 W
PROTECTIONS:	Ground-fault, Arc-fault (Arc-fault Type 1 AFCI, Integrated), PVRSE
MAX OPERATING TEMP: FAHRENHEIT (CELSIUS)	158 °F (70 °C)
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
ENCLOSURE:	Type 4X
WEIGHT - LB (KG):	7.3 lb (3.3 kg)
DIMENSIONS, L x W x H - IN (MM):	15.4" x 2" x 9.6" (391.2 x 50.8 x 243.8)
COMPLIANCE:	UL 1741, CSA 22.2
WARRANTY:	25 Years

*PV Link can tolerate higher than rated power at its input if Max Input Voltage and Short Circuit Current specifications are not exceeded



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PWRCELL

7.6kW 1Ø, 11.4kW 3Ø PWRcell Inverter with CTs
Model: APKE00014, APKE00013
Certification Model Reference: X7602, X11402



Solar + storage is simple with the Generac PWRcell™ Inverter. This bi-directional, REbus™-powered inverter offers a simple, efficient design for integrating smart batteries with solar. Ideal for self-supply, backup power, zero-export and energy cost management, the PWRcell Inverter is the industry's most feature-rich line of inverters, available in single-phase and three-phase models.

FEATURES & BENEFITS

- Single inverter for grid-tied solar with smart battery integration
- Simplified system design: No autotransformer or battery inverter needed
- User-selectable modes for backup power, self-supply, time-of-use and zero-export
- Free system monitoring included via PWRview™ Web Portal and Mobile App

AC OUTPUT/GRID-TIE	MODEL APKE00014	MODEL APKE00013
RATED AC POWER OUTPUT:	7600W	11400W
AC OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 3Ø VAC
AC FREQUENCY:	60 Hz	60 Hz
MAXIMUM CONTINUOUS OUTPUT CURRENT:	32 A, RMS	32 A, RMS
GROUND-FAULT ISOLATION DETECTION:	Included	Included
CHARGE BATTERY FROM AC:	Yes	Yes
THD (CURRENT):	< 2%	< 2%
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7W	< 7W

AC OUTPUT/BACKUP	MODEL APKE00014	MODEL APKE00013
RATED AC BACKUP POWER OUTPUT (ISLANDED):	8000W	8000W
MAXIMUM AC BACKUP POWER OUTPUT:	10000W	10000W
AC BACKUP OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/240, 1Ø VAC
AC FREQUENCY:	60 Hz	60 Hz
AC CIRCUIT BREAKER:	50 A	50 A
THD (VOLTAGE):	< 2%	< 2%
AUTOMATIC SWITCHOVER TIME:	< 1 Seconds	< 1 Seconds
TYPICAL NIGHTTIME POWER CONSUMPTION:	30W	30W

¹Inverter limits DC current import to AC power rating. Total DC current from multiple DC inputs may safely exceed this value up to Max. Input Current. The inverter safely limits the amount utilized

²Per input, four DC inputs total

DC INPUT	MODEL APKE00014	MODEL APKE00013
DC INPUT VOLTAGE RANGE:	360-420 VDC	360-420 VDC
NOMINAL DC BUS VOLTAGE:	380 VDC	380 VDC
MAX IMPORT CURRENT:	20 A	30 A
MAX INPUT CURRENT:	30 A	30 A
REVERSE-POLARITY PROTECTION:	Yes	Yes
GROUND-FAULT ISOLATION DETECTION:	Yes	Yes
TRANSFORMERLESS, UNGROUNDED:	Yes	Yes
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7W	< 7W

DC INPUT/ BATTERY	MODEL APKE00014	MODEL APKE00013
MAXIMUM CONTINUOUS POWER:	8000W	8000W
INTERNAL DC DISTRIBUTION BREAKERS:	4x 2p30A	4x 2p30A
DC FUSES ON PLUS AND MINUS:	40 A	40 A
2-POLE DISCONNECTION:	Yes	Yes

EFFICIENCY	MODEL APKE00014	MODEL APKE00013
PEAK EFFICIENCY:	97%	98%
CEC WEIGHTED EFFICIENCY:	96.50%	97.50%

Specifications

FEATURES AND MODES	
ISLANDING ³ :	Yes
GRID SELL:	Yes
SELF CONSUMPTION:	Yes
PRIORITIZED CHARGING FROM RENEWABLES:	Yes
GRID SUPPORT - ZERO EXPORT:	Yes

ADDITIONAL FEATURES	
SUPPORTED COMMUNICATION INTERFACES:	REbus™, CANbus, RS485 ⁴ , Ethernet
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
BACKUP LOADS DISCONNECT ⁵ :	Yes
MANUAL INVERTER BYPASS SWITCH:	Automatic
WARRANTY:	10 Years

STANDARDS COMPLIANCE	
SAFETY:	UL1741 SA, CSA 22.2
GRID CONNECTION STANDARDS:	IEEE1547, Rule 21, Rule 14H, CSIP
EMISSIONS:	FCC Part 15 Class B

DIMENSIONS AND INSTALLATION SPECIFICATIONS	
ENCLOSURE KNOCKOUTS - QTY, SIZE - IN (MM):	6 x Combo 3/4" x 1" (19 x 25.4) 7 x Combo 1/2" x 3/4" (12.7 x 19)
DIMENSIONS L x W x H - IN (MM):	24.5" x 19.25" x 8" (622.3 x 488.9 x 203.2)
WEIGHT - LB (KG):	62.7 (28.4)
COOLING:	Forced convection
NOISE:	< 40 dBA
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-4 to 122 °F (-20 to 50 °C) ⁵
PROTECTION RATING:	NEMA 3R

INSTALLATION GUIDELINES	
BATTERY TYPES SUPPORTED:	PWRcell™ Battery
MODULE STRING SIZE PER PV LINK OPTIMIZER:	Varies, refer to PV Link Installation Manual
MAXIMUM RECOMMENDED DC POWER FROM PV:	15kW

³3Ø inverters offer islanding for 1Ø loads

⁴Modbus

⁵Reduced power at extreme temperatures

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	REV	ENG.			

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DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
INVERTER DATASHEET

SHEET NUMBER
DS-04

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BATTERY
DATASHEET

SHEET NUMBER

DS-05

FEATURES:

Connect up to 2 PWRcells to a single PWRcell Inverter

Plug-and-play with PWRcell Inverters and PV Links

Residential and commercial application ready

GENERAC

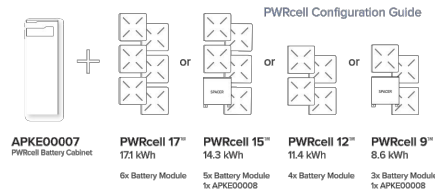
PWRCELL

Model APKE00007, PWRcell Battery Cabinet
Model A0000391219, 2.85kWh PWRcell Battery Module
Model APKE00008, PWRcell Spacer Kit
Model APKE00009, PWRcell Upgrade Kit

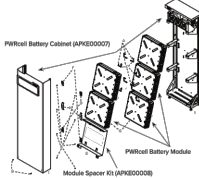
No other smart battery offers the flexibility of PWRcell. Whether for backup power or smart energy management, the PWRcell battery has power and capacity options for every need, without sacrificing flexibility or function.

The PWRcell battery series allows system owners the flexibility to scale from the economical 8.6kWh PWRcell 9™ to the massive 17.1 kWh PWRcell 17™ by adding additional PWRcell battery modules, the gold standard in storage.

PWRCELL CONFIGURATION GUIDE



PWRCELL ASSEMBLY



PWRCELL BATTERY DESIGN

PWRcell is a modular smart battery platform that allows for a range of configurations to suit any need, small or large. PWRcell can be built in capacities ranging from 8.6-17.1kWh. When needs change, PWRcell can be upgraded with additional modules. Use the chart above to understand what components you need for your chosen PWRcell configuration.

ADDITIONAL FEATURES

- Connect as many as (2) PWRcells to a single PWRcell Inverter™ for up to 34.2kWh of storage
- Best-in-class battery backup power
- Plug-and-play with PWRcell Inverters™ and PV Links™
- Time-of-use (TOU) and zero-export ready
- Residential and commercial application ready

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Specifications

PWRCELL OPTIONS	9	12	15	17
BATTERY MODULES:	3	4	5	6
USABLE ENERGY:	8.6 kWh	11.4 kWh	14.3 kWh	17.1 kWh
POWER: RATED CONTINUOUS	3.4 kW	4.5 kW	5.6 kW	6.7 kW
POWER: 60 MINUTES	4.2 kW	5.6 kW	7.0 kW	8.4 kW
POWER: 2 MINUTES	5.0 kW	6.7 kW	8.4 kW	10.0 kW
REBUS VOLTAGE: INPUT/OUTPUT	360-420 VDC			
MODULE VOLTAGE:	46.8 VDC			
ROUND-TRIP EFFICIENCY:	96.5 %			
OPERATING TEMPERATURE: Fahrenheit (Celsius)	41 to 113 °F (5 to 45 °C)			
RECOMMENDED AMBIENT TEMPERATURE: Fahrenheit (Celsius)	55 to 86 °F (13 to 30 °C)			
MAXIMUM INSTALLATION ALTITUDE: ft (m)	9834 (3000)			
DIMENSIONS L x W x H: in (mm)	68" x 22" x 10" (1727 x 559 x 254)			
WEIGHT (ENCLOSURE): lb (kg)	115 (52)			
WEIGHT (INSTALLED): lb (kg)	280 (127)	335 (152)	390 (178)	445 (202)
WARRANTY: LI-ION MODULES	10 Years, (22.6 MWh)	10 Years, (30.2 MWh)	10 Years, (37.8 MWh)	10 Years, (45.3 MWh)
WARRANTY: ELECTRONICS AND ENCLOSURE	10 Years			
COMMUNICATION PROTOCOL:	REbus DC Nanogrid™			
COMPLIANCE:	UL 9540, UL 1973, UL 1642, CSA 22.2			

Specifications subject to change without notice.

UPGRADING PWRCELL

Inside of the PWRcell battery, the PWRcell battery modules are stacked 2-deep on three levels, allowing for up to six modules to be connected in series. Upgrade an existing PWRcell battery by adding modules and a module spacer (APKE00008) if required. PWRcell 9 and PWRcell 15 require a module spacer.

Generac offers a convenient PWRcell Battery Upgrade Kit (APKE00009) to help replace lost or misplaced hardware. A PWRcell Battery Upgrade Kit may be purchased from your Generac distributor.

Refer to the table to the right for material requirements related to upgrading PWRcell.

UPGRADE MATERIAL REQUIREMENTS

Starting Configuration	Ending Configuration		
	PWRCELL 17	PWRCELL 15	PWRCELL 12
	PWRCELL 9 + 3 x PWRCell Mod + 2 x APKE00009*	+ 2 x PWRCell Mod + 1 x APKE00009*	+ 1 x PWRCell Mod + 1 x APKE00009*
PWRCELL 12	+ 2 x PWRCell Mod + 1 x APKE00009*	+ 1 x PWRCell Mod + 1 x APKE00008	
PWRCELL 15	+ 1 x PWRCell Mod + 1 x APKE00009*		

*APKE00009 (Upgrade kit) only required if original hardware is unavailable

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APKE00007 REV B

GENERAC®

PWRCELL
AUTOMATIC TRANSFER SWITCH

100A Non-Service Entrance Rated
Model #: CXSC100A3
UPC #: 696471081701

100A Service Entrance Rated
Model #: CXSW100A3
UPC #: 696471081718

200A Service Entrance Rated
Model #: CXSW200A3
UPC #: 696471081725



An integrated solar + storage system with load management for whole home coverage is made easy with the PWRcell™ Automatic Transfer Switch (ATS). Power the entire home and manage up to four individual HVAC (24 Vac controlled) loads with the PWRcell ATS. This built-in capability requires no additional hardware. When used in tandem with Generac Smart Management Modules (SMM) up to eight additional circuits can be controlled by the PWRcell Inverter. Make the most of your Generac solar + storage system with this comprehensive load management solution.

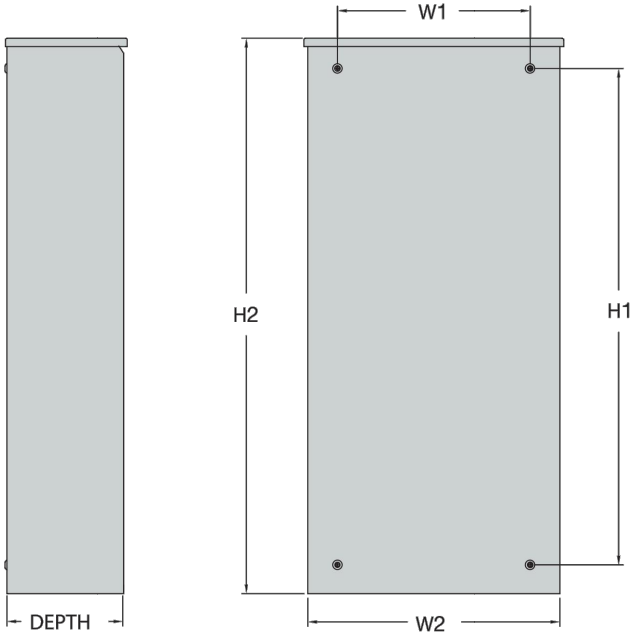
FEATURES & BENEFITS

- Unlock whole home backup power capability for PWRcell solar + storage systems
- Manage up to four HVAC systems, and an additional eight circuits with optional Smart Management Modules (SMMs)
- Aluminum type 3R enclosure with durable finish for indoor or outdoor installation
- Heavy Duty Generac Contactor is an ETL recognized device, designed for years of service and reliability

Specifications

SPECIFICATIONS	CXSC100A3	CXSW100A3	CXSW200A3
AMPS:	100	100	200
VOLTAGE	120/240 1Ø	120/240 1Ø	120/240 1Ø
LOAD TRANSITION TYPE (AUTOMATIC)	OPEN TRANSITION	OPEN TRANSITION SERVICE RATED	OPEN TRANSITION SERVICE RATED
ENCLOSURE TYPE	NEMA 3R	NEMA 3R	NEMA 3R
COMPLIANCE	UL 1008	UL 1008	UL 1008
WITHSTAND RATING (AMPS)	10,000	10,000	20,000
LUG RANGE	1/0 - #14	1/0 - #14	250 MCM - #6

DIMENSIONS		CXSC100A3	CXSW100A3	CXSW200A3
HEIGHT (IN/MM)	H1	17.24/437.9	17.24/437.9	26.75/679.4
	H2	20/508	20/508	30/762
WIDTH (IN/MM)	W1	12.5/317.5	12.5/317.5	10.5/266.7
	W2	14.6/370.8	14.6/370.8	13.5/342.9
DEPTH (IN/MM)		7.09/180.1	7.09/180.1	6.3/160.1
WEIGHT (LBS/KG)		20/9.07	22.5/10.21	39/17.69



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DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME
ATS DATASHEET

SHEET NUMBER
DS-06

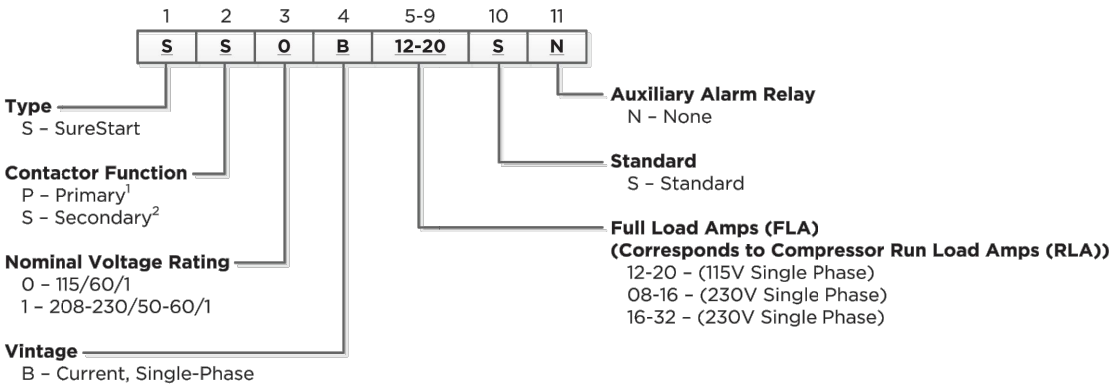


Specification Catalog



Single Phase Soft Starters

Model Nomenclature



Rev.: 27 February 2014D

Notes:
1 – Not available in the United States.
2 – Primary includes a contactor. Secondary operates in series with contactor.

Selection Example

1. Locate Compressor Data. Example Copeland ZPS40 in Model 049 Geothermal Unit. Electrical Table is below.

Dual Capacity Unit with Variable Speed ECM Motor

Model	Rated Voltage	Voltage Min/Max	Compressor				HWG Pump FLA	Ext Loop FLA	Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/HACR
			MCC	RLA	LRA	LRA**						
026	208-230/60/1	187/253	18.2	11.6	58.3	21.0	0.4	5.4	4.0	21.4	24.4	35
038	208-230/60/1	187/253	23.8	15.2	83.0	30.0	0.4	5.4	4.0	25.0	28.8	40
038*	208-230/60/1	187/253	23.8	15.2	83.0	30.0	0.4	5.4	7.0	28.0	31.8	50
049	208-230/60/1	187/253	33.0	21.1	104.0	37.0	0.4	5.4	4.0	30.9	36.2	50
049*	208-230/60/1	187/253	33.0	21.1	104.0	37.0	0.4	5.4	7.0	33.9	39.2	60
064	208-230/60/1	187/253	42.3	27.1	152.9	54.0	0.4	5.4	7.0	39.9	46.6	70
072	208-230/60/1	187/253	46.3	29.6	179.2	63.0	0.4	5.4	7.0	42.4	49.8	70

7/15/13

2. or from the equipment nameplate.
3. Find rated FLA (RLA for Compressor), and Rated Voltage:
 - Compressor RLA is 21.1 Amps from chart or nameplate for Model 049
 - Compressor Rated Voltage is 208-230V/60 Hz/ 1 ph
4. Select SureStart Model From Nomenclature:
 - SS1B16-32SN rated for 208-230V/60/1 and 16-32 FLA (RLA on compressors)

Model 049 Heat Pump	
Voltage	208-230/60/1
Compressor MCC	33.0 A
Compressor RLA	21.1 A
Compressor LRA	104 A
Fan Mtr FLA	4.0 A
Access FLA	5.8 A
Total FLA	30.9 A
Min Circ Amp	36.2 A
Max Fuse/HACR	50 A

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REVIEWS	DESCRIPTION	DATE	REV	ENG	DATE	REV	ENG	DATE	REV	ENG	DATE	REV	ENG	DATE

PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
REVIEWER	

SHEET NAME	
SOFT STARTER DATASHEET	

SHEET NUMBER	
DS-07	

Smart Management
Module (SMM)

GENERAC®

GENERAC® LOAD MANAGEMENT
50 Amp Smart Management Module (SMM)



Model: G007000-0
UPC: 696471070002

1 of 2

2 of 2

FEATURES

Generac's Smart Power Management System is designed to optimize the performance of a standby generator. The system can consist of up to eight individual Smart Management Modules (SMM). Unlike other load management systems that depend on another control device, the SMM's are self-aware and operate autonomously. Frequency is the true measure of generator engine performance, and does not need to factor in increased ambient temperatures, elevation changes, or generator fuel type. The SMM monitors the frequency (Hz) of the power being produced by Generac's standby generators. If frequency falls below a certain threshold of a correctly sized system, the SMM will automatically shed the managed loads to allow the generator to recover.

The modules can be set to a load priority between 1–8, or be set in a lock-out only mode for loads that do not need to run in an outage. This reduces the minimum size of generator required for a more cost-effective solution.

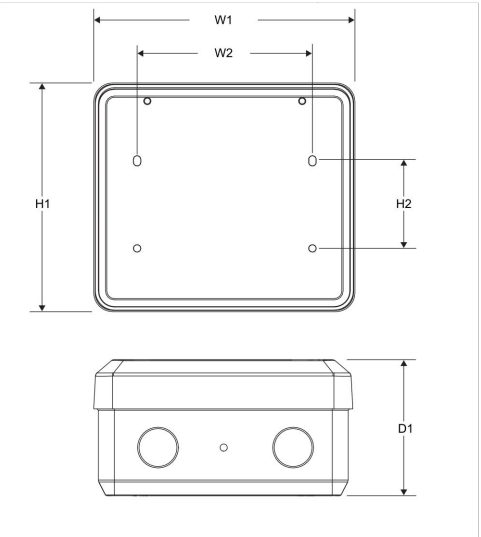
* It is recommended to size the generator with appropriate excess capacity to allow starting of the largest managed loads (i.e. loads with highest starting currents). Each managed load of the SACM and SMM must be assigned a unique priority setting, so no two managed loads attempt to start simultaneously. See owner's manual for more information.

SMM SPECIFICATIONS

Power supply source	240 VAC (from line input)
Contact voltages.....	220/240 VAC
Contact coil voltage.....	240 VAC
Coil VA inrush	30
Coil VA sealed.....	6.5
Poles	2
Resistive amps.....	50
F/L Inductive amps	40
Locked rotor amps.....	180
NEMA	3R
Enclosure rating	UL 50
Frequency selectability.....	50 Hz / 60 Hz

Smart Management Module (SMM)

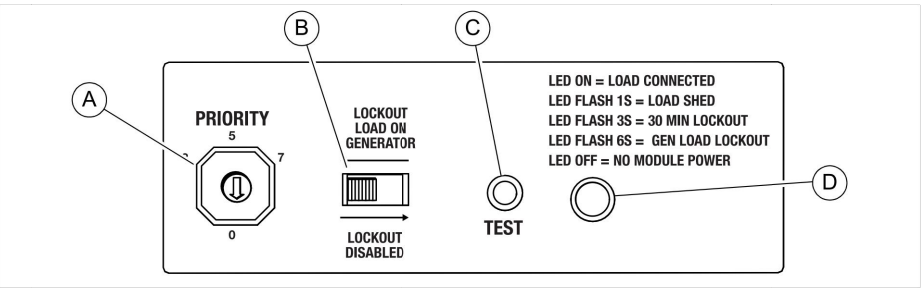
Model	G007000-0	
Height (in / mm)	H1	6.17 / 156.8
	H2	2.36 / 60
Width (in / mm)	W1	7.06 / 179.4
	W2	4.72 / 120
Depth (in / mm)	3.7 / 94	
Weight (lb / kg)	2.06 / 0.94	
Shipping weight (lb / kg)	2.44 / 1.11	
UPC	696471070002	



GENERAC®

Dimensions and UPC

SMM Controls



- Priority Dial (A)Sets module priority.
- Lockout Switch (B)Prevents load from operating when system is operating under generator power.
- Test Button (C)Disables contactor output for a specified time.
- LED (D)Provides module status with easy viewing through the external viewing window located in the upper right corner of the module.

GENERAC®

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Signature with Seal

CHARLES WOODS

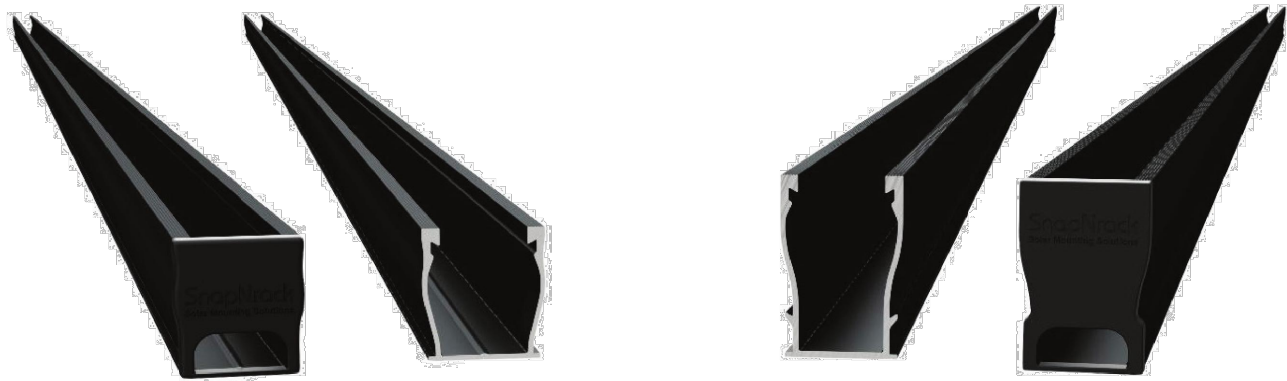
165 KALUNA AVE, BLUFF CITY,
TN 37618, USA

REVISIONS	DATE				
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PERMIT DEVELOPER	
DATE	05/21/2021
DESIGNER	OSM
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SHEET NAME
SMM DATASHEET
SHEET NUMBER
DS-08

Ultra Rail



The Ultimate Value in Rooftop Solar



Industry leading Wire Management Solutions



Mounts available for all roof types



Single Tool Installation



All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

Start Installing Ultra Rail Today

RESOURCES
DESIGN
WHERE TO BUY

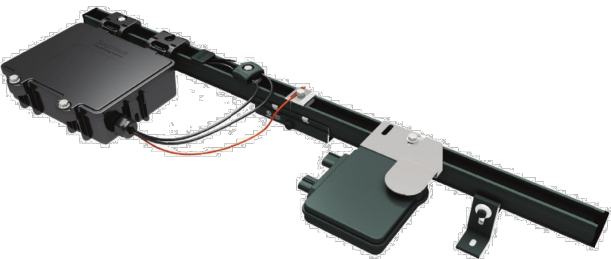
snapnrack.com/resources
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SnapNrack Ultra Rail System

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering includes Junction Boxes, Universal Wire Clamps, MLPE Attachment Kits, and Conduit Clamps
- System is fully bonded and listed to UL 2703 Standard

Heavy Duty UR-60 Rail

- UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads
- Taller, stronger rail profile includes profile-specific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience



Quality. Innovative. Superior.

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

877-732-2860 www.snapnrack.com contact@snapnrack.com

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DS-09