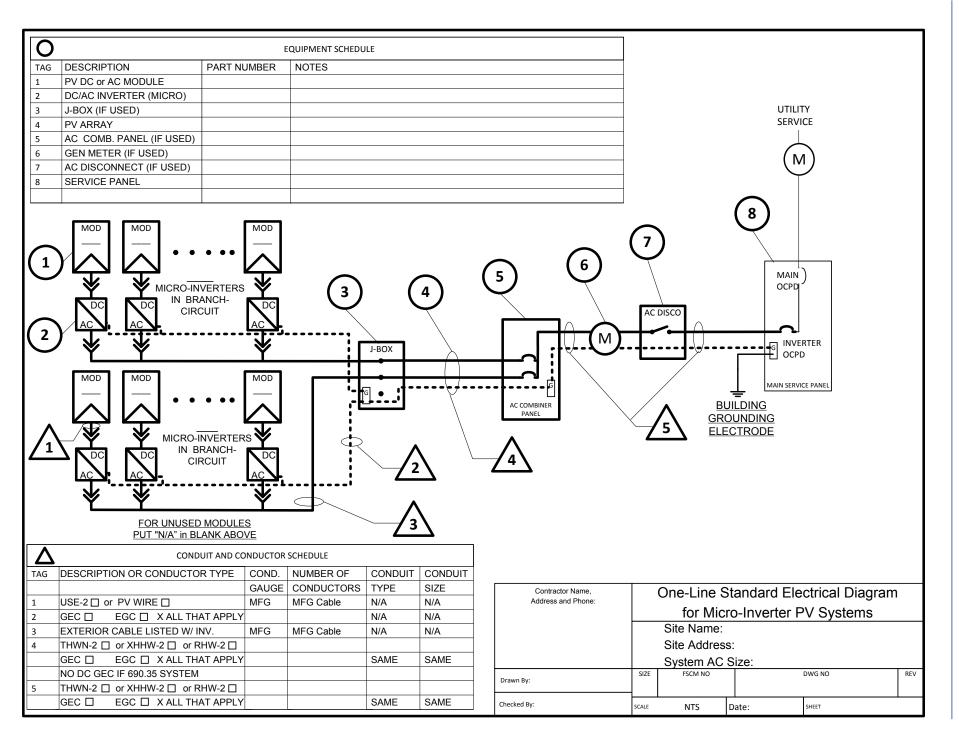
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# MICRO-INVERTER ELECTRICAL DIAGRAM



# Permit Process for PV Systems

## NOTES FOR MICRO-INVERTER ELECTRICAL DIAGRAM

PV MODULE RATINGS @ STC )				
MODULE MAKE				
MODULE MODEL				
MAX POWER-POINT CURRENT (I <sub>MP</sub> )				
MAX POWER-POINT VOLTAGE (V <sub>MP</sub> )				
OPEN-CIRCUIT VOLTAGE (Voc)				
SHORT-CIRCUIT CURRENT (I <sub>SC</sub> )				
MAX SERIES FUSE (OCPD)				
MAXIMUM POWER (P <sub>MAX</sub> )				
MAX VOLTAGE (TYP 600V <sub>DC</sub> )				
VOC TEMP COEFF (mV/°C □ or %/°C □)				
IF COEFF SUPPLIED, CIRCLE UNITS				

### **NOTES FOR ALL DRAWINGS:**

OCPD = OVERCURRENT PROTECTION DEVICE

NATIONAL ELECTRICAL CODE® REFERENCES SHOWN AS (NEC XXX.XX)

### **INVERTER RATINGS)**

INVERTER MAKE		
INVERTER MODEL		
MAX DC VOLT RATING		
MAX POWER @ 40°C		
NOMINAL AC VOLTAGE		
MAX AC CURRENT		
MAX OCPD RATING		
1		

### SIGNS

### SIGN FOR DC DISCONNECT

No sign necessary since 690.51 marking on PV module covers needed information

# SIGN FOR INVERTER OCPD AND AC DISCONNECT (IF USED)

SOLAR PV SYSTEM AC POINT OF CONNECTION

AC OUTPUT CURRENT

NOMINAL AC VOLTAGE

THIS PANEL FED BY MULTIPLE SOURCES (UTILITY AND SOLAR)

### NOTES FOR ARRAY CIRCUIT WIRING

- 1.) LOWEST EXPECT AMBIENT TEMPERATURE BASED ON ASHRAE MINIMUM MEAN EXTREME DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. LOWEST EXPECTED AMBIENT TEMP \_\_\_\_\_°C
- 2.) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMPERATURE \_\_\_\_\_°C
- 2.) 2009 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.1°C). FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES).
- a) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 7.68 AMPS OR LESS WHEN PROTECTED BY A 12-AMP OR SMALLER FUSE.
- b) 10 AWG,  $90^{\circ}$ C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH Isc OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE.

### NOTES FOR INVERTER CIRCUITS

- 1) IF UTILITY REQUIRES A VISIBLE-BREAK SWITCH, DOES THIS SWITCH MEET THE REQUIREMENT? YES  $_{\square}$  NO  $_{\square}$  N/A  $_{\square}$
- 3) SIZE PHOTOVOLTAIC POWER SOURCE (DC) CONDUCTORS BASED ON MAX CURRENT ON NEC 690.53 SIGN OR OCPD RATING AT DISCONNECT
- 4) SIZE INVERTER OUTPUT CIRCUIT (AC) CONDUCTORS ACCORDING TO INVERTER OCPD AMPERE RATING. (See Guide Section 9)
- 5) TOTAL OF \_\_\_\_ INVERTER OUTPUT CIRCUIT OCPD(s), ONE FOR EACH MICRO-INVERTER CIRCUIT. DOES TOTAL SUPPLY BREAKERS COMPLY WITH 120% BUSBAR EXCEPTION IN 690.64(B)(2)(a)? YES □ NO □

Contractor Name, Address and Phone:	Notes for One-Line Standard Electrical					
/ National and Thomas	Diagram for Single-Phase PV Systems					
	Site Name:					
	Site Address:					
System AC Size:						
Drawn By:	SIZE	FSCM NO		DWG NO	REV	
Checked By:	SCALE	NTS	Date:	SHEET		