As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

GENERAL NOTES

- 1.1.1 PROJECT NOTES:
- 1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
- THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
- ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4: PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
- MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAXDC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1,1,6 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING INEC 110.31.
- 1.1.7 ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE, IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT, ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1 SCOPE OF WORK:
- 1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1 WORK INCLUDES:
- 1.3.2 PV ROOF ATTACHMENTS
- 1.3.3 PV RACKING SYSTEM INSTALLATION
- 1.3.4 PV MODULE AND INVERTER INSTALLATION
- 1.3.5 PV EQUIPMENT GROUNDING
- 1.3.6 PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
- 1.3.7 PV LOAD CENTERS (IF INCLUDED)
- 1.3.8 PVMETERING/MONITORING (IF INCLUDED)
- 1.3.9 PV DISCONNECTS
- 1,3,10 PV FINAL COMMISSIONING
- 1.3.11 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3,12 SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

NEW PV SYSTEM: 99 62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO, 64064 PROJECT # 8063

CHANGES MADE TO LAYOUT AND ELECTRICAL CHANGES SHOWN ON A-102.00 M.E. 15 AUG 2023

AS BUILT

MEVANS 15 AUG 2023

OWNER

PHONE:

E MAIL:

NAME:

PHONE:

DESIGNER:

BUILDING:

ZONING:

UTILITY:

ACCT. #:

PROJECT #:

SHEET LIST TABLE				
SHEET#	SHEET TITLE			
T-001	COVER PAGE			
G-001	NOTES			
A-101	SITE PLAN			
A-102	ELECTRICAL PLAN			
A-103	SOLAR ATTACHMENT PLAN			
E-601	LINE DIAGRAM			
E-602	ВОМ			
E-603	PLACARDS			
S-501	ASSEMBLY DETAILS			
R-001	RESOURCE DOCUMENT			
R-002	RESOURCE DOCUMENT			
R-003	RESOURCE DOCUMENT			
R-004	RESOURCE DOCUMENT			
R-005	RESOURCE DOCUMENT			
R-006	RESOURCE DOCUMENT			
R-007	RESOURCE DOCUMENT			
R-008	RESOURCE DOCUMENT			
R-009	RESOURCE DOCUMENT			
R-010	RESOURCE DOCUMENT			

RESOURCE DOCUMENT

PROJECT INFORMATION

(417) 413-1786

MEGAN EVANS

LEE'S SUMMIT, MO LEE'S SUMMIT, MO.

debbie,hill@midwestkarting.com

SUN SOLAR PROJECT TEAM

DEBBIE HILL

PROJECT MANAGER/INSTALLER

AUTHORITIES HAVING JURISDICTION

EVERGY

9737337540

(816)868-6025

CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD.MO 65803

PHONE: 417-413-1786

LIC. NO .: HIC. NO .: ELE. NO .:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CMI

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO, 64064

OF MISSO ENGINEER OF REC

BILLYR ARTHUR

NUMBER PE-017508

COVERPAGE DATE: 8/3/23

STONAL

DESIGN BY: M EVANS

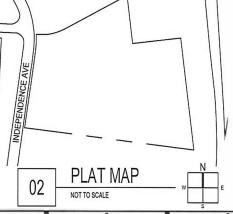
CHECKED BY: B. A.

REVISIONS

T-001.00



AERIAL PHOTO



DESIGN SPECIFICATIONS OCCUPANCY: CONSTRUCTION: COMMERCIAL

ZONING: COMMERCIAL GROUND SNOW LOAD: 20 PSF

WIND EXPOSURE: B

WIND SPEED: 120 MPH

APPLICABLE CODES & STANDARDS

BUILDING: IBC 2018 ELECTRICAL: NEC 2017 FIRE: IFC 2018

SCOPE OF WORK SYSTEM SIZE:

SPECIAL NOTE:

STC: 229 x 435W=99.62 kW

(2x) SMA STP 50-US-41 (480V)

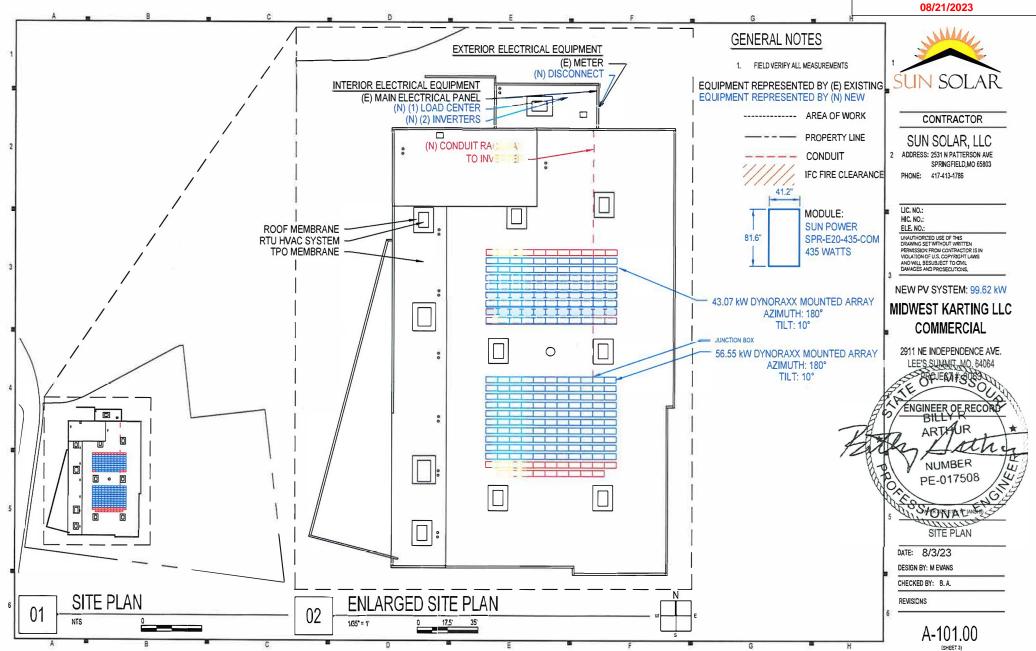
ATTACHMENT TYPE: DYNORAXX EVOLUTION FR DYNORAXX EVOLUTION FR

RACKING TYPE:

(229x)SUNPOWER E-SERIES COMMERCIAL PANELS 435W

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri



RELEASED FOR CONSTRUCTION As Noted on Plans Review **Development Services Department** Lee's Summit, Missouri 08/21/2023 **SUN SOLAR** CONTRACTOR SUN SOLAR, LLC 2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803 PHONE: 417-413-1786 LIC. NO.: HIC. NO .: ELE. NO .: UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS. NEW PV SYSTEM: 99.62 kW MIDWEST KARTING LLC COMMERCIAL 2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064 PROJECT #: 8063 Manney P. ENGINEEROS RECORD NUMBER

GENERAL NOTES (B) FIELD VERIFY ALL MEASUREMENTS (c) — PROPERTY LINE D MODULE STRINGING (F) MODULE: (G) SUN POWER 81.6" SPR-E20-435-COM 435 WATTS EQUIPMENT REPRESENTED BY (E) EXISTING EQUIPMENT REPRESENTED BY (N) NEW EXTERIOR EAST WALL OF BUILDING (E) METER (N) AC DISCONNECT INTERIOR EAST WALL OF BUILDING (E) MAIN ELECTRICAL PANEL INTERIOR MECHANICAL ROOM ON NORTH EAST (Z)-SIDE OF BUILDING (N) AC LOAD CENTER (N) INVERTERS: (x) (1x) SMA STP 50-US-41 (480V) 12 STRINGS OF 9 MODULES (1x) SMA STP 50-US-41 (480V) 1 STRING OF 6 MODULES 1 STRING OF 7 MODULES (0)-12 STRINGS OF 9 MODULES PE-017508 DATE: 8/3/23 DESIGN BY: M EVANS CHECKED BY: B. A. ENLARGED LECTRICAL PLAN REVISIONS 1/14"=1" A-102.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

To Whom It Concern:

Subject: Building Permit Application, Solar Panel Installation 99.62 kW

MidWest Karting / Debbie Hill

2911 NE Independence Ave

Lee's Summit MO, 64064

Project: Installation of 229 solar panels. Two arrays will be mounted and secured using DYNORAXX ballasted racking system using 2 leg baskets (29) and 4 leg Baskets (247) one array will be 43.07 kW and one array will be 56.55 kW

The output from the panels is run in conduit to the existing meter servicing the Building. The inverters are located as shown on the electrical layout drawings. The details of the attachments, inverters, solar panels, and ballasted attachments is shown on the drawings. The electrical one-line drawing provides the details of the electrical connections:

Design Information: The following design components were used for this roof mount system:

- Wind Speed-----120 mph
- Snow Load-----20 psf
- Racking---- DYNORAXX EVOLTION which meet ASCE 07 Building Code.
 Typical details are contained in the drawings.
- Uplift forces are less than 300#, weight distribution is 5.22 psf in the solar footprint.
- Electrical Components meets 2017 NEC Criteria and Installation Guidelines.
- Solar Panels SUNPOWER E-SERIES COMMERCIAL PANELS 435W (229)
- Inverters- SMA STP 50-US-41 (2)

I certify that the existing roof of the structure is adequate to handle the solar panel loading and their installation follows Section R301 of the 2018 International Residential Code. The panels are anchored on racking at a spacing not to exceed 4 Feet.

Billy Arthur

MO-PE 017508

ARTIGIN

NUMBER E-017508

ONAL

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

SHOP / WAREHOUSE PAGE

PROJECT COORDINATOR

<u>INSTALLERS</u>



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.:

HIC. NO.: ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE.

LEE'S SHAWATE MO 64064

ENGINEER OF BECORD

ARTHUR

NUMBER PE-017508

MARIAN AXET (AME

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

GENERAL NOTES

- 1.1.1 PROJECT NOTES:
- 1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
- 1.1.3 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
- 1.1.4 ALL PV SYSTEM COMPONENTS; MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4: PV MODULES: UL1703, IEC61730, AND IEC61215, AND NFPA 70 CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(ES): UL 1703 OR UL 1741 ACCESSORY
- 1.1.5 MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1.1.6 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (D). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING
- 1.1.7 ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT, ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1 SCOPE OF WORK
- 1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ONSITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1 WORK INCLUDES:
- 1.3.2 PV ROOF ATTACHMENTS
- 1.3.3 PV RACKING SYSTEM INSTALLATION
- 1.3.4 PV MODULE AND INVERTER INSTALLATION
- 1.3.5 PV EQUIPMENT GROUNDING
- 1.3.6 PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
- 137 PV LOAD CENTERS (IF INCLUDED)
- 1,3.8 PV METERING/MONITORING (IF INCLUDED)
- 1.3.9 PV DISCONNECTS
- 1,3,10 PV FINAL COMMISSIONING
- 1.3.11 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3.12 SIGNAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NF INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064 PROJECT #: 8063



AERIAL PHOTO NOT TO SCALE



SHEET LIST TABLE SHEET TITLE COVER PAGE T-001 G-001 NOTES A-101 SITE PLAN A-102 ELECTRICAL PLAN SOLAR ATTACHMENT PLAN A-103 E-601 LINE DIAGRAM E-602 вом PLACARDS E-603 S-501 ASSEMBLY DETAILS R-001 RESOURCE DOCUMENT R-002 RESOURCE DOCUMENT RESOURCE DOCUMENT R-003 RESOURCE DOCUMENT R-004 RESOURCE DOCUMENT R-005 R-006 RESOURCE DOCUMENT R-007 RESOURCE DOCUMENT R-008 RESOURCE DOCUMENT R-009 RESOURCE DOCUMENT R-010 RESOURCE DOCUMENT RESOURCE DOCUMENT R-011

PROJECT INFORMATION

OWNER DEBBIE HILL PHONE: (816)868-6025

debbie.hill@midwestkarting.com E MAIL:

8063 PROJECT #:

PROJECT MANAGER/INSTALLER

SUN SOLAR PROJECT TEAM NAME:

PHONE: (417) 413-1786

DESIGNER: MEGAN EVANS

AUTHORITIES HAVING JURISDICTION

LEE'S SUMMIT, MO BUILDING: LEE'S SUMMIT, MO. ZONING:

EVERGY UTILITY: 9737337540 ACCT. #:

DESIGN SPECIFICATIONS

OCCUPANCY: CONSTRUCTION: COMMERCIAL

COMMERCIAL ZONING:

GROUND SNOW LOAD: 20 PSF WIND EXPOSURE: B

WIND SPEED: 120 MPH

APPLICABLE CODES & STANDARDS

BUILDING: IBC 2018 ELECTRICAL: **NEC 2017**

FIRE: IFC 2018

UN SOLAR

CONTRACTOR

SUN SOLAR, LLC

ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD.MO 65803

417-413-1786 PHONE:

LIC. NO.: HIC. NO .: ELE. NO .:

LINAUTHORIZED LISE OF THIS DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE.

LEE'S SUMMIT, MQ. 64064 E BONE ON SOLD

ENGINEER OF RECORD ARTHUR

NUMBER

PE-017508

4:

STATE AND IN AND INCHES COVER PAGE

DATE: 3/27/23 DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

T-001.00

SCOPE OF WORK

SPECIAL NOTE:

SYSTEM SIZE:

(229x)SUNPOWER E-SERIES COMMERCIAL PANELS 435W (2x) SMA STP 50-US-41 (480V)

STC: 229 x 435W=99.62 kW DYNORAXX EVOLUTION FR

ATTACHMENT TYPE: DYNORAXX EVOLUTION FR

RACKING TYPE:

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

		A	В		U	
	2.1.1 2.1.2	SITE NOTES: A LADDER WILL	BE IN PLACE FOR IN	SPECTION IN CO	OMPLIANCE WITH OSHA	2.4.9
1	2.1.3	UTILITY INTERACTI	VE SYSTEM WITH NO ST	ORAGE BATTERIE		2.4.10
	2.1.4		TALLATION WILL NOT O		IMBING, MECHANICAL, OR	
=	2.1.5	PROPER ACCESS ELECTRICAL EQUIP	AND WORKING CLEAR PMENT WILL BE PROVIDE	D AS PER SECTIO		2.5.1 2.5.2
	2.1.6	ACCORDANCE WINSTRUCTIONS SU	TH THIS CODE AT JCH THAT THE ROOF	ND THE APPRO	, AND MAINTAINED IN OVED MANUFACTURER'S OVES TO PROTECT THE	2.5.3
2		BUILDING OR STRU				2.5.4
	2.2.1 2.2.2 2.2.3	WIRING SYSTEMS OPERATING TEMP 310,15 (B)(2)(A) ANI	HALL MEET MINIMUM SE INSTALLED IN DIRECT S ERATURE AS SPECIFIE D 310.15 (B)(3)(C).	SUNLIGHT MUST B D BY NEC 690,31	E RATED FOR EXPECTED (A),(C) AND NEC TABLES	2.5.5
	2.2.3	ACCORDING TO NE	C 690.34.		UNDER PV MODULES	
	2.2.4	WITHIN SIGHT OF	THE AC SERVICING DISC	ONNECT.	RE THE INVERTER IS NOT QUALIFIED PERSONNEL	2.5.6
	2.2.6	ACCORDING TO NE	C APPLICABLE CODES.		D RATED FOR OUTDOOR	2.5.7
3		USAGE WHEN APP				2.5.8
	2.3.1	STRUCTURAL NO	TES:	Market Control Control		
	2.3.2	CODE-COMPLIAN DESIGNATED SP.	IT INSTALLATION NACE BETWEEN MODU	IANUAL. TOP LES, AND RAILS	LLED ACCORDING TO CLAMPS REQUIRE A MUST ALSO EXTEND A THE ARRAY/SUBARRAY,	2.6.1 2.6.2
		ACCORDING TO I	RAIL MANUFACTURER	'S INSTRUCTIONS		2.6.3
	2.3.3	IF ROOF-PENETF REQUIREMENTS.	RATING TYPE, IT SHA	LL BE FLASHED	& SEALED PER LOCAL	2.6.4
	2.3.4	SEALED W/ CONTRACTOR.	APPROVED CHEMIC	AL SEALANT PEF	BE COMPLETED AND R CODE BY A LICENSED	2.6.5
4	2.3.5	SPAN DISTANCE	SPECIFIED BY THE RA	CKING MANUFAC	NO GREATER THAN THE CTURER.	
	2.3.6		E, ALL PV RELATE ONGST THE ROOF FR		TTACHMENTS WILL BE S.	
	2.4.1 2.4.2	GROUNDING NOTE GROUNDING SYS' GROUNDING DEVI		ALL BE LISTED FO	OR THEIR PURPOSE, AND BE RATED FOR SUCH	2.6.6
	2.4.3	PV SYSTEMS REQ	UIRE AN EQUIPMENT	GROUNDING CO	NDUCTOR. ALL METAL B BONDED TO GROUND, IN	2.6.7
		ACCORDANCE W	ITH 250.134 OR 250.1	36(A). ONLY THE	DC CONDUCTORS ARE	2.6.8
5	2.4.4	PV EQUIPMENT SH NEC TABLE 250.12	HALL BE GROUNDED ACC 2.			2.6.9
	2.4.5	CONSIDERED GRO	OUNDED IN ACCORD WIT	H 250.134 AND 250	KING, AND ENCLOSURE 0.136(A).	
	2.4.6	MANUFACTURER I NOT USED, MODU	ILL BE GROUNDED USI DOCUMENTATION AND A LE GROUNDING LUGS M HOLES PER THE MANUF	PPROVED BY THE UST BE INSTALLED	AT THE SPECIFIED	2.7.1 2.7.2
	2.4.7	REQUIREMENTS. THE GROUNDING	CONNECTION TO A MOD	ULE SHALL BE ARI		2.7.3 2.7.4
6	2.4.8	ANOTHER MODUL				
	2.7.0		ED GREEN IF #4 AWG OF			

THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 2.7.5
THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A 2.7.6
GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250, NEC 690.47 2.7.7
AND AHJ.

DC PV ARRAYS SHALL BE PROVIDED WITH DC GROUND-FAULT PROTECTION MEETING THE REQUIREMENTS OF 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS

TERCONNECTION NOTES:

LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 705.12 (B)]

THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS OUTPUT MAY NOT EXCEED 120% OF BUSBAR RATING [NEC 705.12(B)(2)(3)].

THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR, PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(B)(2)(3)]. AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL

AT MULTIPLE ELECTRIC POWER SOURCES OFFOL COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 (B)(2)(3)(C).

FEEDER TAP INTERCONECTION (LOAD SIDE) ACCORDING TO NEC 705.12 (B)(2)(1)

SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42 BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING INEC 705.12 (B)(5)].

DISCONNECTION AND OVER-CURRENT PROTECTION NOTES:

DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS). DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.

BOTH POSITIVE AND NEGATIVE PV CONDUCTORS ARE UNGROUNDED. THEREFORE BOTH MUST OPEN WHERE A DISCONNECT IS REQUIRED, ACCORDING TO NEC 690.13.

ISOLATING DEVICES OR EQUIPMENT DISCONNECTING MEANS SHALL BE INSTALLED IN CIRCUITS CONNECTED TO EQUIPMENT AT A LOCATION WITHIN THE EQUIPMENT, OR WITHIN SIGHT AND WITHIN 10 FT OF THE EQUIPMENT. AN EQUIPMENT DISCONNECTING MEANS SHALL BE PERMITTED TO BE REMOTE FROM THE EQUIPMENT WHERE THE EQUIPMENT DISCONNECTING MEANS CAN BE REMOTELY OPERATED FROM WITHIN 10 FT OF THE EQUIPMENT, ACCORDING TO NEC 690.15 (A).

PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D)

ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8, 690.9, AND 240.

BOTH POSITIVE AND NEGATIVE PV CONDUCTORS ARE UNGROUNDED, THEREFORE BOTH REQUIRE OVER-CURRENT PROTECTION, ACCORDING TO NEC 240.21. (SEE EXCEPTION IN NEC 690.9)

IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.

WIRING & CONDUIT NOTES:

ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
ALL CONDUCTORS SIZED ACCORDING TO NEC 689.8, NEC 690.7.
EXPOSED PV SOURCE CIRCUITS AND OUTPUT CIRCUITS SHALL USE WIRE LISTED AND IDENTIFIED AS PHOTOVOLTAIC (PV) WIRE [690.31 (C)]. PV MODULES WIRE LEADS SHALL BE LISTED FOR USE ON PV ARRAYS, ACCORDING TO NEC 689.31 (A).

PV WIRE BLACK WIRE MAY BE FIELD-MARKED WHITE [NEC 200.6 (A)(6)].
MODULE WIRING SHALL BE LOCATED AND SECURED UNDER THE ARRAY.
ACCORDING TO NEC 200.7, UNGROUNDED SYSTEMS DC CONDUCTORS
COLORED OR MARKED AS FOLLOWS:

DC POSITIVE- RED, OR OTHER COLOR EXCLUDING WHITE, GREY AND GREEN

DC NEGATIVE- BLACK, OR OTHER COLOR EXCLUDING WHITE, GREY AND GREEN

AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1-BLACK

PHASE B OR L2-RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3-BLUE, YELLOW, ORANGE*, OR OTHER CONVENTION NEUTRAL-WHITE OR GREY

* IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15].



CONTRACTOR

SUN SOLAR, LLC

ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.: ELE. NO.:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064 PROJECT 20063

ENGINEER OF RECORD

ARTHUR

NUMBER PE-017508

DATE: 3/27/23
DESIGN BY: M EVANS

SONAT

CHECKED BY: B. A.

REVISIONS

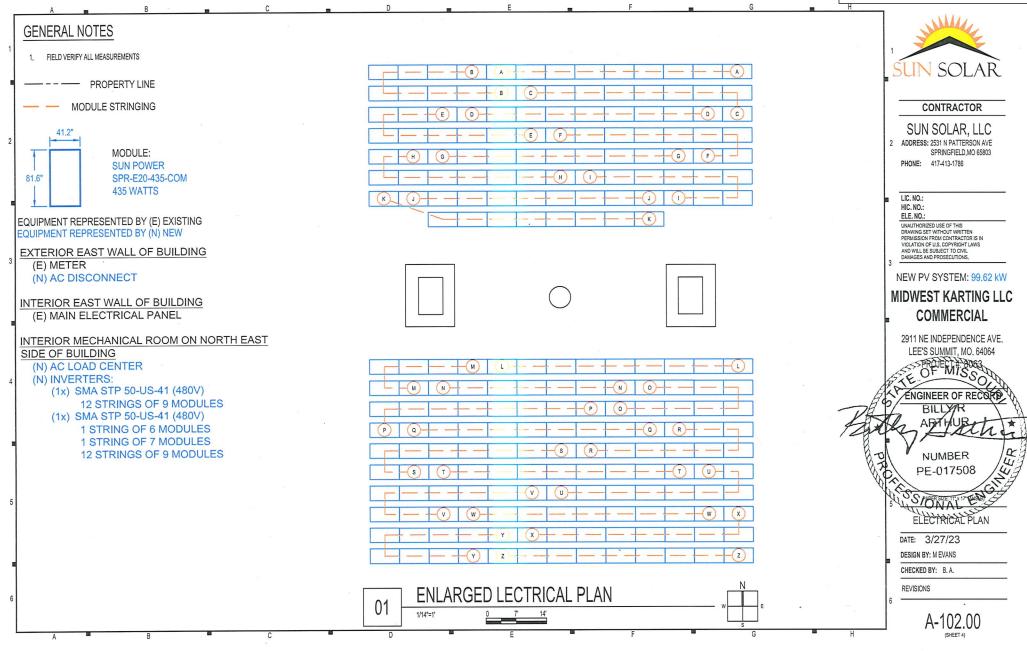
G-001.00

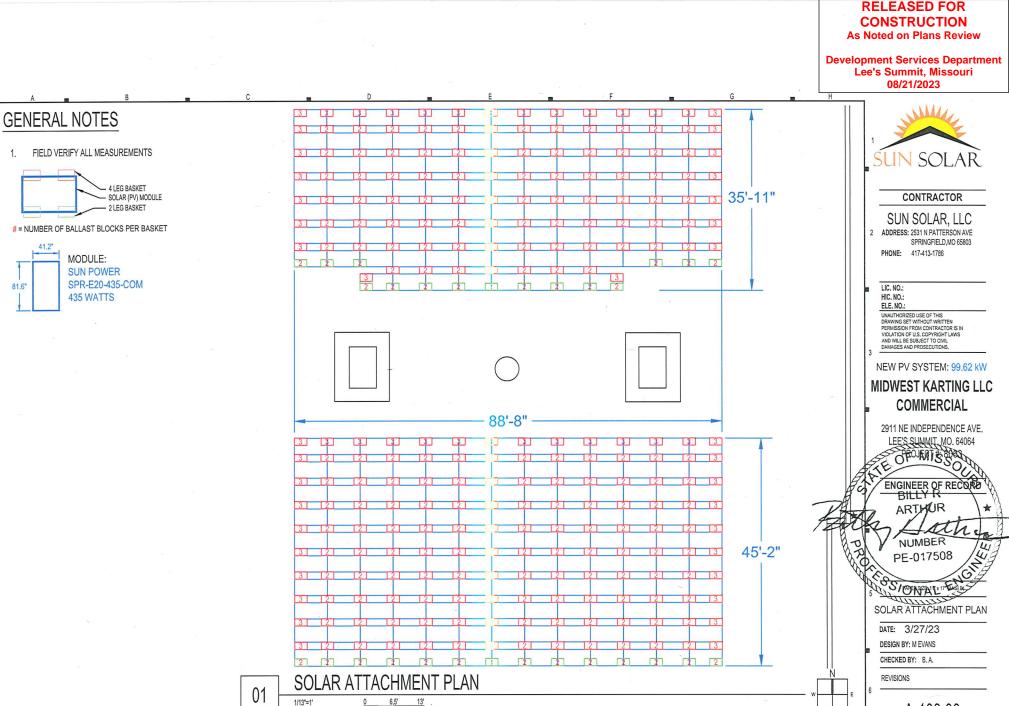
RELEASED FOR CONSTRUCTION As Noted on Plans Review **Development Services Department** Lee's Summit, Missouri 08/21/2023 CONTRACTOR PROPERTY LINE SUN SOLAR, LLC ADDRESS: 2531 N PATTERSON AVE IFC FIRE CLEARANCE 2 SPRINGFIELD,MO 65803 PHO NE: 417-413-1786 MODULE: LIC. NO.: SUN POWER HIC. NO .: ELE. NO .: SPR-E20-435-COM DRAWING SET WITHOUT WRITIEN PERMISSION FROM CONTRACTOR IS IN WICKITION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO COMIL DAMAGES AND PROSECUTIONS. **435 WATTS** NEW PV SYSTEM: 99,62 kW MIDWEST KARTING LLC AZIMUTH: 180° TILT: 10° COMMERCIAL 2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, NO. 64064 AZIMUTH: 180° ORPJEAN# 9831 TILT: 10° ENGINEER OF RECORD ARTHUR NUMBER PE-017508

GENERAL NOTES EXTERIOR ELECTRICAL EQUIPMENT (E) METER (N) DISCONNECT 1. FIELD VERIFY ALL MEASUREMENTS INTERIOR ELECTRICAL EQUIPMENT EQUIPMENT REPRESENTED BY (E) EXISTING. (E) MAIN ELECTRICAL PANEL EQUIPMENT REPRESENTED BY (N) NEW (N) (1) LOAD CENTER ----- AREA OF WORK (N) (2) INVERTERS 0 81.6" ROOF MEMBRANE RTU HVAC SYSTEM TPO MEMBRANE JUNCTION BOX 43.07 kW DYNORAXX MOUNTED ARRAY 0 56.55 kW DYNORAXX MOUNTED ARRAY JUNCTION BOX 0. ______ 0 . 0 SABINIA TIME SITE PLAN DATE: 3/27/23 DESIGN BY: M EVANS CHECKED BY: B. A. **ENLARGED SITE PLAN** SITE PLAN REVISIONS 02 01 1/35" = 1" NTS A-101.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023



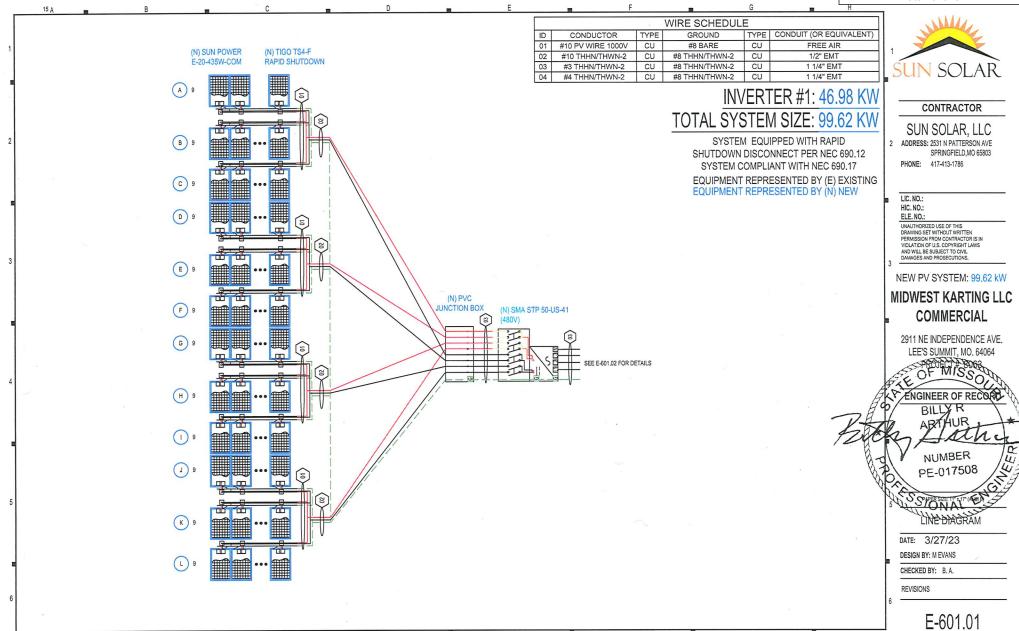


A-103.00

81.6"

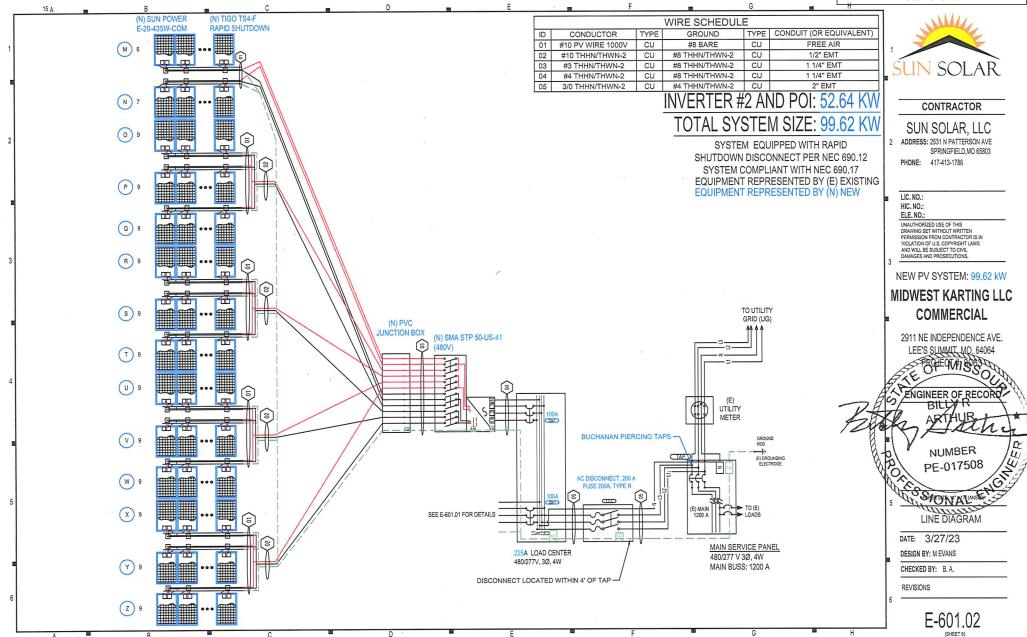
As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023



As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023



As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

BILL OF MATERIALS						
CATEGORY	MAKE	MODEL NUMBER	REF	QTY	UNIT	DESCRIPTION
MODULE	SUN POWER	SPR-E-20-435-COM	PM1-229	229	PIECES	SUN POWER E-20-435-COM
INVERTER	SMA	SUNNY TRIPOWER CORE1-50-US	11-2	2	PIECE	SMA SUNNY TRIPOWER CORE1-50-US
RAPID SHUT DOWN	TIGO	. TS4-F	TS4-F	229	PIECE	TIGO TS4-F
DISCONNECT	SQUARE D	H364RB	SW1	1	PIECE	SQUARE D H364RB SWITCH FUSIBLE GD 3-POLE 200A NEMA 3R, 600VAC OR EQUIVALENT
SUBPANEL	SQUARE D	NF430L2C	SP1	1	PIECE	SQUARE D NF430L2C PNLBRD INTERIOR 250A, 3PH, 4WIRE, MN LUG, CU SUBPANEL 480VAC OR EQUIVALENT
SUBPANEL	SQUARE D	NC38FHR	SP1	1	PIECE	SQUARE D NC38FHR ENCLOSURE BOX- NQNF - NEMA 1 - 20x38IN.
WIRING		GEN-10-AWG-1000V-PV-WIRE-CU	WR1		FEET	10 AWG 1000V PV WIRE, COPPER (POSITIVE AND NEGATIVE)
WIRING		GEN-8-AWG-BARE-CU	WR1		FEET	8 AWG BARE, COPPER (GROUND)
WIRING		GEN-#10-AWG-THHN/THWN-2-CU-RD	WR2		FEET	#10 AWG THHN/THWN-2, COPPER, RED (POSITIVE)
WIRING		GEN-#10-AWG-THHN/THWN-2-CU-BLK	WR2		FEET	#10 AWG THHN/THWN-2, COPPER, RED (NEGATIVE)
WIRING		GEN-#8-AWG-THHN/THWN-2-CU-GR	WR2		FEET	#8 AWG THHN/THWN-2, COPPER, GREEN (GROUND)
WIRING		GEN-#3-AWG-THHN/THWN-2-CU-RD	WR3		FEET	#3 AWG THHN/THWN-2, COPPER, RED (POSITIVE)
WIRING		GEN-#3-AWG-THHN/THWN-2-CU-BLK	WR3		FEET	#3 AWG THHN/THWN-2, COPPER, RED (NEGATIVE)
WIRING		GEN-#8-AWG-THHN/THWN-2-CU-GR	WR3		FEET	#8 AWG THHN/THWN-2, COPPER, GREEN (GROUND)
WIRING		GEN-#4-AWG-THHN/THWN-2-CU-BLK	WR4		FEET	#4 AWG THHN/THWN-2, COPPER, BLACK (LINE 1)
WIRING		GEN-#4-AWG-THHN/THWN-2-CU-RD	WR4		FEET	#4 AWG THHN/THWN-2, COPPER, RED (LINE 2)
WIRING		GEN-#4-AWG-THHN/THWN-2-CU-BLU	WR4		FEET	#4 AWG THHN/THWN-2, COPPER, BLUE (LINE 3)
WIRING		GEN-#4-AWG-THHN/THWN-2-CU-WH	WR4		FEET	#4 AWG THHN/THWN-2, COPPER, WHITE (NEUTRAL)
WIRING		GEN-#8-AWG-THHN/THWN-2-CU-GR	WR4		FEET	#8 AWG THHN/THWN-2, COPPER, GREEN (GROUND)
WIRING		GEN-3/0-AWG-THHN/THWN-2-CU-BLK	WR5		FEET	3/0 AWG THHN/THWN-2, COPPER, BLACK (LINE 1)
WIRING		GEN-3/0-AWG-THHN/THWN-2-CU-RD	WR5		FEET	3/0 AWG THHN/THWN-2, COPPER, RED (LINE 2)
WIRING		GEN-3/0-AWG-THHN/THWN-2-CU-BLU	WR5		FEET	3/0 AWG THHN/THWN-2, COPPER, BLUE (LINE 3)
WIRING		GEN-3/0-AWG-THHN/THWN-2-CU-WH	WR5		FEET	3/0 AWG THHN/THWN-2, COPPER, WHITE (NEUTRAL)
WIRING		GEN-#4-AWG-THHN/THWN-2-CU-GR	WR5		FEET	#4 AWG THHN/THWN-2, COPPER, GREEN (GROUND)
WIREWAY		GEN-EMT-1/2" DIA	WW2-3		FEET	EMT CONDUIT, 1/2" DIA
WIREWAY		GEN-EMT-1 1/4" DIA	WW2-3		FEET	EMT CONDUIT, 1 1/4" DIA
WIREWAY		GEN-EMT-2" DIA	WW2-3		FEET	EMT CONDUIT, 2" DIA
OCPD	GENERIC MANUFACTURER	GEN-CB-100A-208VAC	CB1-2	2	PIECE	CIRCUIT BREAKER, 100A, 208VAC
OCPD	GENERIC MANUFACTURER	GEN-FU-200A-208VAC	F1-3	4	PIECE	FUSE, 200A, 208VAC
COMBINER BOX	GENERIC MANUFACTURER	GEN-0786-3R5	JB-1	2	PIECE	COMBINER/PASS-THROUGH BOX, WITH 4 TERMINAL BLOCKS
TAP CONNECTOR	BUCHANAN	BTC4/0-10	TAP	3	PIECE	BUCHANAN B-TAP INSULATION PIERCING TAP CONNECTORS
RACKING	DYNORAXX	DYNORAXX 2 LEG BASKET		29	PIECE	DYNORAXX 2 LEG FIBERGLASS BASKET
RACKING	DYNORAXX	DYNORAXX 4 LEG BASKET		247	PIECE	DYNORAXX 4 LEG FIBERGLASS BASKET
RACKING	DYNORAXX	DYNOSLIDE FG RAIL LONG W/TEETH POLYGLASS		460	PACKS	DYNORAIL WITH THE DYNOSLIDE TOOL/LESS FASTENING
RACKING	DYNORAXX	SLP6-200S-S		920	PACKS	LOCKING PIN
ATTACHMENT	IRONRIDGE	DYNOBOND 8"		9	PIECE	DYNOBOND UL RECOGNIZED GROUNDING 8" WIRE LENGTH (PACKS OF 25)
ATTACHMENT	IRONRIDGE	DYNOBOND 38"		4	PIECE	DYNOBOND UL RECOGNIZED GROUNDING 38" WIRE LENGTH (PACKS OF 5)

CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.: ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS,

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SHAMIT MO. 64064

NUMBER PE-017508

S MAZAIL 17 LA AL COMPANY BOM

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

E-602.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUTDOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



! WARNING!

ELECTRIC SHOCK HAZARD TERMINALS ON THE LINE AND LOAD SIDES MAY

BE ENERGIZED IN THE OPEN POSITION.
DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPLOSED TO SUNLIGHT

LABEL 3 AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT **INEC 690.151**

ALL SIGNAGE MUST BE PERMANENTLY ATTACHED AND BE WEATHER RESISTANT/SUNLIGHT RESISTANT AND CANNOT BE HAND-WRITTEN PER NEC 110.21(B)

LABEL 1

AT RAPID SHUTDOWN SYSTEM INEC 690,56(C)(1)(A)].

> ! WARNING! MAY BE ENERGIZED IN THE OPEN POSITION

AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT [NEC 690,13 AND 690,15]

LABEL 5
AT EACH DC DISCONNECTING MEANS [NEC 690,53]

PHOTOVOLTAIC AC DISCONNECT

OPERATING CURRENT: 128A AC OPERATING VOLTAGE: 480 V AC

0

PLAQUE

AT POINT OF INTERCONNECTION, MARKED AT DISCONNECTING MEANS [NEC 690.54]

INTERACTIVE PHOTOVOLTAIC SYSTEM

CONNECTED

PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED

ON EAST WALL OF BUILDING

PHOTOVOLTAIC SYSTEM

EQUIPPED WITH RAPID

SHUTDOWN

LETTERS AT LEAST 3/8 INCH: WHITE ON RED

! WARNING!

POWER SOURCE OUTPUT

THIS OVERCURRENT DEVISE

CONNECTION - DO NOT RELOCATE

LABEL 12 AT RAPID SHUTDOWN SWITCH

BACKGROUND; REFLECTIVE

INEC 690.56(C)].

[IFC 605.11.1.1]



0

LABEL 7
AT RAPID SHUTDOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

! WARNING!

DUAL POWER SOURCES. SECOND SOURCE IS PV SYSTEM

! CAUTION!

PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

0

LABEL 9

AT POINT OF INTERCONNECTION; LABEL, SUCH AS LABEL 5 OR LABEL 6 MUST IDENTIFY PHOTOVOLTAIC SYSTEM

[NEC 705.12(B)(4)]

INTERACTIVE PHOTOVOLTAIC SYSTEM

CONNECTED

LABEL 10

0

AT UTILITY METER INEC 690.56(B)1

POWER SOURCE

LABEL 13

AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.

INEC 690.31(G) [IFC 605.11.1.1]

LETTERS AT LEAST 3/8 INCH: WHITE ON RED BACKGROUND; REFLECTIVE

PHOTOVOLTAIC DC DISCONNECT

AT EACH DC DISCONNECTING MEANS [NEC 690.13(B)]

PHOTOVOLTAIC AC DISCONNECT

LABEL 14

AT EACH AC DISCONNECTING MEANS [NEC 690,13(B)]

LABELING NOTES

[NEC 705.12(B)(2)(3)(B)] 1.1 LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, ANSI Z535

OVERCURRENT DEVICE

AT POINT OF INTERCONNECTION

- 1.2 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- 1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
- 1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.
- 1.5 ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND. [ANSI Z535]

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF NOT IN THE SAME LOCATION [NEC 690,56(B)] WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE PROVIDED AT EACH PV SYSTEM

DISCONNECTING MEANS.

PV SYSTEM EQUIPMENT

AND DISCONNECTING

MEANS SHALL NOT BE

INSTALLED IN BATHROOMS [NEC 690.4(D),(E)]

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN: LOAD CENTER o`. MAIN PANEL DISCONNECT PV/ ARRAY 2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO, 64064

CONTRACTOR

SUN SOLAR, LLC

ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD.MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC NO: ELE. NO .:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064 FEE SAGAMAN

ENGINEER OF RECORD ARIHUR

> NUMBER PE-017508

A CINCIAN **PLACARDS**

S. POBANEW FILL

DATE: 3/27/23 DESIGN BY: M EVANS

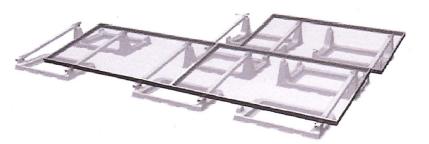
CHECKED BY: B. A.

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

Evolution FR





ev-o-lu-tion

DynoRxxx* Evolution delivers a tool-less ballasted racking system for mounting PV solar panels on flat roofs and surfaces. The proprietary design of the DynoRaxx** ballasted-racking system has been created to simplify and speed installation without compromising quality or performance. With DynoRaxx* Evolution FR, buying commercial solar panel racking has never been more cost-effective.

Three Components

No Tools Needed

Universal Design

Rugged Construction

Space-Saving Reverse

Base protecting / Non-penetrating

Basket Design

Innovative Design

- · Proprietary racking enables fast installation in less than half the time of other systems
- · No tools needed for assembly—one step pivot clamp secures panels to racking
- Versatility to accommodate all framed PV solar panels on the market
- · Eliminates need to penetrate roof with fasteners on most installations
- Smaller footprint than competitive systems saves roof space and adds flexibility
- 10° tilt available
- · Elevated system-does not impede water drainage
- · Non-corrosive
- · No thermal expansion

www.dynoraxx.com Phone: 1866.620.2410 salessingyhoraxx.com



Three Major Components

Easy installation

- · Initial measurement and chalk line needed for placement of first row
- · Precision components require no field measuring
- · Assembles without took

Rugged Construction

- Baskets - Fiberglass

· Rails - fiberglass · Clamps - 304 stainless steel

- Save time and labor to install more modules per hour

High Performance

- · PE-Certified
- ASCE 7-05 compliant
- IBC 2006 compliant
- · Wind tunnel tested



- No special orders ships quickly upon receipt of order
- · Racking is palletized no special shipping requirements
- · Tool-less design

- · Fewer man hours to install
- Baskets stack like cups Huge Shipping Savings
- · A superior, cost-effective solution

ARRA and Ontario FIT Compliant



Phone 1866.620.2410 Toll From Fax 1.666.607.7661



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD.MO 65803

PHONE: 417-413-1786

LIC. NO .: HIC. NO .:

ELE. NO .: UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN

PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. CAFOJEN #SECT

NUMBER PE-017508



DATE: 3/27/23

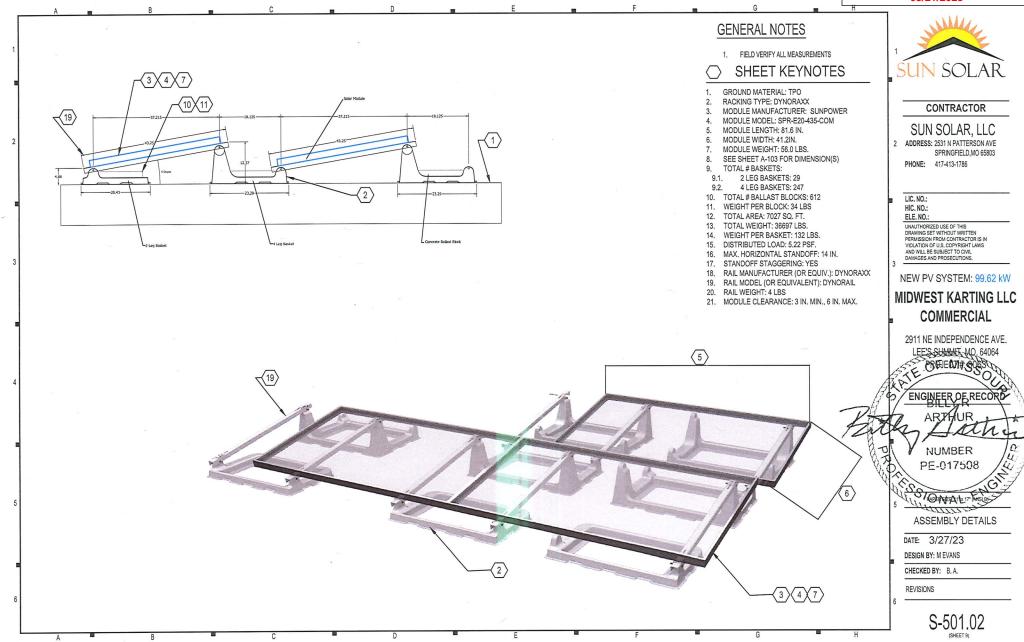
DESIGN BY: M EVANS

CHECKED BY: B. A.



As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023



As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

HelixTM Roof Compatible Modules

Pactory-installed clips enable tool-free panel installation, decreasing installation time and minimizing business disruption.1

More than 20% Efficiency

Captures more sunlight and generates more power than conventional panels.

High Performance

Delivers excellent performance in real-world conditions, such as high temperatures, clouds and low light?

Commercial Grade

Optimized to maximize returns and energy production, the E-Senes panel is a bankable solution for commercial solar applications.



Engineered for Peace of Mind

Designed to deliver consistent, trouble-free energy over a very long lifetime.3

Designed for Reliability

The SunPower Maxeon solar cell is the only cell built on a solid metal foundation. Virtually impervious to the corresion and cracking that degrada conventional panels.

#1 Rank in Fraunhofer durability test.*

High Performance & Excellent Reliability

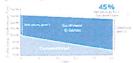




High Efficiency

Generate more energy per square foot

More energy to power your system. E-Senes residential systems convert more sunlight to electricity by producing 31% more energy in the first year. This advantage increases over time, producing 45% more energy over the first 25 years to meet your needs."



Best Reliability, Best Warranty

A better warranty starts with a better product. Proven performance backs up our industry-best coverage, including out warranted 0.25% paryear degradation rate.5



	70-4				
8,273	riteog po	YMC SI	19 100.7	rayes.	
	0.05945	C 1010	w 25		

-	
	٦
	1
	Ļ

76 F 15 2	
741	
	Philips

SunPower® E-Series Commercial Solar Panels | E20-435-COM

Eect.	rical Data
	SPR-E20-435-COM
Nombre Pager Proprié	435 W
Fower Townson	+5:-3%
Agg Parel Etylerica	20.3%
Rated Voltage (Virgin)	72.9 V
Rated Current i mappi	5.97 A
Open-Circuit storage (Voc)	856 V
Short-Crown Current (Sc)	6,43 A
Max. System Voltage	1500 VIDE & 1500 VIEC
Maximum for ex Poore	15 A
Power Temp Chil	-4.35% / P.C
Voltage Terror Coef.	-235.5 mV / 4 C
Custem Temp Coef	2.6 :5A/*C

Temper state	~40° Fta ~185° Ft~40° C to +85° C)
Impact Peristance	1 inch (25 mm) diameter hall at 52 mph (23 m/s
Appear	Class R
Span Criti	128 Monocrystalling Maxicon Gernill
Temperor Sarci	high-banky stion tempered anti-reflective
Reproduction Solv	iP-65, MC4 compatible
Weight	56 Bs (25.4 kg)
Man, Lucia	What 50 put, 2400 Pa hight & back. Show, 112 put, 5400 Pa tright
Conne	Class I silver environd stacking time.

	Tests And Certifications
Standard Tests*	UC1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Management System Certs	SQ 9001.2015, SO 14001.2015
EHS Compilance	Ruhis, Chisas 180012007, lead free, REACH SVHC-163, PV Cycle
Arminoisia Text	.EC 62716
Descett Test	10.1189/FVSC.3013L6744437
Salt Spray Test	:EC 61701 (maximum severity)
PID Test	1000V: ICC62804, PVEJ, 600hr dunstlan
Available Ustines	UE, TOV, MCS, CSA, FSEC

i neuro-versigat bur media in makenduler resignative error cema in ong inpatient. I faufbaler 15 faufbaler 15

is influence with report. (2019).

Furtherwork their Ahmur such Lindfughthour with paper, key (2011), burst, for 109 put. 21100 put-subserving it must also 78th of relations on the Charlest Service and Annual Service Annual Service

Producedado Milmacina, 2014. Si See udilangdown consultament a disserproductaliyahwwan amir furmora dataki. Bi Sandado Redi Candonom (1800 kimi) Madaince AM 18, 297 C3 (1878, car branchi Sandana SDMC durrant, CACCO RE sed visitagis.

Comment # 521912 Rev 6 /LTR_US

a Sweet during the Gray seriage in the seriage of the Sweet Sweet Buring production.

8 Type 2 fire raping per sit (1703-251) 3, Class Citize stonig per Ut (1703-250).



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO .: ELE. NO .:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE.

ENGINEER OFFRECORD

NUMBER PE-017508

RESOURCE DOCUMENT

DATE: 3/27/23 DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

R-001.00



13 June 1410 mm

and the safety and reportion sude

SUNPOWER*

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

CONTRACTOR

SUN SOLAR, LLC

SPRINGFIELD.MO 65803

ADDRESS: 2531 N PATTERSON AVE

PHONE: 417-413-1786

UNAUTHORIZED USE OF THIS

AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN

VIOLATION OF U.S. COPYRIGHT LAWS

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC

COMMERCIAL

2911 NE INDEPENDENCE AVE.

SPROJECTA SOO

ENGINEER OF RECORD

NUMBER

PE-017508

SIONALITER

RESOURCE DOCUMENT

0

LIC. NO .:

HIC. NO .:

ELE. NO .:





Fully integrated

- . No additional racking required for
- rooftop installation
 Integrated DC and AC disconnects and overvoltage protection
- 12 direct string inputs for reduced labor and material costs • Up to 60% faster comme system installation
- - shade management solution optimizes at the string level · Irrelligent string monitoring to

Increased power, flexibility

- . Six MPP tradiers for flexible stringing and maximum power production • ShadeFix, SMA's proprietary compliance to 2017 NBC
 - Next-gen DC AFC are fault protection certified to new Standard UL 16998 Ed. 1

Enhanced safety, reliability Smart monitoring, control, service

- . IV curve diagnostic function to visualize and · Integrated SonSpec PLC signal for module-level rapid shutdows
 - tector energy management platform

 SMA Smart Connected proactive O&M

document PV string electrical characteristics • Increased ROI with SMA ennexOS cross

solution reduces time spent diagnosing and servicing in the field

SUNNY TRIPOWER CORE1 33-US / 50-US / 62-US

It stands on its own

The Sunny Tripower CORE1 is the world's first free-standing PV inverter for commercial rooftops, carports, ground mount and repowering legacy solar projects. From distribution to construction to operation, the Sunny Tripower CORE1 enables logistical, material, labor and service cost reductions, and is the most versatile, cost-effective commercial solution available. Integrated SunSpec PLC for rapid shutdown and enhanced DC AFCI arc-fault protection ensure compliance to the latest safety codes and standards. With Sunny Tripawer CORE1 and SMA's ennexOS cross sector energy management platform, system integrators can deliver comprehensive commercial energy solutions for increased ROI.

www.SMA-America.com

Sunny Tripower CORET 33-US Sunny Tripower CORET 30-US Supply Tripowar COREL 62-US Input (DC) 75000 Ws 570 93750 We STC 50000 We STC Maximum array sawer 1000 V 500 V ... 800 V Maximum system vallage Maximum system callage Raded MFR calgorange MPFF counting callage range MFF rounding callage range MFF hosters / strings por MFPP regula MFF hosters / strings por MFPP regula MFF hosters / strings por mFPP regula Maximum solventing regular carest/ por MFP hoster Maximum solventing regular carest/ por MFPF hoster Maximum solventing regular carest/ por MFPF / por string inguil 550 V... 800 V 330 V... 800 V 160 V... 1000 V 150 V / 188 V 6/2 120 A / 20 A Output (AC) 50000 W 62500 W AC nominal pawer Maximum apparent paw 33300 W 53000 VA 3/3-[N]-PE 480 V/277 V WYE 66000 VA Dulput phases / line connections Naminal AlZ-sitage AC voltage range 244 V... 305 V 80 A Maximum output current Rated grid heavenay Oxid frequency, range 60 Hs 50 Hz 60 Hz/-6 Hz...+6Hz 1/0.0 leading...0.0 logging <3% Power factor at rated power/ adjustable displacement Harmonics THO Efficiency CEC officienty 97.5% 97.54 97.69 Protection and safety feat Load saled DC disconnect Load rated AC disconnect Ground fault monitoring: Riso / Differential corrent DC ARC are-fault protestion SunSpec PLC signal for rapid shutdown DC reverse palarity protection AC short zirzult profestion DC surge protection: Type 2 / Type 1+2 AC surge protection: Type 2 / Type 1+2 Protection class. seen plage category (as per UL 840) General dara 621 mm/732 mm/569 mm (24.4 in x 28.6 in x 22.4 in) Device dimensions (W/H/D) Device weight 24 kg (185 lbd) 25 °C...+60 °C (33 °P...+140 °I Operating temperature range Storage kamperature range Audible naise emasions (full power @ 1m and 25 °C) -40 °C ... +70 °C (-40 °F ... +158 °F 65 dE(A) internal serrumption at night Topology Coaling consept Transformeriess OptiCoal (forzed convection, variable sp Type 4K, 32X (as per UL 505) Enclosure protection rating Maximum permissible relative humidity (non-condensing) 100% Additional information Free-standing with included mounting feet Amphenel UTX PV connectors Screw terminals - 4 AWIS to 4/0 AWIS CU/AL Mounting DC comedian AC commetter LED indicators (Distrat/Fault/Communication) Natural Interfaces: Ethernet/WUAN/R3485 • (2 parts) /4 /0 National Interesses Entermet/ WURSY 1998a Date protosola: ZMA Mediator/ Soutipee Mediator/We ShadeRin technology for string level optimisation Intelligent pring partnermose maniforing W souther signant infundamental Integrated Right Control / Q on Demand 24/7 SMA Smart Connected (proadlive maniforing and service support Carrifications DL 1741, UL 16998 Sd. 1, UL 1998, CSA 22.2 107.1, PV Rapid Shubbarn System Equipment, UL 3741 Cartifications and approvals FCC Part 15 Class A FEEE 1547, US 1741 SA - CA Rule 21, HBCO Rule 144 FCC compilance Orid interconnection standards Advanced grid support copabilitie L/MEST L/MVST, Volta/Ar VoltaWalt, Prequency-Walt, Ramp Rate Control, Fixed Power Paster Standard Optional extensions © Optional features 15/20 years A Subject to availability STP 33-US-41 canditions - status, 06/2022 STP 80-US-41 - Not available STP 60-UE-41 Type designation

AND THE Toll Free +1 888 4 SMA USA

www.SMA-America.com





SMA America, LLC

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

Product data sheet

Specifications

Main



Enclosure cover, NQ and NF panelboards, NEMA 1, flush, hinged, 20in W x 38in H

NC38FHR

Product availability: Stock - Normally stocked in distribution facility

Price*: 687.00 USD

Product	Flush cover	
Color	Gray	
Cover type	Flush cover	
Type of front plate	Hinged	
Complementary		_
Material	Stoel	
Height	38 in (965.20 mm)	
Width	20 in (508,00 mm)	
Tightening torque	Cover 1012 (b.in	
Environment.		_
Enclosure Rating	NEMA 1	
Product Certifications	cütus	
Ordering and shipping of	details	
Category	08052-NF / NO TRIMS RTA	
Discount Schedule	PEIA	
GTIN	765901296840	
Returnability	Yas	
Country of origin	បន	
Packing Units		
Unit Type of Package 1	PCE	
Number of Units in Package 1	1	

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the class of California o cause cancel, and Elsophend A (EPA), which is shown to the Sabe of California to cause birth defects or other reproductive health. For more information go to www.PSOWamings.ca.go.
REACh Regulation	REACh Distinution
REACH free of SVHC	Yes
EU RoHS Directive	Compliant EU RONS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	Chine RohS decisioner
RoHS exemption information	Yes
Environmental Disclosure	Product Environmensal Profile
Contractual warranty	

Recommended replacement(s)



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD.MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.: ELE. NO .:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064

ENGINEER OF RECO

NUMBER PE-017508

RESOURCE DOCUMENT

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

Package 1 Height 22.09 in (56.1 cm) Package 1 Width 42.72 in (108.5 cm) Package 1 Length 22.53 (b(US) (10.219 kg) Package 1 Weight

* Price is "List Price" and may be subject to a trade discount - check with your local distributor or retailer for actual price.

Feb 13, 2023

and Suggester

--- Selpeifer

Feb 13, 2023

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

Product data sheet Characteristics

NF430L2C

NF Pnlbrd Interior 250A, 3 PH, 4 Wire, 30 CCT,

Mn Lug, Cu

Product availability: Stock - Normally stocked in distribution facility

SPUARED



2

Price**: 2,624.00 USD



Panelboard Type	Main lugs
Branch Circuit Breaker Type	EDB/EDG/EDJ
Busbar Material	Copper
Complementary	
Number of spaces	30
Enclosure Nominal Height	38 in (965.20 mm) 50 in (1270.00 mm)
Enclosure Nominal Width	20 in (508.00 mm)
Enclosure Nominal Width	5.75 in (146.05 mm) NEMA 1 6.5 in (165.10 mm) NEMA 3R/5/12
Line Rated Current	250 A
[lu] rated interrupted current	65 KA
Wiring configuration	4-wire
Number of Phases	3 phase
Voltage Rating	480Y/277 V AC
Connections - terminals	Lug line AWG 6350 kcmil aluminium Lug neutral AWG 6350 kcmil aluminium
Net weight	31.00 lb(US) (14.06 kg)
Tightening torque	40,0150.01 lbf.in (4.52558 Nm) 0.220.16 in* (13.3087.43 mm²) AWS 6AWG 20) 100.01 lbf.in (11.3 Nm) 0.020.10 in* (13.3087.43 mm²) AWG 6AWG 20) 274.99 lbf.in (31.07 Nm) 0.020.27 in* (13.30177.3 mm²) AWG 6250 kcmilj 274.99 lbf.in (31.07 Nm) 0.020.20 in* (13.30125.7 mm²) AWG 6250 kcmilj 274.99 lbf.in (31.07 Nm) 0.17024 in* (1072162 mm²) AWG 6250 kcmilj 274.95 lbf.in (31.07 Nm) 0.17024 in* (1072162 mm²) AWG 6200 kcmilj
Width	10.44 in (265.18 mm)
Height	33 in (836.20 mm)

Chile Co. Schneider

Standards	CSA C22.2		
	UL 67		
Ordenno and shipping details			
Category	08350 - NF MLO INTERIOR RTA		
Discount Schedule	PE1A		
GTIN	00785901871484		
Returnability	Yes		
Country of origin	MX		
Offer Sustainability			
Sustainable offer status	Green Premium product		
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds and Di-isodec phthalate (DIDP) which is known to the State of California to cause Carcinogen and Reproductive harm. For more information go to www.p56wamngs.ca.gov		
REACh Regulation	REACh Dectaration		
REACh free of SVHC	Yes		
EU RoHS Directive	Compliant EU RoMS Declaration		
Toxic heavy metal free	Yes		
Mercury free	Yes		
RoHS exemption information	Yes		
China RoH3 Regulation	China RoHS declaration		
Environmental Disclosure	Product Etwiconments: Profile		
Contractual warranty			

Deute Schneider

CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.:

ELE. NO .: UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064

ENGINEER OF RECO

NUMBER PE-017508

RESOURCE DOCUMENT

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

R-003.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

Product data sheet Characteristics

H364RB

SWITCH FUSIBLE HD 600V 200A 3P NEMA3R

Product availability: Stock - Normally stocked in distribution facility

SQUARE D



2

Price**: 2,259.00 USD



Package weight(Lbs) Returnability

Main				
Product	Single Throw Safety Switch			
Current Rating	200 A			
Certifications	UL listed file E2975			
Enclosure Rating	NEMA 3R galvannealed steel			
Factory Installed Neutral	None			
Disconnect Type	Fusible disconnect			
Short Circuit Current Rating	10 kA H or K 200 kA R, J or L			
Mounting Type	Surface			
Number of Poles	3			
Electrical Connection	Lugs			
Duty Rating	Heavy duty			
Voltage Rating	600 V AC/DC			
Wire Size	AWG 6250 kcmil copper or aluminium			
Complementary				
Width	473.20 mm (18.63 in)			
Height	742.95 mm (29.25 in)			
Depth	215,90 mm (8.5 in)			
Tightening torque	31,07 N m (275 lbf.in) 0.020.20 in* (13.3127 mm*) AWG 6250 kcmil)			
Ordering and shipping detail:	8			
Category	00009 - H&HU SW,283P,N3R,30-200A			
Discount Schedule	DE1			
GTIN	00785901482710			

20,82 kg (45.9 lb(US))

charte Schnulder

Country of origin	US
Offer Sustainability	
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds which known to the State of California to cause Carcinogen & Reproductive harm. For more information g to www.p65warnings.ca.gov
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Decisionion
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration Pro-active China RoHS declaration (out of China RoHS legal scope)
Environmental Disclosure	Product Environmental Profile
Circularity Profile	No need of specific recycling operations
One to the desired and the second and	
Contractual warranty Warranty	18 months

out of Someider

CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO .: ELE. NO .:

UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064

ENGINEER OF RECORD

NUMBER PE-017508

RESOURCE DOCUMENT

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

R-004.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

Fire Safety

TS4-F is a rapid shutdown solution that pairs with an integrated modular junction box base [TS4-F). Install with Tigo RSS Transmitter for rapid shutdown activation.

Features

- . Meets NEC 690.12 rapid shutdown requirements
- · Module-level deactivation
- · Automatic or manual shutdown
- · PLC signaling

Protect your investment by enhancing safety with TS4-F

- · UL-Certifled for TS4-B (integrated)
- Uses Tigo's Ultra High Definition (UHD) Core technology for superior performance
- Refer to UL GUS PVRSS listing for rapid shutdown system listed inverters



Deploy TS4-F to prevent fire damage caused by faulty installations, defective equipment, or other environmental hazards.



This product is patent protected

Meet rapid shutdown specifications with TS4-F

Tigo has further expanded its smart module platform with the TS4-F Fire Safety cover. TS4 increases your freedom of choice by allowing you to select the right features for each project and budget.

tiechool .				
Voltage Range	16 - 90 V			
Maximum Current	15A			
Maximum Fower	475W			
Communication Type	FLC			
Impedance Matching Function	No			
Output Voltage Limit	110			
Papia Shundown UL Listed (NEC 2014 & 2017 540,12)	Yes			
Mechanical				
Operating Temperature Pange	-40°C to +85°C (-40°F to +185°F), PH < 85%			
Starage Temperature Pange	-40°C to +85°C (-40°F to +185°F), RH < 60%			
Cooling Method	Natural Convection			
Dimensions (pase with cover)	152.5mm x 105mm x 25.3mm			
Weight (base and cover)	570g			
Outdoor Rating	IP67/IP65, NEMA 3R			
Cabling				
Туре	P√ Wh e			
Output Cable Length	1.0m (standard), 1.2m (optional)			
Rating Option:	1000v (standara), 1500v (optional)			
Cable Cross-Section	6.3 ± 0.3mm			
Connectors	MC4, MC4 apmparable, EVO2			

FART TS4 powers are 1 \$1000 compatible. Specify max system voltage when ordering modules with TS4 baset for appropriate cables & connectors.

Rapid shutdown activation of TS4-F requires RSS Transmitter.

1500V UL/IEC 1

For sales info:

Maximum String Voltage

sales@tiapenerav.com or 1.408.402.0802

For product info:

Visit tiggeneray.com/products







For technical info:

Visit support tigoeneray.com

For additional info and product selection assistance, use Tigo's online design tool at tigoeneray.com/design



ligo Energy, Inc. 420 Biossom Hill Rd, Los Gatas, Calilomia 95032 USA | www.ligoenergy.com P: +1.408.402.0802 F:+1.408.358.6279 | sales@ligoenergy.com



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO.: ELE. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064

ENGINEER OF RECORD

NUMBER PE-017508

RESOURCE DOCUMENT

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

R-005.00

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

7/14/2017

Ideal Industries - Buchanan B-TAP® Insulation Piercing Tap Connectors



uchanan B-TAP® Insulation Piercing Tap Connectors



Features

- · Eliminates split bolts and tape
- . Easy two-minute installation requires only box/socket wrench
- Torque regulating nut breaks off at proper tension
 Installs on energized systems
 Insulation piercing teeth

- · Self-insulating, weather-proof
- 600V dual-rated

Sun		Wire Range Tap		Domicer	Catalog Number
Max.	Min.	Max.	Mire.	el helis	
#1/0 AWG	#8 AWG	#2 AWG	#10 AWG	1	BTC1/0-10
#2/0 AWG	#4 AWG	#10 AWG	#14 AWG	1	BTC2/0-14
#4/0 AWG	#2 AWG	#4/0 AWG	#2 AWG	2	BTC4/0-2
#4/0 AWG	#3 AWG	#2 AWG	#10 AWG	1	BTC4/0-10
#4/0 AWG	#2 AWG	#2/0 AWG	#6 AWG	1	BTC4/0-8
250 MCM	#1 AWG	#4/0 AWG	#4 AWG	1	BTC250-4
350 MCM	#1/0 AWG	350 MCM	#1/0 AWG	2	BTC350-1/0
500 MCM	#2/0 AWG	#4/0 AWG	#4 AWG	2	8TC500-4
500 MCM	#4/0 AWG	350 MCM	#1/0 AWG	2	BTC500-1/0
500 MCM	#2/0 AWG	#10 AWG	#14 AWG	1	BTC500-14

CC017 IDEAL INDUSTRIES, INC. All rights reserved.

http://www.idealindustries.ca/products/wire_termination/lugs/lugs_tap_b-tap_connectors.php

1/1

CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO .:

ELE. NO .: DINAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. LEE'S SUMMIT, MO. 64064

ENGINEER OF RECORD

NUMBER PE-017508

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

As Noted on Plans Review

Development Services Department Lee's Summit, Missouri 08/21/2023

soltection"

RJ-1

Residential Transition Box

The Soltection RJ-1 rooftop junction box with flashing provides a safe, secure, and NEMA 4X watertight solution for the Solar installer to penetrate the roof for attic runs and make the proper wire connections. The product is designed to be simple to install, minimize time on the roof, while additionally providing higher levels of protection for the point of penetration in the roof as well as electrical connections inside the junction box.



- · Designed specifically for solar installations
- · Light weight
- · Non-metallic ---Will NOT rust/corrode
- · Easy to drill/modify
- · Captive screws in cover- will not fall out
- · Minimal design, small footprint
- NEMA 4X rated
- · All roof penetrations cover by Nema 4x enclosure



Enclosure

Material: Polycarb blend w/ UV inhibitors UV Stabilized: Yes Impact Resistance: Yes Weight: 2.73lb Color: Graphite Black

Flashing Dimensions (Approximate): 13" x 18" Enclosure Dimensions (Approximate): 8" x 8" Total Product Height: 3.5" Cubic Inches: 224 Cubic Inches



Dimensions



Vynokier Enclosure Systems 271 McCarty Street, Houston, TX 77029 USA +1,866,227.0577



CONTRACTOR

SUN SOLAR, LLC

2 ADDRESS: 2531 N PATTERSON AVE SPRINGFIELD,MO 65803

PHONE: 417-413-1786

LIC. NO.: HIC. NO .: ELE. NO .:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS,

NEW PV SYSTEM: 99.62 kW

MIDWEST KARTING LLC COMMERCIAL

2911 NE INDEPENDENCE AVE. PROFECTOR'S

NUMBER PE-017508

AMENOREM 1 × 17 KING B

RESOURCE DOCUMENT

DATE: 3/27/23

DESIGN BY: M EVANS

CHECKED BY: B. A.

REVISIONS

R-007.00