



Public Works Department  
**BUILDING DIVISION**  
 1444 West Garvey Avenue  
 West Covina, CA 91790  
 626-939-8425

**ROOFTOP PHOTOVOLTAIC  
 SYSTEMS - EXPEDITED PERMITS**

Job Address: \_\_\_\_\_ Permit No. \_\_\_\_\_

Owner: \_\_\_\_\_

Contractor: \_\_\_\_\_ License: \_\_\_\_\_

*Name* \_\_\_\_\_

Phone: \_\_\_\_\_

*Address* \_\_\_\_\_

\_\_\_\_\_

**APPLICABILITY:** The following applies to residential rooftop photovoltaic systems of 10kW or less. Systems larger than 10kW or mounted in locations other than on the roof of the home, garage or other accessory structures of residential properties will be required to submit for plans review.

**REQUIRED:** Two (2) sets of plans containing the following:

- Site and roof plan. Clearly identify location(s) of PV systems with respect to the property and clearances to hip and ridge lines.
- Rail and track connection to roof details.

**INSTRUCTIONS**

1. Complete building permit application.
2. Using the attached Table A, complete Single Line Diagram of for either a Microinverter or Central Inverter system pertaining to your project. *Note: if the existing electrical panel is required to be upgraded, complete the electrical permit application in addition to the building permit application.*
3. Submit completed permit application and package and pay required fees to the Permit Clerk.

**SPECIFIC REQUIREMENTS**

1. Smoke and Carbon Monoxide Detectors shall be installed in accordance to the California Residential Code Sections R314 and R315.
2. Labels shall be made of durable plastic or metallic material placards with edged or engraved lettering.
3. Three (3) feet clearance is required from edge of panels to roof ridges and hips.
4. A whole house placard showing the roof plan of the house and locations of all PV panels, service panels, AC disconnect, DC disconnect, inverters, and the verbiage below shall be permanently affixed on the service panel cover:

“CAUTION: POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE  
 FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN:”

**Table A**

Ampacity based on the following:

1. Table 310.16-Allowable ampacity of insulated conductors, 90°C rated conductors.
2. Table 310.16-Correction factors based on temperature ranges
3. Table 310.15(B)(2)(c)-Ambient temperature adjustments for conduits exposed to sunlight on or above rooftops
4. Table 310.15(B)(2)(a)-Adjustment factors for more than three current-carrying conductors in a raceway or cable.
5. Sections 240.4(D)(5) and 240.4(D)(7) for 10 AWG and 12 AWG conductors.

**Maximum Allowable Ampacity of Conductors Installed in a Circular Raceway, Exposed to Sunlight, On or Above Rooftops**

Number of Current Carrying Conductors In a Raceway	Height Above Rooftop	Highest Ambient Temperature					
		30° C or less(86°F or less)			31° C to 35° C(87°F to 95°F)		
		12AWG	10AWG	8AWG	12AWG	10AWG	8AWG
Up to 3 Conductors	0 to 0.5"	17	23	32	17	23	32
	above 0.5" to 3.5"	20	30	42	20	28	39
	above 3.5" to 12"	20	30	45	20	30	42
	above 12"	20	30	48	20	30	45
	Other than above rooftop	30	40	55	28	36	52
4 to 6 Conductors	0 to 0.5"	14	19	26	14	19	26
	above 0.5" to 3.5"	18	24	33	17	23	31
	above 3.5" to 12"	20	26	36	18	24	33
	above 12"	20	28	38	20	26	36
	Other than above rooftop	24	32	44	22	28	41
Up to 3 Conductors	0 to 0.5"	<b>36° C to 40° C(96° F to 104° F)</b>			<b>41° C to 45° C(105° F to 113° F)</b>		
		12	16	23	12	16	23
	above 0.5" to 3.5"	17	23	32	17	23	32
		20	28	39	17	23	32
	above 3.5" to 12"	20	30	42	20	28	39
		27	36	50	26	34	47
4 to 6 Conductors	0 to 0.5"	10	13	18	10	13	18
	above 0.5" to 3.5"	14	19	26	14	19	26
	above 3.5" to 12"	17	23	31	14	19	26
	above 12"	18	24	33	17	23	31
	Other than above rooftop	21	28	40	20	27	37
Up to 3 Conductors	0 to 0.5"	<b>46° C to 50° C(114° F to 122° F)</b>			<b>51° C to 55° C(123° F to 131° F)</b>		
		0	0	0	0	0	0
	above 0.5" to 3.5"	12	16	23	12	16	23
		17	23	32	12	16	23
	above 3.5" to 12"	17	23	32	17	23	32
		24	32	45	22	30	41
4 to 6 Conductors	0 to 0.5"	0	0	0	0	0	0
	above 0.5" to 3.5"	10	13	18	10	13	18
	above 3.5" to 12"	14	19	26	10	13	18
	above 12"	14	19	26	14	19	26
	Other than above rooftop	19	25	36	17	24	32

-Photovoltaic Output circuit shall be type THWN-2, XHHW-2, RHW-2, USE-2, or PV Wire.

-Inverter Output circuit shall be type THWN-2, XHHW-2, or RHW-2.

-DC equipment grounding conductor shall be size with Table 250.122. Where no overcurrent protective device is used in the circuit, an assumed overcurrent device rated at the photovoltaic rated short-circuit current shall be used in Table 250.122.

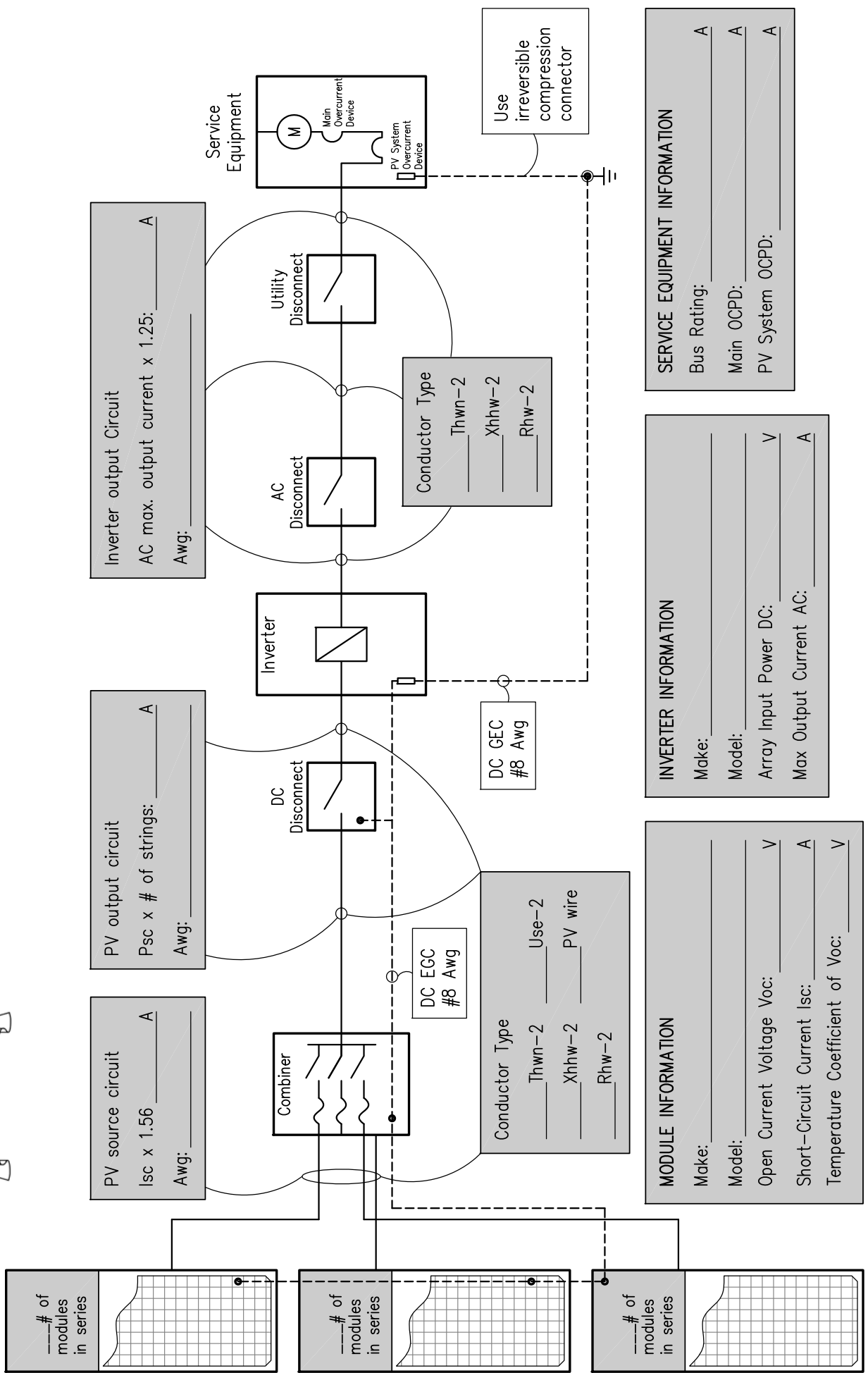
-DC grounding electrode conductor shall be sized not smaller than the largest conductor supplied by the system, and not smaller than 8AWG copper.

# CENTRAL INVERTER SYSTEM

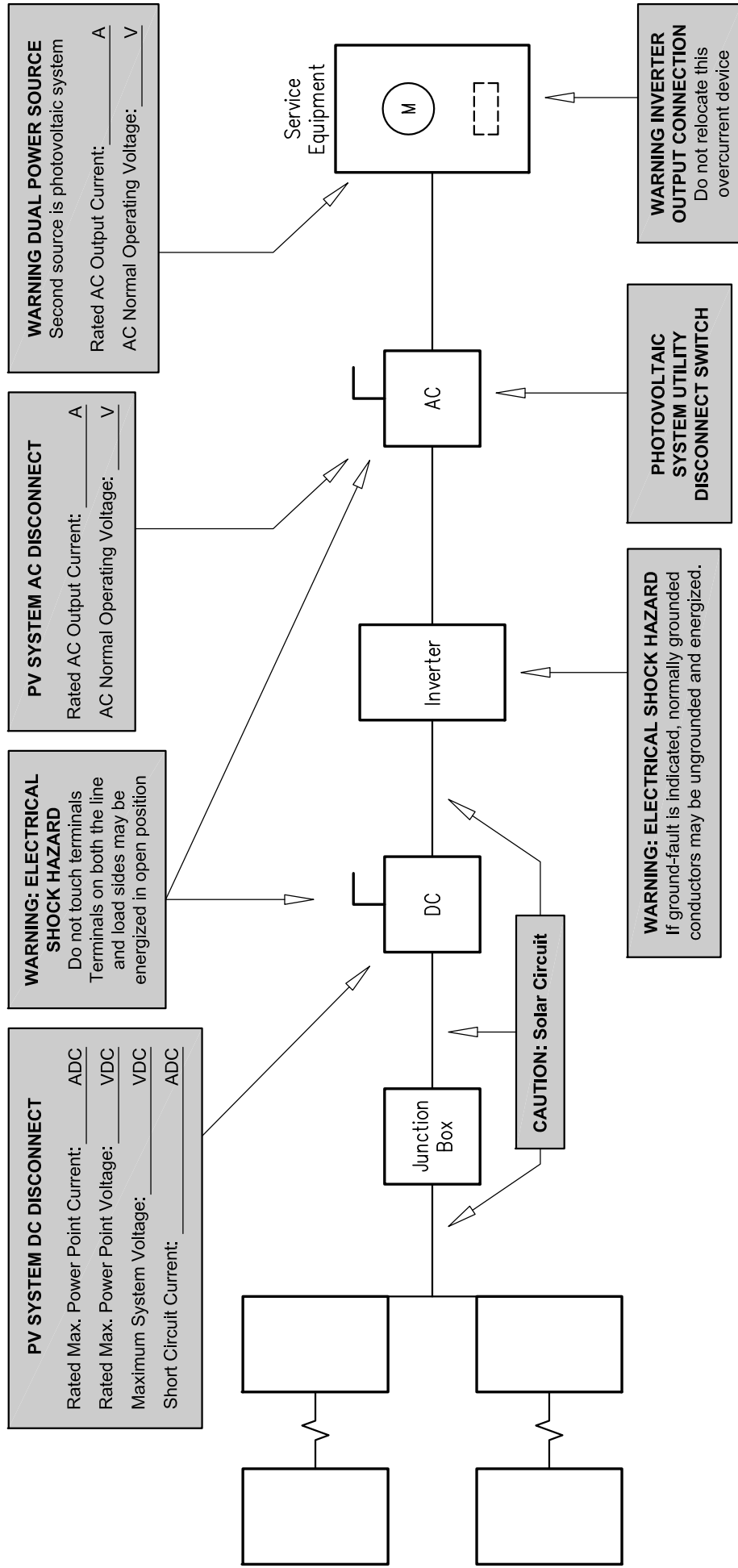
10KW Output Max.  
120/240v, Single Phase



**NOTE TO APPLICANT:**  
COMPLETE ALL INFORMATION  
IN THE SHADED BOXES

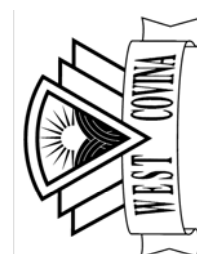


# CENTRAL-INVERTER SYSTEM SIGNAGE



**NOTE TO APPLICANT:**

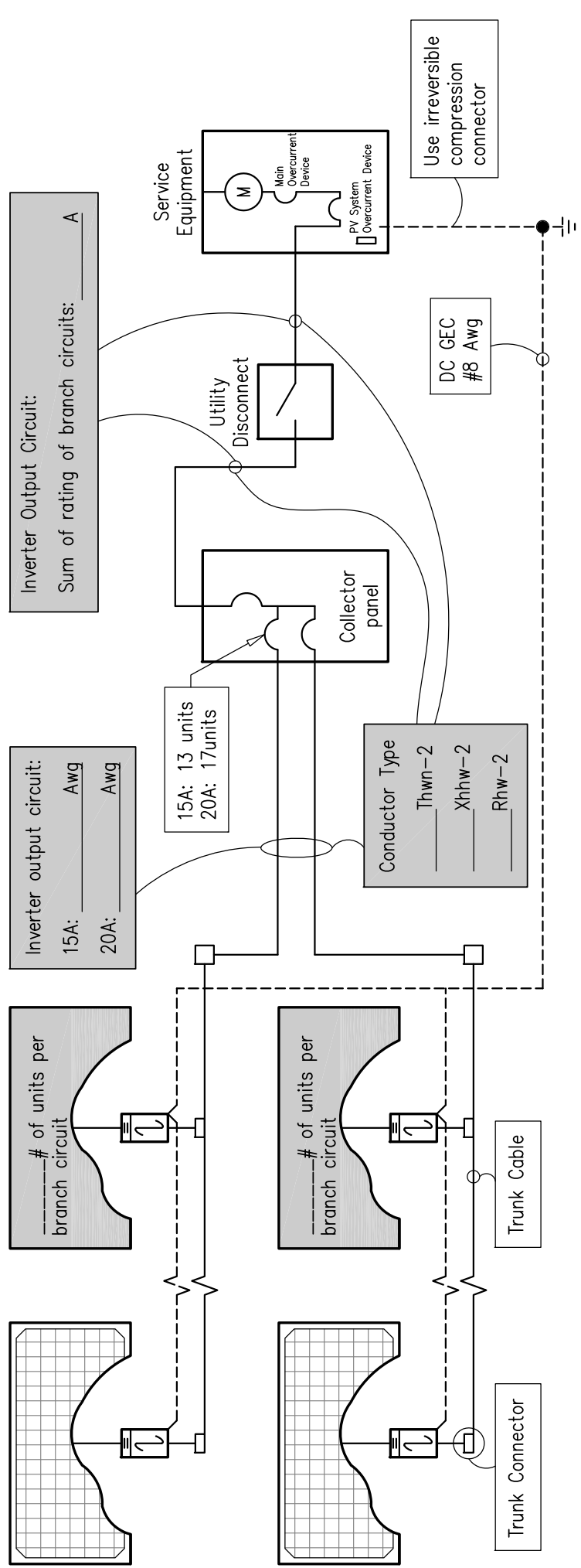
1. LABELS SHALL BE MADE OF DURABLE PLASTIC OR METALLIC MATERIAL PLACARDS WITH EDGED OR ENGRAVED LETTERING PERMANENTLY ATTACHED TO THE DEVICE.
2. VOLTAGE AND AMPERE RATINGS MUST BE SPECIFIED ON THE LABELS.



# MICRO-INVERTER SYSTEM

10KW Output Max.  
120/240v, Single Phase

**NOTE TO APPLICANT:**  
COMPLETE ALL INFORMATION  
IN THE SHADED BOXES



Inverter output circuit:  
15A: \_\_\_ Awg  
20A: \_\_\_ Awg

15A: 13 units  
20A: 17 units

Conductor Type  
\_\_\_ Thwn-2  
\_\_\_ Xhhw-2  
\_\_\_ Rhw-2

Inverter Output Circuit:  
Sum of rating of branch circuits: \_\_\_ A

Use irreversible  
compression  
connector

**MODULE INFORMATION**

Make: \_\_\_\_\_  
 Model: \_\_\_\_\_  
 Open Current Voltage Voc: \_\_\_\_\_ V  
 Short-Circuit Current Isc: \_\_\_\_\_ A  
 Temperature Coefficient of Voc: \_\_\_\_\_ V

**INVERTER INFORMATION**

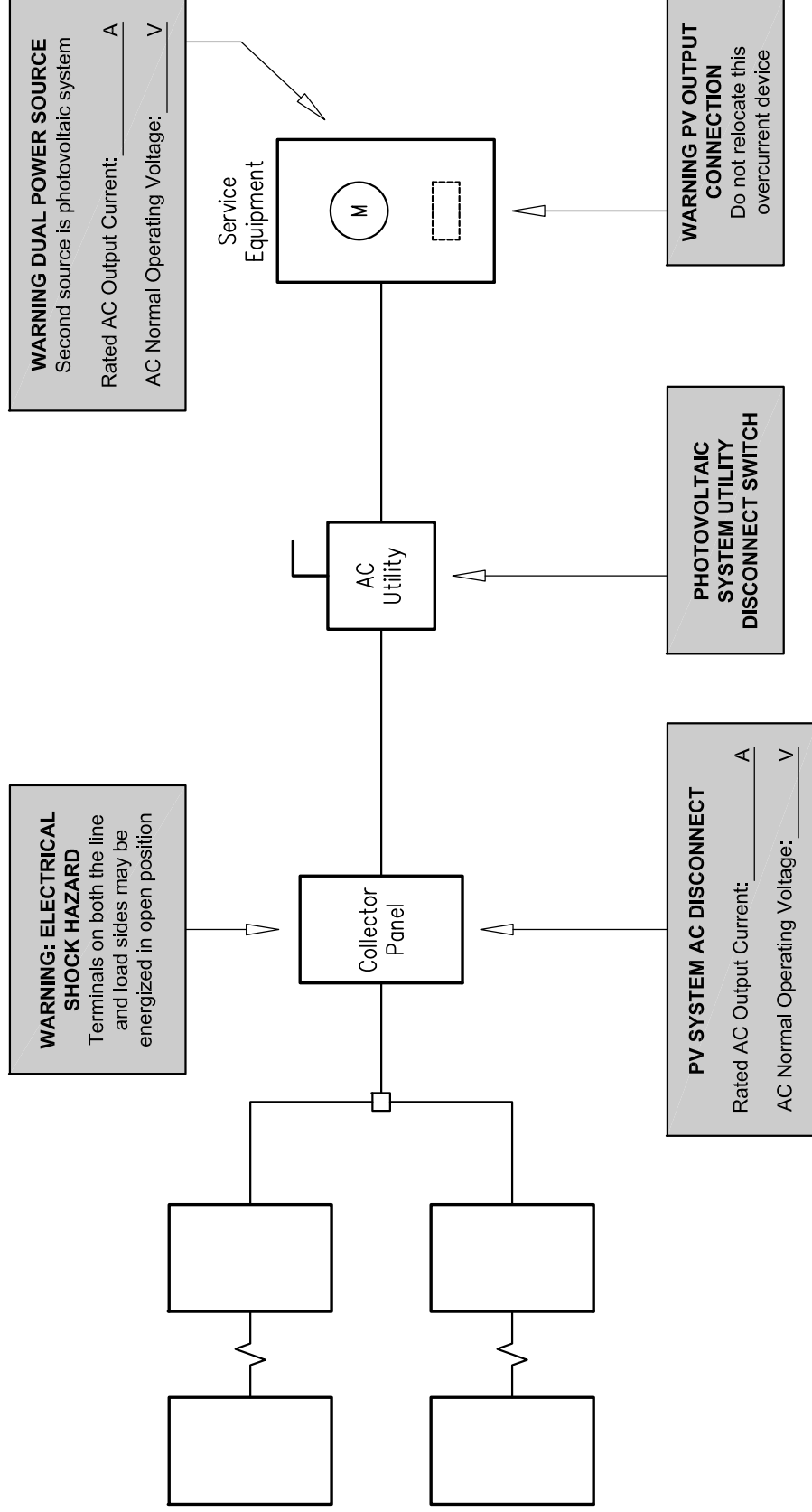
Make: \_\_\_\_\_  
 Model: \_\_\_\_\_  
 Array Input DC Voltage: \_\_\_\_\_ V  
 Nominal output current: \_\_\_\_\_ A  
 Max. units per branch circuit: \_\_\_\_\_

**SERVICE EQUIPMENT INFORMATION**

Bus Rating: \_\_\_\_\_ A  
 Main OCPD: \_\_\_\_\_ A  
 PV System OCPD: \_\_\_\_\_ A



**MICRO-INVERTER SYSTEM SIGNAGE**



**NOTE TO APPLICANT:**

1. LABELS SHALL BE MADE OF DURABLE PLASTIC OR METALLIC MATERIAL PLACARDS WITH EDGED OR ENGRAVED LETTERING PERMANENTLY ATTACHED TO THE DEVICE.
2. VOLTAGE AND AMPERE RATINGS MUST BE SPECIFIED ON THE LABELS.