

PROJECT DETAILS

PV Modules	48 x SOLARIA POWERX 395R
Optimizers	48 x P505
Inverter	1 x SE7600H-US (RGM) 1 x SE7600H-US
Roof Type	Asphalt Shingles
Racking	PSR-B84 Rails (Black)
Mounting Type	CompMount Flashing (Black)
DC SIZE	18.96 kW
AC SIZE	15.2 kVA

DRAWING INDEX

Item	Drawing #	Rev	Description
1	22366JM00-0	A	Drawing Index
2	22366JM00-1	A	Site Layout
3	22366JM00-2	A	String Mapping
4	22366JM00-3	A	Electrical One Line Diagram
5	22366JM00-4	A	Detailed Electrical Wiring Schematic
6	22366JM00-5	A	PV Labels
7	22366JM00-6	A	Bill of Materials
8	22366JM00-7	A	Plot Plan

TOP VIEW OF BUILDING



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J Richard McDuffie
777 Miller Road
Benson NC 27504

PHOTOVOLTIC NOTES

1. THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES:

- 2020 NATIONAL ELECTRICAL CODE
- 2018 NORTH CAROLINA RESIDENTIAL CODE
- 2018 NORTH CAROLINA BUILDING CODE
- AS ADOPTED BY THE STATE OF NORTH CAROLINA
- ALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES

2. ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY.

3. SOLAR SYSTEM SHALL NOT COVER ANY PLUMBING OR MECHANICAL VENTS

4. MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDED

5. SOLAR INVERTER SHALL BE LISTED TO UL1741

6. ALL CONDUCTORS SHALL BE COPPER AND SHOULD BE 75 AND 90 DEG RATED

7. REMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR AND THE PHOTOVOLTAIC SOURCE AND/OR OUTPUT CIRCUIT GROUNDED CONDUCTORS.

8. LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.

9. ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE.



A 08/26/2022

Customer's Signature

JOB NUMBER

22-366-JM00

PROJECT STATUS

PERMITTING

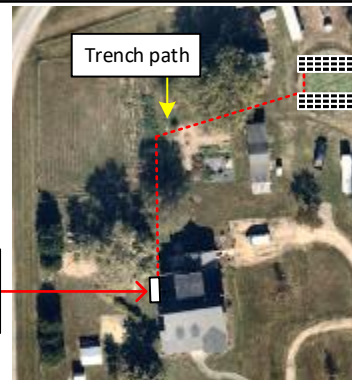
SHEET

DRAWING INDEX

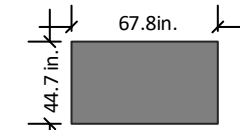
JM
22366JM00-0

Trench: 220ft. (approx.)

Utility Meter



Module Dimension



Array	Tilt	Azimuth
A	30°	180°
B	30°	180°

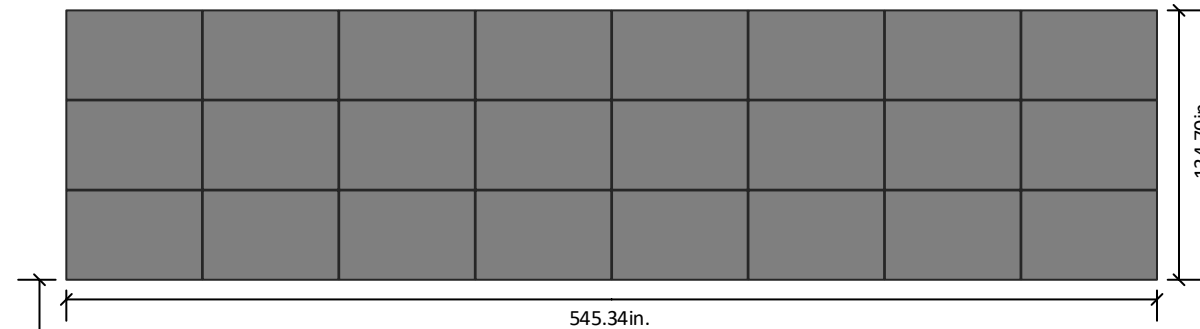


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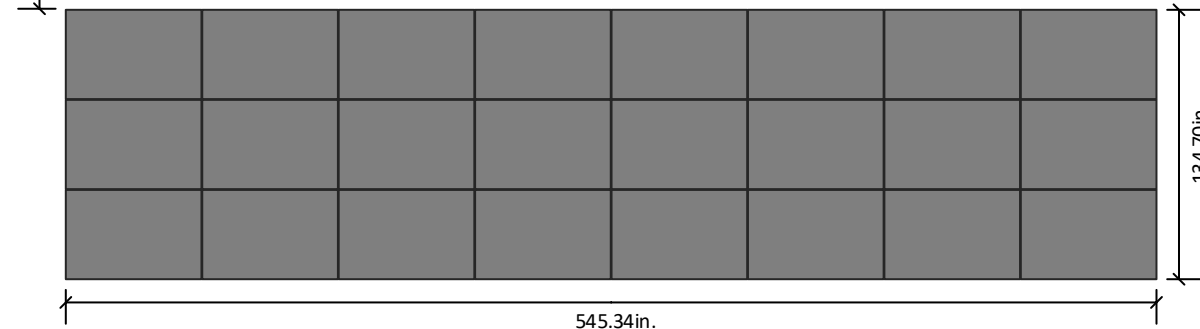
SYSTEM DETAILS

NUMBER OF PANELS : 48
PANELS MODEL : Solaria PowerX-395R
DC SIZE : 18.96 kW
AC SIZE : 15.2 kVA

Array A
24 Modules



Array B
24 Modules



6" clearance
from each side
of the roof

SITE LAYOUT
SCALE: 1/8" - 1' 0"



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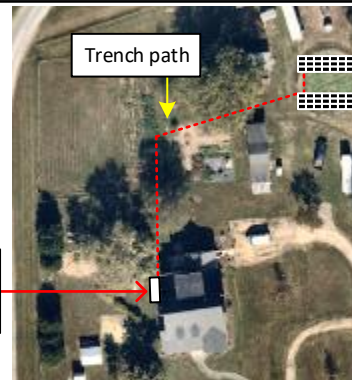
JOB NUMBER
22-366-JM00

PROJECT STATUS
PERMITTING

SHEET
SITE LAYOUT

JM
22366JM00-1

String Layout					
Inv A: SE7600H-US (RGM)			Inv B: SE7600H-US		
Strings #	No. of Modules	Color Code	Strings #	No. of Modules	Color Code
String 1	12		String 3	12	
String 2	12		String 4	12	



Module Dimension		
	Array	Tilt
A	30°	180°
B	30°	180°

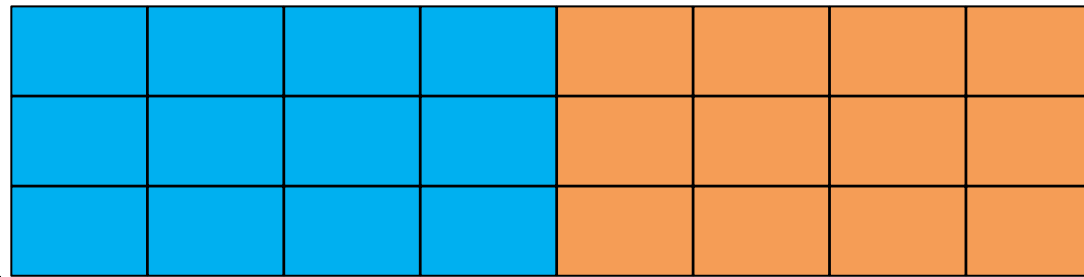
8MSOLAR
ADVANCING ENERGY INDEPENDENCE

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SYSTEM DETAILS

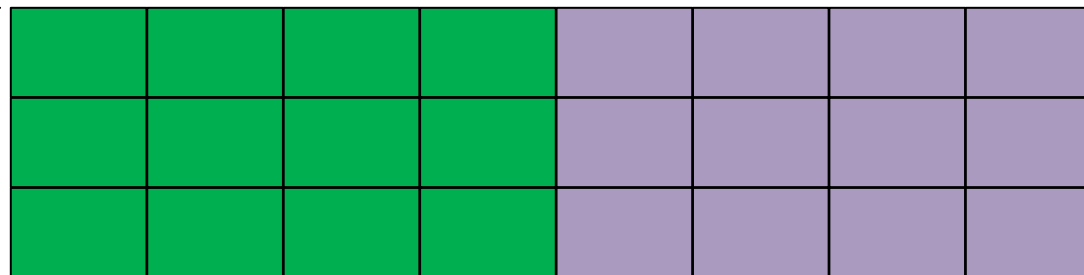
NUMBER OF PANELS : 48
 PANELS MODEL : Solaria PowerX-395R
 DC SIZE : 18.96 kW
 AC SIZE : 15.2 kVA

Array A
24 Modules



180.00in.

Array B
24 Modules



6" clearance
from each side
of the roof

STRING MAPPING
SCALE: 1/8" - 1' 0"

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**NABCEP
CERTIFIED**
PV Installation
Professional
Ali Buttar
PVIP #031310-32

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Customer's Signature

JOB NUMBER
22-366-JM00

PROJECT STATUS
PERMITTING

SHEET
STRING MAPPING

JM
22366JM00-2

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Customer's Signature

JOB NUMBER

22-366-JM00

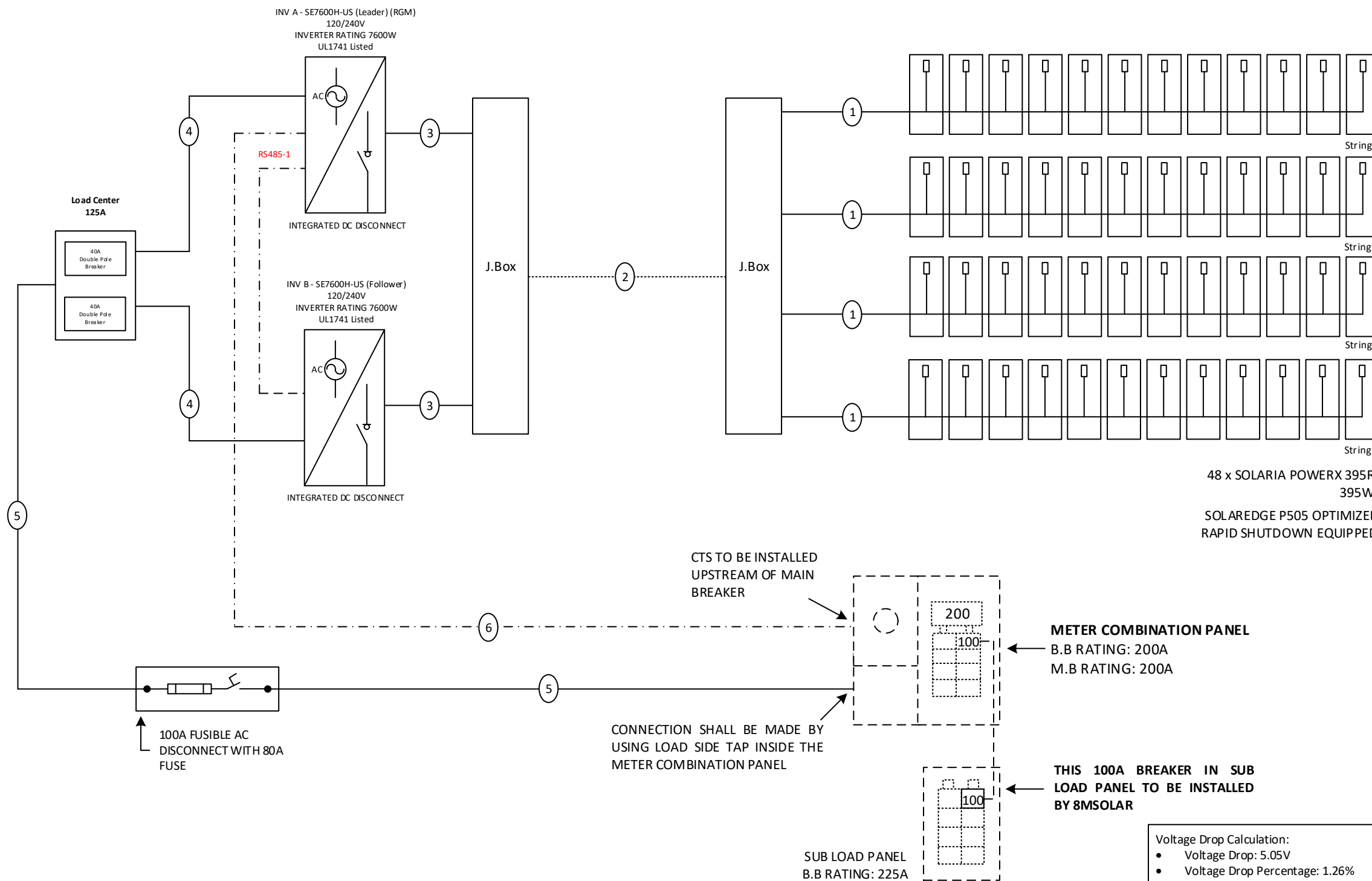
PROJECT STATUS

PERMITTING

SHEET

DETAILED ELECTRICAL DIAGRAM

JM
22366JM00-3



48 x SOLARIA POWERX 395R
395W
SOLAREEDGE P505 OPTIMIZER
RAPID SHUTDOWN EQUIPPED

Voltage Drop Calculation:

- Voltage Drop: 5.05V
- Voltage Drop Percentage: 1.26%
- Voltage at End: 394.95
- Trench Path: 220' approximately

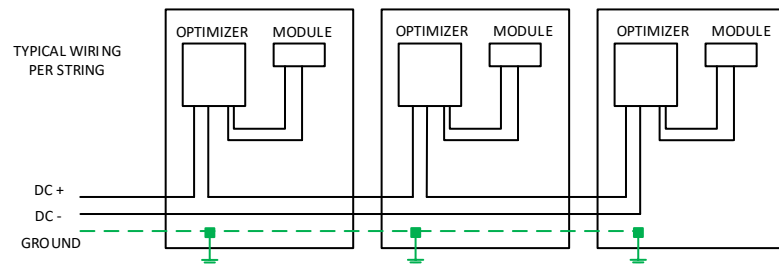
ELECTRICAL NOTES

- System Size: 18,960W DC
- (48) SOLARIA POWERX 395R
- (48) SOLAREEDGE P505 OPTIMIZERS
- (01) SOLAREEDGE SE7600H-US (RGM)
- (01) SOLAREEDGE SE7600H-US
- Inverter Output: 32A max @ 240 VAC (Each)
- 15.2 kVA AC output max

- Grounding will be done via SunModo grounding mid-clamps to ensure the rail and panels are continuously grounded.
- Rapid Shutdown is included in the Inverter, refer to inverter & optimizer attached datasheets.
- The load center / disconnect will be visible, lockable accessible to utility linesmen and will be properly labelled as per NEC requirements. It will be located on the exterior wall of the building, next to the utility meter.

STRING 1,2,3&4:
12 x 375W = 4,740W ea
I_{mpp} = 11.85 Adc
I_{max} = 23.4 Adc
V_{mpp} = 400 Vdc
V_{oc} = 12 Vdc

Sr.No	#Wire	Conduit Size	Ground Wire	Amperage
1	2 x #10 PV		#10 Bare CU	23.4A
2	8 x #6 PV	Direct Burial	#10 Green	
3	4 x #10 THHN Cu	3/4" EMT	#10 Green	40A
4	3 x #8 THHN Cu	3/4" EMT	#10 Green	
5	3 x #4 THHN Cu	1" EMT	#8 Green	80A
6	Shielded CAT5e			



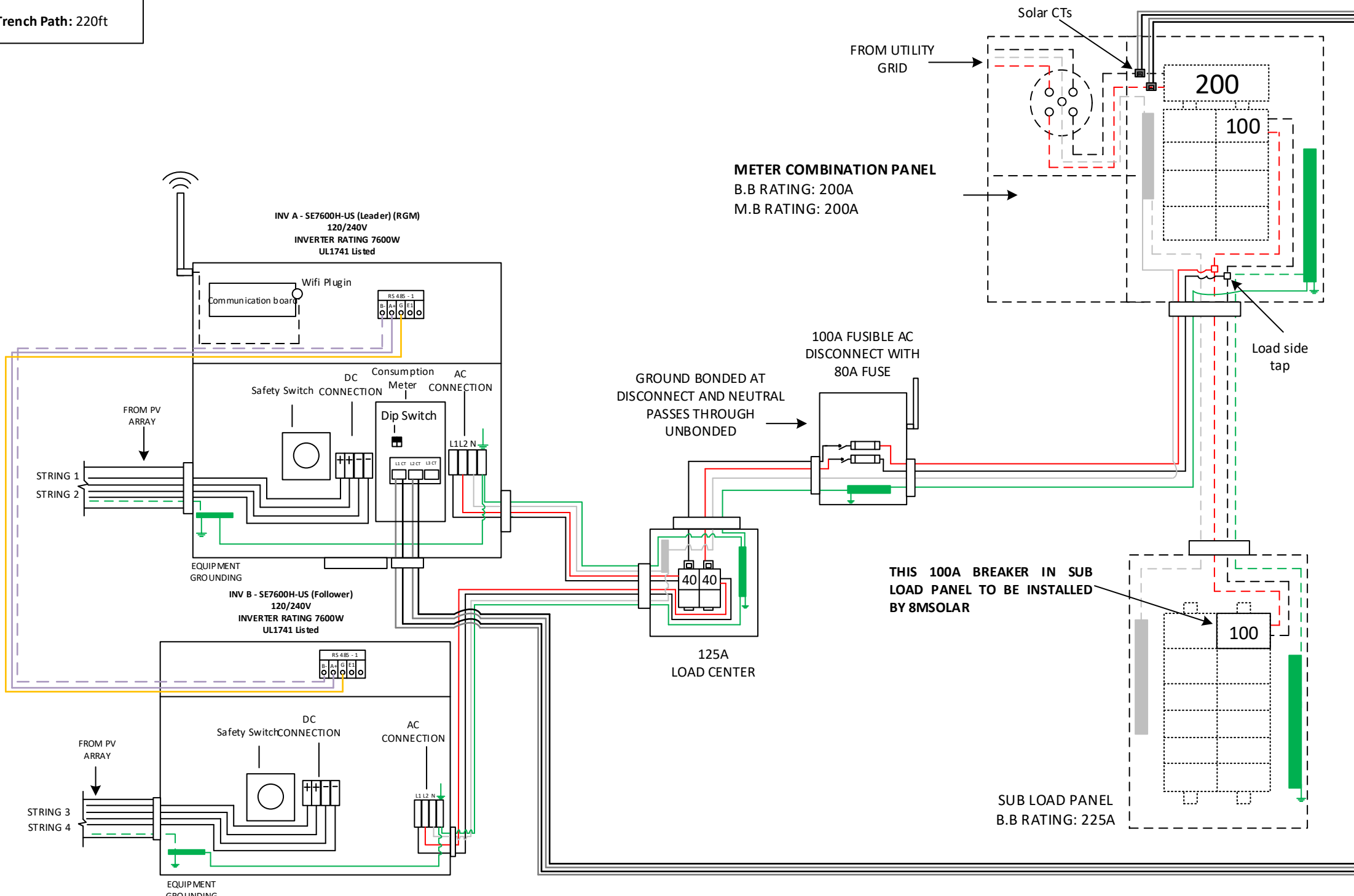
Line 1	
Line 2	
Neutral	
Ground	

DIP SWITCH CONFIGURATION

<input checked="" type="checkbox"/>	0	OFF
<input type="checkbox"/>	1	ON

- Note**
- The arrow on the 225A CTs should face the grid.
- Note**
- Dip switch settings are factory set to address 1

Trench Path: 220ft



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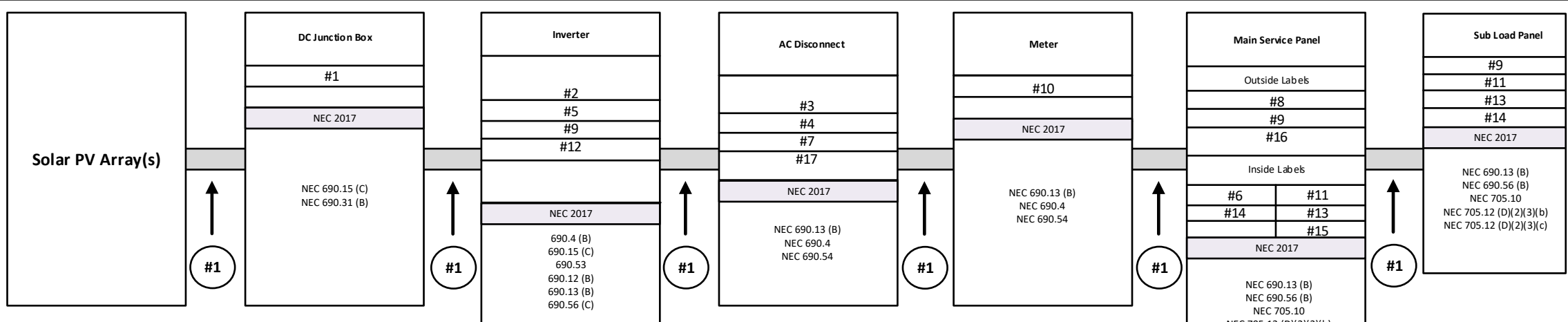
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Customer's Signature

JOB NUMBER 22-366-JM00

PROJECT STATUS PERMITTING

SHEET DETAILED ELECTRICAL DIAGRAM



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LABELING AND WARNING SIGNS

A. PURPOSE
PROVIDE EMERGENCY RESPONDERS WITH APPROPRIATE WARNING AND GUIDANCE WITH RESPECT TO ISOLATING THE SOLAR ELECTRIC SYSTEM. THIS CAN FACILITATE IDENTIFYING ENERGIZED ELECTRICAL LINES THAT CONNECT THE SOLAR PANELS TO THE INVERTER, AS SHOULD NOT BE CUT WHEN VENTING FOR SMOKE REMOVAL.

B. MAIN SERVICE DISCONNECT:

1. RESIDENTIAL BUILDINGS- THE MARKING MAY BE PLACED WITHIN THE MAIN SERVICE DISCONNECT. THE MARKING SHALL BE PLACED ON THE OUTSIDE COVER IF THE MAIN SERVICE DISCONNECT IS OPERABLE WITH THE SERVICE PANEL CLOSED.
2. COMMERCIAL BUILDINGS- THE MARKINGS SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT CLEARLY VISIBLE FROM THE LOCATION WHERE THE LEVER IS OPERATED
3. MARKINGS, VERBIAGE, FORMAT AND TYPE OF MATERIAL
 - a. VERBIAGE: CAUTION; SOLAR ELECTRIC SYSTEM CONNECTED
 - b. FORMAT:
 - (1) WHITE LETTERING ON A RED BACKGROUND
 - (2) MINIMUM 3/8 INCH LETTER HEIGHT
 - (3) ALL LETTERS SHALL BE CAPITALIZED
 - (4) ARIAL OR SIMILAR FONT, NON-BOLD
 - c. MATERIAL:
 - (1) REFLECTIVE, WEATHER RESISTANT MATERIAL SUITABLE FOR THE ENVIRONMENT (USE UL-969) AS STANDARD FOR WEATHER RATING); DURABLE ADHESIVE MATERIALS MEET THIS REQUIREMENT.

C. MARKING REQUIREMENTS ON DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, DC COMBINERS AND JUNCTION BOXES;

1. MARKING: PLACEMENT, VERBIAGE, FORMAT AND TYPE OF MATERIAL.
 - A. PLACEMENT: MARKINGS SHALL BE PLACED EVERY 10 (TEN) FEET ON ALL INTERIOR AND EXTERIOR DC CONDUITS, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, AT TURNS ABOVE AND/OR BELOW PENETRATIONS, ALL DC COMBINERS AND JUNCTION BOXES.
 - B. VERBIAGE: CAUTION SOLAR CIRCUIT
 - C. THE FORMAT AND TYPE OF MATERIAL SHALL ADHERE TO SECTION B-3.B & C ABOVE
 - D. INVERTERS ARE NOT REQUIRED TO HAVE CAUTION MARKINGS

#1 WARNING: PHOTOVOLTAIC POWER SOURCE

#2 PHOTOVOLTAIC
DC DISCONNECT

#3 PHOTOVOLTAIC
AC DISCONNECT

#4 RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

#5 MAXIMUM VOLTAGE
MAXIMUM CIRCUIT CURRENT
MAX. RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED)

#6 PHOTOVOLTAIC POWER SOURCE
OPERATING AC VOLTAGE [] V
MAXIMUM OPERATING AC OUTPUT CURRENT [] A

#7 AC DISCONNECT PHOTOVOLTAIC SYSTEM POWER SOURCE
RATED AC OUTPUT CURRENT [] AMPS
NOMINAL OPERATING AC VOLTAGE [] VOLTS

#8 WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

#9 WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

#10 WARNING
THIS SERVICE METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

#11 WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

#12 WARNING
BIPOLAR PHOTOVOLTAIC ARRAY
DISCONNECTION OF NEUTRAL GROUNDING CONDUCTORS MAY RESULT IN OVERVOLTAGE ON ARRAY OR INVERTER

#13 WARNING
SOLAR ELECTRIC CIRCUIT BREAKER IS BACKFED

#14 WARNING
THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

#15 SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN
TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY

#16 SOLAR AC DISCONNECT LOCATED AT WEST SIDE WALL OF THE HOUSE BESIDE THE METER COMBINATION PANEL

#17 SERVICE DISCONNECT LOCATED IN THE METER COMBINATION PANEL



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Customer's Signature

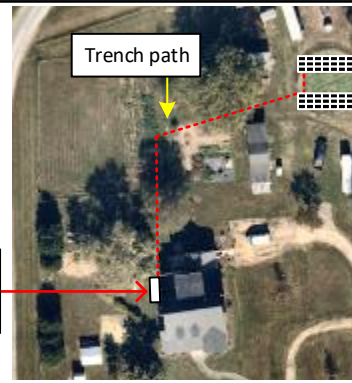
JOB NUMBER 22-366-JM00

PROJECT STATUS PERMITTING

SHEET PV LABELS

JM
22366JM00-5

Trench: 220ft. (approx.)



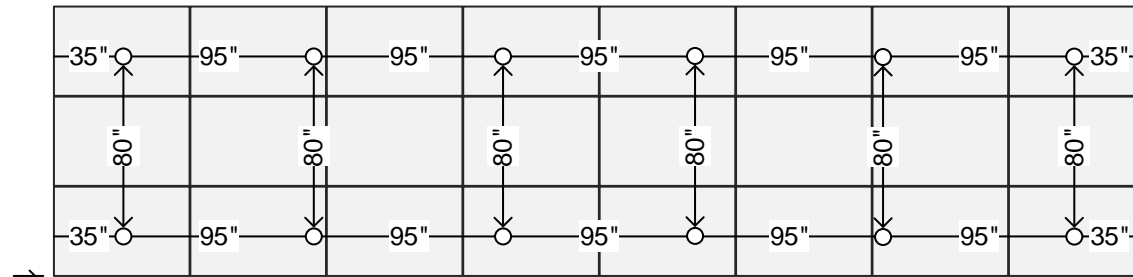
Utility Meter

Module Dimension		
Array	Tilt	Azimuth
A	30°	180°
B	30°	180°



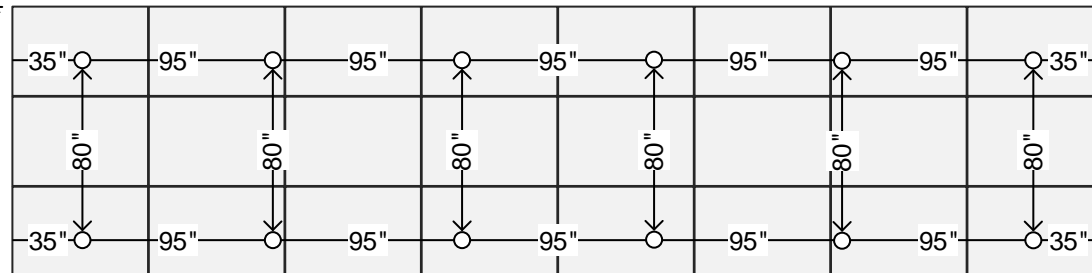
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Array A
24 Modules



180.00in.

Array B
24 Modules



PIER DIAGRAM

6" clearance
from each side
of the roof

PV LABELS

Sr No	Code	Qty
01	02-314	11
02	03-301	02
03	03-302	01
04	02-316	01
05	03-308	02
06	03-390	01
07	03-306	01
08	05-215	02
09	05-211	04
10	07-359	01
11	05-372	02
12	05-103	02
13	05-216	02
14	05-342	02
15	07-111	02
16	8M-001	01
17	8M-002	01

- 24 X K10423-063: GROUND SCREW, 63"
- 12 X A21165-060: HSS 2.375" OD FRONT PIPE
- 12 X A21165-120: HSS 2.375" OD REAR PIPE
- 20 X A21168-112: 2.875" OD E/W PIPE BEAM, 112"
- 04 X A50164-066: HSS E/W TUBE BRACE
- 12 X A50164-092: HSS N/S TUBE BRACE
- 32 X A20144-168-ML: HELIO STANDARD RAIL HR250, 168"
- 64 X K10343-001: 2.5" PIPE U-CLAMP KIT
- 24 X K10341-002: 2.5" PIPE T-CAP KIT
- 28 X K10219-001: 2" PIPE CLAMP KIT
- 04 X K10222-001: 2.5" PIPE CLAMP KIT
- 16 X K10342-001: 2.5" PIPE SPLICE KIT
- 64 X K10180-001: UNIVERSAL MID CLAMP KIT
- 64 X K10224-135: END CLAMP KIT
- 04 X K10469-003: GROUNDING LUG
- 64 X A20284-001: RAIL END CAP
- 48 X K10363-001: MICRO INVERTER HARDWARE KIT
- 08 X A20380-001: PIPE END CAP

SOLAR MODULES

- 48 x Solaria PowerX-395R

INVERTER & SUPPORTING ITEMS

- 01 x SolarEdge SE7600H-US US000BNI4 (RGM)
- 01 x SolarEdge SE7600H-US US000BNU4
- 48 x SolarEdge Power Optimizer P505
- 01 x SE-WFGW-B-S1-NA with Antenna kit
- 02 x 225A SolarEdge CTs

WIRE

- 2000 ft x #6 PV WIRE BLK (Cu)
- 500 ft x #10 PV WIRE BLK (Cu)

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Customer's Signature

JOB NUMBER
22-366-JM00

PROJECT STATUS
PERMITTING

SHEET
BILL OF MATERIAL

BILL OF MATERIAL

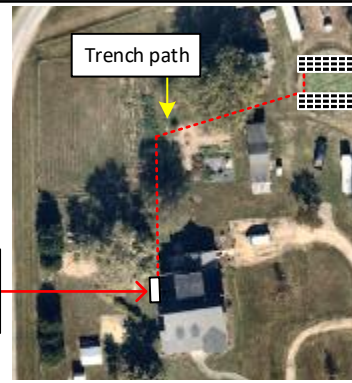
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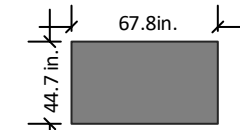
JM
22366JM00-6

Trench: 220ft. (approx.)

Utility Meter



Module Dimension



Array	Tilt	Azimuth
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A	30°	180°
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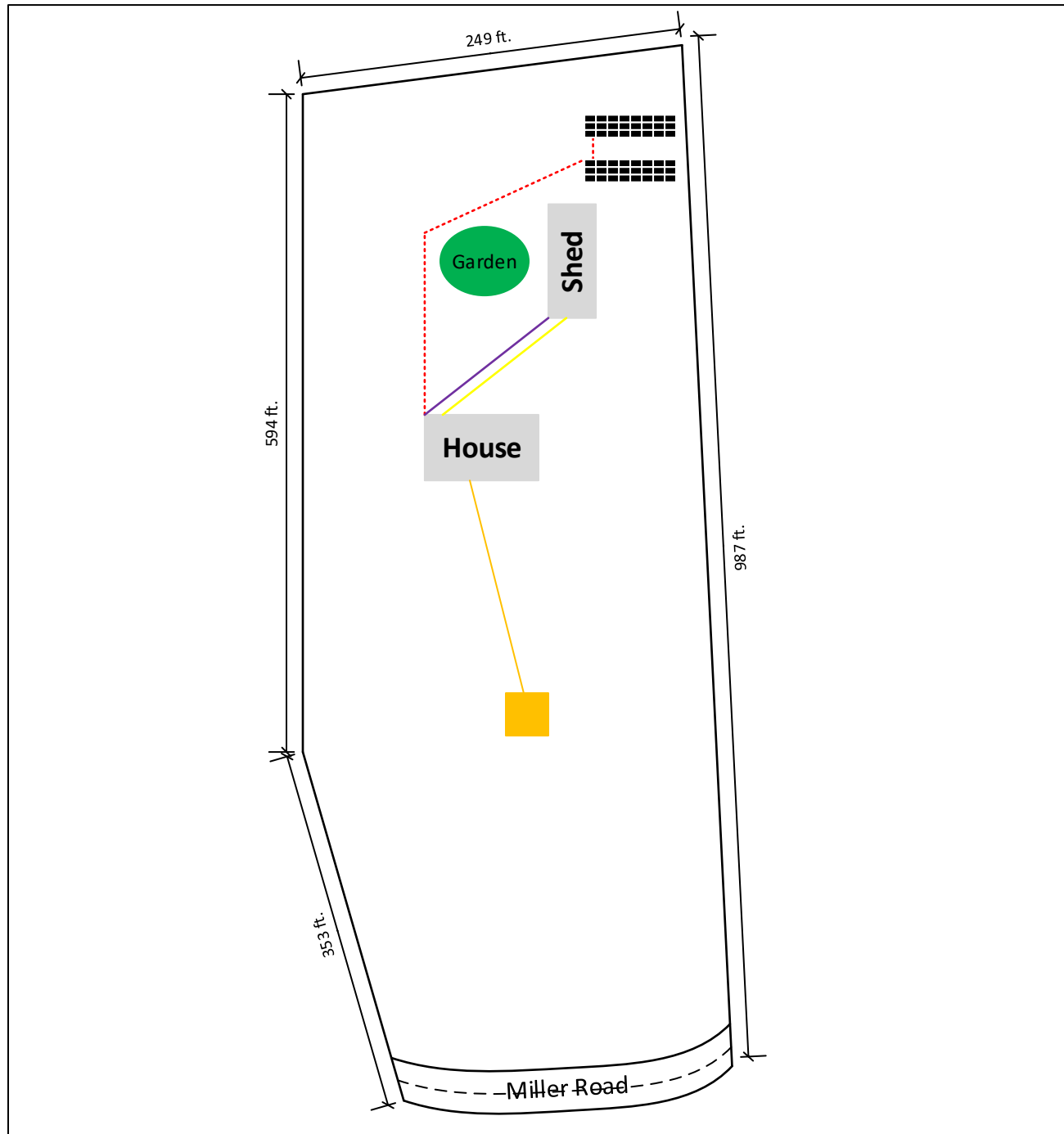
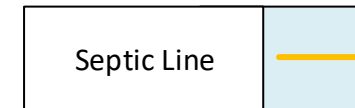
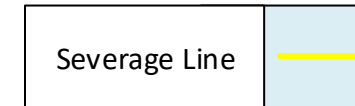
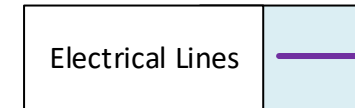
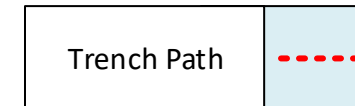
B	30°	180°
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SYSTEM DETAILS

NUMBER OF PANELS : 48
PANELS MODEL : Solaria PowerX-395R
DC SIZE : 18.96 kW
AC SIZE : 15.2 kVA



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PV Installation Professional
Ali Buttar
PVIP #031310-32

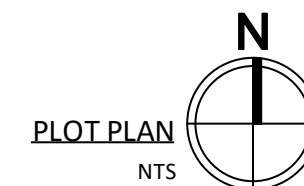
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PROJECT STATUS
PERMITTING

SHEET
PLOT PLAN



JM
22366JM00-7

Solaria PowerX-400R Performance Series

Achieving over 20.5% efficiency, Solaria PowerX Performance solar panels feature Solaria's core cell cutting technology, offering higher-power and attractive black-on-black aesthetics compared to conventional solar panels. Solaria has been the market leader in cut-cell technologies for over a decade. With a comprehensive 25-year warranty, PowerX delivers the latest in power and reliability for homeowners.



High Efficiency, High Power

At 400 watts and 20.5% efficiency, Solaria PowerX solar panels are one of the highest power residential panels available.



High Quality and Reliability

State-of-the-art cell cutting technology and advanced panel construction ensure that PowerX panels are highly reliable and designed to far exceed the industry-leading 25-year warranty.



All Black Aesthetics

Compared to conventional panels, Solaria PowerX panels have a more uniform all-black appearance.



Best System Value

Solaria PowerX solar panels produce more power per square meter area. This reduces installation costs due to fewer balance of system components.



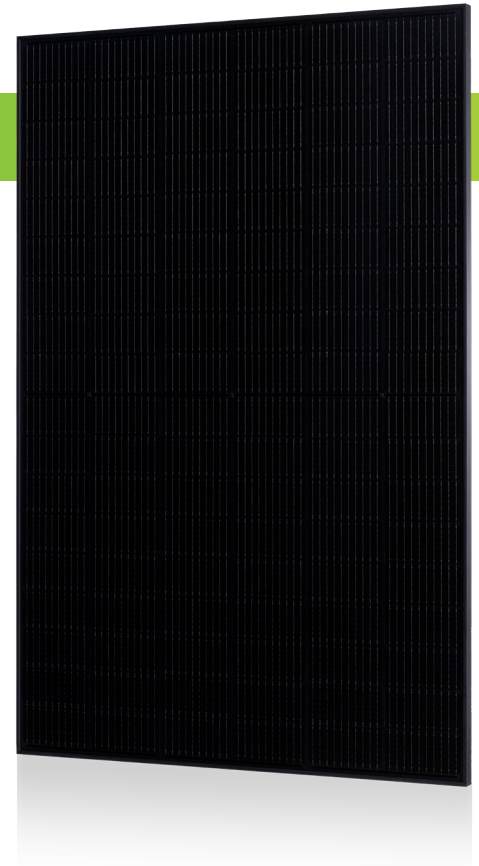
Improved Shading Tolerance

Sub-strings are interconnected in parallel, which dramatically lowers the shading losses and boosts energy yield.



Low Light Performance

PowerX maintains high efficiency at low irradiance further ensuring maximum energy yield.



About Solaria

Established in 2000, The Solaria Corporation has created one of the industry's most respected IP portfolios, with over 250 issued and pending patents in PV solar cell and module technology. Headquartered in California, Solaria has developed a technology platform that unlocks the potential of solar energy.

Performance at STC (1000W/m², 25° C, AM 1.5)

Solaria PowerX-		390R	395R	400R
Max Power (P _{max})	[W]	390	395	400
Efficiency	[%]	20.0	20.2	20.5
Open Circuit Voltage (V _{oc})	[V]	36.9	37.1	37.3
Short Circuit Current (I _{sc})	[A]	13.52	13.60	13.68
Max Power Voltage (V _{mp})	[V]	30.6	30.8	31.0
Max Power Current (I _{mp})	[A]	12.73	12.82	12.9
Power Tolerance	[%]	-0/+3	-0/+3	-0/+3

Performance at NOCT (800W/m², 20° C Amb, Wind 1 m/s, AM 1.5)

Max Power (P _{max})	[W]	290	293	297
Open Circuit Voltage (V _{oc})	[V]	34.3	34.5	34.7
Short Circuit Current (I _{sc})	[A]	11.01	11.10	11.13
Max Power Voltage (V _{mp})	[V]	28.50	28.60	28.76
Max Power Current (I _{mp})	[A]	10.20	10.26	10.32

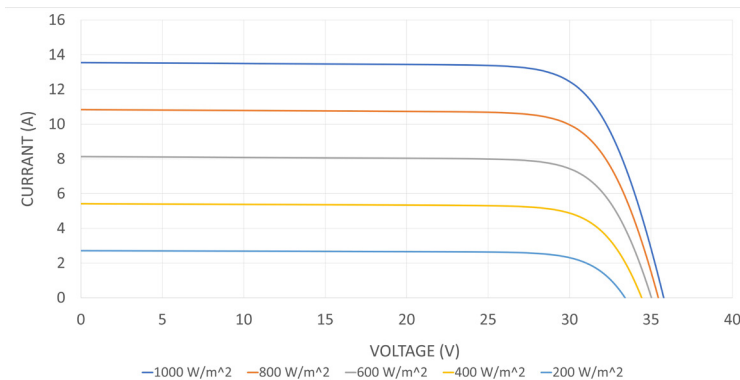
Temperature Characteristics

NOCT	[°C]	45 +/-2
Temp. Coeff. of P _{max}	[% / °C]	-0.36
Temp. Coeff. of V _{oc}	[% / °C]	-0.28
Temp. Coeff. of I _{sc}	[% / °C]	0.048

Design Parameters

Operating temperature	[°C]	-40 to +85
Max System Voltage	[V]	1000
Max Fuse Rating	[A]	25
Bypass Diodes	[#]	3

IV Curves vs. Irradiance (400W Panel)



Mechanical Characteristics

Cell Type	Monocrystalline Silicon
Dimensions (L x W x H)	67.8" x 44.7" x 1.4"
	1723mm x 1134mm x 35mm
Weight	22.1 kg / 48.7 lbs
Glass Type / Thickness	AR Coated, Tempered / 3.2mm
Frame Type	Black Anodized Aluminum
Cable Type / Length	12 AWG PV Wire (UL) / 1100mm
Connector Type	MC4
Junction Box	IP68 / 3 diodes
Front Load	5400 Pa / 113 psf*
Rear Load	2400 Pa / 50 psf*

* Refer to Solaria Installation Manual for details

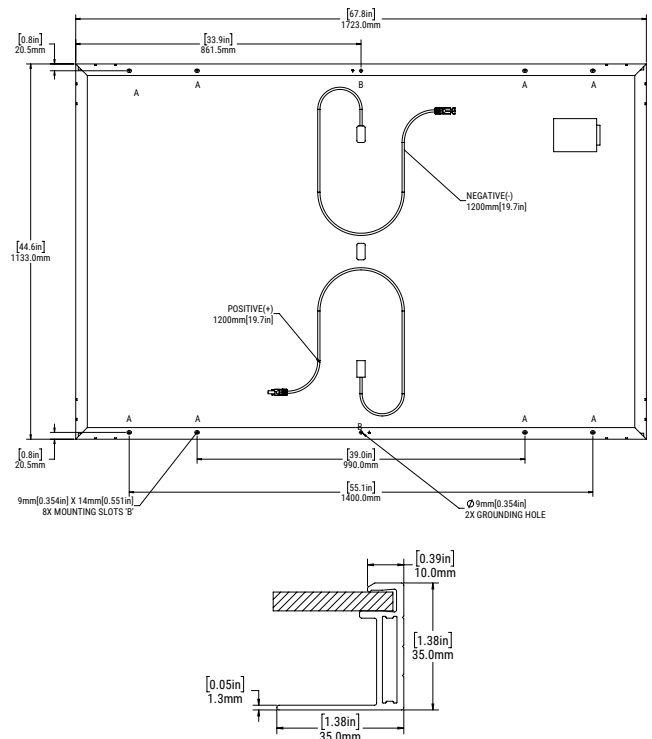
Certifications / Warranty

Certifications	UL 61730 / IEC 61215 / IEC 61730
Fire Type (UL 1703)	2
Power, Parts & Labor Warranty	25 years*

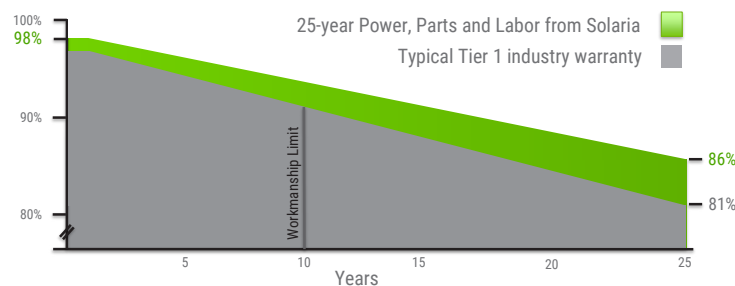
* Warranty details at www.solaria.com

Packaging

Stacking Method	Vertical / Palletized
Panels/ Pallet	31
Pallet Dims (L x W x H)	69.3" x 44.3" x 49.3"
	1760mm x 1125mm x 1253mm
Pallet Weight	745 kg / 1642 lbs
Pallets / 40-ft Container	26
Panels / 40-ft Container	806



Comprehensive 25-Year Warranty



Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US



Optimized installation with HD-Wave technology

- / Specifically designed to work with power optimizers
- / Record-breaking 99% weighted efficiency
- / Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- / Fixed voltage inverter for longer strings
- / Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- / UL1741 SA certified, for CPUC Rule 21 grid compliance
- / Small, lightweight, and easy to install both outdoors or indoors
- / Built-in module-level monitoring
- / Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

/ Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5 ⁽¹⁾							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380			400				Vdc
Maximum Input Current @240V ⁽²⁾	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V ⁽²⁾	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600k Ω Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

(1) For other regional settings please contact SolarEdge support

(2) A higher current source may be used; the inverter will limit its input current to the values stated

/ Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

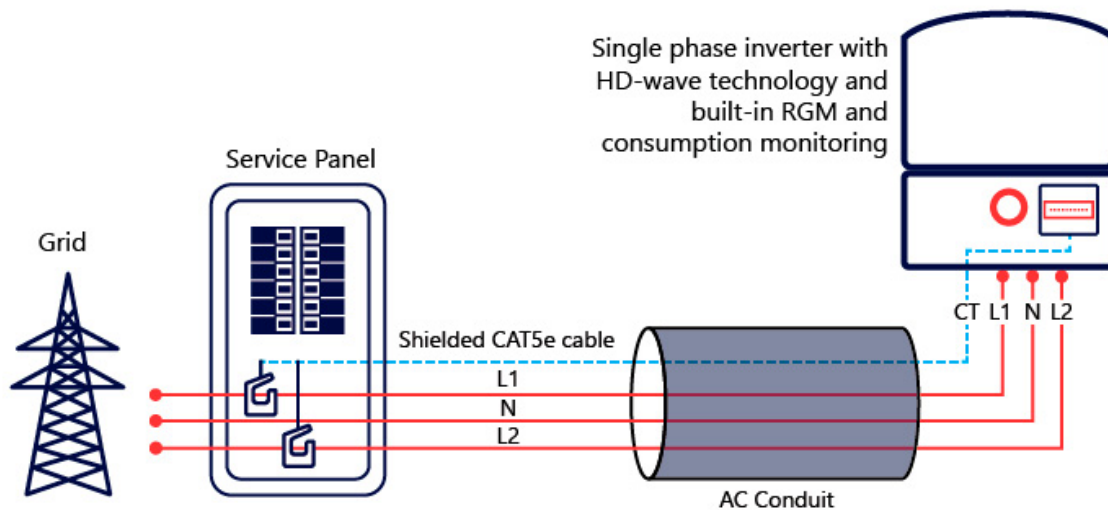
MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Metering, ANSI C12.20	Optional ⁽³⁾							
Consumption metering								
Inverter Commissioning	With the SetApp mobile application using Built-in Wi-Fi Access Point for Local Connection							
Rapid Shutdown - NEC 2014, NEC 2017 and NEC 2020, 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07							
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)							
Emissions	FCC Part 15 Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG				1" Maximum /14-4 AWG			
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG				1" Maximum / 1-3 strings / 14-6 AWG			
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174				21.3 x 14.6 x 7.3 / 540 x 370 x 185			
Weight with Safety Switch	22 / 10	25.1 / 11.4	26.2 / 11.9	38.8 / 17.6			lb / kg	
Noise	< 25				<50			dBA
Cooling	Natural Convection							
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁴⁾							°F / °C
Protection Rating	NEMA 4X (Inverter with Safety Switch)							

(3) Inverter with Revenue Grade Meter P/N: SExxxH-US000BNC4; Inverter with Revenue Grade Production and Consumption Meter P/N: SExxxH-US000BNI4 . For consumption metering, current transformers should be ordered separately: SEACT0750-200NA-20 or SEACT0750-400NA-20. 20 units per box

(4) Full power up to at least 50°C / 122°F; for power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>

How to Enable Consumption Monitoring

By simply wiring current transformers through the inverter's existing AC conduits and connecting them to the service panel, homeowners will gain full insight into their household energy usage helping them to avoid high electricity bills



Power Optimizer

For North America

P370 / P400 / P401 / P485 / P505

POWER OPTIMIZER



PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

/ Power Optimizer

For North America

P370 / P400 / P401 / P485 / P505

Optimizer model (typical module compatibility)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96- cell modules)	P401 (for high power 60 and 72 cell modules)	P485 (for high-voltage modules)	P505 (for higher current modules)		
INPUT							
Rated Input DC Power ⁽¹⁾	370	400	430	485	505	W	
Absolute Maximum Input Voltage (Voc at lowest temperature)	60	80	60	125 ⁽²⁾	83 ⁽²⁾	Vdc	
MPPT Operating Range	8 - 60	8 - 80	8-60	12.5 - 105	12.5 - 83	Vdc	
Maximum Short Circuit Current (Isc)	11	10.1	12.5	11	14	Adc	
Maximum DC Input Current	13.75	12.5	14.65	12.5	17.5		
Maximum Efficiency						99.5	%
Weighted Efficiency						98.8	%
Overvoltage Category						II	
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREEDGE INVERTER)							
Maximum Output Current						15	Adc
Maximum Output Voltage	60			80		Vdc	
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREEDGE INVERTER OR SOLAREEDGE INVERTER OFF)							
Safety Output Voltage per Power Optimizer						1 ± 0.1	Vdc
STANDARD COMPLIANCE							
EMC						FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3	
Safety						IEC62109-1 (class II safety), UL1741, NEC/PVRSS	
Material						UL94 V-0 , UV Resistant	
RoHS						Yes	
INSTALLATION SPECIFICATIONS							
Maximum Allowed System Voltage						1000	Vdc
Compatible inverters						All SolarEdge Single Phase and Three Phase inverters	
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1	129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 153 x 29.5 / 5.1 x 6 x 1.16	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in	
Weight (including cables)	630 / 1.4	750 / 1.7	655 / 1.5	845 / 1.9	1064 / 2.3	gr / lb	
Input Connector	MC4 ⁽³⁾			MC4 ⁽³⁾	MC4 ⁽³⁾		
Input Wire Length						0.16 / 0.5	m / ft
Output Wire Type / Connector						Double Insulated / MC4	
Output Wire Length						1.2 / 3.9	m / ft
Operating Temperature Range ⁽⁴⁾						-40 to +85 / -40 to +185	°C / °F
Protection Rating						IP68 / Type6B	
Relative Humidity						0 - 100	%

(1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed

(2) NEC 2017 requires max input voltage be not more than 80V

(3) For other connector types please contact SolarEdge

(4) Longer inputs wire lengths are available for use. For 0.9m input wire length order P401-xxxLxxx

(5) For ambient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>

PV System Design Using a SolarEdge Inverter ⁽⁶⁾⁽⁷⁾	Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	P370, P400, P401	8	10	18	
	P485, P505	6	8	14	
Maximum String Length (Power Optimizers)	25		25	50	
Maximum Power per String	5700 ⁽⁸⁾ (6000 with SE7600-US - SE11400-US)	5250 ⁽⁸⁾	6000 ⁽⁹⁾	12750 ⁽¹⁰⁾	W
Parallel Strings of Different Lengths or Orientations	Yes				

(6) For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf

(7) It is not allowed to mix P485/P505 with P370/P400/P401 in one string

(8) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement

(9) For 208V grid: it is allowed to install up to 6,500W per string when the maximum power difference between each string is 1,000W

(10) For 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W

Subject: ETL Evaluation of SolarEdge Products to Rapid Shutdown Requirements

To, whom it may concern

This letter represents the testing results of the below listed products to the requirements contained in the following standards:

The evaluation was done on the PV Rapid Shutdown System (PVRSS), and covers installations consisting of optimizers and inverters with part numbers listed below.

The testing done has verified that controlled conductors are limited to:

- Not more than 30 volts and 240 voltamperes within 30 seconds of rapid shutdown initiation outside the array.
- Not more than 80 volts and 240 voltamperes within 30 seconds of rapid shutdown initiation inside the array.

The rapid shutdown initiation is performed by either disconnecting the AC feed to the inverter, or – if the inverter DC Safety switch is readily accessible – by turning off the DC Safety switch.

Applicable products:

(1) Power optimizers:

PB followed by 001 to 350; followed by -AOB or -TFI.

OP followed by 001 to 500; followed by -LV, -MV, -IV or -EV.

P followed by 001 to 1100.

SP followed by 001 to 350.

When optimizers are connected to 2 or more modules in series, the max input voltage may exceed 80V. Following the implementation of the NEC 2017 rapid shutdown value of 80V max inside of the array at the beginning of 2019, modules exceeding this combined input max voltage will be required to use optimizers with parallel inputs. Also meeting NEC 2020 rapid shutdown requirement.

(2) 1 -PH Inverters

SE3000A-US / SE3800A-US / SE5000A-US / SE6000A-US / SE7600A-US / SE10000A-US / SE11400A-US / SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US when the following label is labeled on the side of the inverter:

Inverter part number may be followed by a suffix.

(3) 3 -PH Inverters



Total Quality. Assured.


Intertek
3933 US Route 11
Cortland, NY 13045
Telephone: 607-753-7311
www.intertek.com

SE9KUS / SE10KUS / SE14.4KUS/ SE16.7kUS / SE17.3kUS / SE20KUS/ SE24KUS / SE30KUS / SE33.3KUS / SE40KUS / SE43.2KUS / SE50KUS / SE66.6KUS / SE80KUS / SE85KUS / SE100KUS / SE120KUS; when the following label is labeled on the side of the inverter:

Please note, this Letter Report does not represent authorization for the use of any Intertek certification marks.

Brand Name(s)	SolarEdge
Relevant Standard(s)	UL 1741, UL 1741 CRD for rapid shutdown National Electric Code, 2020, Section 690.12 requirement for rapid shutdown
Verification Issuing Office	3933 US Route 11, Cortland, NY 13045

NRTL Disclaimer, Different for each NRTL – Example: *"This Verification is for the exclusive use of NRTL's Client and is provided pursuant to the agreement between NRTL and its Client. NRTL's responsibility and liability are limited to the terms and conditions of the agreement. NRTL assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the NRTL name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by NRTL. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an NRTL certification program."*

Signature: 

Name: Mukund Rana
Position: Staff Engineer
Date:5/17/2021

Date	Engineer / Reviewer	Description
5/17/2021 G104683664CRT	Dishant Patel Mukund Rana	Added New 3-PH Inverter model SE50KUS, SE80KUS, SE85KUS and SE120KUS. Updated Power optimizers from "P followed by 001 to 960" to "P followed by 001 to 1100" Updated NEC standard from "National Electric Code, 2017, Section 690.12 requirement for rapid shutdown" To "National Electric Code, 2020, Section 690.12 requirement for rapid shutdown"



GO BIG ON TURF

SunTurf™ Ground Mount System



SunModo offers the next generation Ground Mount System with SunTurf™. The streamlined design combines the strength of Helio Rails with steel pipes to create the perfect ground mount solution.

SunTurf™ is ideal for solar installers looking for a durable and cost-effective system that can accommodate a wide variety of soil conditions.

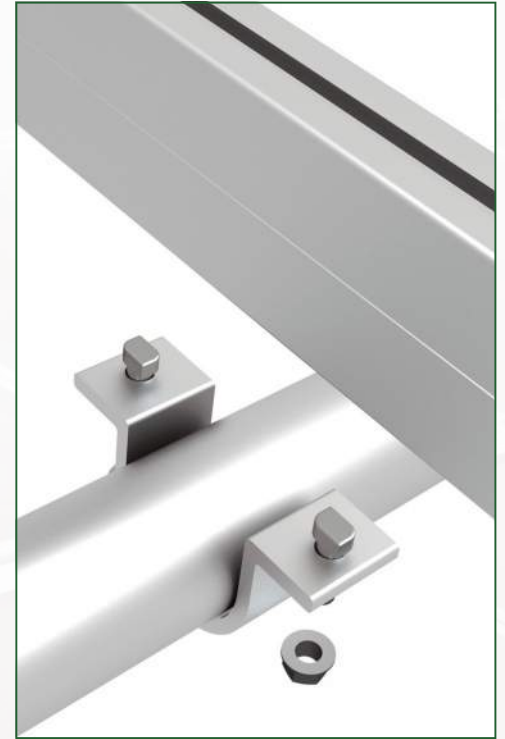
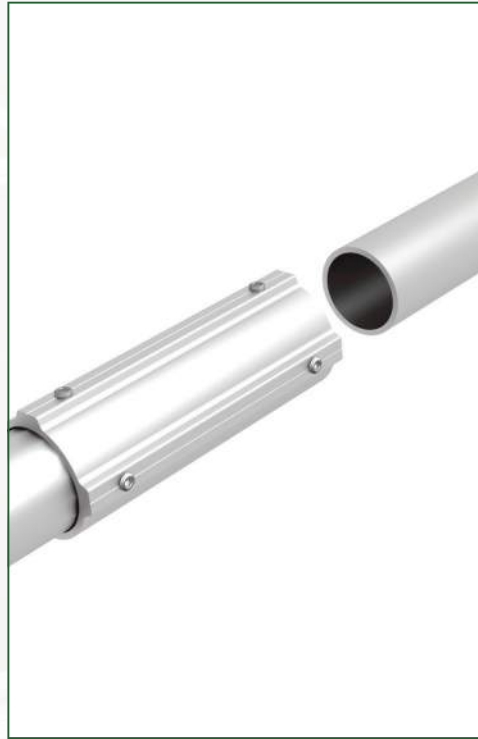
The SunTurf™ Ground Mount Advantage

- ✓ Easily scalable from kilowatts to multimegawatts PV Arrays.
- ✓ Foundation design solution for every soil condition.
- ✓ Online configuration tool available to streamline design process.
- ✓ Components optimized for strength, durability and fast installation.
- ✓ UL 2703 Listed by Intertek.

Key Features of SunTurf™ Ground Mount System



SunTurf™ Ground Mount System easily integrate Helio Rails with 2-inch Schedule 40 steel pipes. No drilling is required to attach the aluminum rails to the horizontal pipe. Optional bracing can provide additional structural rigidity for sites with high snow or wind load conditions. Anchor any ground mount installation using one of our fountain types including helical piles, precast ballasts and concrete piers.



Technical Data

Application	Ground Mount
Material	High grade aluminum, galvanized steel and 304 stainless steel hardware
Module Orientation	Portrait and landscape
Tilt Angle	Range between 10 to 50 degrees
Foundation Types	Post in concrete, helical earth auger, ground screw anchor and ballast
Structural Integrity	Stamped engineering letters available
Certification	UL 2703 Listed by ETL
Warranty	20 Years



GROUND SCREW ANCHORS & HELICAL EARTH AUGERS

**Don't fret over your next
PV ground mount installation; Screw It!**

SunModo is proud to offer heavy-duty Ground Screws and Earth Augers as a foundational option for your Ground Mount PV racking system.

These anchors are used for securing installer-supplied 2 inch Schedule 10 or 40 galvanized steel pipe. Our anchors are popular because they are strong, economical, and easily to install.

To install simply turn/screw the anchor into the ground using a rotary head backhoe and a drive adaptor. The drive adaptor bolts quickly through the anchor's reinforced eyelet efficiently transferring torque.

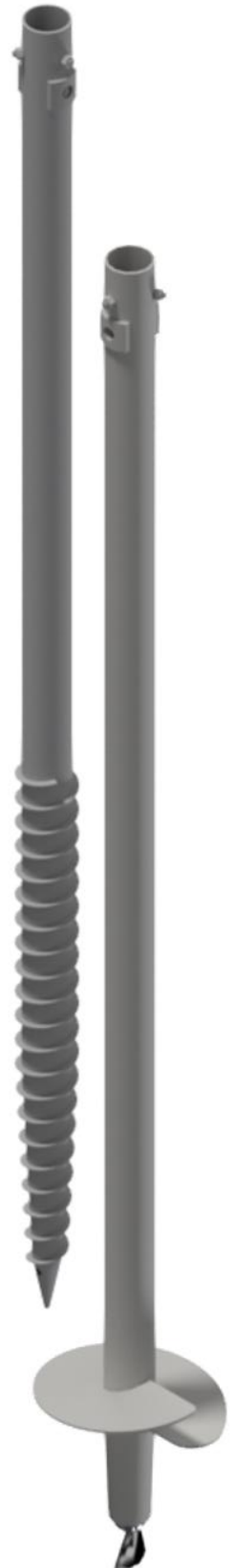
These heavy-duty ground screws and earth augers are made of structural carbon steel with a hot-dipped galvanized corrosion resistant finish. Both anchors are available in 63" and 84" lengths with a 36" long extension coupler available.

Features:

- Predictable capacity
- Cost-effective method
- Easy to store, reusable
- Pre-engineered system
- Labor-saving, keeps crew small
- Screws into place (not predrilled)
- Site-specific to conditions and loads
- Extendable with bolted joint connection

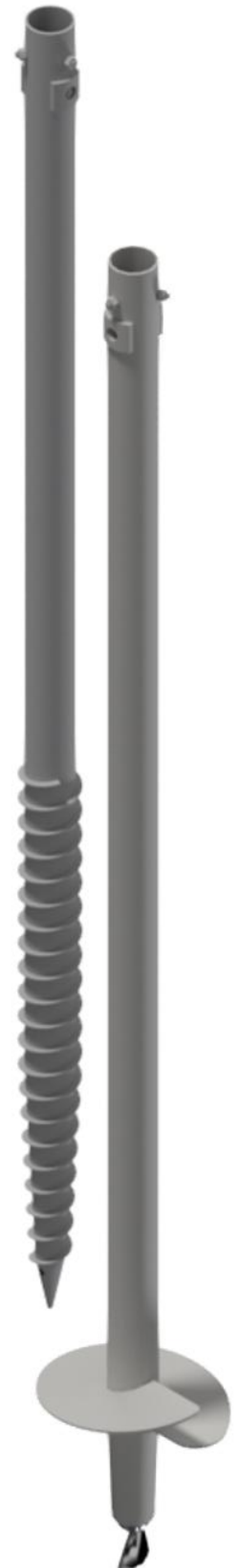
Benefits:

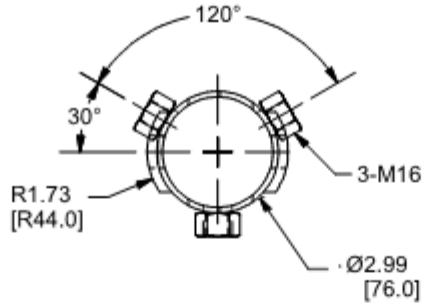
- Fast installation
- Clean installation
- Immediate loading
- No spoils to remove
- Lower installed costs
- One-trip convenience
- Installs in limited access areas



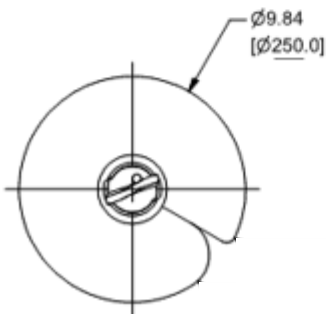
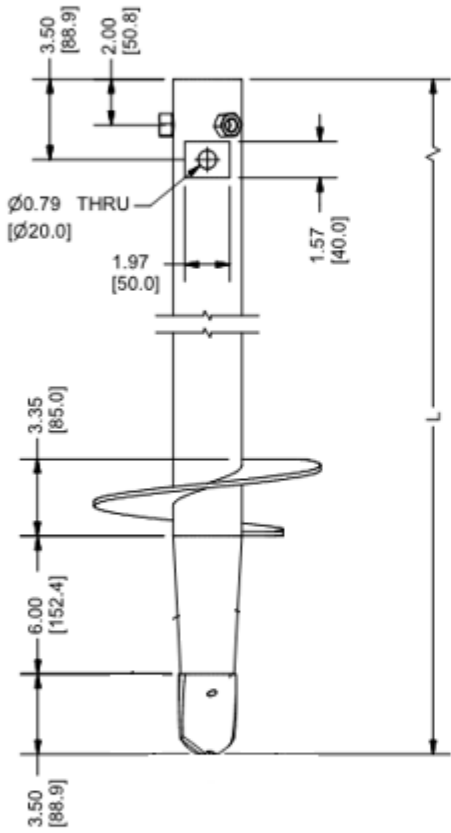
BASIC INFORMATION	
Part Number	A21146-XXX
Description	10" Helix Blade Auger
Lengths (-063 -080)	63 inches 80 inches
Auger Outside Diameter	76mm
Attachment Hardware	3X M16 Set Screws
Material	#45 Structural Carbon Steel
Finish	Hot Dip Galvanized
Approximate Weight	8,2 kg 10,5 kg

BASIC INFORMATION	
Part Number	A21147-XXX
Description	Screw Anchor
Lengths (-063 -080)	63 inches 80 inches
Auger Outside Diameter	76mm
Attachment Hardware	3X M16 Set Screws
Material	#45 Structural Carbon Steel
Finish	Hot Dip Galvanized
Approximate Weight	8,2 kg 10,5 kg

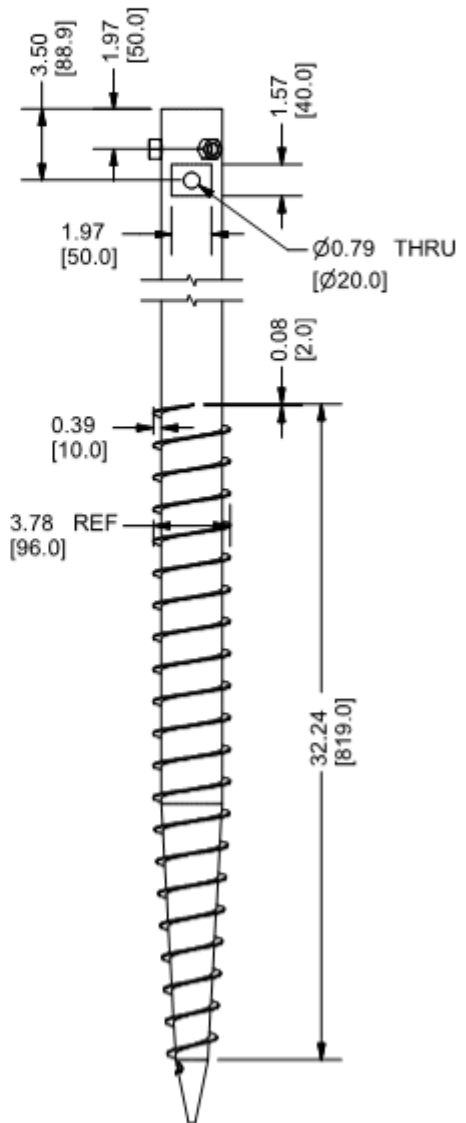




TYPICAL DETAIL



A21146-XXX



A21147-XXX



THE SWIVEL™ PIPE CAP KIT CAN HANDLE ANY TWIST OR TURN YOUR SLOPED TERRAIN HAS TO OFFER

SunModo has added the Swivel Pipe Cap to its expanding SunTurf® Ground Mount PV racking system.

Installing solar arrays on an undulating hillside terrain is no longer a problem thanks to the Swivel Pipe Cap Kit. This pivoting pipe cap saves time and money by eliminating the need to grade the land before installing the PV array on sloped terrain. The Swivel Pipe Cap Kit, a part of the SunTurf system, can accommodate terrains up to 27% slope east-west and 120% slope north-south.

The Swivel Pipe Cap Kit (K10373-001) is a robust aluminum design with stainless steel hardware and integrated bonding for safety.

The solar array can now follow the east-west contour of the land, thus providing the highest possible output through increased density.



Features & Benefits:

- Accommodate terrains up to 27% slope east-west and 120% slope north-south.
- Heavy-duty aluminum construction.
- 3/8 stainless steel hardware with integrated bonding provided in every pipe cap.
- Eliminates the need to grade the land.

SLOPE CONVERSION TABLE		
DEGREES	GRADIENT (Rise/Run)	PERCENT
15	1 : 3.73	26.8%
50	1 : 0.84	119.2%

HR250 Rail **A20144-xxx**

P/N	Description
A20144-xxx-ML	HR250, xxx", Mill
A20284-001	HR250 End Cap

HR300 Rail **A20288-xxx**

P/N	Description
A20288-xxx-ML	HR300, xxx", Mill
A20297-001	HR300 End Cap

Mid Clamp

K10180-001 **K10182-001**

P/N	Description
K10180-001	Universal Mid Clamp Kit
K10182-001	Mid Clamp Kit with Shared Rail Adaptor

End Clamp

K10244-1XX **K10299-00X**

P/N	Description
K10244-1xx (31-50)	End Clamp Kit
K10299-001/002	Adjustable End Clamp Kit, 33-50mm/30-46mm

Pipe T-Cap **K10341-002**

Part	P/N	Description	QTY
1	A20326-001	2.5" Pipe Tee, Male	1
2	A20327-002	2.5" Pipe Tee, Female	1
3	B15014-005	Hex Cap Screw 1/2-13 X 1.25", 304 SS	1
4	B15020-001	Flange Nut 1/2-13	1
5	B10001-001	Set Screw M10X20	5

Swivel Pipe Cap **K10373-001**

Part	P/N	Description	QTY
1	A20326-001	2.5" Pipe Tee, Male	1
2	A20362-001	Tilt Head	1
3	A20363-001	Tilt Base	1
4	B10001-002	Set Screw M10X20	5
5	B15014-005	Hex Cap Screw 1/2-13 X 1.25", 304 SS	1
6	B15020-001	Flange Nut 1/2-13	1
7	B15072-001	Hex Cap Screw 3/4 - 10 x 2"	1
8	B15073-001	Star Washer for 3/4 Bolt	1
9	B15081-001	Flat Washer 3/4	1

2" Pipe Clamp **K10219-001**
2.5" Pipe Clamp **K10222-001**

Part	P/N	Description	QTY
1	A20235-001/ A20238-001	2" Pipe Clamp Male/ 2.5" Pipe Clamp Male	1
2	A20236-001/ A20239-001	2" Pipe Clamp Female/ 2.5" Pipe Clamp Female	1
3	B15018-002	Hex Cap Screw 3/8-16 X 1.25"	1
4	B15018-004	Hex Cap Screw 3/8-16 X 2.5"	1
5	B15048-001	Star Washer for 3/8 Bolt	1
6	B10001-002	Set Screw M10X10	2
7	B15003-001	Flange Nut 3/8-16	2

Pipe U-Clamp (HR250) **K10343-001**
Pipe U-Clamp (HR300) **K10343-004**

Part	P/N	Description	QTY
1	A20329-001	2.5" Pipe U-Clamp	1
2	B15003-001	Flange Nut 3/8-16	2
3	B20018-002	Grounding Pin	1
4	B50033-001/ B20007-002	T-bolt, 3/8-16 X 1" T-bolt, 3/8-16 X 0.75"	2
5	C10005-006	PVC Gasket T=1.5mm	1

Post Base Plate **K10268-005**

Part	P/N	Description	QTY
1	A21120-005	2" Galvanized Pipe Base	1
2	B10053-001	Conical Set Screw M12X20	3

Pipe Splice **K10342-001**

Part	P/N	Description	QTY
1	A20328-001	2.5" Pipe Splice	1
2	B10001-001	Set Screw M10X20	4

Diagonal Brace **A50164-xxx**

P/N	Description
A50164-66	HSS Tube Brace, 66"
A50164-92	HSS Tube Brace, 92"
A50164-120	HSS Tube Brace, 120"

79" Helical Anchor **K10414-079**

Part	P/N	Description	QTY
1	A21178-079	Helical Anchor, 79"	1
2	B10055-001	Set Screw, Cone Tip, M16 x 25mm, 304 SS	3

63" Ground Screw **K10423-063**
80" Ground Screw **K10423-080**

Part	P/N	Description	QTY
1	A21147-063/080	Ground Screw, 63"/80"	1
2	B10055-001	Set Screw, Cone Tip, M16 x 25mm, 304 SS	3

2" Vertical Pipe **A21165-xxx**
2.5" Horizontal Pipe **A21168-xxx**

P/N	Description
A21165-060/120	2" HSS Pipe
A21168-112	2.5" HSS Pipe
A20380-001	2.5" HSS Pipe End Cap

Grounding Lug **K10179-002**

P/N	Description	Note
K10179-002	Grounding Lug	1 per array up to 30 amps max

SolaDeck

PV ROOF-MOUNT ENCLOSURE

**INTRODUCED AT
*SOLAR POWER 2007***



**UL50 Type 3R Enclosure • Stamped 18 gauge gal. steel • Powder coated finish
• Weather tight**



Enclosure Includes:

- Dual ground lug
- Universal DIN rail
- 1/2", 3/4" & 1" knockouts
- Wire strain relief clip
- Complete hardware package

PV Roof-Mount Combiner/Enclosure

Benefits

- The ability to prep the building is now possible
- Replaces several parts used today
- Provides professional looking install
- Saves time on install
- Allows for easy access
- Guaranteed seal to roof
- Low profile design

***For product information contact us at
(866) 367-7782***

www.commdeck.com



RSTC Enterprises, Inc
2219 Heimstead Road
Eau Claire, WI 54703
1 (866) 367 - 7782



SolaDeck Part # 780

Specifications:

18 Gauge Steel Base (1) and Cover (2)
Pre Punched 7 holes in base (1) for roof deck
Pre Punched 4 holes in base (1) and cover (2) for match
Draw Process both parts
Powder Coated to withstand 1000 hours Salt Spray (Primer Gray)
High UV resistance
15" x 15" flashing dimension
Cavity dimension 8"W x 9" L x 2.5"D
Approx. 162 Cubic inch equipment cavity
Norloked steel base plate (3) to drawn base (2)
Three knockout locations .5", .75" and 1"
3" DIN rail installed
Grounding Lug- Installed (In Equipment Cavity)
Wire Strain Relief Clip –Installed (In Equipment Cavity)
Hardware pack withstands 500 hours Salt Spray
7 - 2" Trusshead Screws
4 - .5" 8-32 thread cutting screws
4 - #10 Bonded Seal washers
1 – Foam closed Cell Seal
ETL Listed UL50 Type 3R

Total Weight 6.9 pounds each

Packaging:

Individually bagged and boxed
Box dimension 15.5"w x 16" L x 3" D
White Carton labeled with Cut out template
Print One Color - Black

Master Cartons of 6 Units each
Master Carton dimension 18.75"x16"x16.375"
Master Carton Weight – 42 pounds
18 Master Cartons per skid Approx 800 pounds with skid

SolarEdge Slim Current Transformer

SECT-SPL-225A-T-20

ACCESSORIES



Easily fits into home Main Service Panels, for simpler, faster installations

- Works seamlessly with SolarEdge consumption meters (external or built-in to the Energy Hub inverter)
- Boosts customer satisfaction by enabling real-time energy insight for greater electricity savings
- Increases installer revenue by creating more opportunities to expand system size or add smart capabilities like batteries, EV charging and smart energy devices
- High system accuracy (with SolarEdge meters) of $\pm 1.25\%$
- Clamp and split-core design, with single-handed installation
- Supports CT paralleling, enabling measurements of more load conductors
- Includes 17ft twisted pair cable, eliminating need for extension cable and additional labor when installing inverters with built-in consumption meter
- Simplified support and logistics with a single vendor

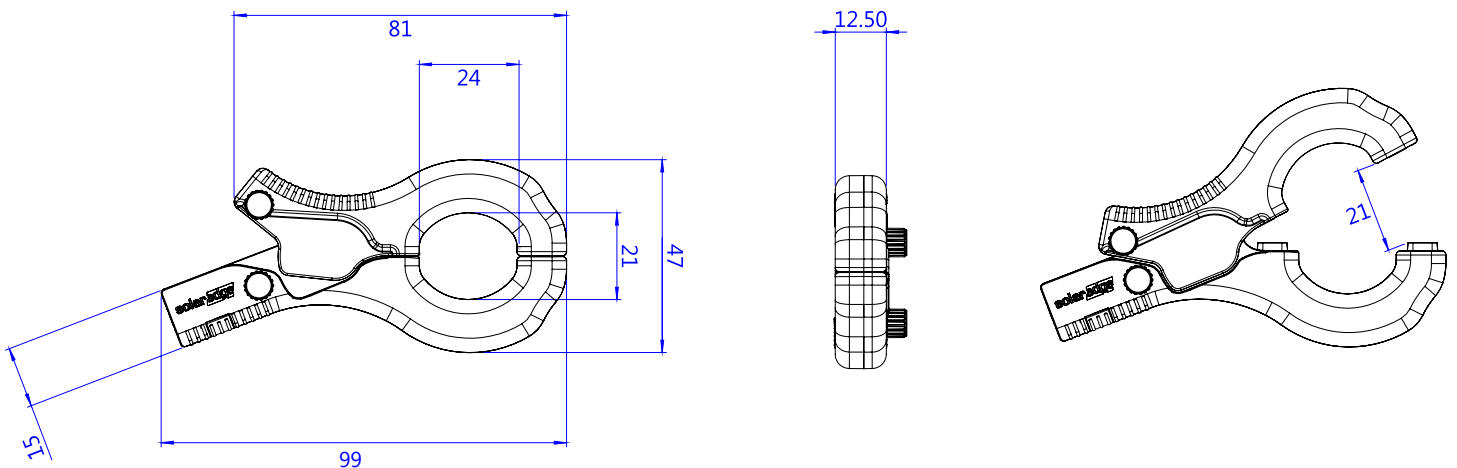
/ SolarEdge Slim Current Transformer

SECT-SPL-225A-T-20

Model number: SECT-S1

SECT-SPL-225A-T-20		UNITS
ELECTRICAL SPECIFICATION		
Accuracy (1% - 100% of rated current)	±1	%
CT Phase Angle (10% - 100% of rated current)	< ±2.0	Degrees
Nominal Line Frequency	60 / 50	Hz
Current Rating	225 (@ 600 Vac)	A
Output Voltage	0 - 333	mVac
Overvoltage Category	CAT III 600V	Vac
Maximum Primary Conductor Gauge	300	kcmil
Maximum Continuous Amps	300	A
MECHANICAL		
Type	Split core, clamp design	
Dimensions: Overall (H x W x L)	1.85 x 0.49 x 4.05 / 47 x 12.5 x 99	Inch / mm
Average Window Diameter	0.885 / 22.6	Inch / mm
Lead Wire	Type	Twisted pair
	Length	17 / 5.2
	Gauge	18 / 20 ⁽¹⁾
Material	Polycarbonate	
Weight	7.5 / 213	Oz / g
ENVIRONMENTAL		
Operating Temperature Range	-40 to 140 / -40 to 60	°F / °C
Operating Humidity	5% to 90% relative humidity	
IP Rating	30 (NEMA 1)	
STANDARDS		
Safety for US/CAN	UL 2808 (XOBA) listed, meets 2017 NEC code requirements for field installation	
RoHS	Compliant	

(1) 18 AWG or 20 AWG can be used interchangeably



* All dimensions are in millimeters

Product data sheet

Specifications

SQUARE D

Green Premium™



Safety switch, general duty, fusible, 60A, 2 poles, 15 hp, 120 VAC, NEMA 3R, bolt-on provision, neutral factory installed

D222NRB

Product availability : Stock - Normally stocked in distribution facility

Price* : 326.00 USD

Main

Product	Single Throw Safety Switch
Duty Rating	General duty
Device Application	Residential
Disconnect Type	Fusible disconnect switch
Factory Installed Neutral	Neutral (factory installed)
Phase	3 phase
Number of Poles	2
Current Rating	60 A
Voltage Rating	240 V AC
Enclosure Rating NEMA	NEMA 3R
Maximum Horse Power Rating	1.5 hp 120 V at AC 60 Hz for 1 phase conforming to NEC 240.6 3 hp 120 V at AC 60 Hz for 3 phase conforming to NEC 430.52 3 hp 240 V at AC 60 Hz for 1 phase conforming to NEC 240.6 7.5 hp 240 V at AC 60 Hz for 3 phase conforming to NEC 240.6 10 hp 240 V at AC 60 Hz for 1 phase conforming to NEC 430.52 15 hp 240 V at AC 60 Hz for 3 phase conforming to NEC 430.52

Complementary

Short Circuit Current Rating	100 kA maximum depending on fuse H, K or R
Fuse type	H, K or R
Mounting Type	Surface
Electrical Connection	Lugs
Wiring configuration	3-wire
Wire Size	AWG 12...AWG 3 aluminium AWG 14...AWG 3 copper
Tightening torque	35 lbf.in (3.95 N.m) 0.00...0.01 in ² (2.08...5.26 mm ²) (AWG 14...AWG 10) 35 lbf.in (3.95 N.m) (AWG 14...AWG 10) 45 lbf.in (5.08 N.m) 0.01 in ² (8.37 mm ²) (AWG 8) 45 lbf.in (5.08 N.m) 0.02...0.03 in ² (12.3...21.12 mm ²) (AWG 6...AWG 4) 50 lbf.in (5.65 N.m) 0.04 in ² (26.67 mm ²) (AWG 3)
Depth	4.87 in (123.70 mm)
Width	7.45 in (189.23 mm)

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

Height	14.88 in (377.95 mm)
Net Weight	8.82 lb(US) (4 kg)

Environment

Certifications	UL listed file E2875
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Ordering and shipping details

Category	00106-D & DU SW,NEMA3R, 30-200A
Discount Schedule	DE1A
GTIN	785901460640
Nbr. of units in pkg.	1
Package weight(Lbs)	8.25 lb(US) (3.742 kg)
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	5.20 in (13.208 cm)
Package 1 width	7.70 in (19.558 cm)
Package 1 Length	16.20 in (41.148 cm)
Unit Type of Package 2	PAL
Number of Units in Package 2	120
Package 2 Weight	1022.00 lb(US) (463.571 kg)
Package 2 Height	45.00 in (114.3 cm)
Package 2 width	40.00 in (101.6 cm)
Package 2 Length	48.00 in (121.92 cm)

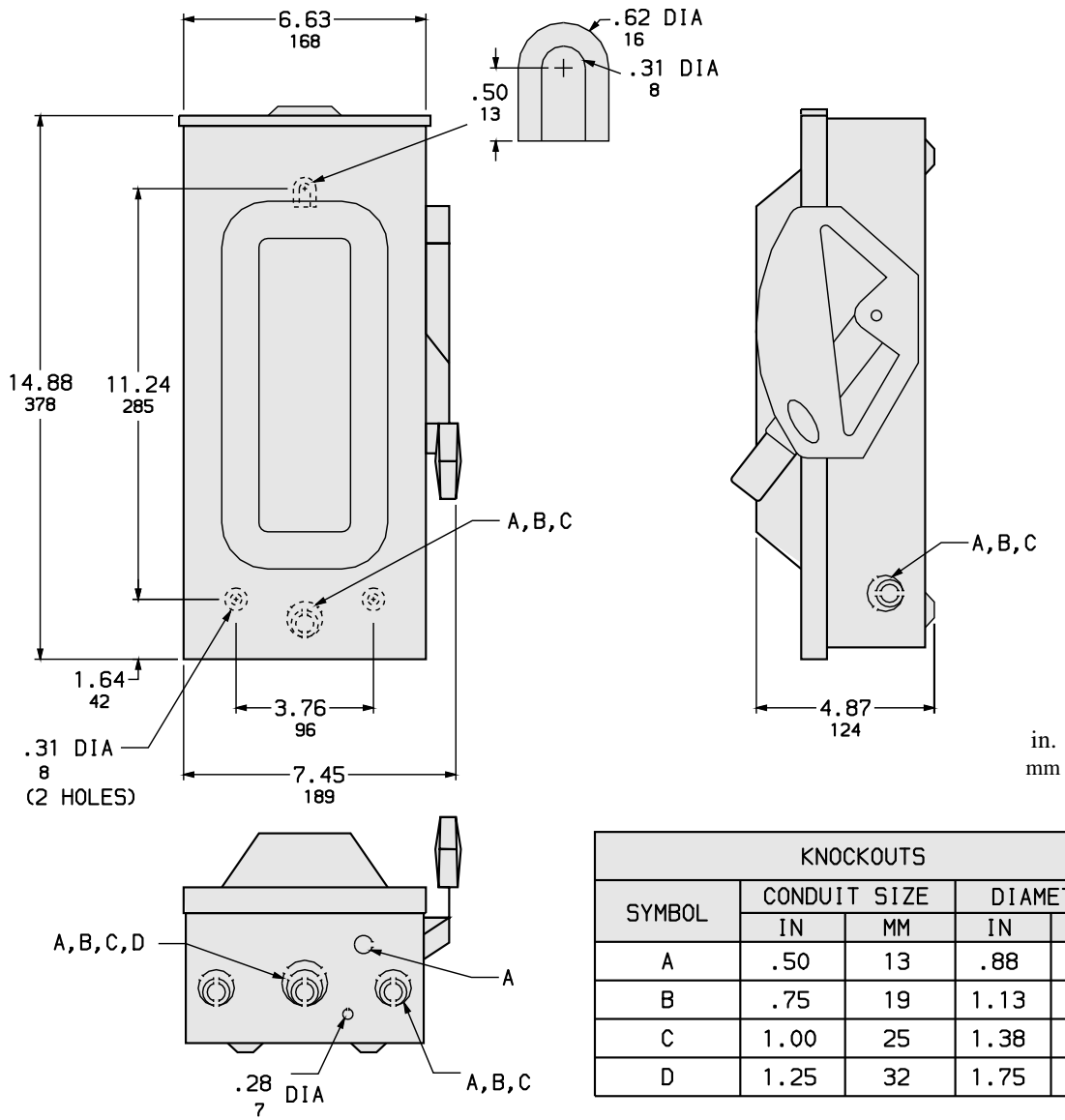
Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information.
Environmental Disclosure	Product Environmental Profile
PVC free	Yes

Contractual warranty

Warranty	18 months
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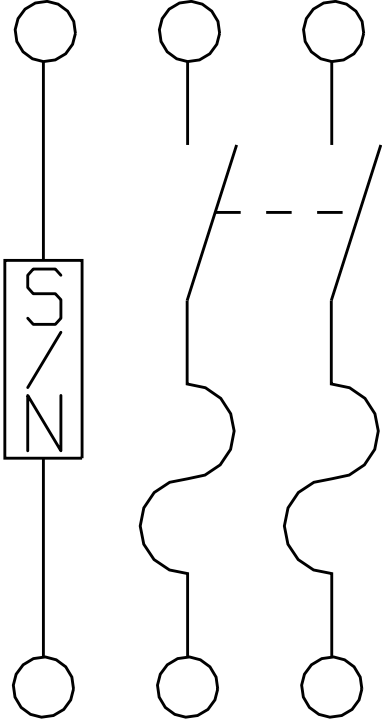
Dimensions



ALL DIMENSIONS ARE APPROXIMATE.
 REFER TO TECHNICAL DRAWINGS AND DOCUMENTS

Wiring Diagram

FUSIBLE



D222NRB

Product data sheet

Specifications

SQUARE D

Green Premium™



Safety switch, general duty, fusible, 100A, 2 poles, 30 hp, 120 VAC, NEMA 3R, bolt-on provision, neutral factory installed

D223NRB

Product availability : Stock - Normally stocked in distribution facility

Price* : 480.00 USD

Main

Product	Single Throw Safety Switch
Duty Rating	General duty
Device Application	Residential
Disconnect Type	Fusible disconnect switch
Factory Installed Neutral	Neutral (factory installed)
Phase	3 phase
Number of Poles	2
Current Rating	100 A
Voltage Rating	240 V AC
Enclosure Rating NEMA	NEMA 3R
Maximum Horse Power Rating	7.5 hp 240 V at AC 60 Hz for 1 phase conforming to NEC 240.6 15 hp 240 V at AC 60 Hz for 3 phase conforming to NEC 240.6 15 hp 240 V at AC 60 Hz for 1 phase conforming to NEC 430.52 30 hp 240 V at AC 60 Hz for 3 phase conforming to NEC 430.52

Complementary

Short Circuit Current Rating	100 kA maximum depending on fuse H, K or R
Fuse type	H, K or R
Mounting Type	Surface
Electrical Connection	Lugs
Wiring configuration	3-wire
Wire Size	AWG 14...AWG 1 copper AWG 12...AWG 1 aluminium
Tightening torque	35 lbf.in (3.95 N.m) 0.00...0.01 in ² (2.08...5.26 mm ²) (AWG 14...AWG 10) 40 lbf.in (4.52 N.m) 0.01 in ² (8.37 mm ²) (AWG 8) 35 lbf.in (3.95 N.m) (AWG 14...AWG 10) 45 lbf.in (5.08 N.m) 0.02...0.03 in ² (12.3...21.12 mm ²) (AWG 6...AWG 4) 50 lbf.in (5.65 N.m) (AWG 3...AWG 1)
Depth	6.5 in (165.10 mm)
Width	10.56 in (268.22 mm)
Height	17.5 in (444.50 mm)

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

Product Weight	15.43 lb(US) (7 kg)
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Environment

Certifications	UL listed file E2875
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Ordering and shipping details

Category	00106-D & DU SW,NEMA3R, 30-200A
Discount Schedule	DE1A
GTIN	785901460701
Nbr. of units in pkg.	1
Package weight(Lbs)	15.60 lb(US) (7.076 kg)
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	7.30 in (18.542 cm)
Package 1 width	10.80 in (27.432 cm)
Package 1 Length	20.00 in (50.8 cm)
Unit Type of Package 2	PAL
Number of Units in Package 2	40
Package 2 Weight	650.00 lb(US) (294.835 kg)
Package 2 Height	41.00 in (104.14 cm)
Package 2 width	41.00 in (104.14 cm)
Package 2 Length	48.00 in (121.92 cm)

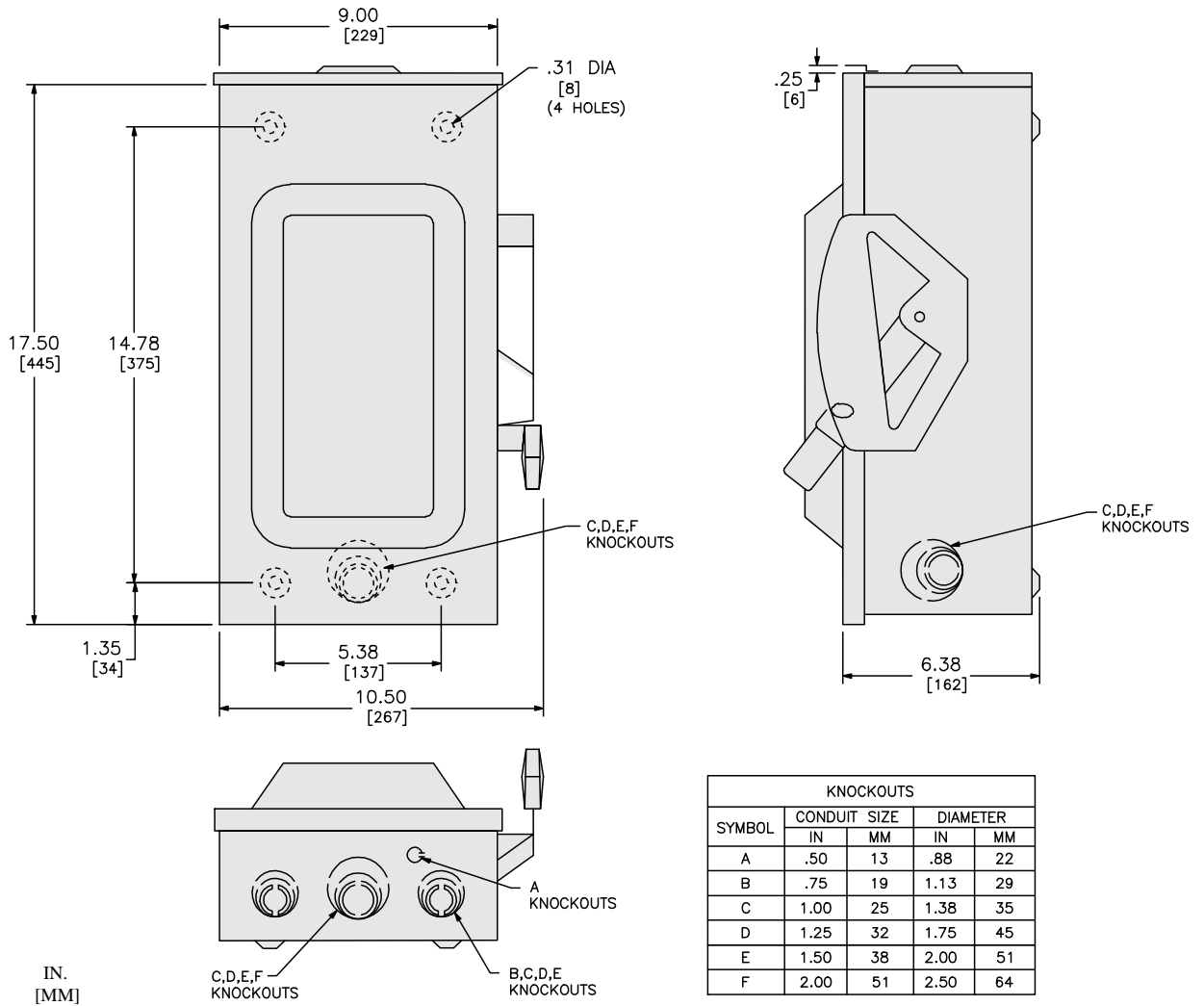
Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration Product out of China RoHS scope. Substance declaration for your information.
Environmental Disclosure	Product Environmental Profile
PVC free	Yes

Contractual warranty

Warranty	18 months
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Dimensions



WHEN MOUNTING, ALLOW 4.00/[102] MIN. CLEARANCE BETWEEN ENCLOSURES FOR OPENING OF SIDE HINGED DOOR.

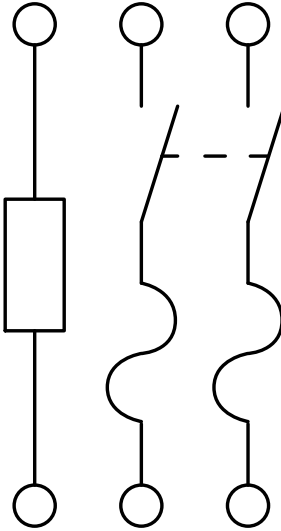
TOP OF NEM A TYPE 3R DEVICES HAVE PROVISIONS FOR MAX 2.50/[64] Bolt-ON HUB.

DU323RB REQUIRES FIELD INSTALLATION OF EQUIPMENT GROUNDING KIT GTK0610 WHEN USED AS SERVICE EQUIPMENT.

ALL DIMENSIONS ARE APPROXIMATE. REFER TO TECHNICAL DRAWINGS AND DOCUMENTATION FOR COMPLETE DETAILS.

TI_DIM_GD1003R

Wiring Diagram



223NRB
CD223NRB