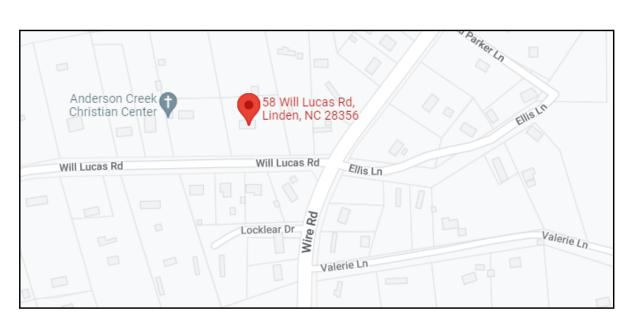


### **SHEET SCHEDULE**

SHEET NO.	SHEET TITLE
G-01	COVER
S-01	ARRAY A LAYOUT
S-02	ARRAY B LAYOUT
S-03	ASSEMBLY DETAILS
R-01	RESOURCES
R-02	RESOURCES
R-03	RESOURCES
R-04	RESOURCES
R-05	RESOURCES
R-06	RESOURCES
R-07	RESOURCES
R-08	RESOURCES
E-01	LINE DIAGRAM
E-02	STICKERS

01 SITE SKETCH G-01 SCALE: N/A



02 LOCATION MAP G-01 SCALE: N/A



### PROJECT INFORMATION:

CONTRACTOR

NAME: CAPE FEAR SOLAR SYSTEMS, LLC

PHONE: (910) 409-5533

PROJECT MANAGER: ROBERT PARKER

PHONE: (910) 232-6288

### **AUTHORITIES HAVING JURISDICTION:**

BUILDING: HARNETT COUNTY ZONING: HARNETT COUNTY ELECTRICAL: HARNETT COUNTY

UTILITY: DEP

### **APPLICABLE CODES & STANDARDS**

BUILDING: IRC WITH NORTH CAROLINA AMENDMENTS 2018

ELECTRICAL: NEC 2017

FIRE: IFC WITH NORTH CAROLINA AMENDMENTS 2018,

STATEWIDE UNIFORM REQUIREMENTS OF INSPECTION PROCEDURES FOR SOLAR PHOTOVOLTAIC SYSTEMS INSTALLED ON RESIDENTIAL

ROOFTOPS

STRUCTURAL REVIEW PROVIDED BY: RONALD P. BITTLER, PE RB ENGINEERING, INC. (C-2499) 168 QUADE DRIVE CARY, NC 27513 919-677-9662 PROJECT #RB-228004

-DocuSigned by:

Ron Bittler \_\_157097CCC9304AF

5/12/2022

# CAPE FEAR SOLAR SYSTEMS

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

13.2KW PV SYSTEM ROMERO RESIDENCE 58 Will Lucas Rd, Linden, NC 28356

COVER



05.12.2022			
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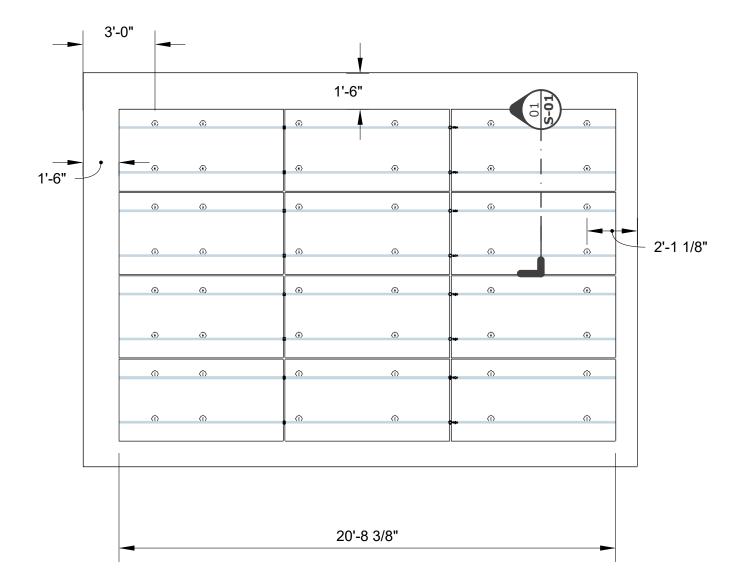
G-01

### **STRUCTURAL NOTES**

- 1. ROOF MOUNT RACKING SYSTEM & PV ARRAY TO BE INSTALLED IN STRICT ACCORDANCE WITH THESE DRAWINGS & MFG'S RECOMMENDATIONS. MINOR SPACING MODIFICATIONS ARE ACCEPTABLE TO ACCOMODATE EXISTING ROOF STRUCTURE MEMBERS
- 2. EXISTING ROOF STRUCTURE HAS BEEN INCLUDED IN THE STRUCTURAL EVALUATION AND FOUND SUITABLE FOR THIS INSTALLATION
- 3. ALL ATTACHMENT BOLTS SHALL BE INSTALLED IN THE MIDDLE THIRD OF THE RAFTER (OR TRUSS) THICKNESS

### **DESIGN SPECIFICATIONS**

GROUND SNOW LOAD: 10 PSF DESIGN WIND SPEED: 119 MPH (ASCE 7-10) DESIGN EXPOSURE CATEGORY: B DEAD LOAD: 2.48 PSF



O1 PLAN - ARRAY A LAYOUT SCALE: 1/4" = 1'

CAPE FEAR SOLAR SYSTEMS

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

ELEC. LIC. NO. : U-3332

13.2KW PV SYSTEM ROMERO RESIDENCE 58 Will Lucas Rd, Linden, NC 28356

ARRAY A LAYOUT

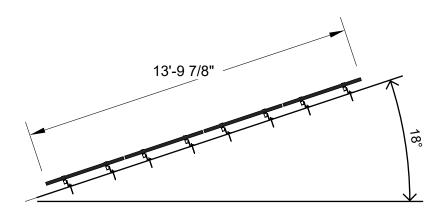


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**S-01** 

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SOLAR SYSTEMS
901 Martin Street, Unit A
Wilmington, NC 28401
910-409-5533



GC LIC. NO.: 65677

ELEC. LIC. NO.: U-33321

**ARRAY A ELEVATION** 

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM



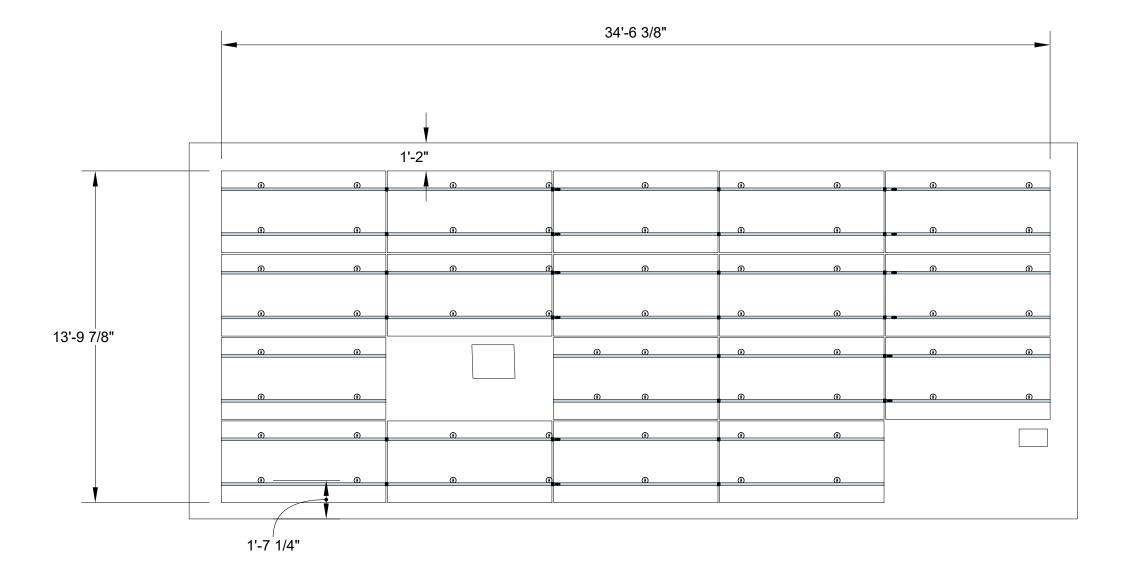
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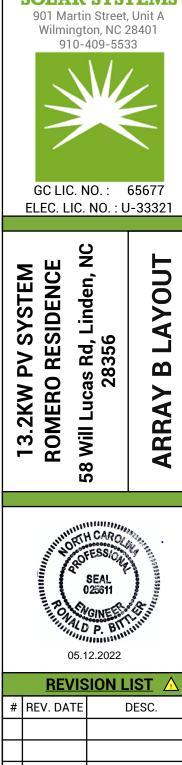
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**S-02** 

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01 **PLAN - ARRAY A ELEVATION** S-02 SCALE: 1/4" = 1'





DATE:

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DESC.

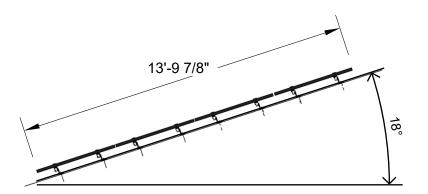
May 12, 2022

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**S-03** 

01 **PLAN - ARRAY B LAYOUT** S-03 SCALE: 1/4" = 1'

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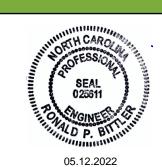
SOLAR SYSTEMS
901 Martin Street, Unit A
Wilmington, NC 28401
910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

**ARRAY B ELEVATION** 

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM



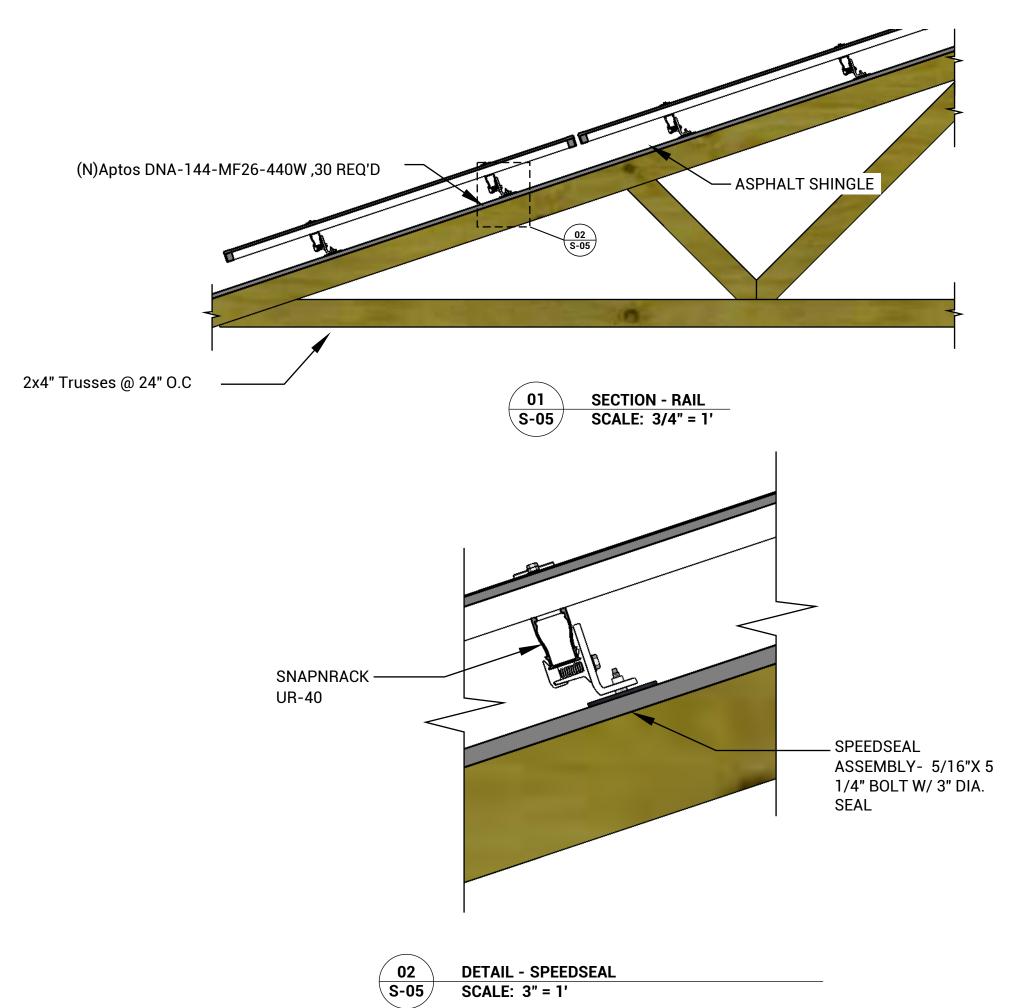
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DATE:

**S-04** 



901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM

**ASSEMBLY DETAILS** 



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**S-05** 

SnapNrack Solutions

snapnrack.com

snapnrack.com

### SnapNrack SpeedSeal™ Foot

Patent Pending Lag Driven Sealant Solution for Ultra Rail



### A New Generation of Roof Attachments

- Innovative design incorporates flashing reliability into a single roof attachment
- 100% waterproof solution
- Sealing cavity with compressible barrier secures sealant in place & fills voids

### SnapNrack SpeedSeal<sup>™</sup> Foot Fastest Roof Attachment in Solar

- Lag straight to a structural member, no in-between components such as flashings or bases.
- Simply locate rafter, fill sealant cavity & secure to roof. It's that simple!

### Integrated Flashings. No Questions.

- · Sealant fills around lag screw keeping roof and structure sealed and intact
- No added holes from ripping up nails, staples and screws holding shingles on roof

# Maintain the Integrity of the Roof by Eliminating Disruption

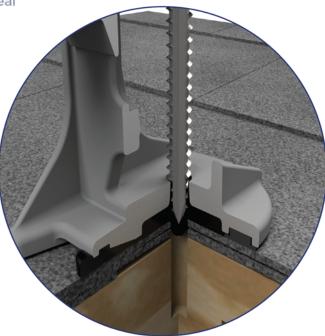
- Zero prying of shingles
- · Zero removal of nails leaving holes in the roof
- Roof remains installed the way manufacturer meant it to be

### Lag Driven Sealant Waterproofing

- Time Tested Roof Sealant provides lasting seal
- Sealant is compressed into cavity and lag hole as attachment is secured to rafter
- Active sealant solidifies bond if ever touched by liquid
- Technology passes UL 2582 Wind Driven Rain Test and ASTM E2140 Water Column Testing standards. Patent Pending.

### **Single Tool Installation**

 SnapNrack was the first in the industry to develop a complete system that only requires a single tool. That tradition is continued as a ½" socket is still the only tool necessary to secure the mount as well as all other parts of the system.



Note: Sealant shown in white for illustration purposes only.

### Less Time. Less Parts. Less Tools.

- No more need for a pry bar to rip up shingles
- No more proprietary lag screws
- Single Tool installation with ½" socket

### Total System Solution One Tool. One Warranty.

- SnapNrack Ultra Rail is a straightforward intuitive install experience on the roof without
- compromising quality, aesthetics & safety, all supported by a 25 year warranty.
- Built-in Wire Management & Aesthetically pleasing features designed for Ultra Rail result in a long-lasting quality install that installers and homeowners love.

### Certifications

SnapNrack Ultra Rail System has been evaluated by Underwriters Laboratories (UL) and Listed to UL/ANSI Standard 2703 for Mechanical Loading and Fire. Additionally it is listed to UL 2582 for wind-driven rain and ASTM 2140.



877-732-2860

www.snapnrack.com

contact@snapnrack.com

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### CAPE IFEAR SOLAR SYSTEMS

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

as Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM 58 Will Lucas

**ESOURCES** 



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R-01

DN4<sup>TM</sup> 144

### Solar for Innovators

### Residential I Commercial







3140 De La Cruz Blvd., Ste 200 Santa Clara, CA 95054 wwww.aptossolar.com info@aptossolar.com

### Designed & Engineered in Silicon Valley 440W I 435W I 430W

Our DNA™ Split Cell Series impressively combines advanced solar technologies to maximize performance. Our patented Dual Nano Absorber (DNA™) Technology allows the panel to operate at high-efficencies in extreme temperatures. Contact our sales team today to learn more about our line of high-efficienty solar panels.



Patented DNA™ technology boosts power performance & module efficiency



Advanced split cell technology with 9 ultra-thin busbars allows for less resistance and more photon



Ideal solution for applications affected by shading



All-black design for pristine aesthetics Y No excessive silver bussing or ribbons



Robust product design is reslient in extreme weather. Up to 5400 Pa snow load and 210 mph wind speeds wind speeds

# intertek (E





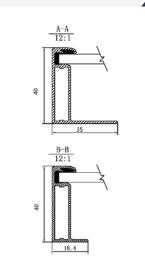
### **Linear Performance Warranty**



### DNA<sup>TM</sup> 144







Solar for Innovators

Electrical Specifiactions	DNA-144-MF26-440W	DNA-144-MF26-435W	DNA-144-MF26-430W
STCrated Output P <sub>mpp</sub> (W)	440W	435W	430W
Module Efficiency	20.21%	19.98%	19.76%
Open Circuit Voltage V <sub>voc</sub> (V)	49.9	49.7	49.5
Short Circiut Current I <sub>sc</sub> (A)	11.33	11.26	11.19
Rated Voltage V <sub>mmp</sub> (V)	41.0	40.8	40.6
Rated Voltage I <sub>mmp</sub> (A)	10.74	10.67	10.60
Standard Test Conditions for front-face of panel: 1000 W	/m², 25°C, measurement und	certainty <3%	

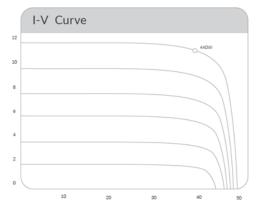
Temperature Coefficients	
Temperature Coefficients P <sub>mmp</sub>	-0.36%
Temperature Coefficients I <sub>sc</sub>	+0.05%/°C
Temperature Coefficients V <sub>oc</sub>	-0.29%/°C
Normal Operating Cell Temperature (NOCT)	44°C

Test Operating Conditions	
Maximum Series Fuse	20A
Maximum System Voltage	1,000 VDC (UL&IEC)
Maximum Load Capacity (Per UL 1703)	5400 PA Snow Load / 210mph Wind Rating
Fire Performance Class	Class C/Type 1

Packaging Configuration	
Number of Modules per Pallet	27
Number of Pallets per 40ft. Container	22
Pallet Dimensions	2110 X 1120 X 2365
Pallet Weight (kg)	680
Container Weight (kg)	14960

Aptos Solar Technology reserves the right to make specification changes without notice

Mechanical	Mechanical Properties	
Cell Type	Monocrystalline	
Glass	<ol> <li>3.2mm, anti-reflection coating, high transmission, low iron, tempered glass</li> </ol>	
Frame	Anodized Aluminum Alloy	
Junction Box	IP68	
Dimensions	2095 X 1039 X 40mm	
Output Cable	4mm2 (EU)12AWG,39.37in.(1200mm)	
Weight	53.13lbs.(24.1kg)	
Cable Length	1200mm	
Encapsulant	POE	







# **SOLAR SYSTEMS**

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM

**ESOURCES** 

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Sheet No.

**R-02** 

# NXT HORIZON



Wilmington, NC 28401 #UNIRAC 910-409-5533

DISCOVER YOUR **NXT** HORIZON

The culmination of over two decades of experience. Thoughtful design, rigorous engineering, world-class support, and a reliable supply chain are the foundation of what makes us confident that NXT HORIZON\* is the NXT Level of DESIGN, SIMPLICITY, and VALUE.

NXT HORIZON' COMBO CLAMP

MILL: CCLAMPMI

Clicks into rail anywhere (even where there are cables!) Self-standing clamp with spring

GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

CAPE **EFEAR** SOLAR SYSTEMS 901 Martin Street, Unit A

ROMERO RESIDENCE 13.2KW PV SYSTEM

as Rd, Linden, NC 28356 58 Will Lucas

**ESOURCES** 

**SUNPOWER®** 

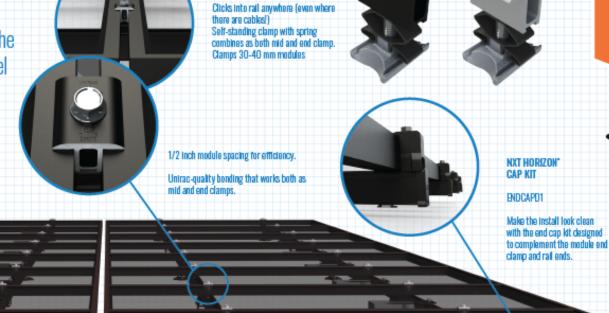
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May 12, 2022 DATE: ZJP DRAWN BY:

Sheet No.

**R-03** 



DARK: SHCLMPD1 MILL: SHCLMPM1

daptable rail connection to attachments allows click-in feature compatibility with almost all of Unirac's attachments

STRONGHOLD- ATTACHMENT KIT

DARK: SHCPKTD1 MILL: SHCPKTM1

features: dick-in rail & open slot L-Foot for

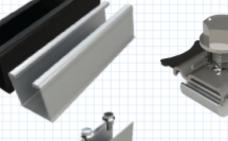
NXT HORIZON RAIL

DARK: 168RLD1 MILL: 168RLM1

Strong, lightweight open channel rail with invisible, easy, unfailing and integrated wire managemy

NXT HORIZON RAIL SPLICE

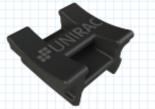
Structural Internal solice that does not interfere with roof connection Pre-assembled thread cutting bolts



NXT HORIZON' MLPE & LUG CLAMP

LUGMLPET

Works as either MLPE Mount or Grounding Lug connection to the rail. Why source two parts when one can do the Job?



HXT HORIZON' WIRE MANAGEMENT CLIP

Aesthetic, yet functional accessory that works to help installers keep wires inside the rail. No zip-ties required. Optional zip tie loop for extra



NXT HORIZON NORTH/SOUTH WIRE

WRMCNSD1

An elegant solution to help installers get to the home run. The same hardware works to provide both easy entry to rail and adjustability for cable



ALL NXT HORIZON° SYSTEMS INCLUDE A FREE PERMITTING PLANSET DESIGN - FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR EMAIL NXTPERMITS@UNIRAC.COM

### pe.eaton.com

# Eaton general duty cartridge fuse safety switch

### DG222NRB

UPC:782113144221

### **Dimensions:**

Height: 14.37 IN
Length: 7.35 IN
Width: 8.4 IN

Weight: 10 LB

**Notes:**Maximum hp ratings apply only when dual element fuses are used. 3-Phase hp rating shown is a grounded B phase rating, UL listed.

### Warranties:

 Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

### Specifications:

- Type: General duty, cartridge fused
- Amperage Rating: 60A
- Enclosure: NEMA 3R
- Enclosure Material: Painted galvanized steel
- Fuse Class Provision: Class H fuses
- Fuse Configuration: Fusible with neutral
- Number Of Poles: Two-pole
- Number Of Wires: Three-wire
- Product Category: General duty safety switch
- Voltage Rating: 240V

### Supporting documents:

- Eatons Volume 2-Commercial Distribution
- Eaton Specification Sheet DG222NRB

### **Certifications:**

UL Listed

Product compliance: No Data



CAPE FEAR SOLAR SYSTEMS

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

13.2KW PV SYSTEM ROMERO RESIDENCE 58 Will Lucas Rd, Linden, NC 28356

RESOURCES



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R-04

### POWERWALL

Tesla Powerwall is a fully-integrated AC battery system for residential or light commercial use. Its rechargeable lithium-ion battery pack provides energy storage for solar self-consumption, time-based control, and backup.

Powerwall's electrical interface provides a simple connection to any home or building. Its revolutionary compact design achieves market-leading energy density and is easy to install, enabling owners to quickly realize the benefits of reliable, clean power.



### PERFORMANCE SPECIFICATIONS

AC Voltage (Nominal)	120/240 V
Feed-In Type	Split Phase
Grid Frequency	60 Hz
Total Energy	14 kWh
Usable Energy	13.5 kWh
Real Power, max continuous	5 kW (charge and discharge)
Real Power, peak (10 s, off-grid/backup)	7 kW (charge and discharge)
Apparent Power, max continuous	5.8 kVA (charge and discharge)
Apparent Power, peak (10 s, off-grid/backup)	7.2 kVA (charge and discharge)
Maximum Supply Fault Current	10 kA
Maximum Output Fault Current	32 A
Overcurrent Protection Device	30 A
Imbalance for Split-Phase Loads	100%
Power Factor Output Range	+/- 1.0 adjustable
Power Factor Range (full-rated power)	+/- 0.85
Internal Battery DC Voltage	50 V
Round Trip Efficiency <sup>1,3</sup>	90%
Warranty	10 years

<sup>1</sup>Values provided for 25°C (77°F), 3.3 kW charge/discharge power. <sup>2</sup>In Backup mode, grid charge power is limited to 3.3 kW. <sup>3</sup>AC to battery to AC, at beginning of life.

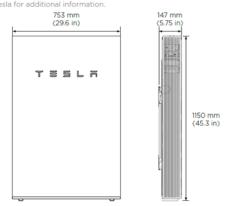
### COMPLIANCE INFORMATION

Certifications	UL 1642, UL 1741, UL 1973,			
	UL 9540, IEEE 1547, UN 38.3			
Grid Connection	Worldwide Compatibility			
Emissions	FCC Part 15 Class B, ICES 003			
Environmental	RoHS Directive 2011/65/EU			
Seismic	AC156, IEEE 693-2005 (high)			

### MECHANICAL SPECIFICATIONS

Dimensions <sup>1</sup>	1150 mm x 755 mm x 147 mm (45.3 in x 29.6 in x 5.75 in)
Weight <sup>1</sup>	114 kg (251.3 lbs)
Mounting options	Floor or wall mount

<sup>1</sup>Dimensions and weight differ slightly if manufactured before March 2019. Contact Tesla for additional information.



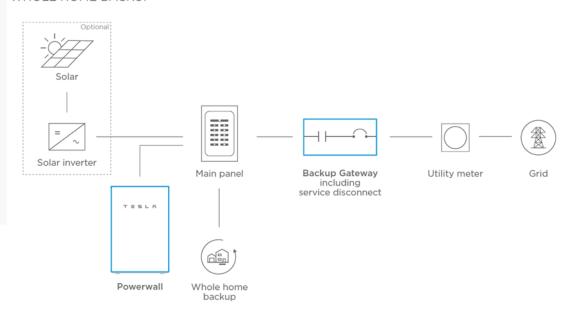
### **ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Recommended Temperature	0°C to 30°C (32°F to 86°F)
Operating Humidity (RH)	Up to 100%, condensing
Storage Conditions	-20°C to 30°C (-4°F to 86°F) Up to 95% RH, non-condensing State of Energy (SoE): 25% initial
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP56 (Wiring Compartment)
Wet Location Rating	Yes
Noise Level @ 1m	< 40 dBA at 30°C (86°F)

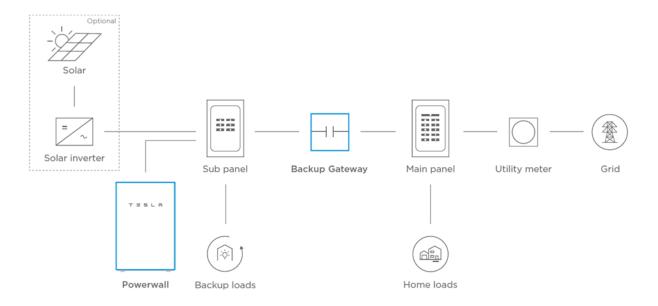
TESLA.COM/ENERGY

### TYPICAL SYSTEM LAYOUTS

### WHOLE HOME BACKUP



### PARTIAL HOME BACKUP



TESLA.COM/ENERGY TESLA NA - BACKUP - 2019-06-11

### CAPE **EXECUTE** FEAR **SOLAR SYSTEMS**

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE

13.2KW PV SYSTEM

ESOURCE



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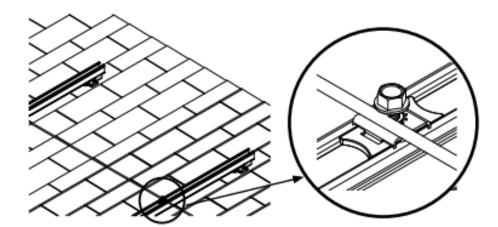
Sheet No.

R-05

TESLA

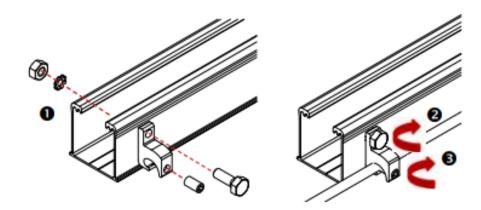






SYSTEM GROUNDING: Rails can be bonded using an NXT Horizon MLPE & Lug Clamp, GROUND WEEBLUG #1 or ILSCO LAY IN LUG (GBL4DBT). At least one rail per row of modules in an array must be bonded to electrical ground. Each additional row of modules must be grounded with at least one rail lug per row or with a row-to-row bonding devise listed here.

Note: See Page F for additional lugs required for expansion joints.

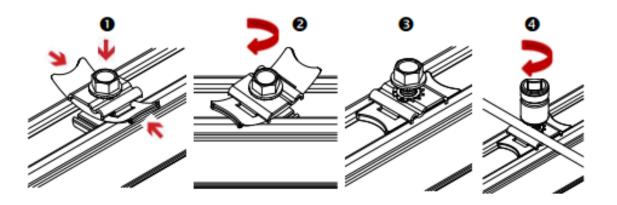


ALTERNATE SYSTEM GROUNDING WITH ILSCO LAY-IN LUG - UNIRAC P/N 008009P: Alternate Grounding Lug. Drill hole in rail 7/32" in diameter, deburr hole and bolt thru one wall of rail.

**BOLT TORQUE VALUE: 5 ft lbs.** 

TERMINAL TORQUE: 4-6 AWG: 35in-lbs, 8 AWG: 25 in-lbs.

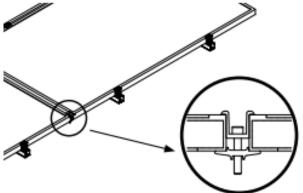
WARNING: ISOLATE COPPER FROM ALUMINUM CONTACT TO PREVENT CORROSION



SYSTEM GROUNDING WITH MLPE & LUG CLAMP: Insert the rail nut profile in the opening by lifting the flaps of the plastic clip. Rotate the clamp 90 deg and release the flaps to get flush with rail. Ensure that the rail nut is engaged in the rail profile. Align the ground wire in the depression of the washer. Tighten bolt.

TOROUE VALUE: 6-8 AWG: 12 ft lbs.

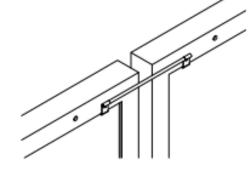
CAUTION: MLPE & Lug Clamp cannot be used to simultaneously mount a MLPE and ground wire.



### ALTERNATE ROW GROUNDING WITH NXT HORIZON ROW BONDING CLAMP:

Insert clamp between module rows and tighten bolt.

TORQUE VALUE: 20 ft-lbs



### ALTERNATE ROW GROUNDING WITH N/S BONDING CLIP:

Fully seat bonding clip on each module flange to provide bond across N/S module gap.

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

58 Will Lucas Rd, Linden, NC 28356 ROMERO RESIDENCE 13.2KW PV SYSTEM

**ESOURCES** 

**SUNPOWER®** 

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R-06





### **IQ8** Series Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.

to IQ8 Series IQ8 Series Microinverters are UL Listed as C-2 adapter PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

IQ8 Series Microinverters redefine reliability

leading limited warranty of up to 25 years.

standards with more than one million cumulative

hours of power-on testing, enabling an industry-

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IQ8SE-DS-0001-01-EN-US-2022-03-17

### Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

### High productivity and reliability

- Produce power even when the grid is down\*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest highpowered PV modules

### Microgrid-forming

- Complies with the latest advanced grid support\*\*
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

\* IQ8 Series Microinverters supports split phase, 240V. IQ8H-208 supports split phase, 208V only.

### **IQ8** Series Microinverters

INPUT DATA (DC)		1 <b>0</b> 8-60-2-US	IQ8PLUS-72-2-US	108M-72-2-US	108A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US1
Commonly used module pairings <sup>2</sup>	W	235 - 350	235 - 440	260 - 460	295 - 500	320 - 540+	295 - 500+
Module compatibility		60-cell/120 half-cell	6	60-cell/120 half-cell, 6	66-cell/132 half-cell a	nd 72-cell/144 half-ce	ell
MPPT voltage range	٧	27 - 37	29 - 45	33 - 45	36 - 45	38 - 45	38 - 45
Operating range	٧	25 - 48			25 - 58		
Min/max start voltage	٧	30 / 48			30/58		
Max input DC voltage	٧	50			60		
Max DC current <sup>3</sup> [module lsc]	Α			1:	5		
Overvoltage class DC port				I	I		
DC port backfeed current	mA				)		
PV array configuration		1x1 Ungrounded a	array; No additional D	C side protection requ	ired; AC side protecti	on requires max 20A p	er branch circuit

OUTPUT DATA (AC)		108-60-2-US	IQ8PLUS-72-2-US	108M-72-2-US	108A-72-2-US	IQ8H-240-72-2-US	IQ8H-208-72-2-US1
Peak output power	VA	245	300	330	366	384	366
Max continuous output power	VA	240	290	325	349	380	360
Nominal (L-L) voltage/range <sup>4</sup>	٧			240 / 211 - 264			208 / 183 - 250
Max continuous output current	А	1.0	1.21	1.35	1.45	1.58	1.73
Nominal frequency	Hz			6	60		
Extended frequency range	Hz			50	- 68		
AC short circuit fault current over 3 cycles	Arms			2			4.4
Max units per 20 A (L-L) branch circuit <sup>6</sup>		16	13	11	11	10	9
Total harmonic distortion		<5%					
Overvoltage class AC port					II		
AC port backfeed current	mA			3	0		
Power factor setting				1.	0		
Grid-tied power factor (adjustable)				0.85 leading	- 0.85 lagging		
Peak efficiency	%	97.5	97.6	97.6	97.6	97.6	97.4
CEC weighted efficiency	%	97	97	97	97.5	97	97
Night-time power consumption	mW			6	60		

MECHANICAL DATA	
Ambient temperature range	-40°C to +60°C (-40°F to +140°F)
Relative humidity range	4% to 100% (condensing)
DC Connector type	MC4
Dimensions (HxWxD)	212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")
Weight	1.08 kg (2.38 lbs)
Cooling	Natural convection - no fans
Approved for wet locations	Yes
Pollution degree	PD3
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environ. category / UV exposure rating	NEMA Type 6 / outdoor

CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01

Certifications

This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.

(1) The IQ8H-208 variant will be operating in grid-tied mode only at 208V AC. (2) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility (3) Maximum continuous input DC current is 10.6A (4) Nominal voltage range can be extended beyond nominal if required by the utility. (5) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IQ8SE-DS-0001-01-EN-US-2022-03-17

# CAPE FEAR SOLAR SYSTEMS

901 Martin Street, Unit A Wilmington, NC 28401 910-409-5533



GC LIC. NO.: 65677 ELEC. LIC. NO.: U-33321

13.2KW PV SYSTEM ROMERO RESIDENCE 58 Will Lucas Rd, Linden, NC 28356

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# REV. DATE DESC.

DATE: May 12, 2022

Sheet No.

R-07

<sup>\*</sup>Only when installed with IQ System Controller 2, meets UL 1741. IQ8H-208V operates only in grid-tied mode.

\*\*IQ8 Series Microinverters supports split phase, 240V.