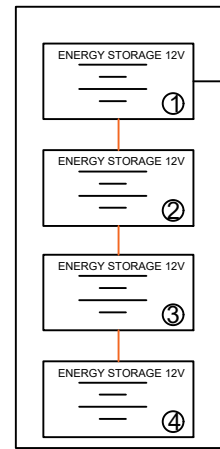
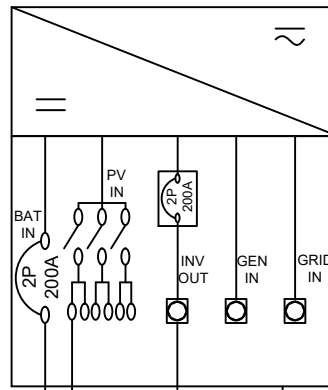


(4) ROLLS S12-160AGM-RE 145AH AGM BATTERIES IN SERIES

(4) ROLLS S12-160AGM-RE 145AH AGM BATTERIES (48V BATTERY BANK)



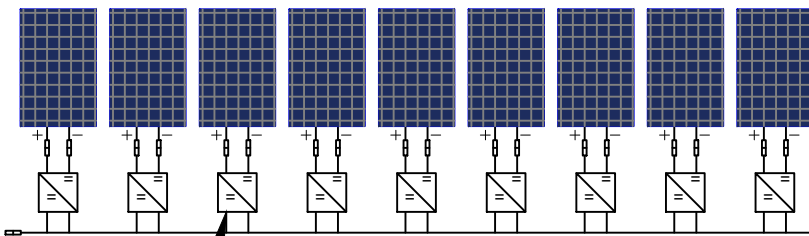
NEW SOLAR INVERTER  
SOLARK 15K-2P-N  
500V, 62.5A MAX CURRENT



CONDUIT SCHEDULE					
#	CONDUIT	CONDUCTOR (RED/BLACK)	GROUND		
			NEUTRAL (WHITE)	(GREEN)	(BARE COPPER)
1	NONE	(2) 10 AWG PV WIRE	NONE	NONE	(1) 6 AWG
2	NONE	12/2 MC CABLE W/ GND			NONE
3	1" PVC	(2) 4 AWG THHN/THWN-2	(1) 4 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	NONE
4	1.5" PVC	(2) 3/0 AWG BATTERY CABLE			

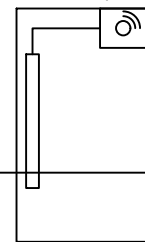
NOTE: FOR PRACTICE INSTALLATION PURPOSES ONLY, NOT TO BE USED FOR ACTUAL CONSTRUCTION

JINKO JKM385M-72HBL-V 385W  
(10) AP SYSTEMS RSD-S-PLC  
(1) STRING OF (10) MODULES  
STRING A

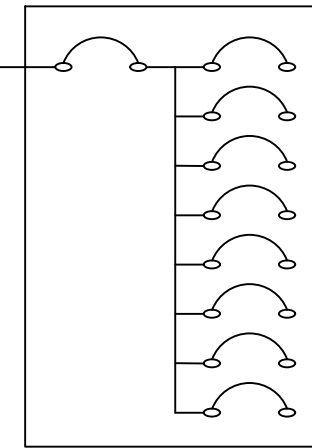


AP SYSTEMS RSD-S-PLC Receivers (one per module)

AP SMART Transmitter-PLC OUTDOOR KIT (FOR DISPLAY ONLY)



(10) JINKO JKM385M-72HBL-V (385W) MODULES.  
(1) STRING OF 10 MODULES CONNECTED IN SERIES.



BACKUP SUBPANEL

OFF GRID - SOL-ARK INVERTER WITH AGM BATTERIES

**INTERSOLAR**  
123 ANYSTREET  
CITY, STATE, 00000

Rev B  
DATE:10 February 2023

CONDUCTOR SIZING CALCULATIONS

CIRCUIT DESCRIPTION	CURRENT	$I_{max}$ (690.8(A)(3))	$I_{cont}$ (690.8(B)(1) calc)	SPECIFIED CONDUCTOR	AMPACITY @ 90c	AMBIENT TEMP c	CURRENT CARRYING COND.	TERMINAL TEMP RATING	AMPACITY @ TERMINAL TEMP. RATING	COND. OF USE APPLIED (690.8(B)(2) calc)
PV SOURCE CIRCUIT	10.38A	$10.38A \times 1.25 = 12.98A$	$12.98A \times 1.25 = 16.22A$	#12 MC CABLE	30A	26-30	1-3	75C	35A	$30A \times 1.0$ (am b. temp.) x1.0 (raceway fill) = 30A
INVERTER CONTINUOUS OUTPUT CURRENT	62.5A	62.5A	$62.5A \times 1.25 = 78.13A$	#4 THWN-2	95A	41-45	1-3	75C	85A	$95A \times 1.0$ (am b. temp.) x1.0 (raceway fill) = 95A
BATTERY OUTPUT CURRENT	160A	160A	160A	#3/0 THWN-2	225A	41-45	1-3	75C	200A	$225A \times 1.0$ (am b. temp.) x1.0 (raceway fill) = 225A

Line Diagram

INSTALL EVERY 10 FEET ON EXTERIOR  
CONDUIT, RACEWAYS

**PHOTOVOLTAIC POWER SOURCE**  
596-03945

**SOLAR PV DC CIRCUIT**  
596-03945

**DC PHOTOVOLTAIC  
SOURCE CIRCUIT**  
596-03945-01

INSTALL ON THE BACKUP LOADS PANEL

**CAUTION: DO NOT INSTALL  
ADDITIONAL LOADS IN THIS PANEL**  
596-03945

INSTALL ON THE ESS DISCONNECT

**ENERGY  
STORAGE  
SYSTEM  
DISCONNECT**  
9

INSTALL ON THE JUNCTION BOX

**DC JUNCTION BOX**  
596-00738-03945

**WARNING**  
**PV SOURCE CIRCUIT**  
596-03945

INSTALL ON THE INVERTER

**WARNING**  
THE DISCONNECTION OF THE  
GROUNDED CONDUCTOR(S)  
MAY RESULT IN OVERVOLTAGE  
ON THE EQUIPMENT  
596-09323-03945

**CIRCUIT 1**

**PHOTOVOLTAIC  
DC DISCONNECT**  
596-01001-03945

**MAXIMUM DC VOLTAGE  
OF PV SYSTEM**  
596-01001-03945

**RAPID SHUTDOWN FOR  
SOLAR PV SYSTEM**  
596-01001-03945

**DC  
DISCONNECT**  
3

**WARNING**  
**ELECTRICAL SHOCK HAZARD**  
TERMINALS ON THE LINE AND  
LOAD SIDES MAY BE ENERGIZED  
IN THE OPEN POSITION  
596-00878-03945

OFF GRID -  
SOL-ARK INVERTER  
WITH AGM  
BATTERIES

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Warning Labels