





CLIENT INFO

MARY LANG 220 WINDSWEPT WAY FUQUAY-VARINA, NC 27526

PROJECT INFO

AC OUTPUT: 11.880 k
DOI INSPT. METHOD: OPTION

Model Energy

300 Fayetteville St. #1430 Raleigh, NC 27602 919-274-9905

ModelEnergy.com



<u>Code reference</u>

NATIONAL ELECTRICAL CODE v. 20 NC FIRE PROTECTION CODE v. 2018 NC BUILDING CODE v. 2018 NC RESIDENTIAL CODE v. 2018 ACSE v. 7-10

SITE CONDITIONS

WIND SPEED: 120 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 15 PSF

SHEET INDEX

PV-2: PV STRUCTURAL
PV-3: PV ELECTRICAL
PV-4: PV EQUIPMENT LABELS

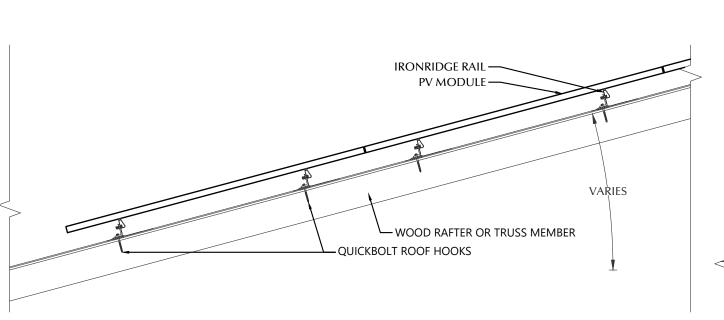
PV-5: PV INSTALL GUIDE

VERSIONS

FOR: DESIGNER DATE
CONSTRUCTION CRM 7/24/202

PV SYSTEM COVER PAGE

PV-1.1



-PV MODULE FRAME

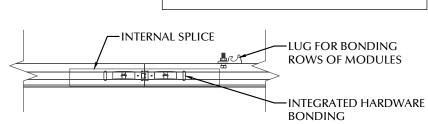
FASTENING OBJECT

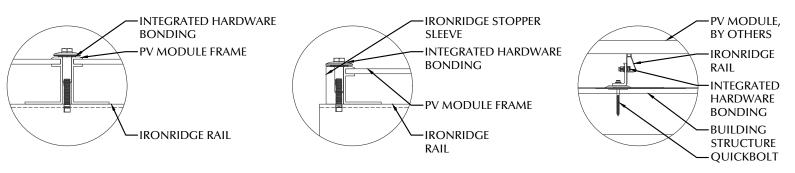
IRONRIDGE UNIVERSAL

STATEMENT OF STRUCTURAL COMPLIANCE

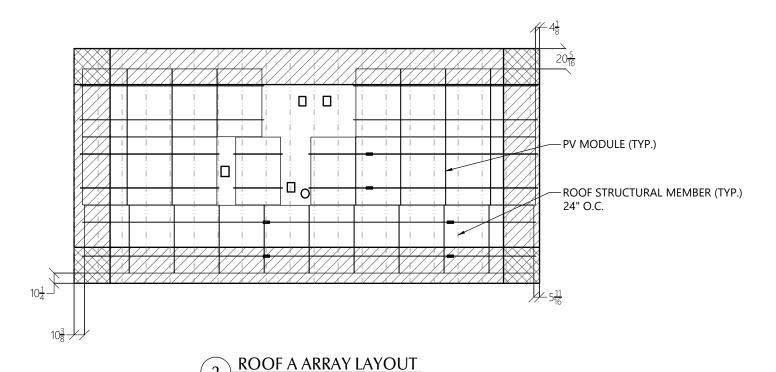
THE EXISTING ROOF STRUCTURE HAS BEEN DESIGNED TO SUPPORT THE ADDITIONAL LOADS OF THE PROPOSED PV SYSTEM. IN ADDITION, THE RACKING AND FASTENING SYSTEM SHALL BE CAPABLE OF SECURING THE SYSTEM TO THE STRUCTURE UNDER DESIGN CONDITIONS WHEN INSTALLED PROPERLY AND IN ACCORDANCE WITH THE RACKING AND FASTENING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







1) ROOF FASTENER DETAIL NOT TO SCALE



	PV MODULES				
MAKE		SILFAB			
	MODEL	SIL-440 QD			
	WIDTH	44.60 IN			
	LENGTH	67.80 IN			
	THICKNESS	35 MM			
	WEIGHT	46.30 LBS.			
	ARRAY AREA	567 SQFT.			
	ARRAY WEIGHT	1417 LBS.			

ROOF SUMMARY				
STRUCTURE:				
TYPE	TRUSSES			
MATERIAL	SOUTHERN PINE #2			
SIZE	2 X 4			
SPACING	24 IN O.C.			
ALLOWABLE SPAN	88 IN			
PITCH	5/12			
DENSITY	30 LBS./CU.FT.			
DECKING:				
TYPE	OSB			
MATERIAL	COMPOSITE			
THICKNESS	7/16 IN			
WEIGHT	1.60 LBS/SQFT			
ROOFING:				
TYPE	ASPHALT SHINGLE			
MATERIAL	ASPHALT			
WEIGHT	2.30 LBS./SQFT.			

ROOF MOUNT :		SUMMARY
MAXIMUM (IN)	MOUNT SPACING	RAIL OVERHANG
WIND ZONE 1	72 IN	24 IN
WIND ZONE 2	48 IN	19 IN
WIND ZONE 3	24 IN	11 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	-23.0 LBS./SQFT.				
UPLIFT ZONE 2	-38.0 LBS./SQFT.				
UPLIFT ZONE 3	-57.1 LBS./SQFT.				
DOWNWARD	13.6 LBS./SQFT.				
FASTENER LOAD:					
UPLIFT ZONE 1	-387 LBS.				
UPLIFT ZONE 2	-426 LBS.				
UPLIFT ZONE 3	-320 LBS.				
DOWNWARD	229 LBS.				

ROOF MOUNT & FASTENER				
ROOF MOUNT:				
MAKE	QUICKBOLT			
MODEL	4 IN QB2			
MATERIAL	STAINLESS / EPDM			
FASTENER:				
MAKE	QUICK SCREWS			
MODEL	HEX LAG BOLT			
MATERIAL	304 SS			
SIZE	5/16" X 4" (1/2" HEX)			
GENERAL:				
WEIGHT	0.65 LBS.			
FASTENERS PER MOUNT	1			
MAX. PULL-OUT FORCE	960.0 LBS.			
SAFETY FACTOR	2			
DESIGN PULL-OUT FORCE	480.0 LBS.			

IRONRIDGE
VD10
XR10
ALUMINUM
0.036 LBS/IN
34 IN



CLIENT INFO

MARY LANG 220 WINDSWEPT WAY FUQUAY-VARINA, NC 27526

PROJECT INFO

DC INPUT: 11.880 kW
AC OUTPUT: 11.500 kW
DOI INSPT. METHOD: OPTION 2

Model Energy

300 Fayetteville St. #1430 Raleigh, NC 27602 919-274-9905 ModelEnergy.com

P-1194



ODE REFERENCE

NATIONAL 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: 120 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 15 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

VERSIONS

	FOR:	DESIGNER	DATE
	CONSTRUCTION	CRM	7/24/2025

PV SYSTEM STRUCTURAL

PV-2.1

CONDUCTOR SCHEDULE										
TAG		CURRENT CARRYING CONDUCTORS		GROUNDING CONDUCTORS		CONDUIT/RACEWAY			NOTES	
IAU	QTY.	SIZE	INSULATION	QTY.	SIZE	INSULATION	QTY.	SIZE	LOCATION	NOTES
C1	6	10 AWG	PV WIRE	1	6 AWG	BARE	-	-	FREE AIR	1
C2	6	10 AWG	THWN-2	1	10 AWG	THWN-2	1	3/4"	EXT/INT	2,4
C3	3	6 AWG	THWN-2	1	10 AWG	THWN-2	1	1"	EXT/INT	2,4
C4	3	4/0 AWG ALUMINUM	XHHW	1	6 AWG	THWN-2	1	2"	EXT/INT	2,4
C5	3	4/0 AWG ALUMINUM	XHHW	-	-	=	1	2"	EXTERIOR	2,4
XC	-	-	-	-	-	-	-	-	-	3

- MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED
- CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
- EXISTING CONDUCTORS, FIELD VERIFY
- EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF

	-	-	-	3			
E١	ENERGY MANAGEMENT						
	MAKE		TESLA				
MODEL			BACKUP GATEWAY 3				
ENCL. RATING			NEMA 3R				
VOLT. RATING		√G	240 VOLTS	3			
DISCONNECT CURR.		CURR.	200 AMPS				
UL LIST. (Y/N)			YES				
MAIN BREAKER (Y/N)			YES				

200 AMPS

TROUGH MAY BE USED IF NECESSARY

MAIN BREAKER RATING

- INSTALL 200A MAIN BREAKER THAT WILL SERVE AS THE NEW SERVICE DISCONNECT
- LAND POWERWALL 3 VIA 60A BREAKER ON INTERNAL PANELBOARD
- INSTALL BONDING JUMPER FROM NEUTRAL TO GROUND
- FEED BACKED-UP LOADS PANEL VIA BACKUP LUGS

PV MODULE			
MAKE	SILFAB		
MODEL	SIL-440 QD		
NOM. POWER (PNOM)	440 WATTS		
NOM. VOLT. (VMPP)	33.4 VOLTS		
O.C. VOLT (VOC)	39.0 VOLTS		
MAX. SYS. VOLT.	1000 VOLTS		
NOM. CURR. (IMPP)	13.2 AMPS		
S.C. CURR. (ISC)	14.2 AMPS		
TEMP. COEF. (PMPP)	-0.29 %/C		
TEMP. COEF. (Voc)	-0.24 %/C		
MAX SERIES FUSE	25 AMPS		
UL COMPLIANT (Y/N)	YES		

MAX. DC VOLTAGE CALCULATION $V_{OC}MAX = V_{OC} * (1 + (TMIN - TSTC) * (VTC / 100))$ MAX STRING VOLTAGE

MAX. DC CURRENT CALCULATION

378.9

 $\frac{I_{SC}MAX = I_{SC} * TCX}{I_{SC}MAX (AMPS)}$

EV CHARGER				
MAKE	GENERIC			
MODEL	NA			
ENCL. RATING	NEMA 14-50			
VOLT. RATING	250 VOLTS			
UL LIST. (Y/N)	YES			

MID-CIRCUIT INTERRUPTER					
MAKE	TESLA				
MODEL	MCI-2				
ENCL. RATING	NEMA 4X / IP65				
DC INPUT:					
CONNECTOR TYPE	MC4				
	3				
MAX MCI PER STRING	5				
MAX. SYSTEM VOLTAGE	1000 VOLTS				
NOM. CURRENT (Imp)	15.00 AMPS				
MAX. CURRENT (Isc)	19.00 AMPS				
RSD COMPLIANT (Y/N)	YES				
UL COMPLIANT (Y/N)	YES				

JUNCTION BOX	
MAKE SOLADECK	
PROTECT. RATING NEMA TYPE 3R	
UL LIST. (Y/N) YES	

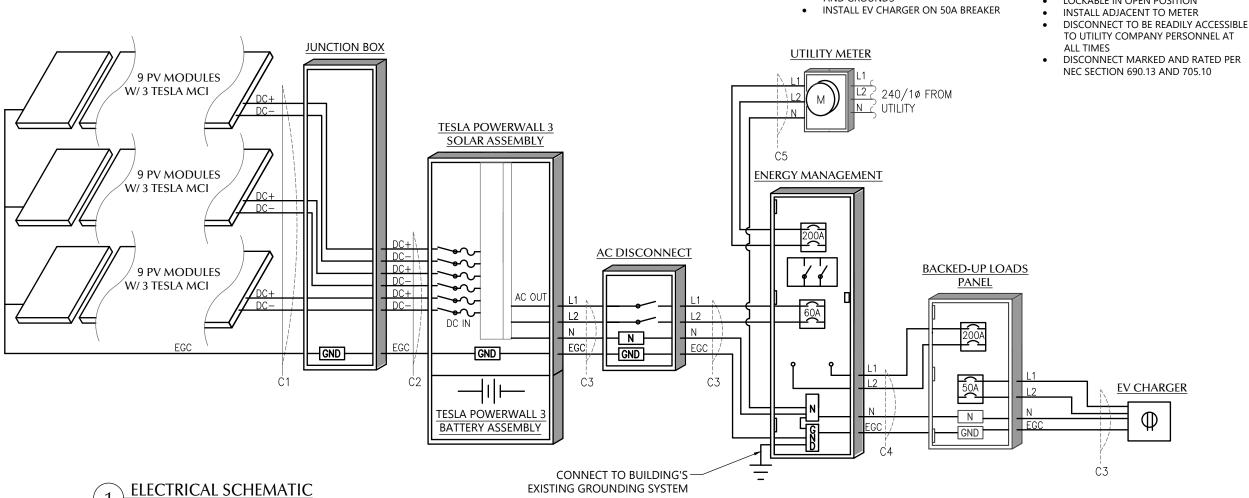
BACKED-UP LOADS PANEL (EXISTING)		
MAKE	EATON-CUTLER HAMMER	
MODEL	CHP42B200X7	
ENCL. RATING	NEMA TYPE 1	
VOLT. RATING 240		
BUS RATING 225 AMPS		
UL LIST. (Y/N) YES		
MAIN BREAKER (Y/N) YES		
MAIN BREAKER RATING	200 AMPS	

- RE-FEED BACKED-UP LOADS PANEL VIA **GATEWAY OUTPUTS**
- REMOVE N/G BOND, SEPARATE NEUTRALS AND GROUNDS

DC/AC INVERTER & BATTERY		
MAKE	TESLA POWERWALL 3	
MODEL	1707000-XX-Y	
DC INPUT:		
MAX POWER	20000 WATTS	
INPUT VOLT. RANGE	60-550 VOLTS	
MPPT VOLT. RANGE	60-480 VOLTS	
MAX. CURR. (Imp/Isc)	13 / 15 AMPS	
STRING INPUTS	6 MPPTs	
AC OUTPUT:		
MAX. CONT. POWER	11500 WATTS	
NOM. VOLT.	120 / 240 VOLTS	
MAX. CONT. CURRENT	48.00 AMPS	
RAPID SHUTDOWN (Y/N)	YES	
PROTECT. RATING	NEMA TYPE 3R	
BATTERY INFO:		
USABLE ENERGY	13.5 kWh	
NOM. VOLT.	240 VOLTS	
MAX. CONT. CHARGE	5000 WATTS	
MAX. CONT. DISCHARGE	11500 WATTS	
UL LIST. (Y/N)	YES	

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

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- DISCONNECT MARKED AND RATED PER NEC SECTION 690.13 AND 705.10





MARY LANG

220 WINDSWEPT WAY FUQUAY-VARINA, NC 27526

PROJECT INFO

AC OUTPUT: 11.500 kW DOI INSPT. METHOD: OPTION 2

Model Energy

300 Fayetteville St. #1430

Raleigh, NC 27602 919-274-9905 ModelEnergy.com

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

SITE CONDITIONS

WIND SPEED: RISK CATEGORY: EXPOSURE: SNOW: 15 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

VERSIONS

FOR:	DESIGNER	DATE
CONSTRUCTION	CRM	7/24/2025

PV SYSTEM ELECTRICAL

PV-3.1

WARNING: PHOTOVOLTAIC POWER SOURCE

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

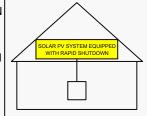
RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

NEC 690.56 (C)(3)
PLACE ON RAPID SHUTDOWN SWITCH OR EQUIPMENT WITH INTEGRATED RAPID SHUTDOWN *REFLECTIVE*

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 3FT OF SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL

PV SYSTEM DISCONNECT

NEC 690.13 (B)
PLACE ON PV SYSTEM DISCONNECTING MEANS.

MARNING

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

NEC 705.12 (B)(2)(3)(c)

⚠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 THREE POWER SOURCES

DIRECT CURRENT
PHOTOVOLTAIC POWER SOURCE

MAXIMUM VOLTAGE 600 VDC MAX CIRCUIT CURRENT 53.34 AMPS

NEC 690.53
PLACE ON ALL DC DISCONNECTING MEANS

PHOTOVOLTAIC SYSTEM

AC DISCONNECT

OPERATING VOLTAGE 240 VOLTS

OPERATING CURRENT 48.0 AMPS

NEC 690.54
PLACE ON INTERCONNECTION
DISCONNECTING MEANS

SERVICE DISCONNECT LOCATED:

PV/BATTERY DISCONNECT LOCATED:

NEC 705.10 PLACE AT SERVICE EQUIPMENT AND PV SYSTEM DISCONNECTING MEANS.

LABEL NOTES:

- 1. LABELS SHOWN ARE NOT TO SCALE.
- 2. LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT.
- 3. DC CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET.
- 4. PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
- 5. EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT.
- 6. 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.
- 7. A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED AT THE DC DISCONNECT
- 8. 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.
- 9. LABELS WILL BE APPLIED IN ACCORDANCE WITH THE NEC. SOME LABELS SHOWN MAY NOT BE NECESSARY.

WIRING NOTES:

- 1. CONDUCTORS SHALL BE COPPER OR ALUMINUM, RATED AT NOT LESS THAN 600 VOLTS
- 2. MINIMUM SIZE SHALL BE #14 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. CABLE ASSEMBLIES SHALL BE TYPE DG. BARE CONDUCTORS SHALL BE A MINIMUM OF #6 AWG.
- 4. EXTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN-2 AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), RIGID POLYVINYL CHLORIDE CONDUIT(PVC), RIGID METALLIC CONDUIT (RMC), LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LFMC), OR LIQUIDTIGHT FLEXIBLE NON METALLIX CONDUIT (LFNC). SE-TYPE CABLE CAN BE USED AS AN ALTERNATIVE. ADDITIONAL WIRING METHODS SHALL BE PERMITTED ONLY WHEN IN COMPLIANCE WITH ALL NEC REQUIREMENTS.
- . INTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN-2 OR XHHW AND INSTALLED IN ELECTRICAL METALLIC TUBING (EMT), FLEXIBLE METAL CONDUIT (FMC), LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC), LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC). TYPE SE, NM, AND MC CABLE ASSEMBLIES SHALL ALSO BE PERMITTED. ADDITIONAL WIRING METHODS SHALL BE PERMITTED ONLY WHEN IN COMPLIANCE WITH ALL NEC REQUIREMENTS.
- 6. BURIED WIRING CONDUCTOR INSULATION SHALL BE RATED FOR DIRECT BURIAL WHEN INSTALLED OUTSIDE OF RACEWAY. CONDUCTOR INSULATION SHALL BE TYPE THWN-2 OR XHHW AND INSTALLED IN RIGID PVC, RIGID METALLIC CONDUIT, OR HDPE. ADDITIONAL WIRING METHODS SHALL BE PERMITTED ONLY WHEN IN COMPLIANCE WITH ALL NEC REQUIREMENTS.
- 7. 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
- 8. MINIMUM CONDUIT SIZE TO BE 1/2".
- 9. WIRING METHODS TO CONFORM TO CHAPTER 3 OF THE 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
- 4. FUSES 0 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING A, UNLESS NOTED OTHERWISE.
- 5. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
- ALL PENETRATIONS THROUGH EXTERIOR ROOFS SHALL BE FLASHED IN A WATERPROOF MANNER.
- 7. ALL PENETRATIONS THROUGH ATTIC FIRE BARRIERS SHALL BE SEALED WITH FIRE-BARRIER SEALANT CAULK.
- 8. SUPPORT ALL CONDUIT AND EQUIPMENT IN ACCORDANCE W/ NEC. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE.
- 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:
 - -THE WEIGHT OF THE PV SYSTEM EXCEEDS THREE (3) POUNDS PER SQUARE FOOT(PSF)
 - -THE ROOF POSSESSES MORE THAN ONE (1) LAYER OF ASPHALT SHINGLES
 - -THE ROOFING MATERIAL CONSISTS OF A TYPE OTHER THAN ASPHALT SHINGLES OR METAL
 - -THE ROOF IS LOCATED IN A 140 MPH OR GREATER WIND ZONE



CLIENT INFO

MARY LANG 220 WINDSWEPT WAY FUQUAY-VARINA, NC 27526

,

PROJECT INFO

DC INPUT: AC OUTPUT: DOI INSPT. METHOD:

11.500 kW HOD: OPTION 2

11.880 kW

Model Energy

300 Fayetteville St. #1430 Raleigh, NC 27602

919-274-9905 ModelEnergy.com

P-119



CODE REFERENCES

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

SITE CONDITIONS

WIND SPEED: 120 MPH
RISK CATEGORY: II
EXPOSURE: B
SNOW: 15 PSF

SHEET INDEX

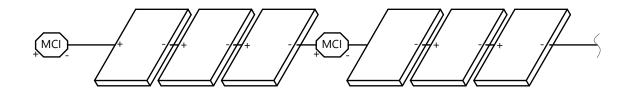
PV-2: PV STRUCTURAL
PV-3: PV ELECTRICAL
PV-4: PV EQUIPMENT LABELS
PV-5: PV INSTALL GUIDE

VERSIONS

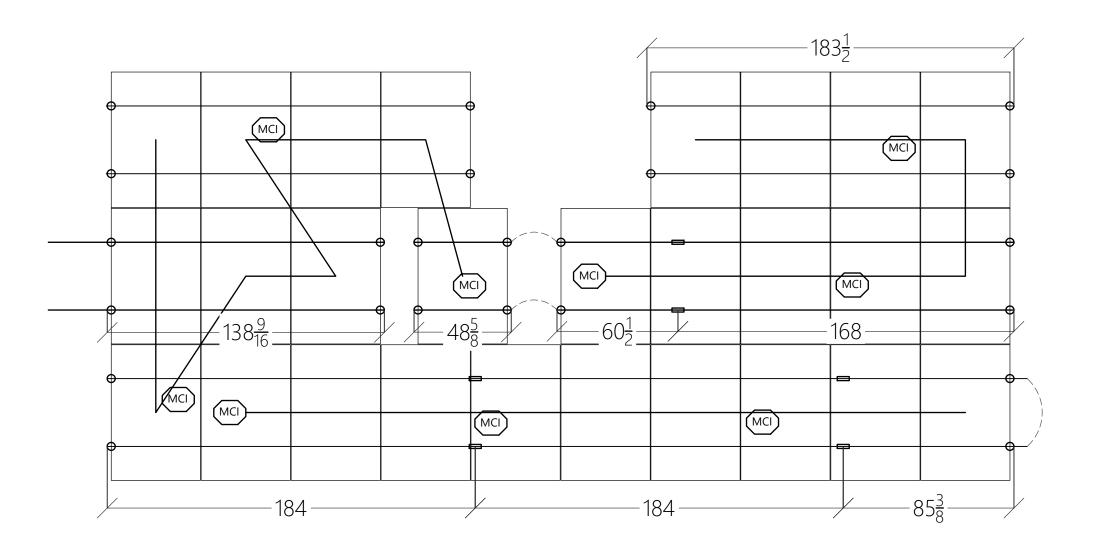
FOR:	DESIGNER	DATE
CONSTRUCTION	CRM	7/24/2025

PV SYSTEM EQUIPMENT LABELS

PV-4.1



STRING WIRING + MCI DETAIL NOT TO SCALE





MARY LANG 220 WINDSWEPT WAY FUQUAY-VARINA, NC 27526

PROJECT INFO

DC INPUT: 11.880 kW AC OUTPUT: 11.500 kW DOI INSPT. METHOD: OPTION 2

Model Energy

300 Fayetteville St. #1430 Raleigh, NC 27602 919-274-9905

ModelEnergy.com

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

SITE CONDITIONS

WIND SPEED: 120 MPH RISK CATEGORY: EXPOSURE: 15 PSF SNOW:

SHEET INDEX

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

VERSIONS

FOR:	DESIGNER	DATE
CONSTRUCTION	CRM	7/24/2025

PV SYSTEM INSTALL **GUIDE**

PV-5.1



Powerwall 3

Power Everything

Powerwall 3 is a fully integrated solar and battery system, designed to accelerate the transition to sustainable energy. Customers can receive whole home backup, cost savings, and energy independence by producing and consuming their own energy while participating in grid services. Once installed, customers can manage their system using the Tesla App to customize system behavior to meet their energy goals.

Powerwall 3 achieves this by supporting up to 20 kW DC of solar and providing up to 11.5 kW AC of continuous power per unit. It has the ability to start heavy loads rated up to 185 LRA, meaning a single unit can support the power needs of most homes. Powerwall 3 Expansions make it easier and more affordable to scale up customers' systems to meet their current or future needs. Powerwall 3 is designed for fast and efficient installations, modular system expansion, and simple connection to any electrical service.



Powerwall 3 Technical Specifications

System Technical Specifications

Model Number	1707000-xx-	у		
Nominal Grid Voltage (Input & Output)	120/240 VAC			
Grid Type	Split phase			
Frequency	60 Hz			
Nominal Battery Energy	13.5 kWh AC	1		
Nominal Output Power (AC)	5.8 kW	7.6 kW	10 kW	11.5 kW
Maximum Apparent Power	5,800 VA	7,600 VA	10,000 VA	11,500 VA
Maximum Continuous Current	24 A	31.7 A	41.7 A	48 A
Overcurrent Protection Device ²	30 A	40 A	60 A	60 A
Configurable Maximum Continuous Discharge Power Off-Grid (PV Only, -20°C to 25°C)	15.4 kW ³			
Maximum Continuous Charge Current / Power (Powerwall 3 only)	20.8 A AC / 5 kW			
Maximum Continuous Charge Current / Power (Powerwall 3 with up to (3) Expansion units)	33.3 A AC / 8 kW			
Output Power Factor Rating	0 - 1 (Grid Co	de configurabl	e)	
Maximum Output Fault Current (1 s)	160 A			
Maximum Short-Circuit Current Rating	10 kA			
Load Start Capability	185 LRA			
Solar to Battery to Home/Grid Efficiency	89% 1,4			
Solar to Home/Grid Efficiency	97.5% 5			
Power Scalability	Up to 4 Powe	rwall 3 units su	pported	
Energy Scalability	Up to 3 Expa	nsion units (for	a maximum tot	tal of 7 units)
Supported Islanding Devices	Gateway 3, B	ackup Switch,	Backup Gatew	ay 2
Connectivity	Wi-Fi (2.4 and	d 5 GHz), Ether	net, Cellular (L	TE/4G ⁶)
Hardware Interface	Dry contact relay, Rapid Shutdown (RSD) certified switch and 2-pin connector, RS-485 for meters			
AC Metering	Revenue Grad	de (+/- 0.5%, <i>A</i>	NSI C12.20)	
Protections	Integrated arc fault circuit interrupter (AFCI), Isolation Monitor Interrupter (IMI), PV Rapid Shutdown (RSD) using Tesla Mid-Circuit Interrupters			
Customer Interface	Tesla Mobile	Арр		
Warranty	10 years			

¹Values provided for 25°C (77°F), at beginning of life. 3.3 kW charge/discharge power.

²See <u>Powerwall 3 Installation Manual</u> for fuse requirements if using fuse for overcurrent protection.

³ If enabling the 15.4 kW off-grid maximum continuous discharge power, Powerwall 3 must be installed with an 80 A breaker and appropriately sized conductors.

⁴ Typical solar shifting use case.

⁵ Tested using CEC weighted efficiency methodology.

⁶The customer is expected to provide internet connectivity for Powerwall 3; cellular should not be used as the primary mode of connectivity. Cellular connectivity subject to network operator service coverage and signal strength.

Powerwall 3 Technical Specifications

Solar Technical Specifications

Maximum Solar STC Input	20 kW
Withstand Voltage	600 V DC
PV DC Input Voltage Range	60 — 550 V DC
PV DC MPPT Voltage Range	60 — 480 V DC
MPPTs	6
Maximum Current per MPPT (I _{mp})	13 A ⁷
Maximum Short Circuit Current per MPPT (I_{sc})	15 A ⁷

 $^{^{7}}$ Where the DC input current exceeds the MPPT rating, a jumper can be used to combine two MPPTs into a single input to intake DC current up to 26 A I_{MP} / 30 A I_{SC} .

Environmental Specifications

–20°C to 50°C (–4°F to 122°F) ⁸
Up to 100%, condensing
-20°C to 30°C (-4°F to 86°F), up to 95% RH, non- condensing, State of Energy (SOE): 25% initial
3000 m (9843 ft)
Indoor and outdoor rated
NEMA 3R
IP67 (Battery & Power Electronics) IP55 (Wiring Compartment)
PD3
< 50 db(A) typical < 62 db(A) maximum

 $^{^8}$ Performance may be de-rated at operating temperatures above 40°C (104°F).

Compliance Information

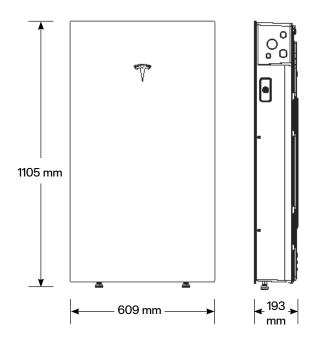
Certifications	UL 1741, UL 9540, UL 9540A, UL 3741, UL 1741 PCS, UL 1741 SA, UL 1741 SB, UL 1973, UL 1699B, UL 1998, CSA C22.2 No. 0.8, CSA C22.2 No. 107.1, CSA C22.2 No. 330, CSA 22.3 No. 9, IEEE 1547, IEEE 1547A, IEEE 1547.1, CA Rule No.21
Grid Connection	United States and Canada
Emissions	FCC Part 15 Class B, ICES 003
Environmental	RoHS Directive 2011/65/EU
Seismic	AC156, IEEE 693-2005 (high)
Fire Testing	Meets the unit level performance criteria of UL 9540A

Powerwall 3 Technical Specifications

Mechanical Specifications

Dimensions	$1105 \times 609 \times 193 \text{ mm} (43.5 \times 24 \times 7.6 \text{ in})^9$
Total Weight of Installed Unit	132 kg (291.2 lb)
Weight of Powerwall 3	124 kg (272.5 lb)
Weight of Glass Front Cover	6.5 kg (14.5 lb)
Weight of Wall Bracket	1.9 kg (4.2 lb)
Mounting Options	Floor or wall mount

 $^{^{\}rm 9}$ These dimensions include the glass front cover being installed on Powerwall 3.



Powerwall 3 Expansion Technical Specifications

Battery Technical Specifications

Model Number	1807000-xx-y
Nominal Battery Energy	13.5 kWh
Voltage Range	52 - 92 V DC ¹⁰

¹⁰ Powerwall 3 Expansion units are connected in parallel and are not field serviceable.

Environmental Specifications

-20°C to 50°C (-4°F to 122°F) 11
Up to 100%, condensing
–20°C to 30°C (–4°F to 86°F), up to 95% RH, non- condensing, State of Energy (SOE): 25% initial
3000 m (9843 ft)
Indoor and outdoor rated
NEMA 3R
IP67
PD3

¹¹Performance may be de-rated at operating temperatures above 40°C (104°F).

Compliance Information

Certifications

UL 1973, UL 9540

Mechanical Specifications

Dimensions	1105 x 609 x 168 mm (43.5 x 24 x 6.6 in) ¹²	1105 mm								
Total Weight of Wall- Mounted Expansion Unit	118.5 kg (261.2 lb)		€	₩						
Weight of Expansion Unit	110 kg (242.5 lb)		1105 mm		Y					
Weight of Glass Front Cover	6.5 kg (14.5 lb)			. 1105 mm						ľ
Weight of Wall Bracket	1.9 kg (4.2 lb)									
Weight of Expansion Accessories	0.7 kg (1.5 lb)									
Mounting Options	Floor or wall mount									
Stacking Capability (Floor Mount Only)	Up to (3) Expansion units behind a Powerwall 3					ŀ				
Compatibility with Other Systems	Only compatible with Powerwall 3									
Connection to Powerwall 3 or Expansions	Powerwall 3 Expansion harness 13			_		168	' 			
12 These dimensions include the	glass front cover being	_	609	mm —	-	oo →	-			

I hese dimensions include the glass front cover being installed on Powerwall 3 Expansion.

¹³ The Powerwall 3 Expansion harness is a listed component of the UL 9540 certification.

Solar Shutdown Device Technical Specifications

_

The Solar Shutdown Device is a Mid-Circuit Interrupter (MCI) and is integral to the rapid shutdown (RSD) function required for rooftop PV systems in accordance with Article 690 of the NEC. When paired with Powerwall 3, solar array shutdown is initiated by an External System Shutdown Switch or the On/Off Enable switch located on Powerwall 3. Systems not subject to rapid shutdown requirements must still install one or more MCIs for functional purposes; see the Powerwall 3 installation manual for details.

ΕI	ectrical
S	pecifications

Model	MCI-1	MCI-2	MCI-2 High Current
Nominal Input DC Current Rating (I _{MP})	13 A	13 A	15 A
Maximum Input Short Circuit Current (I _{SC})	19 A	17 A	19 A
Maximum System Voltage	600 V DC	1000 V DC 14	1000 V DC 14
Maximum Disconnect Voltage 15	600 V DC	165 V DC	165 V DC

¹⁴ Maximum System Voltage is limited by Powerwall to 600 V DC.

RSD Module Performance

Maximum Number of Devices per String	5		
Control	Power Line Excitation		
Passive State	Normally Open		
Maximum Power Consumption	7 W		
Warranty	25 years		

Environmental Specifications

Enclosure Rating	NEMA 4X / IP65		
Storage Temperature	−30°C to 70°C (−22°F to 158°F)	–30°C to 70°C (–22°F to 158°F)	
Operating Temperature	-40°C to 50°C (-40°F to 122°F)	-45°C to 70°C (-49°F to 158°F)	

Mechanical Specifications

Electrical Connections	MC	4 Connector
Housing	Plastic	
Dimensions	125 x 150 x 22 mm	173 x 45 x 22 mm
	(5 x 6 x 1 in)	(6.8 x 1.8 x 1 in)
/eight	350 g (0.77 lb)	120 g (0.26 lb)
ounting Options	ZEP Home Run Clip	Wire Clip
	M4 Screw (#10)	·
	M8 Bolt (5/16")	
	Nail / Wood screw	

Compliance Information

Certifications	UL 1741 PVRSE, UL 3741, PVRSA (Photovoltaic Rapid Shutdown Array)
RSD Initiation Method	External System Shutdown Switch or Powerwall 3 Enable Switch

UL 3741 PV Hazard Control (and PVRSA) Compatibility

See <u>UL 3741 Application Addendum</u>

¹⁵ Maximum Disconnect Voltage is the maximum voltage allowed across each MCI in the open position (Rapid Shutdown Initiated). An individual MCI-2 has a voltage rating of 165V but in combination (connected in the same string) their voltage ratings are additive.

Gateway 3

Tesla Gateway 3 controls connection to the grid in a Powerwall system, automatically detecting outages and providing seamless transition to backup power. It provides energy monitoring that is used by Powerwall for solar self-consumption, time-based control, and backup operation.

Performance Specifications

Model Number	1841000-x1-y
Nominal Grid Voltage	120/240 V AC
Grid Configuration	Split phase
Grid Frequency	60 Hz
Continuous Current Rating	200 A
Maximum Supply Short Circuit Current	22 kA with Square D or Eaton main breaker 25 kA with Eaton main breaker ¹⁶
IEC Protective Class	Class I
Overvoltage Category	Category IV
¹⁶ Only Eaton CSR or BWH m	nain breakers are 25 kA rated.

AC Meter	+/- 0.5%
Communication	CAN
User Interface	Tesla App
Backup Transition	Automatic disconnect for seamless backup
Overcurrent Protection Device	100–200 A Service entrance rated Eaton CSR, BWH, or BW, or Square D QOM breakers
Internal Panelboard	200 A 8-space/16 circuit breakers Eaton BR, Siemens QP, or Square D HOM breakers rated to 10–125A
Warranty	10 years

Environmental Specifications

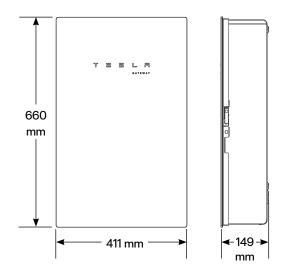
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Operating Humidity (RH)	Up to 100%, condensing
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R

Compliance Information

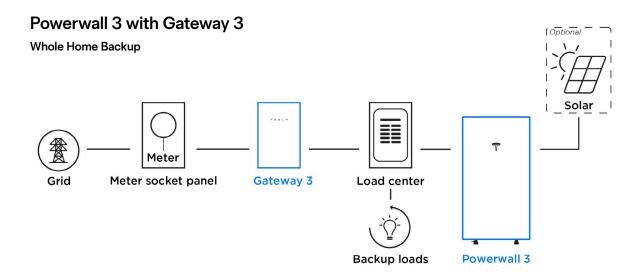
Certifications	UL 67, UL 869A, UL 916, UL 1741 PCS, CSA 22.2 107.1, CSA 22.2 29
Emissions	FCC Part 15, Class B, ICES 003

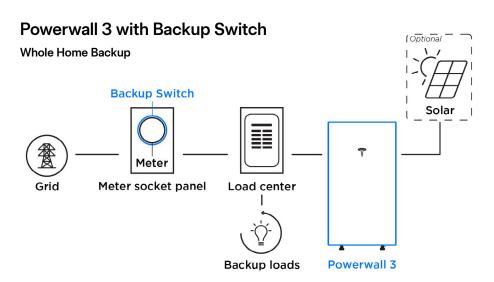
Mechanical Specifications

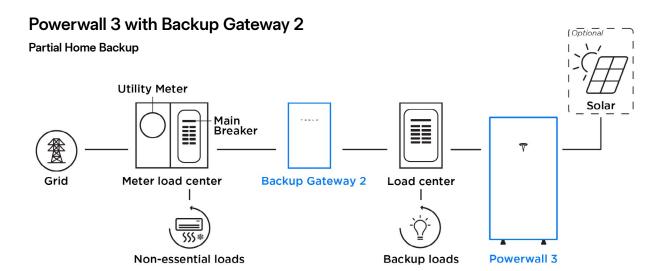
Dimensions	660 x 411 x 149 mm (26 x 16 x 6 in)
Weight	16.3 kg (36 lb)
Mounting options	Wall mount



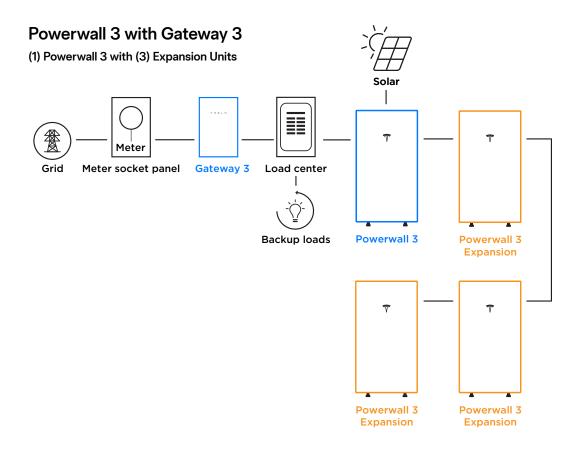
Powerwall 3 Example System Configurations



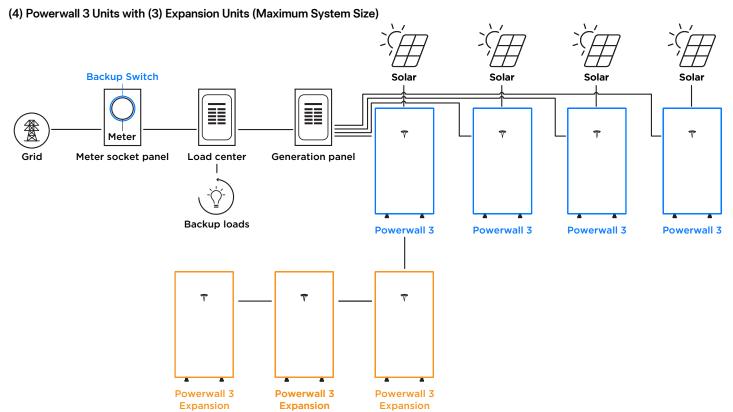




Powerwall 3 Example System Configurations



Powerwall 3 with Backup Switch



NEW QB2

NO LIFTING SHINGLES NO REMOVING NAILS SEALANT IS NOW YOUR CHOICE

FOR ASPHALT, TPO, & EPDM ROOFS

LAYERS OF PROTECTION



OPTIONAL SEALANT

We recommend that sealant is inserted into the predrilled hole to fill the penetration and ensure that the Microflashing® adheres completely to the roof



MICROFLASHING®

Our innovative Microflashing® is placed over the predrilled hole to flash the penetration



QB2 SHOULDER

The shoulder of the QB2 compresses the Microflashing® to create a leak-proof seal and acts like a cork to plug the hole



INDEPENDENT LAB TEST RESULTS



BOTH TESTS PASSED WITH AND WITHOUT SEALANT

Complete Test Results available online in the AHJ Packets
Patent# 8448407

THE FASTEST, SIMPLEST, MOST EFFICIENT QUICKBOLT

ERROR-PROOF COMPRESSION

The QB2 doesn't leave any room for user error when it comes to Microflashing® compression. Once the Dual Drive Shoulder Screw is secured, the Microflashing® is compressed!

ONLY 3 COMPONENTS

The QB2 is comprised of Microflashing®, an L-Foot, and a Dual Drive Shoulder Screw. No more Nuts needed to tighten and secure the L-Foot! Not only does this simplify the installation process, it also cuts down the installation time!

DUAL DRIVE

The new Dual Drive Shoulder Screw design can be driven using a standard ½" Hex Nut Setter or a 6mm Hex Driver. Installers can use the drive that works best with the rest of the components of their array.



3" QB2: PN **17662** | 4" QB2: PN **17663**

QUICKBOLT.COM (844) 671-6045 • MON-FRI: 7AM-5PM PST



Flush Mount System



Built for solar's toughest roofs.

IronRidge builds the strongest mounting system for pitched roofs in solar. Every component has been tested to the limit and proven in extreme environments.

Our rigorous approach has led to unique structural features, such as curved rails and reinforced flashings, and is also why our products are fully certified, code compliant and backed by a 20-year warranty.



Strength Tested

All components evaluated for superior structural performance.



PE Certified

Pre-stamped engineering letters available in most states.



Class A Fire Rating

Certified to maintain the fire resistance rating of the existing roof.



Design Assistant

Online software makes it simple to create, share, and price projects.



UL 2703 Listed System

Entire system and components meet newest effective UL 2703 standard.



25-Year Warranty

Products guaranteed to be free of impairing defects.

XR Rails (

XR10 Rail



A low-profile mounting rail for regions with light snow.

- · 6' spanning capability
- · Moderate load capability
- Clear and black finish

XR100 Rail



The ultimate residential solar mounting rail.

- 8' spanning capability
- · Heavy load capability
- · Clear and black finish

XR1000 Rail



A heavyweight mounting rail for commercial projects.

- 12' spanning capability
- · Extreme load capability
- · Clear anodized finish

Bonded Splices



All rails use internal splices for seamless connections.

- · Self-drilling screws
- · Varying versions for rails
- · Forms secure bonding

Clamps & Grounding

UFOs



Universal Fastening Objects bond modules to rails.

- Fully assembled & lubed
- · Single, universal size
- · Clear and black finish

Stopper Sleeves



Snap onto the UFO to turn into a bonded end clamp.

- · Bonds modules to rails
- · Sized to match modules
- · Clear and black finish

CAMO



Bond modules to rails while staying completely hidden.

- Universal end-cam clamp
- · Tool-less installation
- · Fully assembled

Grounding Lugs



Connect arrays to equipment ground.

- · Low profile
- Single tool installation
- · Mounts in any direction

Attachments

FlashFoot2



Flash and mount XR Rails with superior waterproofing.

- Twist-on Cap eases install
- · Wind-driven rain tested
- · Mill and black finish

Conduit Mount



Flash and mount conduit, strut, or junction boxes.

- Twist-on Cap eases install
- · Wind-driven rain tested
- Secures ¾" or 1" conduit

Slotted L-Feet



Drop-in design for rapid rail attachment.

- Secure rail connections
- · Slot for vertical adjusting
- · Clear and black finish

Bonding Hardware



Bond and attach XR Rails to roof attachments.

- T & Square Bolt options
- · Nut uses 7/16" socket
- · Assembled and lubricated

Resources



Design Assistant

Go from rough layout to fully engineered system. For free.

Go to IronRidge.com/design



NABCEP Certified Training

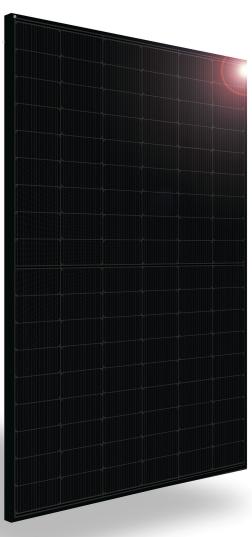
Earn free continuing education credits, while learning more about our systems.

Go to IronRidge.com/training

SILFAB NTC

SIL-440 QD





♠ NEXT-GENERATION N-TYPE CELL TECHNOLOGY

- Improved Shade Tolerance
- Improved Low-Light Performance
 Reduced Degradation Rate
- Increased Performance in High Temperatures
- Enhanced Durability
- 25-Year Product Warranty/ 30-Year Performance Warranty













ELECTRICAL SPECIFICATIONS		4-	40
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	440	328.0
Maximum power voltage (Vpmax)	V	33.41	31.17
Maximum power current (Ipmax)	А	13.17	10.52
Open circuit voltage (Voc)	V	38.97	36.64
Short circuit current (Isc)	А	14.22	11.44
Module efficiency	%	22.6%	
Maximum system voltage (VDC)	V	1000	
Series fuse rating	А	25	
Power Tolerance	Wp	0 t	to +10

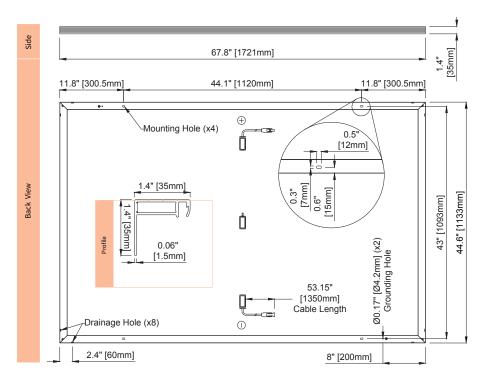
Measurement conditions: STC 1000 W/m² • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty \leq 3% Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by \pm 5% and power by 0 to +10 W.

MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	21 kg ± 0.2 kg	46.3 lbs ± 0.4 lbs
Dimensions (H x L x D)	1721 mm x 1133 mm x 35 mm	67.8 in x 44.6 in x 1.37 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5 lb/ft² rear load / 112.8 lb/ft² front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	108 Half cells - N-Type Silicon solar cell 182 mm x 91 mm	108 Half cells - N-Type Silicon solar cell 7.16 in x 3.58 in
Glass	3.2 mm high transmittance, tempered, antireflective coating	0.126 in high transmittance, tempered, antireflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, MC4 from Staubli	53.1 in, ø 0.22 in (12 AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized aluminum (Black)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated, 3 diodes	

TEMPERATURE RATINGS		WARRANTIES	
Temperature Coefficient Isc	0.04 %/°C	Module product workmanship warranty	25 years**
Temperature Coefficient Voc	-0.24 %/°C	Linear power performance guarantee	30 years
Temperature Coefficient Pmax	-0.29 %/°C		≥ 98% end 1st yr ≥ 94.7% end 12th yr
NOCT (± 2 °C)	45 °C		≥ 94.7% end 12th yr ≥ 90.8% end 25th yr
Operating temperature	-40/+85 °C		≥ 89.3% end 30th yr

CERTIFICATIONS		SHIPPING SPECS	
Product	UL 61215, UL 61730, CSA C22.2#61730, IEC 61215, IEC 61730, IEC 61701 (Salt Mist Corrosion), IEC 62716 (Ammonia Corrosion), CEC Listed, UL Fire Rating: Type 2	Modules Per Pallet:	26 or 26 (California)
Product		Pallets Per Truck	32 or 30 (California)
Factory	ISO9001:2015	Modules Per Truck	832 or 780 (California)

- ▲ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.
- ** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com. PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.



SILFAB SOLAR INC.

1770 Port Drive

Burlington WA 98233 USA

T +1 360.569.4733

info@silfabsolar.com

SILFABSOLAR.COM

7149 Logistics Lane

Fort Mill SC 29715 USA

T +1 839.400.4338

240 Courtneypark Drive East Mississauga ON L5T 2Y3 Canada

T +1 905.255.2501

F +1 905.696.0267

Silfab - SIL-440-QD-20240829

No reproduction of any kind is allowed without permission. Data and information is subject to modifications without notice. © Silfab Solar Inc., 2024. Silfab Solar% is a registered trademark of Silfab Solar inc.

RSTC Enterprises, Inc. 2214 Heimstead Road Eau Claire, WI 54703 715-830-9997



Outdoor Photovoltaic Enclosures

Composition/Cedar Roof System

ETL listed and labeled

Report # 3171411PRT-002 Revised May, 2018

- UL50 Type 3R, 11 Edition Electrical equipment enclosures
- CSA C22.2 No. 290 Nema Type 3R
- Conforms to UL 1741 Standard

0799 Series Includes:

0799 - 2 Wire size 2/0-14

0799 - 5 Wire size 14-6 0799 - D Wire size 14-8

Models available in Grey, Black or Stainless Steel

Basic Specifications

Material options:

- Powder coated, 18 gauge galvanized 90 steel (1,100 hours salt spray)
- Stainless steel

Process - Seamless draw (stamped) Flashing - 15.25" x 17.25" Height - 3" Cavity - 255 Cubic inches

Base Plate:

- Fastened to base using toggle fastening system
- 5 roof deck knockouts
- Knockout sizes: (3) .5", (1) .75" and (1) 1"
- 8", 35mm slotted din rail
- Ground Block

Passthrough and combiner kits are available for either AC or DC applications.

0799 Series







Safety switch, general duty, non fusible, 60A, 2 pole, 10hp, 240VAC, NEMA 3R, bolt on provision

DU222RB

Product availability: Stock - Normally stocked in distribution

facility

Price*: 353.00 USD

wan	
-----	--

Product	Single Throw Safety Switch
Duty Rating	General duty
Device Application	Residential
Disconnect Type	Non-fusible disconnect switch
Factory Installed Neutral	None
Phase	3 phase
Number of Poles	2
Current Rating	60 A
Voltage Rating	240 V AC
Enclosure Rating NEMA	NEMA 3R
Motor power hp	10 hp at 240 V AC 60 Hz for 1 phase motors

Complementary

Mounting Type	Surface	
Electrical Connection	Lugs	
Wiring configuration	2 wires	
Wire Size	AWG 12AWG 3 aluminium AWG 14AWG 3 copper	
Tightening torque	35 lbf.in (3.95 N.m) 0.000.01 in² (2.085.26 mm²) (AWG 14AWG 10) 35 lbf.in (3.95 N.m) (AWG 14AWG 10) 45 lbf.in (5.08 N.m) 0.01 in² (8.37 mm²) (AWG 8) 45 lbf.in (5.08 N.m) 0.020.03 in² (12.321.12 mm²) (AWG 6AWG 4) 50 lbf.in (5.65 N.m) 0.04 in² (26.67 mm²) (AWG 3)	
Depth	3.75 in (95.25 mm)	
Width	7.75 in (196.85 mm)	
Height	9.63 in (244.60 mm)	
Net Weight	16.98 lb(US) (7.7 kg)	

Environment

Certifications UL listed file E2875

^{*} Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Ordering and shipping details

Category	00106-D & DU SW,NEMA3R, 30-200A	
Discount Schedule	DE1A	
GTIN	785901491491	
Returnability	Yes	
Country of origin	MX	

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.30 in (13.462 cm)
Package 1 Width	7.20 in (18.288 cm)
Package 1 Length	10.00 in (25.4 cm)
Package 1 Weight	4.65 lb(US) (2.109 kg)
Unit Type of Package 2	PAL
Number of Units in Package 2	120
Package 2 Height	36.50 in (92.71 cm)
Package 2 Width	40.00 in (101.6 cm)
Package 2 Length	48.00 in (121.92 cm)
Package 2 Weight	610.00 lb(US) (276.691 kg)
Unit Type of Package 3	CAR
Number of Units in Package 3	5
Package 3 Height	10.70 in (27.178 cm)
Package 3 Width	10.20 in (25.908 cm)
Package 3 Length	23.50 in (59.69 cm)
Package 3 Weight	24.60 lb(US) (11.158 kg)

Offer Sustainability

Sustainable offer status	Green Premium product	
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov	
REACh Regulation	REACh Declaration	
REACh free of SVHC	Yes	
EU RoHS Directive	Compliant EU RoHS Declaration	
Toxic heavy metal free	Yes	
Mercury free	Yes	
China RoHS Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope)	
RoHS exemption information	Yes	
Environmental Disclosure	Product Environmental Profile	
PVC free	Yes	

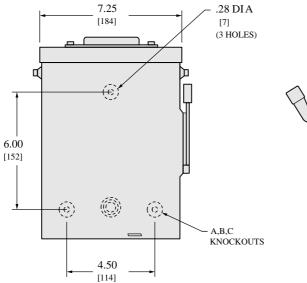
Contractual warranty

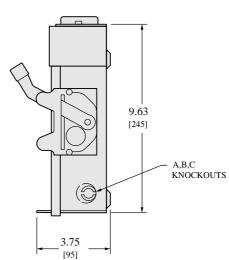
Warranty

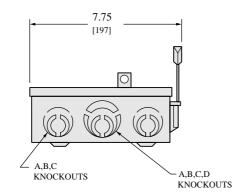
18 months

Technical Illustration

Dimensions







NEMA TYPE 3R

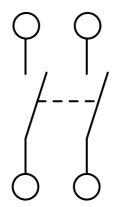
IN. [mm]

KNOCKOUTS					
SYMBOL	A	В	С	D	
CONDUIT SIZE (IN.)	.50	.75	1	1.25	

TOP OF NEM A TYPE 3R SWITCHES H AVE PROVISIONS FOR MAXIMUM 2 1/2" BO LT-ON HUB. ALL DIMENSIONS ARE APPROXIMATE. REFER TO TECHNICAL DRAWINGS AND DOCUMENTATION.

Technical Illustration

Wiring Diagram



DU222RB

Recommended replacement(s)



Pass and Seymour 50 Amp 125/250V NEMA 14-50R Flush Mount Electrical Outlet for Ranges / Dryers Part No. 3894



A durable solution that provides 50A 125/250V NEMA 14-50R power access for ranges and dryers. A single, flush-mount, straight-blade receptacle. 3-Pole, 4-Wire

Features & Benefits

Provides 50A 125/250V power access for ranges, dryers and more; NEMA compliant.			Quality Materials.		
Durability.			Time-tested Design.		
Specifications					
General Info					
Product Line	Pass & Seymour	UPC Number	785007807905		
Country Of Origin	China				
Dimensions					
Product Width US	2.5 in	Product Depth US	2.2 in		
Listing Agencies / 3rd Party Agencies					
CSA Listed	Yes	cULus Listed	Yes		
Technical Information					
Amperage	50 A				