

PROJECT: PV SYSTEM DETAILS	
[DC] SYSTEM SIZE	[AC] SYSTEM SIZE
26 MODULES x 395W	(26) IQ8+ MICRO-INVERTERS x 290W
10.27 kW	7.54 kW



SCOPE OF WORK

- PROPOSED PROJECT TO INSTALL GRID-TIED PV ONLY SYSTEM ON AN EXISTING GROUND MOUNT STRUCTURE AT A RESIDENTIAL LOCATION : [REDACTED] . COORDINATES: [REDACTED]
- THE PV MODULES WILL BE SECURED ON GROUND USING PRE-ENGINEERED GROUND RACKING SYSTEM.
- INSTALLED PV SYSTEM WILL BE THEN CONNECTED TO HOMEOWNER'S SERVICE EQUIPMENT USING APPLICABLE INTERCONNECTION METHOD (AS PER AHJ).
- THE ENERGY PRODUCED BY PV SYSTEM WILL BE USED TO POWER THE HOME APPLIANCES. THIS PV SYSTEM INCLUDES STORAGE BATTERIES.

APPLICABLE GOVERNING CODES & NOTES

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES:

- 2019 CALIFORNIA BUILDING CODE
- 2019 CALIFORNIA ELECTRICAL CODE
- 2019 CALIFORNIA FIRE CODE
- 2019 CALIFORNIA RESIDENTIAL CODE

ALL OTHER RELATED STATE & AHJ BY-LAWS & ORDINANCES

DESIGN CRITERIA

- OCCUPANCY GROUP: R1/SINGLE FAMILY DWELLING (SFD)
- NO. OF STORIES: SINGLE STORY
- EXPOSURE CATEGORY : C, RISK CATEGORY : II
- WIND SPEED (ASCE 7-16) : 95 MPH
- GROUND SNOW LOAD (ASCE 7-16) : 0 lb/sqft
- ASHRAE EXTREME LOW: -4°C
- ASHRAE HIGH TEMP (2% AVG.) : 40°C
- ASHRAE DISTANCE ABOVE ROOF (7/8") : 62°C

SHEET INDEX

PV-0	PROJECT SUMMARY
PV-1	SITE PLAN
PV-2	ATTACHMENT DETAILS
PV-3	BOM & STRING LAYOUT
S-1	STRUCTURAL DETAILED DIAGRAM
E-1	ELECTRICAL DIAGRAM & CALCULATIONS
E-2	PLACARDS
E.S	EQUIPMENT SPECIFICATIONS

EQUIPMENT DETAILS

(#) PV MODULES	(26) CANADIAN SOLAR CS3N 395-MS
(#) MICRO- INVERTER	(26) ENPHASE IQ8PLUS-72-2-US (240V)
SMART SWITCH DEVICE	IQ SYSTEM CONTROLLER 2 (EP200G101-M240US01)
ENERGY STORAGE SYSTEM	ENPAHSE ENCHARGE 10 (ENCHARGE-10-1P-NA)
ROOF RACKING SYSTEM	IRONRIDGE GROUND MOUNT SYSTEM W/ IRONRIDGE XR1000 RAIL
STRING / BRANCH CIRCUIT	2 STRINGS OF 13
POINT OF INTERCONNECTION	60A LOAD BREAKER IN THE MAIN SERVICE PANEL W/ (N)175A MAIN BREAKER, 200A BUSBAR,120/240V, 3W, 1φ
UTILITY	PG&E
AHJ	BUTTE COUNTY

GENERAL NOTES

- ALL COMPONENTS ARE UL LISTED & CEC CERTIFIED, WHERE WARRANTED
- A DISCONNECTING MEANS SHALL BE INSTALLED AT A READILY ACCESSIBLE LOCATION EITHER OUTSIDE OF THE BUILDING OR STRUCTURE OR INSIDE NEAREST POINT OF ENTRANCE OF THE SYSTEM CONDUCTORS.
- HEIGHT OF THE INTEGRATED AC/DC DISCONNECT SHALL NOT EXCEED 6'-7" PER CEC CODE 240.24.
- A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH CEC 690.47 AND 250.50 THROUGH 60 AND 250-166 SHALL BE PROVIDED. PER CEC
- GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE OR INADEQUATE A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT. GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO LARGER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE FOR A COMPLETE SYSTEM.
- PHOTOVOLTAIC MODULES ARE TO BE CONSIDERED NON-COMBUSTIBLE.
- PHOTOVOLTAIC INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- WATER PROOF CONNECTORS AND HUBS SHALL BE USED WHERE APPLICABLE PER CEC 312.2 AND 314.15.
- GROUNDING/BONDING BUSHINGS SHALL BE INSTALLED WHERE APPLICABLE PER CEC 250.92.
- ALL EXTERIOR RACEWAYS ON WALLS SHOULD BE EMT UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS & NOTHING IN THIS DOCUMENT SHALL BE INTERPRETED IN A WAY THAT OVERRIDES THEM.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL CONDITIONS, DIMENSIONS & DETAILS IN THIS DOCUMENT. ALL DIMENSIONS SHALL BE VERIFIED BY SUBCONTRACTOR BEFORE INSTALLATION.

PHOTOVOLTAIC SYSTEM FIRE CLASSIFICATION LISTING IN ACCORDANCE WITH UL1703 STANDARD.

ELECTRICAL NOTES

- THE EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE INSTALLED ONLY BY QUALIFIED PEOPLE. A QUALIFIED PERSON IS ONE WHO HAS SKILLS AND KNOWLEDGE RELATED TO THE CONSTRUCTION AND OPERATION OF THE ELECTRICAL EQUIPMENT AND INSTALLATIONS AND HAS RECEIVED SAFETY TRAINING TO RECOGNIZE AND AVOID THE HAZARDS INVOLVED. (CEC690.4(E) AND 705.6)
- LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND ACTIVATION OF ANY SOLAR PHOTOVOLTAIC INSTALLATION. FOR A LINE SIDE TAP CONNECTION, UTILITY NEEDS TO BE NOTIFIED WELL IN ADVANCE TO COORDINATE BUILDING ELECTRICAL SHUT OFF.
- NEW CONDUIT ROUTING SHOWN IS ESSENTIALLY SCHEMATIC. SUBCONTRACTOR SHALL LAY OUT RUNS TO SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF OTHER TRADES.
- ARRAY WIRING SHOULD NOT BE READILY ACCESSIBLE EXCEPT TO QUALIFIED PERSONNEL.
- ALL EXTERIOR CONDUIT, FITTINGS, AND BOXES SHALL BE WATERTIGHT AND APPROVED FOR USE IN WET LOCATIONS .
- WIRING METHODS FOR PV SYSTEM CONDUCTORS AREN'T PERMITTED WITHIN 10 IN. OF THE ROOF DECKING OR SHEATHING EXCEPT WHERE LOCATED DIRECTLY BELOW THE ROOF SURFACE THAT'S COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT WIRING
- BACK-FED BREAKER MUST BE AT THE OPPOSITE END OF BUS BAR FROM THE MAIN BREAKER OR MAIN LUG SUPPLYING CURRENT FROM THE UTILITIES.
- ALL CONDUCTORS AND WIRE TIES EXPOSED TO SUNLIGHT ARE LISTED AS UV RESISTANT.
- CONTRACTOR SHALL FOLLOW ALL ELECTRICAL EQUIPMENT LABELING REQUIREMENTS ACCORDING TO CEC.
- MEASURE THE LINE-TO-LINE AND LINE-TO-NEUTRAL VOLTAGE OF ALL SERVICE ENTRANCE CONDUCTORS PRIOR TO INSTALLING ANY SOLAR EQUIPMENT. THE VOLTAGES FOR THE 240VAC RATED.

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SCALE	
SHEET SIZE	

HOMEOWNER INFO	
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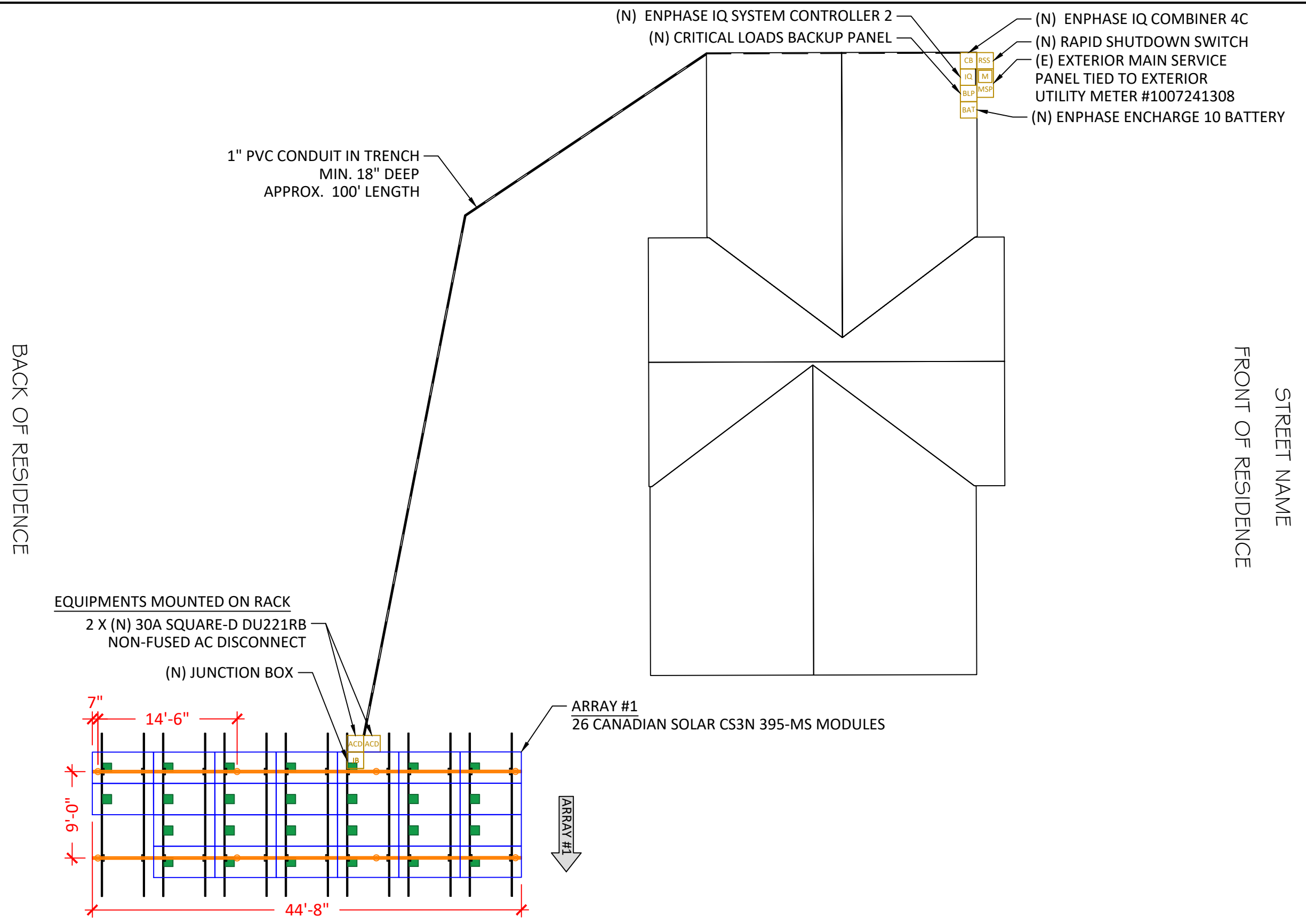
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PV-0
SHEET NO.
PROJECT SUMMARY
SHEET INFORMATION

GROUND MOUNT ARRAY DETAILS	
MOUNTING PLANE	ARRAY 1
NO. OF MODULES	26
AZIMUTH	180°
ROOF TILT	15°
ARRAY AREA (SQ. FT)	569.71

LEGEND	
	UTILITY METER
	ENPHASE IQ COMBINER 4C
	AC DISCONNECT
	MAIN SERVICE PANEL
	CRITICAL LOADS BACKUP PANEL
	ENPHASE IQ SYSTEM CONTROLLER 2
	ENPHASE ENCHARGE 10 BATTERY
	DC JUNCTION BOX
	RAPID SHUTDOWN SWITCH
	CONDUIT
	VENT, ATTIC FAN (ROOF OBSTRUCTIONS)
	CHIMNEY
	IRONRIDGE XR1000 RAIL
	TRENCH
	TOP CAP
	PIPE



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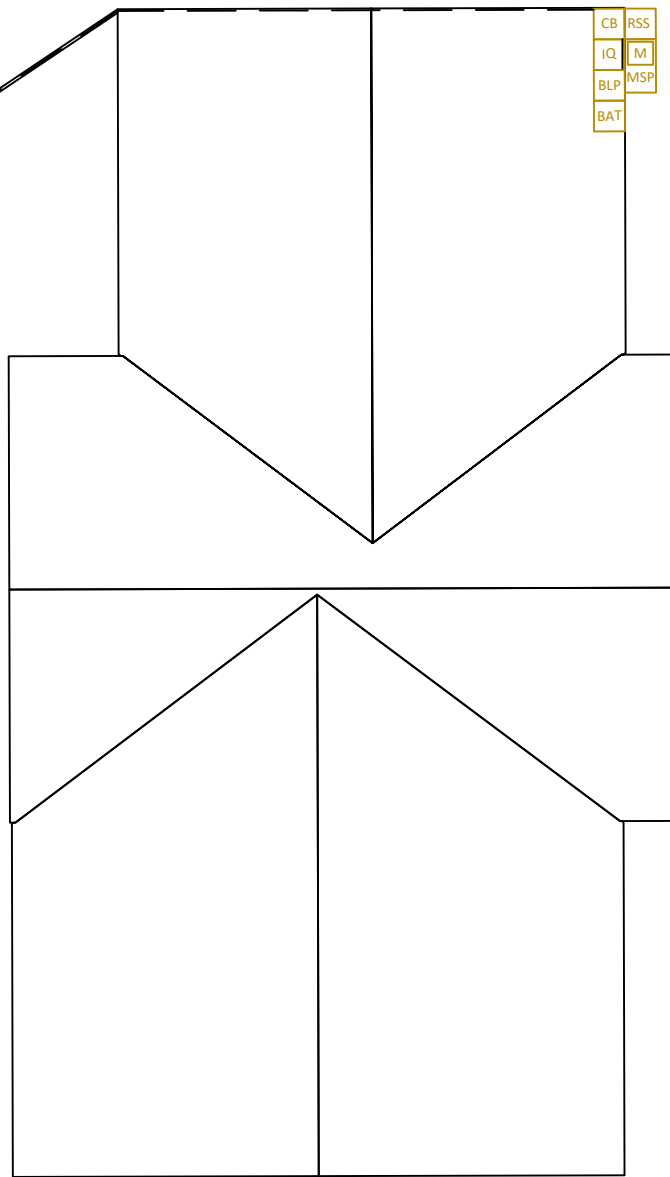
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PV-2
SHEET NO.
ROOF ATTACHMENT DETAILS
SHEET INFORMATION

BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	26	CANADIAN SOLAR CS3N 395-MS
MICRO-INVERTER	26	ENPHASE IQ8PLUS-72-2-US (240V)
JUNCTION BOX	1	JUNCTION BOX, 600V, NEMA 3R, UL LISTED
AC DISCONNECT	2	SQUARE-D DU221 RB, 30A/2P NON FUSIBLE AC DISCONNECT, NEMA 3R, 120/240VAC (VISIBLE, LOCKABLE, LABELED)
COMBINER BOX	1	ENPHASE IQ COMBINER 4C W/ IQ GATEWAY (X-IQ-AM1-240-4C)
ENPHASE Q CABLE	33	ENPHASE Q CABLE 240V, (PER CONNECTOR)
BRANCH TERMINATOR	2	BRANCH TERMINATOR
WATER TIGHT CAPS	7	WATER TIGHT CAPS
BACKUP PANEL	1	NEW CRITICAL LOADS BACKUP PANEL 240V/125A BUS BAR RATING, SINGLE PHASE, WITH A 60A DISCONNECT
RAPID SHUTDOWN SWITCH	1	RAPID SHUTDOWN SWITCH (EP200G-NA-02-RSD)
TRANSFER SWITCH	1	ENPHASE IQ SYSTEM CONTROLLER 2 (EP200G101-M240US01)
BATTERY	1	ENPAHSE ENCHARGE 10 (ENCHARGE-10-1P-NA)
ATTACHMENT	70	UNIVERSAL MODULE CLAMP
ATTACHMENT	28	STOPPER SLEEVE
ATTACHMENT	8	SGA TOP CAP AT 3"
ATTACHMENT	28	GROUND MOUNT BONDED RAIL CONNECTOR
RAIL	14	XR1000 RAIL 204" (17 FEET)
GROUNDING LUG	1	GROUNDING LUG

BACK OF RESIDENCE



FRONT OF RESIDENCE

STREET NAME

STRING LEGEND

A STRING #1

B STRING #2

LEGEND

M UTILITY METER

CB COMBINER BOX

ACD AC DISCONNECT

MSP MAIN SERVICE PANEL

BLP CRITICAL LOADS PANEL

IQ IQ SYSTEM CONTROLLER

BAT BATTERY

JB DC JUNCTION BOX

— — CONDUIT

○ □ VENT, ATTIC FAN (ROOF OBSTRUCTIONS)

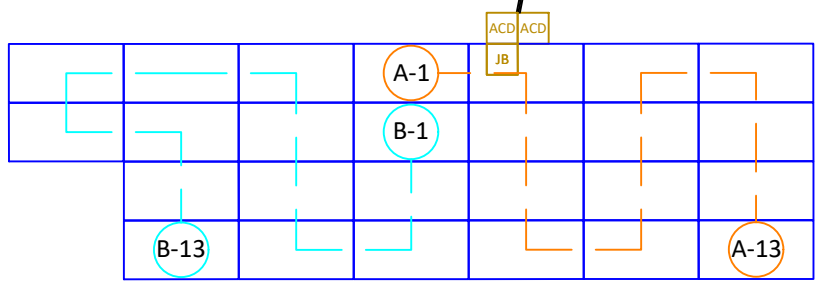
⊠ CHIMNEY

— IRONRIDGE XR1000 RAIL

≡ - TRENCH

⊙ - TOP CAP

— - PIPE



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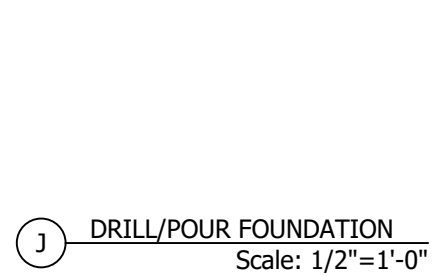
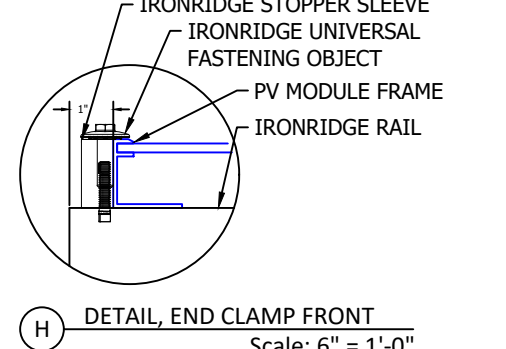
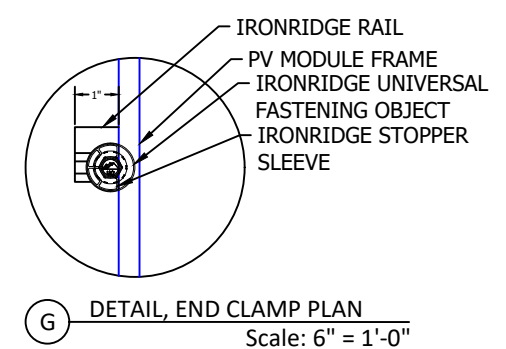
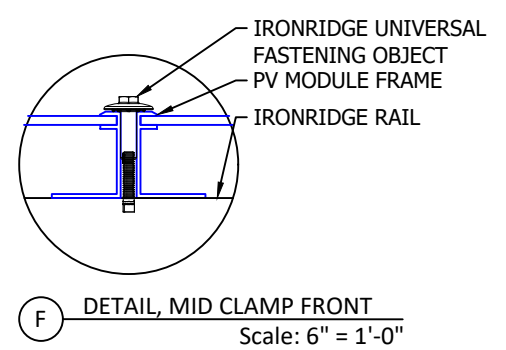
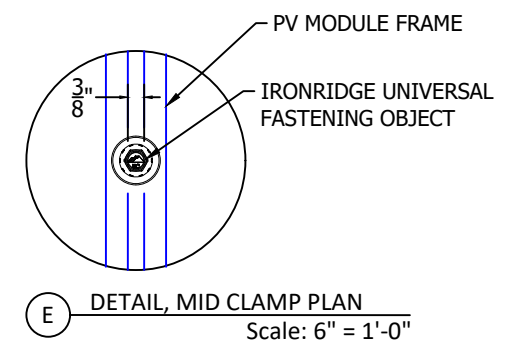
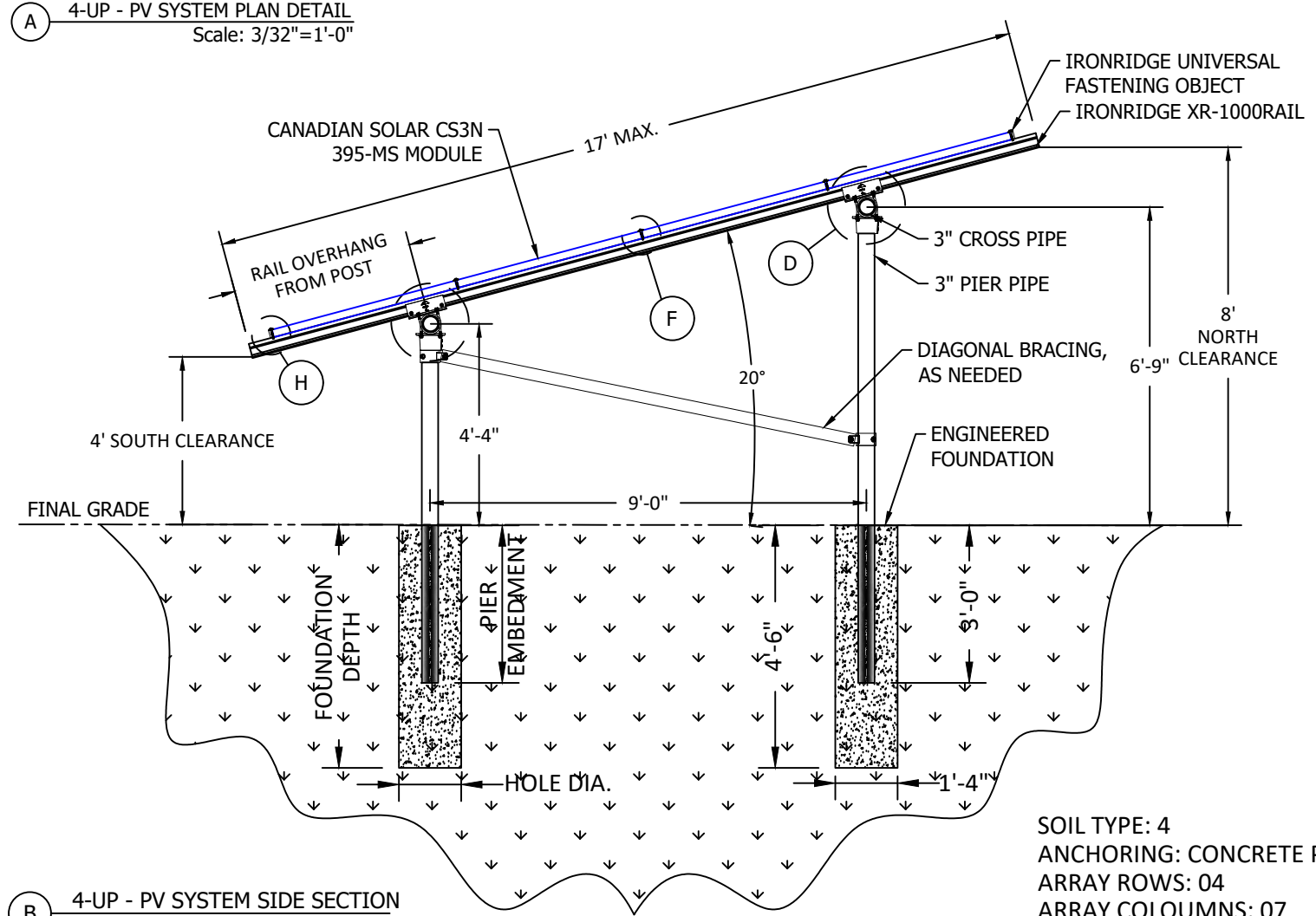
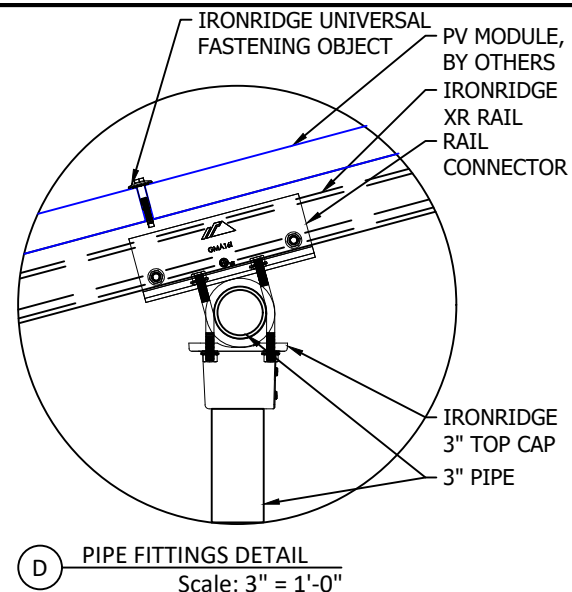
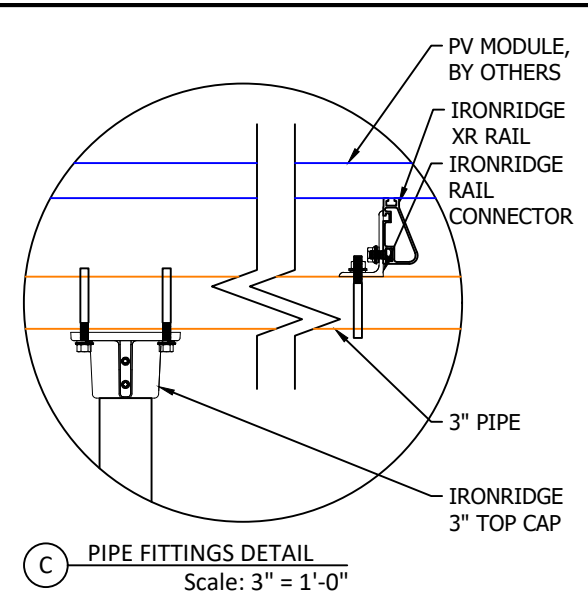
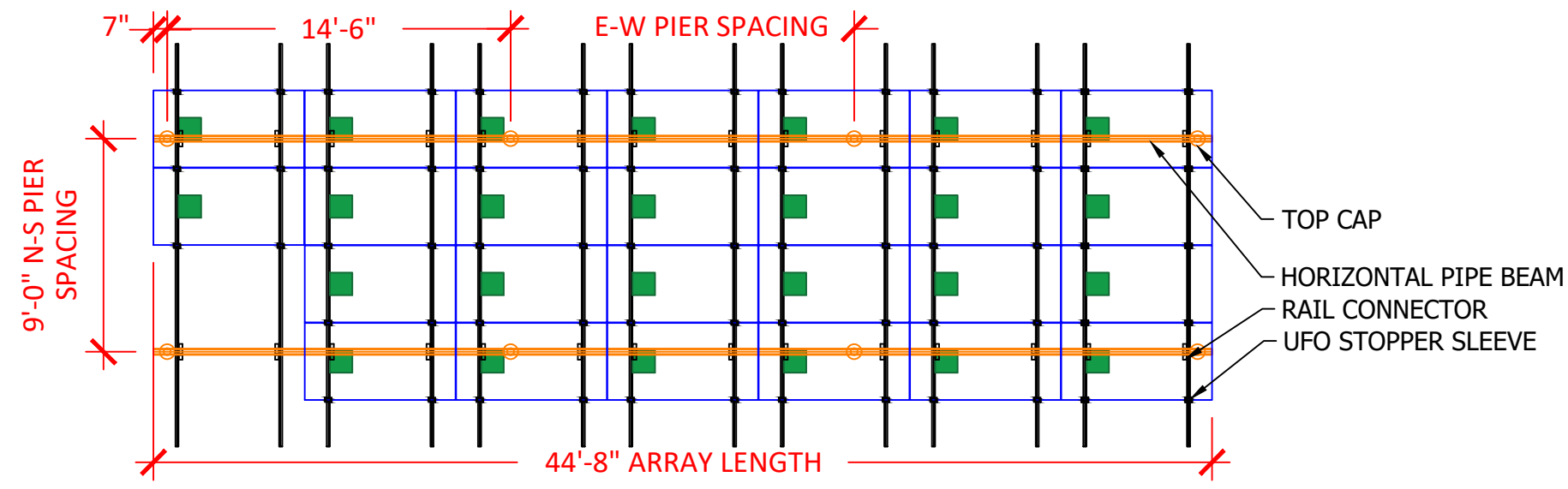
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PV-3

SHEET NO.

BOM & STRING LAYOUT

SHEET INFORMATION



SOIL TYPE: 4
ANCHORING: CONCRETE PIERS
ARRAY ROWS: 04
ARRAY COLOUMNS: 07
ARRAY TILT: 20°
ARRAY AZIMUTH: 180°

1. SCHEDULE 40 PIPE OR ALLIED MECHANICAL TUBING (8GA WALL THICKNESS)

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SHEET SIZE	

HOMEOWNER INFO

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S-1
SHEET NO.
STRUCTURAL
DETAILED
DIAGRAM
SHEET INFORMATION

ID	CONDUCTOR			CONDUIT	# OF PARALLEL CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	CONDUIT FILL PERCENT	OCPD	EGC		TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT x 125%				MAX CURRENT	BASE AMP.	DERATED AMP.	LENGTH	VOLTAGE DROP
	10 AWG	PV WIRE	COPPER						6 AWG	BARE COPPER	0.65	(62°C)		N/A	15.7A	x	1.25					
A	10 AWG	PV WIRE	COPPER	OPEN AIR	1	2	N/A	N/A	6 AWG	BARE COPPER	0.65	(62°C)	N/A	15.7A	x	1.25	=	19.6A	N/A	40A x 1 x 0.65 = 26A	50FT	1.18%
B	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	2	4	19.09%	N/A	8 AWG	THWN-2, COPPER	0.91	(40°C)	0.8	15.7A	x	1.25	=	19.6A	40A	40A x 0.8 x 0.91 = 29.12A	10FT	0.17%
C	6 AWG	THWN-2	COPPER	MIN 1" Dia PVC	2	4	28.31%	20A	8 AWG	THWN-2, COPPER	0.91	(40°C)	1	15.7A	x	1.25	=	19.6A	75A	75A x 1 x 0.91 = 68.3A	130FT	0.75%
D	8 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	26.73%	40A	8 AWG	THWN-2, COPPER	0.91	(40°C)	1	31.4A	x	1.25	=	39.3A	55A	55A x 1 x 0.91 = 50.05A	5FT	0.11%
E	10 AWG	THWN-2	COPPER	MIN 0.75" Dia EMT	1	3	11.45%	20A	8 AWG	THWN-2, COPPER	0.91	(40°C)	1	16A	x	1.25	=	20.0A	40A	40A x 1 x 0.91 = 36.4A	5FT	0.09%
F	1 AWG	THWN-2	COPPER	MIN 1.25" Dia EMT	1	3	29.81%	60A	8 AWG	THWN-2, COPPER	0.91	(40°C)	1	47.4A	x	1.25	=	59.25A	145A	145A x 1 x 0.91 = 131.95A	5FT	0.04%
G	1 AWG	THWN-2	COPPER	MIN 1.25" Dia EMT	1	3	29.81%	60A	8 AWG	THWN-2, COPPER	0.91	(40°C)	1	47.4A	x	1.25	=	59.25A	145A	145A x 1 x 0.91 = 131.95A	5FT	0.04%

SOLAR MODULE SPECIFICATIONS

MANUFACTURER / MODEL	CANADIAN SOLAR CS3N 395-MS
VMP	37.0V
IMP	10.68A
VOC	44.3V
ISC	11.44A
TEMP. COEFF. VOC	-0.27 %/°C
MODULE DIMENSION	76.4" (L) x 41.3" (W)
PANEL WATTAGE	395W

MICROINVERTER SPECIFICATIONS

MANUFACTURER / MODEL	ENPHASE IQ8PLUS-72-2-US (240V)
NOMINAL OUTPUT VOLTAGE	240VAC
CONTINUOUS OUTPUT CURRENT	1.21A

AMBIENT TEMPERATURE SPECS

RECORD LOW TEMP	-4°C
AMBIENT TEMP (HIGH TEMP 2%)	40°C
CONDUIT HEIGHT	7/8"
ROOF TOP TEMP	90°C
CONDUCTOR TEMPERATURE RATE	62°C
MODULE TEMPERATURE COEFFICIENT OF VOC	-0.27 %/°C

ENPHASE ENPOWER SPECIFICATION

MAX. DISCONNECT CURRENT	200A
MAX. OVERCURRENT PROTECTION BREAKER	200A

BATTERY SPECIFICATION

MODEL	ENCHARGE-10-1P-NA
AMBIENT TEMPERATURE RANGE	-15°C TO 55°C
RATED OUTPUT CURRENT	16 A
NOMINAL VOLTAGE	240 V
USABLE CAPACITY	10.08 KWH
INTERCONNECTION	SINGLE-PHASE

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SCALE	
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HOMEOWNER INFO

#	REVISION/UPDATE	DATE

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E-2

SHEET NO.

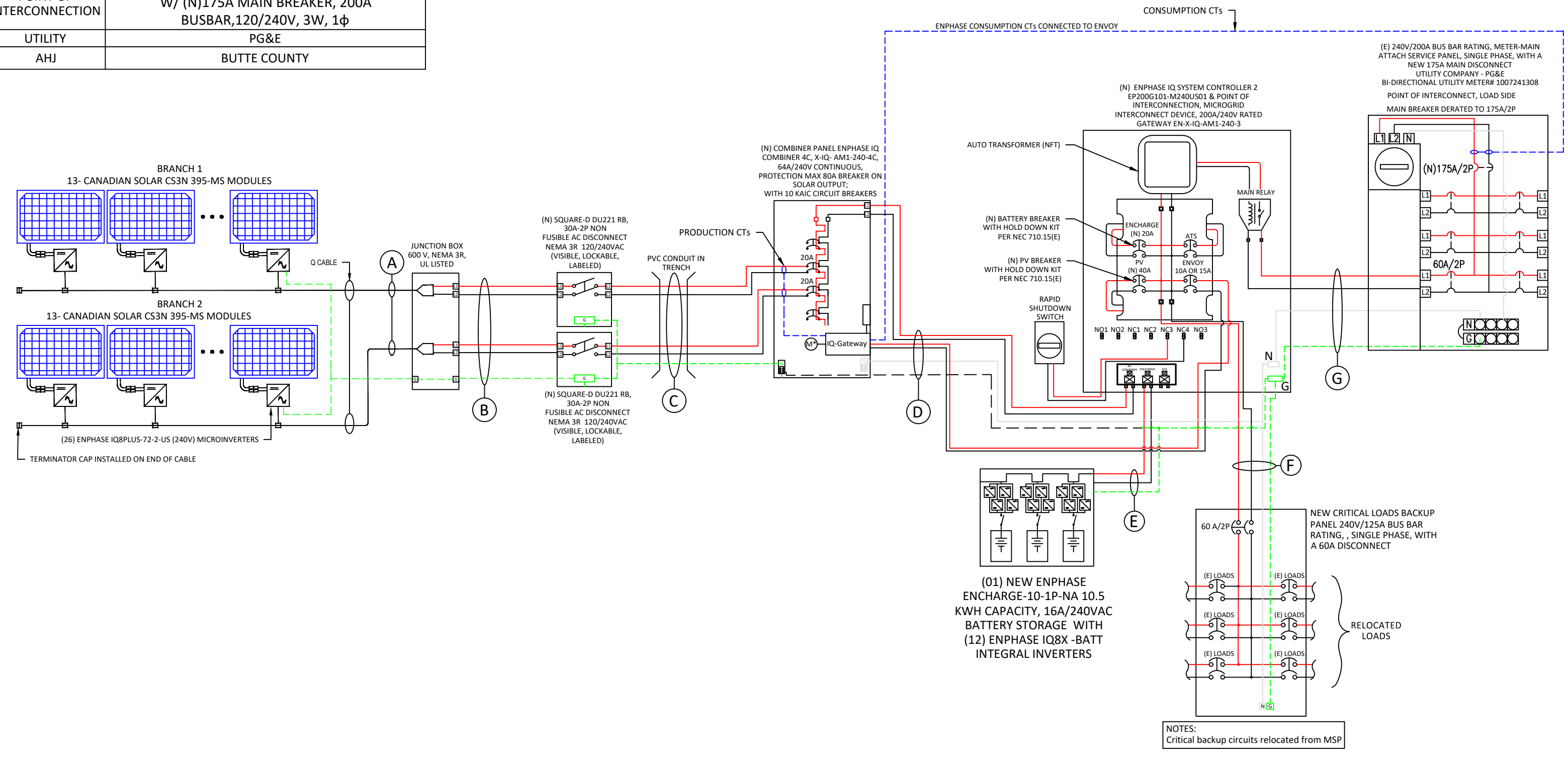
ELECTRICAL
DIAGRAM &
CALCULATIONS

SHEET INFORMATION

EQUIPMENT DETAILS	
(#) PV MODULES	(26) CANADIAN SOLAR CS3N 395-MS
(#) INVERTERS	(26) ENPHASE IQ8PLUS-72-2-US (240V)
OUTPUT CURRENT	32A
BRANCH CIRCUIT	2 STRING OF 13
POINT OF INTERCONNECTION	60A LOAD BREAKER IN THE MAIN SERVICE PANEL W/ (N)175A MAIN BREAKER, 200A BUSBAR, 120/240V, 3W, 1φ
UTILITY	PG&E
AHJ	BUTTE COUNTY

[DC] SYSTEM SIZE	[AC] SYSTEM SIZE
26 MODULES x 395W	(26) IQ8+ MICRO-INVERTERS x 290W
10.27 kW	7.54 kW

120% RULE CEC 705.12 (B)(2)(3)(b)
BUS BAR RATING X 120% - MAIN BREAKER RATING = MAX. PV OCPD
(200A x 120%) - 175A = 65A
INSTALLED PV BREAKER = 60A



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E-2
SHEET NO.
ELECTRICAL DIAGRAM & CALCULATIONS
SHEET INFORMATION

1

! WARNING

ELECTRIC SHOCK HAZARD

TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION:
MAIN SERVICE PANEL/AC DISCONNECT/INVERTER/
AC COMBINER
2019 CEC 690.13(B)

2

CAUTION SOLAR CIRCUIT

LABEL LOCATION:
DC CONDUIT
EVERY 10' AND ON CONDUIT BODIES WHEN EXPOSED
2019 CEC 690.31(G)(D)(3)

3

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT 32A

NOMINAL OPERATING AC VOLTAGE 240 VAC

LABEL LOCATION:
AC DISCONNECT 2019 CEC 690.13(B)

4

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL LOCATION:
INVERTER
AT OR WITHIN 3' OF THE DC COMBINER SWITCH
2019 CEC 690.56(C)(3)

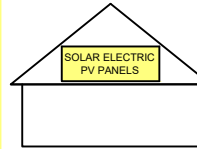
ADHESIVE FASTENED SIGNS:

- THE LABEL SHALL BE SUITABLE FOR THE ENVIRONMENT WHERE IT IS INSTALLED.
- WHERE REQUIRED ELSEWHERE IN THIS CODE, ALL FIELD APPLIED LABELS, WARNINGS, AND MARKINGS SHOULD COMPLY WITH ANSI Z535.4 [CEC 110.21(B) FIELD MARKING].
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT [CFC 605.11.1.3]

5

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



LABEL LOCATION:
MAIN SERVICE PANEL
IF MSD IS OUTSIDE PLACE IT THERE / IF MSD IS INSIDE PLACE ON THE AC DISCONNECT
2019 CEC 690.56(C)(1)(a)

6

! WARNING

PHOTOVOLTAIC SYSTEM COMBINER PANEL

DO NOT ADD LOADS

LABEL LOCATION:
PHOTOVOLTAIC AC COMBINER (IF APPLICABLE).
PER CODE(S): CEC 2019: 705.12(B)(2)(3)(c)

7

PV SOLAR BREAKER

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:
MAIN SERVICE PANEL
2019 CEC 705.12(B)(2)(3)(b)

8

CAUTION-TRI POWER SOURCE

FIRST SOURCE IS UTILITY ELECTRICAL GRID
SECOND SOURCE IS AC BATTERY
THIRD SOURCE IS PV INVERTER

REQ'D BY: CEC 705.10
LABEL LOCATION:
SUB PANEL OR BACKUP LOADS PANEL,
MAIN SERVICE, METER/MAIN

10

BATTERY DISCONNECT

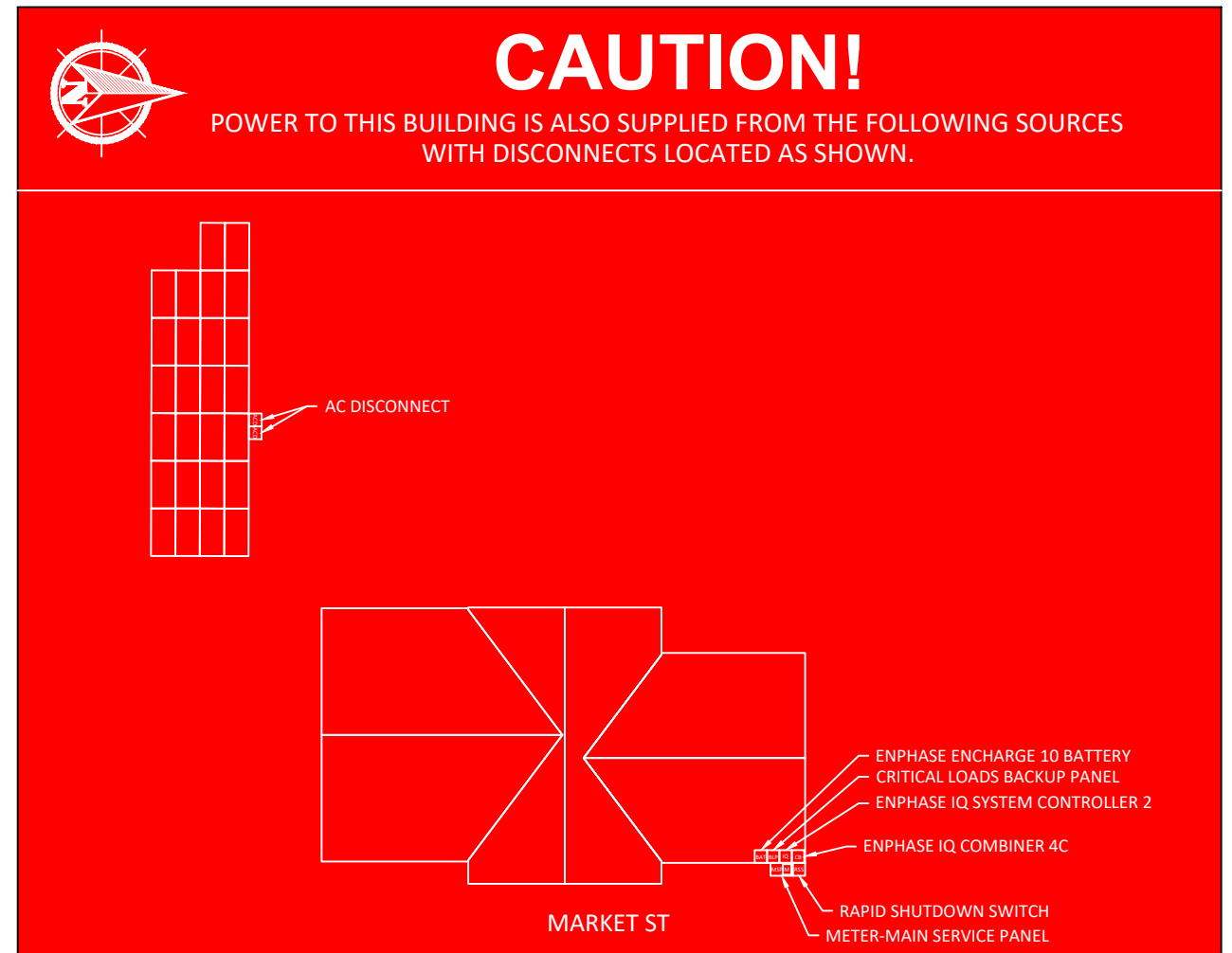
DO NOT RELOCATE THIS OVERCURRENT DEVICE

REQ'D BY: NEC 705.12(B)(2)(3)(b)
LABEL LOCATION:
BATTERY BREAKERS

11

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

LABEL LOCATION:
UTILITY SERVICE ENTRANCE/METER, INVERTER/DC DISCONNECT
IF REQUIRED BY LOCAL AHJ. OR OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ
PER CODE(S): CEC 2019: ARTICLE 690.56(C)



LABEL LOCATION:
EACH SERVICE EQUIPMENT LOCATION AND AT THE LOCATION(S) OF THE SYSTEM DISCONNECT(S) FOR ALL ELECTRIC POWER PRODUCTION SOURCES CAPABLE OF BEING INTERCONNECTED

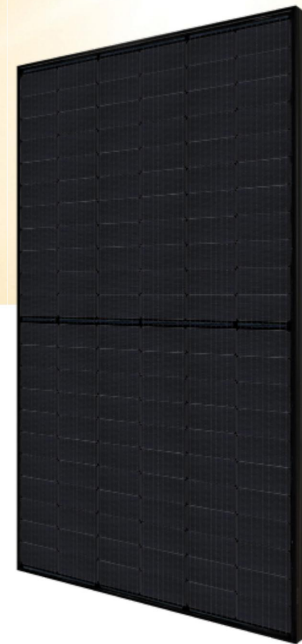
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SHEET NO.
PLACARDS
SHEET INFORMATION



HiKu Mono PERC (All-Black)

380 W ~ 400 W

CS3N-380 | 385 | 390 | 395 | 400MS

MORE POWER

- 425 W** Module power up to 400 W
Module efficiency up to 19.7%
- \$** Lower LCOE & BOS cost
- Bar Chart** Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation
- +** Better shading tolerance

MORE RELIABLE

- Shield** Minimizes micro-crack impacts
- ***** Heavy snow load up to 5400 Pa, enhanced wind load up to 2400 Pa*

12 Years Enhanced Product Warranty on Materials and Workmanship*

25 Years Linear Power Performance Warranty*

1st year power degradation no more than 2%
Subsequent annual power degradation no more than 0.55%

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001: 2015 / Quality management system
ISO 14001: 2015 / Standards for environmental management system
ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE
FSEC (US Florida)
UL 61730 / IEC 61701 / IEC 62716
UNI 9177 Reaction to Fire: Class 1 / Take-e-way



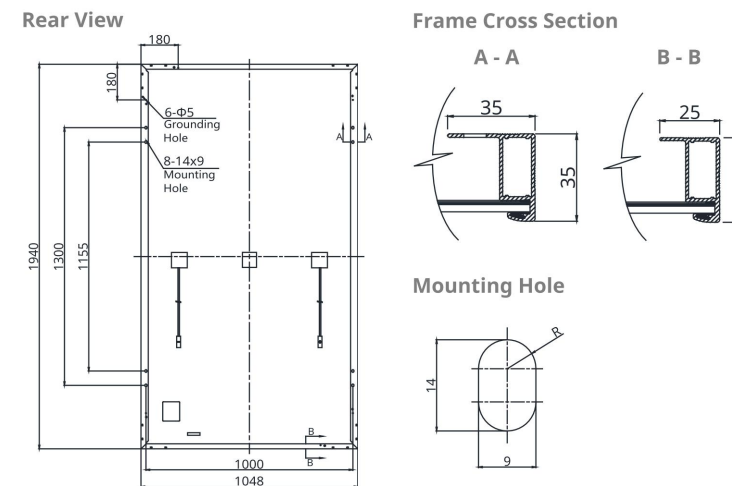
* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

Canadian Solar (USA) Inc. is committed to providing high quality solar products, solar system solutions and services to customers around the world. Canadian Solar was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey, and is a leading PV project developer and manufacturer of solar modules, with over 52 GW deployed around the world since 2001.

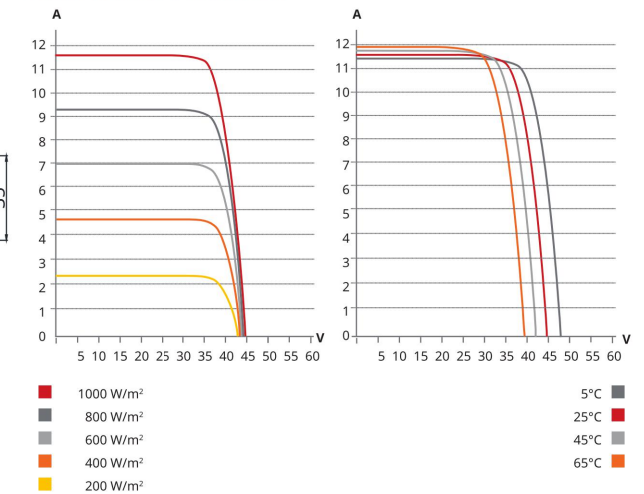
* For detailed information, please refer to the Installation Manual.

Canadian Solar (USA) Inc.
3000 Oak Road, Suite 400, Walnut Creek, CA 94597, USA, www.csisolar.com/na, service.ca@csisolar.com

ENGINEERING DRAWING (mm)



CS3N-400MS / I-V CURVES



ELECTRICAL DATA | STC*

CS3N	380MS	385MS	390MS	395MS	400MS
Nominal Max. Power (Pmax)	380 W	385 W	390 W	395 W	400 W
Opt. Operating Voltage (Vmp)	36.4 V	36.6 V	36.8 V	37.0 V	37.2 V
Opt. Operating Current (Imp)	10.44 A	10.52 A	10.60 A	10.68 A	10.76 A
Open Circuit Voltage (Voc)	43.7 V	43.9 V	44.1 V	44.3 V	44.5 V
Short Circuit Current (Isc)	11.26 A	11.32 A	11.38 A	11.44 A	11.50 A
Module Efficiency	18.7%	18.9%	19.2%	19.4%	19.7%
Operating Temperature	-40°C ~ +85°C				
Max. System Voltage	1000V (IEC/UL)				
Module Fire Performance	TYPE 1 (UL 61730 1500V) or TYPE 2 (UL 61730 1000V) or CLASS C (IEC 61730)				
Max. Series Fuse Rating	20 A				
Application Classification	Class A				
Power Tolerance	0 ~ + 10 W				

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS3N	380MS	385MS	390MS	395MS	400MS
Nominal Max. Power (Pmax)	283 W	287 W	291 W	295 W	298 W
Opt. Operating Voltage (Vmp)	33.9 V	34.1 V	34.3 V	34.5 V	34.7 V
Opt. Operating Current (Imp)	8.36 A	8.42 A	8.49 A	8.56 A	8.6 A
Open Circuit Voltage (Voc)	41.1 V	41.3 V	41.5 V	41.7 V	41.9 V
Short Circuit Current (Isc)	9.08 A	9.13 A	9.18 A	9.23 A	9.28 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m² spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	132 [2 X (11 X 6)]
Dimensions	1940 X 1048 X 35 mm (76.4 X 41.3 X 1.38 in)
Weight	22.5 kg (49.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 400 mm (15.7 in) (+) / 280 mm (11.0 in) (-); landscape: 1250 mm (49.2 in)*
Connector	T4 series or MC4
Per Pallet	30 pieces
Per Container (40' HQ)	720 pieces

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.35 % / °C
Temperature Coefficient (Voc)	-0.27 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. CSI Solar Co., Ltd. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.



IQ8 and IQ8+ Microinverters

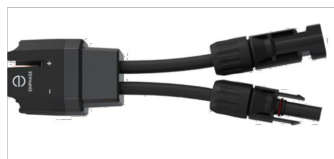
Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (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.



IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.



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



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

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 high-powered 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-SB) requirements

* Only when installed with IQ System Controller 2, meets UL 1741.

** IQ8 and IQ8Plus supports split phase, 240V installations only.

IQ8 and IQ8+ Microinverters

INPUT DATA (DC)		IQ8-60-2-US	IQ8PLUS-72-2-US
Commonly used module pairings ¹	W	235 – 350	235 – 440
Module compatibility		60-cell/120 half-cell	60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
MPPT voltage range	V	27 – 37	29 – 45
Operating range	V	25 – 48	25 – 58
Min/max start voltage	V	30 / 48	30 / 58
Max input DC voltage	V	50	60
Max DC current ² [module Isc]	A		15
Overvoltage class DC port			II
DC port backfeed current	mA		0
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT DATA (AC)		IQ8-60-2-US	IQ8PLUS-72-2-US
Peak output power	VA	245	300
Max continuous output power	VA	240	290
Nominal (L-L) voltage/range ³	V	240 / 211 – 264	
Max continuous output current	A	1.0	1.21
Nominal frequency	Hz	60	
Extended frequency range	Hz	50 – 68	
AC short circuit fault current over 3 cycles	A _{rms}	2	
Max units per 20 A (L-L) branch circuit ⁴		16	13
Total harmonic distortion		<5%	
Overvoltage class AC port		III	
AC port backfeed current	mA	30	
Power factor setting		1.0	
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging	
Peak efficiency	%	97.5	97.6
CEC weighted efficiency	%	97	97
Night-time power consumption	mW	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	
COMPLIANCE			
Certifications		CA Rule 21 (UL 1741-SB), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01	
		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) No enforced DC/AC ratio. See the compatibility calculator at <https://link.enphase.com/module-compatibility>

(2) Maximum continuous input DC current is 10.6A (3) Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

Enphase IQ Combiner 4/4C

X-IQ-AM1-240-4
X-IQ-AM1-240-4C



The **Enphase IQ Combiner 4/4C** with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure and streamlines IQ microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.

Smart

- Includes IQ Gateway for communication and control
- Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), included only with IQ Combiner 4C
- Includes solar shield to match Enphase IQ Battery aesthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Centered mounting brackets support single stud mounting
- Supports bottom, back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included for both the IQ Combiner SKU's
- UL listed



To learn more about Enphase offerings, visit enphase.com



Enphase IQ Combiner 4/4C

MODEL NUMBER

IQ Combiner 4 (X-IQ-AM1-240-4)	IQ Combiner 4 with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver solar shield to match the IQ Battery system and IQ System Controller 2 and to deflect heat.
IQ Combiner 4C (X-IQ-AM1-240-4C)	IQ Combiner 4C with Enphase IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the IQ Battery and IQ System Controller and to deflect heat.

ACCESSORIES AND REPLACEMENT PARTS

Ensemble Communications Kit COMMS-CELLMODEM-M1-06 CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05	(not included, order separately) - Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with 5-year Sprint data plan for Ensemble sites - 4G based LTE-M1 cellular modem with 5-year Sprint data plan - 4G based LTE-M1 cellular modem with 5-year AT&T data plan
Circuit Breakers BRK-10A-2-240V BRK-15A-2-240V BRK-20A-2P-240V BRK-15A-2P-240V-B BRK-20A-2P-240V-B	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220 Circuit breaker, 2 pole, 15A, Eaton BR215B with hold down kit support Circuit breaker, 2 pole, 20A, Eaton BR220B with hold down kit support
EPLC-01	Power line carrier (communication bridge pair), quantity - one pair
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 4/4C
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 4/4C (required for EPLC-01)
XA-ENV-PCBA-3	Replacement IQ Gateway printed circuit board (PCB) for Combiner 4/4C
X-IQ-NA-HD-125A	Hold down kit for Eaton circuit breaker with screws.

ELECTRICAL SPECIFICATIONS

Rating	Continuous duty
System voltage	120/240 VAC, 60 Hz
Eaton BR series busbar rating	125 A
Max. continuous current rating	65 A
Max. continuous current rating (input from PV/storage)	64 A
Max. fuse/circuit rating (output)	90 A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. total branch circuit breaker rating (input)	80A of distributed generation / 95A with IQ Gateway breaker included
IQ Gateway breaker	10A or 15A rating GE/Siemens/Eaton included
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway
Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers

MECHANICAL DATA

Dimensions (WxHxD)	37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets.
Weight	7.5 kg (16.5 lbs)
Ambient temperature range	-40° C to +46° C (-40° to 115° F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes	<ul style="list-style-type: none"> • 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors • 60 A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors Always follow local code requirements for conductor sizing.
Altitude	Up to 3000 meters (9,842 feet)

INTERNET CONNECTION OPTIONS

Integrated Wi-Fi	802.11b/g/n
Cellular	CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.
Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)

COMPLIANCE

Compliance, IQ Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5
Compliance, IQ Gateway	UL 60601-1/CANCSA 22.2 No. 61010-1

To learn more about Enphase offerings, visit enphase.com

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Enphase IQ Battery 10

The **Enphase IQ Battery 10** all-in-one AC-coupled storage system is **reliable, smart, simple, and safe**. It is comprised of three base IQ Battery 3 units, has a total usable energy capacity of 10.08 kWh and twelve embedded Grid-forming Microinverters with 3.84 kW power rating. It provides backup capability and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.

Reliable

- Proven high reliability IQ Series Microinverters
- Ten-year limited warranty
- Three independent IQ Battery base units
- Twelve embedded IQ8X-BAT Microinverters
- Passive cooling (no moving parts/fans)

Smart

- Grid-forming capability for backup operation
- Remote software and firmware upgrade
- Mobile app-based monitoring and control
- Support for self consumption
- Utility time of use (TOU) optimization

Simple

- Fully integrated AC battery system
- Quick and easy plug-and-play installation
- Interconnects with standard household AC wiring

Safe

- Cells safety tested
- Lithium iron phosphate (LFP) chemistry for maximum safety and longevity



Enphase IQ Battery 10

MODEL NUMBER	
ENCHARGE-10-1P-NA	IQ Battery 10 system with integrated Enphase IQ Microinverters and battery management unit (BMU). Includes: - Three IQ Battery 3.36 kWh base units (B03-A01-US00-1-3) - One IQ Battery 10 cover kit with cover, wall mounting bracket, watertight conduit hubs, and interconnect kit for wiring between batteries (B10-C-1050-O)
ACCESSORIES	
ENCHARGE-HNDL-R1	One set of IQ Battery base unit installation handles
OUTPUT (AC) @ 240 VAC ¹	
Rated (continuous) output power	3.84 kVA
Peak output power	5.7 kVA (10 seconds)
Nominal voltage / range	240 / 211 – 264 VAC
Nominal frequency / range	60 / 57 – 61 Hz
Rated output current	16 A
Peak output current	24.6A (10 seconds)
Power factor (adjustable)	0.85 leading ... 0.85 lagging
Maximum units per 20 A branch circuit	1 unit (single phase)
Interconnection	Single-phase
Maximum AC short circuit fault current over 3 cycles	69.6 Arms
Round trip efficiency ²	89%
BATTERY	
Total capacity	10.5 kWh
Usable capacity	10.08 kWh
Round trip efficiency	96%
Nominal DC voltage	67.2 V
Maximum DC voltage	73.5 V
Ambient operating temperature range	-15° C to 55° C (5° F to 131° F) non-condensing
Optimum operating temperature range	0° C to 30° C (32° F to 86° F)
Chemistry	Lithium iron phosphate (LFP)
MECHANICAL DATA	
Dimensions (WxHxD)	1070 mm x 664 mm x 319 mm (42.13 in x 26.14 in x 12.56 in)
Weight	Three individual 44.2 kg (97.4 lbs) base units plus 21.1 kg (48.7 lbs) cover and mounting bracket; total 154.7 kg (341 lbs)
Enclosure	Outdoor – NEMA type 3R
IQ 8X-BAT Microinverter enclosure	NEMA type 6
Cooling	Natural convection – No fans
Altitude	Up to 2500 meters (8200 feet)
Mounting	Wall mount
FEATURES AND COMPLIANCE	
Compatibility	Compatible with grid-tied PV systems. Compatible with Enphase M215/M250 and IQ Series Micros, Enphase IQ System Controller, and Enphase IQ Gateway for backup operation.
Communication	Wireless 2.4 GHz
Services	Backup, self-consumption, TOU, Demand Charge, NEM Integrity
Monitoring	Enphase Installer Platform and Enphase App monitoring options; API integration
Compliance	UL 9540, UN 38.3, UL 9540A, UL 1998, UL 991, NEMA Type 3R, AC156 EMI: 47 CFR, Part 15, Class B, ICES 003 Cell Module: UL 1973, UN 38.3 Inverters: UL 62109-1, IEC 62109-2, UL 1741SA, CAN/CSA C22.2 No. 107.1-16, and IEEE 1547
LIMITED WARRANTY	
Limited Warranty ³	>70% capacity, up to 10 years or 4000 cycles
<ol style="list-style-type: none"> 1. Supported in backup/off grid operations 2. AC to Battery to AC at 50% power rating. 3. Whichever occurs first. Restrictions apply. 	

To learn more about Enphase offerings, visit enphase.com

Enphase IQ System Controller 2

The **Enphase IQ System Controller 2** connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnection device (MID) functionality by automatically detecting and seamlessly transitioning the home energy system from grid power to backup power in the event of a grid failure. It consolidates interconnection equipment into a single enclosure and streamlines grid independent capabilities of PV and storage installations by providing a consistent, pre-wired solution for residential applications.

Reliable

- Durable NEMA type 3R enclosure
- Ten-year limited warranty

Smart

- Controls safe connectivity to the grid
- Automatically detects grid outages
- Provides seamless transition to backup

Simple

- Connects to the load or service equipment¹ side of the main load panel
- Centered mounting brackets support single stud mounting
- Supports conduit entry from the bottom, bottom left side, and bottom right side
- Supports whole home and partial home backup and subpanel backup
- Up to 200A main breaker support
- Includes neutral-forming transformer for split phase 120/240V backup operation
- IQ System Controller supports backward compatibility with older generation of PV microinverters (M215, M250 and S series), making it simple for home owners to upgrade their systems
- Easy integration with generator from major manufacturers

1. IQ System Controller 2 is not suitable for use as service equipment in Canada.



Enphase IQ System Controller 2

MODEL NUMBER

EP200G101-M240US01	Enphase IQ System Controller 2 with neutral-forming transformer (NFT), Microgrid Interconnect Device (MID), breakers, and screws. Streamlines grid-independent capabilities of PV and battery installations.
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ACCESSORIES and REPLACEMENT PARTS

EP200G-NA-XA-E3	Replacement IQ System Controller 2 printed circuit board
EP200G-NA-HD-200A	Eaton type BR circuit breaker hold-down screw kit, BRHDK125
CT-200-SPLIT	200 A split core current transformers for Generator metering (+/- 2.5%)
Circuit breakers (as needed) ^{2,3}	Not included, must order separately:
• BRK-100A-2P-240V : Main breaker, 2 pole, 100A, 25kAIC, CSR2100	• BRK-20A-2P-240V-B: Circuit breaker, 2 pole, 20A, 10kAIC, BR220B
• BRK-125A-2P-240V: Main breaker, 2 pole, 125A, 25kAIC, CSR2125N	• BRK-30A-2P-240V: Circuit breaker, 2 pole, 30A, 10kAIC, BR230B
• BRK-150A-2P-240V: Main breaker, 2 pole, 150A, 25kAIC, CSR2150N	• BRK-40A-2P-240V: Circuit breaker, 2 pole, 40A, 10kAIC, BR240B
• BRK-175A-2P-240V: Main breaker, 2 pole, 175A, 25kAIC, CSR2175N	• BRK-60A-2P-240V: Circuit breaker, 2 pole, 60A, 10kAIC, BR260
• BRK-200A-2P-240V: Main breaker, 2 pole, 200A, 25kAIC, CSR2200N	• BRK-80A-2P-240V: Circuit breaker, 2 pole, 80A, 10kAIC, BR280
EP200G-HNDL-R1	IQ System Controller 2 installation handle kit (order separately)
EP200G-LITKIT	IQ System Controller 2 literature kit, including labels, feed-through headers, screws, filler plates, and QIG
BRK-20A40A-2P-240V	2 pole, 20A/40A, 10kAIC, BQC220240

ELECTRICAL SPECIFICATIONS

Assembly rating	Continuous operation at 100% of its rating
Nominal voltage / range (L-L)	240 VAC / 100 - 310 VAC
Voltage measurement accuracy	±1% V nominal (±1.2V L-N and ±2.4V L-L)
Auxiliary contact for load control, excess PV control, and generator two-wire control	24V, 1A
Nominal frequency / range	60 Hz / 56 - 63 Hz
Frequency measurement accuracy	±0.1 Hz
Maximum continuous current rating	160A
Maximum input overcurrent protection device	200A
Maximum output overcurrent protection device	200A
Maximum overcurrent protection device rating for Generator circuit ⁴	80A
Maximum overcurrent protection device rating for storage branch circuit ⁴ (the storage branch circuit can be replaced with PV)	80A
Maximum overcurrent protection device rating for IQ8 PV combiner branch circuit ⁴	80A
Neutral Forming Transformer (NFT)	<ul style="list-style-type: none"> • Breaker rating (pre-installed): 40A between L1 and Neutral; 40A between L2 and Neutral • Continuous rated power: 3600VA • Maximum continuous unbalance current: 30A @ 120V • Peak rated power: 8800VA for 30 seconds • Peak unbalanced current: 80A @ 120V for 30 seconds

MECHANICAL DATA

Dimensions (WxHxD)	50cm x 91.6cm x 24.6cm (19.7 in x 36 in x 9.7 in)
Weight	39.4 kg (87 lbs)
Ambient temperature range	-40° C to +50° C (-40° F to 122° F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NEMA type 3R, polycarbonate construction
Altitude	To 2500 meters (8200 feet)

WIRE SIZES

Connections (All lugs are rated to 90C)	<ul style="list-style-type: none"> • Main lugs and backup load lugs • CSR breaker bottom wiring lugs • BR breakers (wire provided) • AC combiner lugs, Encharge lugs, and generator lugs • Neutral (large lugs) 	<ul style="list-style-type: none"> Cu/Al: 1 AWG – 300 KCMIL Cu/Al: 2 AWG – 300 KCMIL 6 AWG 14 AWG – 2 AWG Cu/Al: 6 AWG - 300 KCMIL
Neutral and ground bars	<ul style="list-style-type: none"> Large holes (5/16-24 UNF) Small holes (10-32 UNF) 	<ul style="list-style-type: none"> 14 AWG – 1/0 AWG 14 AWG – 6 AWG

COMPLIANCE

Compliance	<ul style="list-style-type: none"> UL 1741, UL 1741 SA, UL 1741 PCS, UL1998, UL869A⁵, UL67⁵, UL508⁵, UL50E⁵ CSA 22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, AC156. IQ System Controller 2 is approved for Use as Service Equipment in the United States⁵ IFETEL homologation number: RCPENEP22-2078
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2. Compatible with BRHDK125 Hold-Down Kit to comply with 2017 NEC 710.15E for back-fed circuit breakers.
3. The IQ System Controller 2 is rated 22 kAIC
4. Not included. Installer must provide properly rated breaker per circuit breaker list above.
5. Sections from these standards were used during the safety evaluation and included in the UL 1741 listing.



Ground Mount System



All-Terrain Mounting

The IronRidge Ground Mount System combines our XR100 or XR1000 rails with locally-sourced steel pipes or mechanical tubing, to create a cost-effective structure capable of handling any site or terrain challenge.

Installation is simple with only a few structural components and no drilling, welding, or heavy machinery required. In addition, the system works with a variety of foundation options—including concrete piers, ground screws, helical or driven piles, and above-ground ballast blocks.

Rugged Construction
Engineered steel and aluminum components ensure durability.

PE Certified
Pre-stamped engineering letters available in most states.

UL 2703 Listed System
Meets newest effective UL 2703 standard.

Design Software
Online tool generates engineering values and bill of materials.

Flexible Architecture
Multiple foundation and array configuration options.

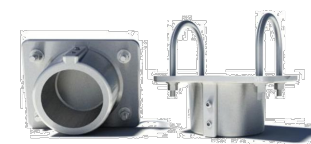
25-Year Warranty
Products guaranteed to be free of impairing defects.



360° Product Tour
Visit ironridge.com

Substructure

Top Caps



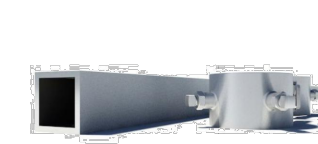
Connect vertical and cross pipes.

Bonded Rail Connectors



Attach and bond Rail Assembly to cross pipes.

Diagonal Braces



Optional Brace provides additional support.

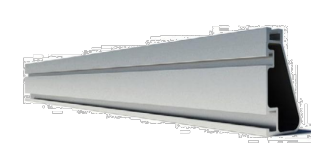
Cross Pipe & Piers



Steel pipes or mechanical tubing for substructure.

Rail Assembly

XR100/XR1000 Rails



Curved rails increase spanning capabilities.

UFOs



Universal Fastening Objects bond modules to rails.

Stopper Sleeves



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

CAMO



Bond modules to rails while staying completely hidden.

Resources



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