

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

5060 Wp (STC) PHOTOVOLTAIC ARRAY  
ROOF-MOUNTED  
(2) PV SUBARRAYS (CIRCUITS)  
(11) CS6P-230 MODULES IN SERIES  
Isc=8.34 AMPS PER CIRCUIT  
Vmp=325.6 VDC  
SEE SHEET E-2

(2) PV SUBARRAYs  
5060 Wp

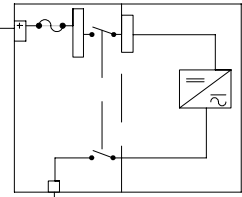
4-#12 AWG XLP/USE-2  
SUNRES  
1-#10 BARE GND

JUNCTION BOX  
TRANSITION  
TO CONDUIT  
TYPICAL IN  
2 PLACES  
(UL LISTED)

4-#10 THWN-2  
1-#10 THWN-2 GND  
PER CIRCUIT  
1 1/4" EMT CONDUIT  
OVER ROOF

PHOTOVOLTAIC SYSTEM  
DC SAFETY DISCONNECT  
SWITCH  
3P, 30A, 600VDC  
SQ-D HU361RB

4-#10 THWN-2  
1-#10 THWN-2 GND  
PER CIRCUIT  
1 1/4" EMT CONDUIT



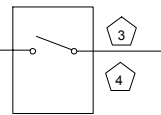
5.0 KW UTILITY INTERTIE INVERTER  
WITH DC DISCONNECT  
SMA 5000US  
200-480 VDC TO 240VAC, 1  $\phi$ , 60Hz  
VOLTAGE AND PHASE SENSING NEUTRAL  
UL1741 LISTED  
600 VDC MAX INPUT VOLTAGE  
(NEGATIVE GROUND)  
AC AND DC DISCONNECT SWITCH  
INTEGRAL TO INVERTER

5060 Wp (STC) PHOTOVOLTAIC ARRAY  
ROOF-MOUNTED  
(2) PV SUBARRAYS (CIRCUITS)  
(11) CS6P-230 MODULES IN SERIES  
Isc=8.34 AMPS PER CIRCUIT  
Vmp=325.6 VDC  
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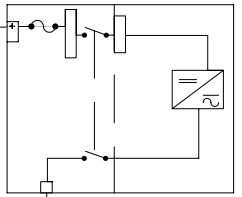
(2) PV SUBARRAYs  
5060 Wp

4-#12 AWG XLP/USE-2  
SUNRES  
1-#10 BARE GND

4-#10 THWN-2  
1-#10 THWN-2 GND  
PER CIRCUIT  
1 1/4" EMT CONDUIT  
OVER ROOF



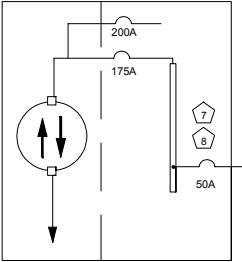
4-#10 THWN-2  
1-#10 THWN-2 GND  
PER CIRCUIT  
1 1/4" EMT CONDUIT



5.0 KW UTILITY INTERTIE INVERTER  
WITH DC DISCONNECT  
SMA 5000US  
200-480 VDC TO 240VAC, 1  $\phi$ , 60Hz  
VOLTAGE AND PHASE SENSING NEUTRAL  
UL1741 LISTED  
600 VDC MAX INPUT VOLTAGE  
(NEGATIVE GROUND)  
AC AND DC DISCONNECT SWITCH  
INTEGRAL TO INVERTER

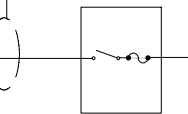
240VAC  
3-#8 THWN-2  
1-#10 THWN-2 GND  
1" EMT CONDUIT  
PER BRANCH

EXISTING 400A ELECTRICAL  
SERVICE ENTRANCE WITH  
UTILITY BI-DIRECTIONAL METER  
BREAKERS LISTED FOR  
BACKFEED PROTECTION

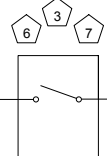


TO UTILITY GRID  
120/240 VAC, 1  $\phi$

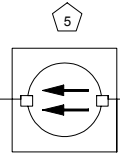
240VAC  
3-#4 THWN-2  
1-#6 THWN-2 GND  
1 1/4" EMT CONDUIT



PHOTOVOLTAIC SYSTEM  
UTILITY DISCONNECT SWITCH  
FUSEABLE  
2P, 60A, 240VAC  
SQ-D H223NRB  
FUSES RATED FOR  
BACKFEED PROTECTION

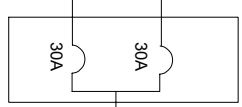


PHOTOVOLTAIC SYSTEM  
UTILITY DISCONNECT SWITCH  
2P, 100A, 240VAC  
SQ-D DU223RB



PHOTOVOLTAIC  
SYSTEM  
DEDICATED KWH  
METER  
FORM 2S 100A

240VAC  
3-#4 THWN-2  
1-#6 THWN-2 GND  
1 1/4" EMT CONDUIT



NOTES:

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 690
- CONDUCTORS ARE COPPER UNLESS OTHERWISE NOTED
- PROVED WARNING SIGN READING "WARNING-ELECTRIC SHOCK HAZARD-DO NOT TOUCH"
- LABEL SWITCH AS "PV ARRAY DC SAFETY DISCONNECT SWITCH". SWITCH TO BE LOCKED PER NEC 690.17
- LABEL "PV SYSTEM DEDICATED kW-HR METER".
- LABEL SWITCH "PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT SWITCH".
- LABEL RATED AC OUTPUT CURRENT AND NOMINAL OPERATING AC VOLTAGE PER NEC 690.54.
- LABEL BREAKER "PHOTOVOLTAIC POWER SOURCE" PER NEC 705.10, AND "PANEL IS BACKFEED".
- LABEL AC COMBINER PANEL AS "DEDICATED AC POWER PANEL. DO NOT ADD LOADS TO THIS PANEL."
- LISTING AGENCY NAMES AND NUMBERS TO BE INDICATED ON POWER INVERTER AND SOLAR MODULES PER NEC 110.3(B)
- GEC TO BE INSTALLED AS REQUIRED BY MANUFACTURE INSTRUCTIONS AND NEC 690.47

ALL EQUIPMENT TO COMPLY WITH NEC 2008

LABELS

PHOTOVOLTAIC SYSTEM UTILITY DISCONNECT OPERATING VOLTAGE: 240 VAC OPERATING CURRENT: 41.67 A OPERATING CURRENT @ 125%: 52.08A OVERCURRENT RATING: 60 A
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COMPANY ADDRESS AND PHONE	COMPANY NAME
COMPANY LOGO	10120 W-DC-STC PHOTOVOLTAIC SYSTEM 1-LINE ELECTRICAL DIAGRAM EXAMPLE LOCATION PHOENIX, AZ
CUSTOMER: EXAMPLE	SIZE: FSCM NO. DWG NO. E-1 REV
DRAWN: TMH	SCALE: SHEET