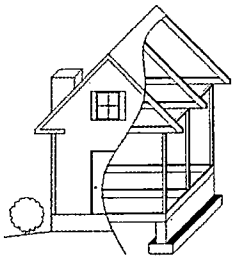
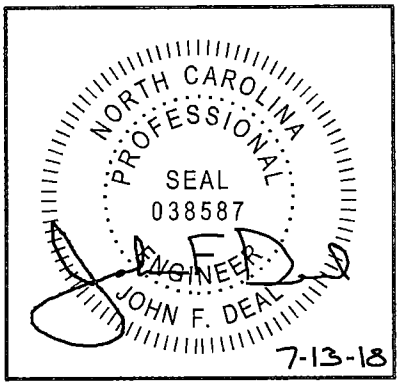


ON-SITE
Residential Engineering



Project #	18-247
Location	571 Moonlight Drive, Fuquay
Client	Sun Dollar Energy
Contact	sundollarenergy@gmail.com

Page	1 of 2
Date	July 13, 2018

The purpose of this project is to determine the structural adequacy of the existing roof system, and design any necessary structural reinforcement, to support the addition of a solar panel energy system. The following structural specifications are based on information provided by the installer, Sun Dollar Energy. Directional indicators are referenced as if standing in front of, and facing the front of the residence. The engineer's seal applies only to structural items specifically addressed in this project.

(A) Solar Panel Energy System Addition

Observations

The residence is a wood-framed structure with a gable roof. An array of solar panels is to be added to the roof. Per pictures sent by Sun Dollar Energy, the roof structure in this area is composed of roof trusses spaced at 24" o.c., which span a horizontally projected distance of 30'-0". The roof covering is composed of asphalt shingles.

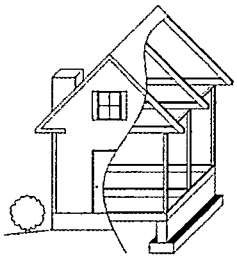
Per Sun Dollar Energy:

Total Solar Panel Array Area	425 sq ft
Total Solar Panel Array Weight	1,238 lb
Dead Load to be Added	**2.9 psf**

Per NC Residential Code, 2012 Edition:

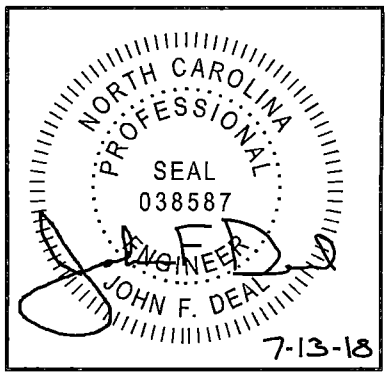
Roof Live Load	20 psf	Table R301.2(1)
Roof Dead Load	7 psf	Section R301.4
Wind Speed / Exposure	100 mph / Exposure B	Figure R301.2(4)
Wind Load (Uplift)	15.0 psf	Table R301.2(2)

(919) 880-6958 John@On-SiteResidentialEngineering.com



ON-SITE

Residential Engineering



Project #	18-247	Page	2 of 2

(A) Solar Panel Energy System Addition (continued)

Structural Specification

Roof truss manufacturers impose a standard 10 psf design dead load on the top chords of trusses to accommodate various roof coverings. From known material weights, asphalt shingles on an OSB or CDX plywood sheathed roof has an assembly dead load of approximately 6 psf. The additional 2.9 psf dead load of the solar panel system does not exceed the 10 psf design dead load, and the roof trusses are structurally adequate to carry the additional load of the solar panel system.

The solar panel array is to be attached to the roof with footing plates per manufacturer. The total uplift on the solar panel array is approximately 6,370 lb, which is to be resisted by a total of 48 footing plates. Footing plates are therefore to withstand an uplift load of 133 lb per plate. Plates are to be located above truss top chords (or 2x4 blocking between truss top chords nailed with (4) 10d nails) and attached with one 5/16" lag screw with 3" penetration per manufacturer's instructions.

(919) 880-6958 John@On-SiteResidentialEngineering.com

SCOPE OF WORK

TO INSTALL A SOLAR PHOTOVOLTAIC (PV) SYSTEM
THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT.
THE PV SYSTEM DOES NOT INCLUDE BATTERIES.

ELECTRICAL NOTES

1) ALL EQUIPMENT TO BE LISTED BY THE UL OR OTHER NRTL AND LABELED FOR ITS APPLICATION.
2) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600V AND 90°C WET ENVIRONMENT.
3) WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
4) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
5) DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
6) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
7) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
8) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
9) MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR THE ILSCO GBL-4DBT LAY-IN LUG.
10) THE POLARITY OF THE GROUNDED CONDUCTORS IS (positive/negative) OR THE DC SIDE OF THE PV SYSTEM IS UNGROUNDED AND SHALL COMPLY WITH NEC 690.35

GOVERNING CODES

2014 NATIONAL ELECTRICAL CODE
2013 INTERNATIONAL BUILDING CODE
2012 NC BUILDING CODE
UNDERWRITERS LABORATORIES (UL) STANDARDS
OSHA 29 CFR 1910.269

SHEET INDEX

VICINITY MAP

SUN DOLLAR ENERGY, LLC

Sun Dollar Energy, LLC
4904 Elaine Avenue
Raleigh, NC 27616
919-508-6907
NC Electrical License #: 30043U
NC GC License #: 73462

Valarie Batten
571 Moonlight Drive
Fuquay Varina, NC 27526
919-389-9341

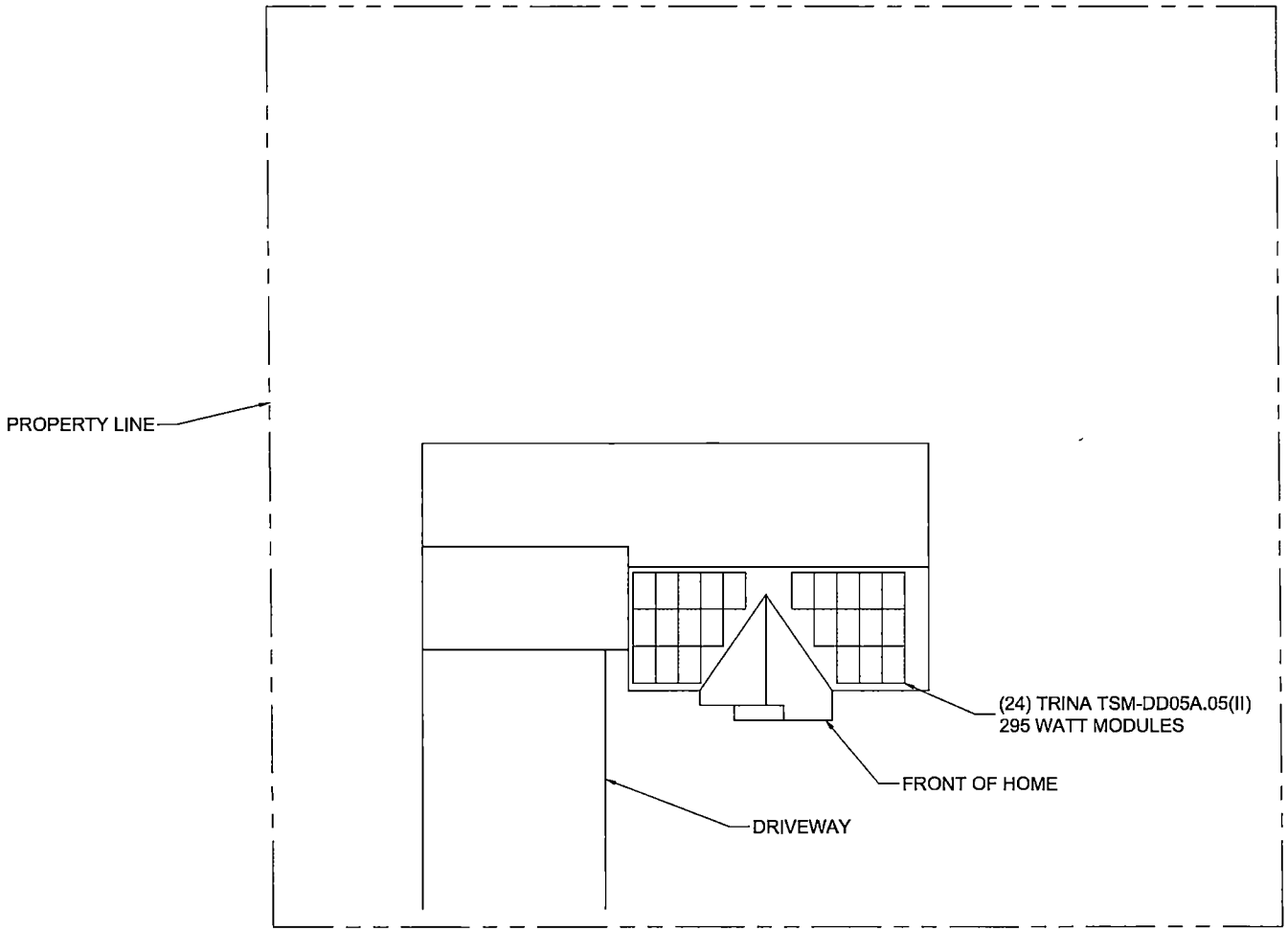
System:
- System Type: Grid Tied
- Module Type: Trina TSM-DD05A.05(II) 295 Watt
- # of Modules: 24
- Inverter: SolarEdge SE6000H-US
- Power Optimizers: SolarEdge P320
- Racking: Everest Rail
- Solar Mounts: Quickmount E-Mounts
- DC Watts: 7.08kW DC STC

Existing Home Electrical
- (E) Main Service Panel: 200A
- Grid Voltage: 120/240V

Special Info
- Roof Type: Comp Shingle
- Array 1 Rafter Size: 2x4 @ 24" O.C.
- Array 1 Pitch: 28°
- Array 1 Azimuth: 255°
- Avg. High Temp: 93.2°F
- Rec. Low Temp: 10.4°F

Date: 07/23/2018

COVER



PROPERTY PLAN

SCALE: 1/8"=1'-0"

N

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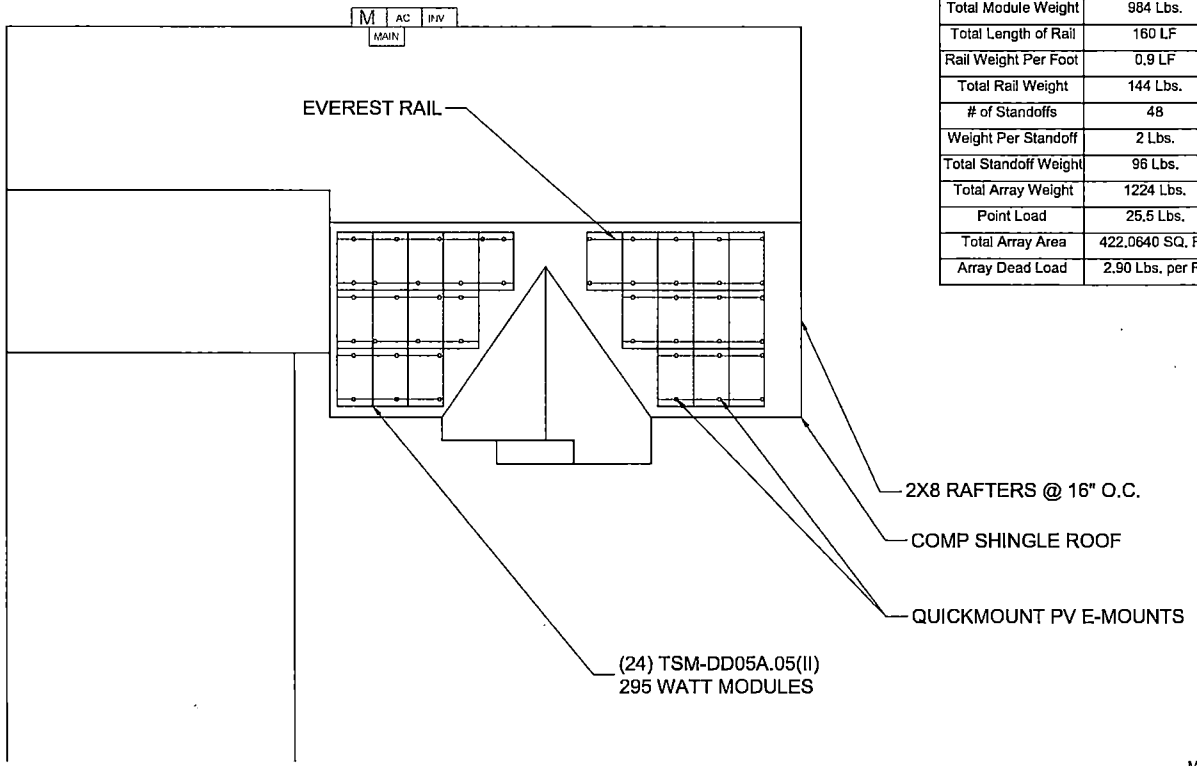
Date: 07/23/2018

PV-1

LOAD CALCULATIONS	
Module Weight	41.0 lbs
# of Modules	24 Ea.
Module Sq. Ft.	17.5860 SQ. FT.
Total Module Weight	984 Lbs.
Total Length of Rail	160 LF
Rail Weight Per Foot	0.9 LF
Total Rail Weight	144 Lbs.
# of Standoffs	48
Weight Per Standoff	2 Lbs.
Total Standoff Weight	96 Lbs.
Total Array Weight	1224 Lbs.
Point Load	25.5 Lbs.
Total Array Area	422.0640 SQ. FT.
Array Dead Load	2.90 Lbs. per Ft.

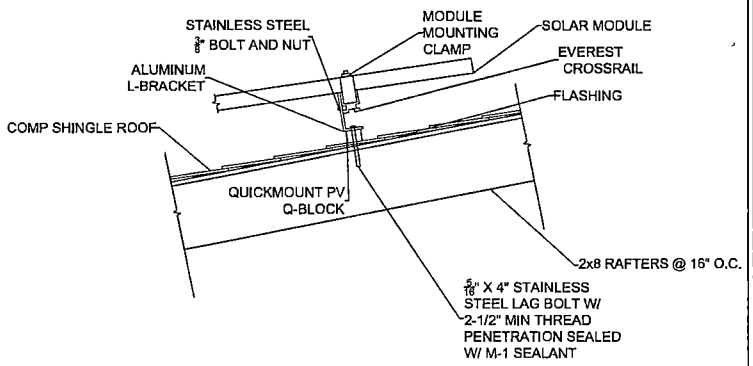
LEGEND

- M — UTILITY METER
- MAIN — MAIN SERVICE PANEL
- INV — INVERTER
- AC — AC DISCONNECT
- DC — DC DISCONNECT
- JB — JUNCTION BOX
- CB — COMBINER BOX
- SUB — SUBPANEL
- LC — LOAD CENTER
- (M) — PV METER/MONITORING
- (X) — SOLMETRIC READING
- —— CONDUIT RUN ON EXTERIOR
- (G) — GAS METER
- ○ — SOLAR ROOF MOUNTS



ROOF PLAN

SCALE: 3/16"=1'-0"



SOLAR MOUNTING DETAIL

SUN DOLLAR ENERGY, LLC

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- Power Optimizers: SolarEdge P320
- Racking: Everest Rail
- Solar Mounts: Quickmount E-Mounts
- DC Watts: 7.08kW DC STC

Existing Home Electrical
- (E) Main Service Panel: 200A
- Grid Voltage: 120/240V

Special Info
- Roof Type: Comp Shingle
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- Array 1 Azimuth: 255°
- Avg. High Temp: 93.2°F
- Rec. Low Temp: 10.4°F

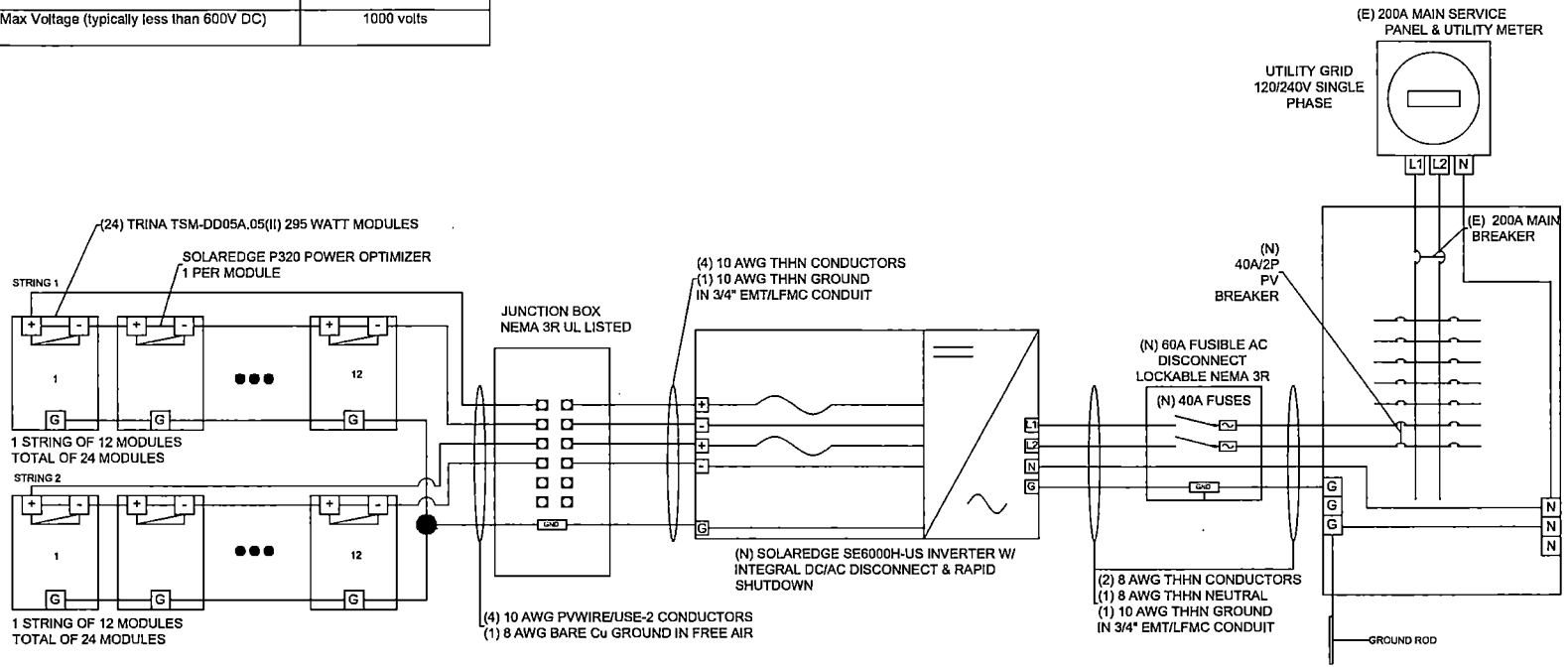
Date: 07/23/2018

PV-2

MODULE DATA	
Make of Model	Trina
Model Number	TSMDD05A.05(II)
Max Power Point (MPP) Current (Impp)	9.08 amps
Max Power Point (MPP) Voltage (Vmpp)	32.5 volts
Open Circuit Voltage (Voc)	39.7 volts
Short Circuit Current (Isc)	9.55 amps
Max Series Fuse (OCPD)	15 amps
Max Power (Pmax)	295 watts
Max Voltage (typically less than 600V DC)	1000 volts

Inverter Data (provided by manufacturer)	
Make of Model	SolarEdge
Model Number	SE6000H-US
Max DC Volt Rating	480 volts
Max AC Output	6000 Watts
Nominal AC Voltage	240 volts
Max AC Current	27.5 amps
Strings per Inverter	2
Number of Inverters	1

Temperature Data from ASHRAE	
Average High Temp. (°F)	93.2°F
Record Low Temp. (°F)	10.4°F



NOTE: DC IS UNGROUNDED

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Date: 07/23/2018

PV-3

Ampacity Calculations

Wiring Location: Module to Power Optimizer (Direct Current)
Wiring Location: Inverter to Service Entrance (Alternating Current)
All calculations show minimum sizing for ampacity
Actual wire sizing may be larger for voltage drop or other factors
All calculations are according to the 2014 National Electric Code

Modules: Trina TSM DD05A.08 (II) 295 Watt

Inverter: SolarEdge SE6000H-US

Initial Input Values						
Isc (Short Circuit Current)	9.55					
Number of circuits	9.55	x	1	=	9.55	
Maximum Circuit Current (NEC 690.8 (A)(1+2)	9.55	x	156%	=	14.898	
Minimum Overcurrent Device	15	Series Fuse Rating by Manufacturer				
	Size AWG #					
Chosen Conductor Type (THHN, RHW-2, or USE-2)	10					
Conductor Derating						
NEC 690.31 © ref (NEC 310.16)						
Conductor 90C Ampacity		30				
Conduit Fill Derating	2	30	x	1	=	30
Temperature Derating F	123-131	30	x	0.76	=	22.8
Ampacity vs Overcurrent Device						
Conductor Ampacity Check		22.8		14.898		OK
Conductor to Overcurrent Check		22.8		15		OK

Input Data Into Yellow Fields
Green Field must say OK

Use this calculation for over current protection and wire sizing for stringers coming from Solar Panels. Isc comes from manufacturer

Ampacity Calculations

Wiring Location: Inverter to Service Entrance (Alternating Current)

All calculations show minimum sizing for ampacity
Actual wire sizing may be larger for voltage drop or other factors
All calculations are according to the 2014 National Electric Code

Modules: Trina TSM DD05A.08 (II) 295 Watt

Inverter: SolarEdge SE6000H-US

Initial Input Values							
Inverter Continuous AC Output Combined (Watts)	6000						
Minimum Operating Voltage	240	Watts		Volts		Amps	
		6000	/	240	=	25	
Inverter Continuous AC Amps		25					
Number of Inverters		25	x	1	=	25	
Overcurrent Device Rating							
NEC 690.8 (B)(3)		25	x	125%	=	31.25	
Minimum Overcurrent Device Circuit Breaker Size per NEC 240.6(A)		40 40A					
		Size AWG #					
Chosen Conductor Type THHN,THWN,RHW-2 or USE-2		8					
Conductor Derating							
NEC 690.31© ref (NEC 310.16)							
Conductor 90C Ampacity			55				
Conduit Fill Derating		2	55	x	1	=	55
Temperature Derating F		96-104	55	x	0.91	=	50.05
Ampacity vs Overcurrent Device							
Conductor Ampacity Check			50.05		31.25		OK
Conductor to Overcurrent Check			50.05		40		OK

Input Data into Yellow Fields
Green Fields must say OK

Use this calculation for over current protection and wire sizing for inverter

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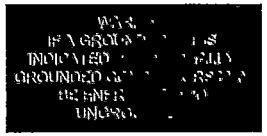
- Array 1 Azimuth: 255°
- Avg. High Temp: 93.2°F
- Rec. Low Temp: 10.4°F

Date: 07/23/2018

PV-4

SIGNAGE REQUIREMENTS

> RED BACKGROUND
> WHITE LETTERING
> MIN. 3/8" LETTER HEIGHT
> ALL CAPITAL LETTERS
> ARIAL OR SIMILAR FONT
> REFLECTIVE, WEATHER RESISTANT MATERIAL, UL 969



REQ'D BY: NEC 690.5(C) — 1

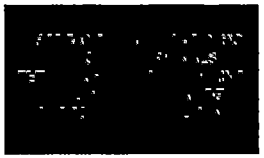
APPLY TO:
SMA AND SOLAREDGE INVERTERS

REQ' BY: NEC 690.14(C)(2) — 2

APPLY TO:
DC DISCONNECTS IF UTILIZED

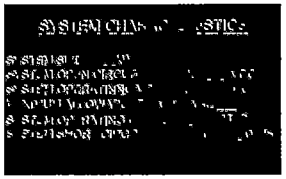
REQ' BY: NEC 690.14(C)(2) — 3

APPLY TO:
AC DISCONNECTS



REQ'D BY: NEC 690.17 — 4

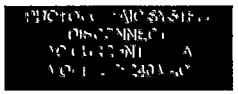
APPLY TO:
DISCONNECTS
SOLAR LOAD CENTERS
COMBINER BOXES



RED'Q BY: NEC 690.53 — 5

APPLY TO:
INVERTER

UPDATE VALUES



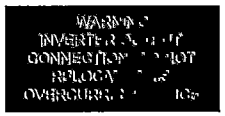
REQ'D BY: NEC 690.54 — 6

APPLY TO:
PV SYSTEM BREAKER

UPDATE VALUES

REQ'D BY: NEC 690.64(B)(2) — 8

APPLY TO:
SOLAR LOAD CENTER IF UTILIZED



REQ'D BY: NEC 690.64(B)(7) — 9

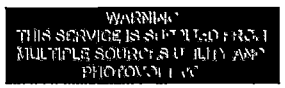
APPLY TO:
PV SYSTEM BREAKER

REQ'D BY: AHJ — 11

APPLY TO:
SOLAR CONDUIT

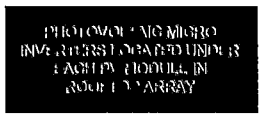
REQ'D BY: NEC 690.35(F) — 12

UNGROUNDED ARRAYS ONLY
JUNCTION BOXES
COMBINER BOXES
DC DISCONNECTS
INVERTERS



REQ'D BY: NEC 690.56(B) — 13

MAIN SERVICE PANEL



REQ'D BY: NEC 690.14(D) — 14

APPLY TO:
MAIN SERVICE PANEL IF PV SYSTEM UTILIZES MICRO INVERTERS

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- Grid Voltage: 120/240V

Special Info
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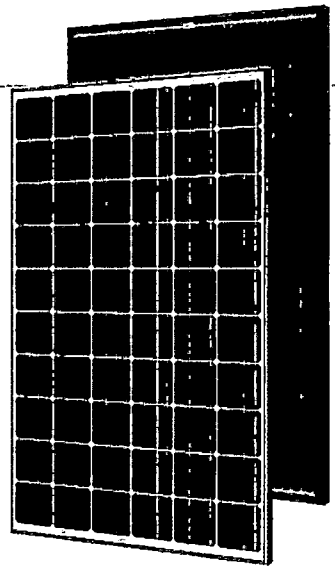
Date: 07/23/2018

PV-5

Mono Multi Solutions

THE ALLMAX M PLUS+ MODULE



60 CELL
MONOCRYSTALLINE MODULE

270-295W
POWER OUTPUT RANGE

18.0%
MAXIMUM EFFICIENCY

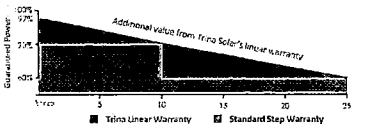
0~+5W
POSITIVE POWER TOLERANCE

As a leading global manufacturer of next generation photovoltaic products, we believe close cooperation with our partners is critical to success. With local presence around the globe, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners as the backbone of our shared success in driving Smart Energy Together.

Trina Solar Limited
www.trinasolar.com

LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty · 25 Year Linear Power Warranty



Trinasolar
Smart Energy Together

Maximize limited space with top-end efficiency
- Up to 180 W/m² power density
- Low thermal coefficients for greater energy production at high operating temperatures

Highly reliable due to stringent quality control
- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- 100% EL double inspection

Certified to withstand challenging environmental conditions
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

Comprehensive products and system certificates

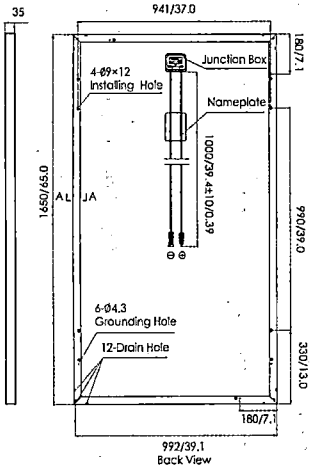
- IEC 61215/ IEC 61730/ UL 1703/ IEC 61701/IEC 62716
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO 14064: Greenhouse Gases Emissions Verification
- OHSAS 18001: Occupation Health and Safety Management System

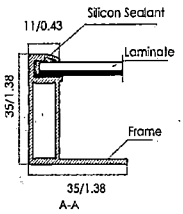
LISTED PV CYCLE

THE ALLMAX™ PLUS MODULE

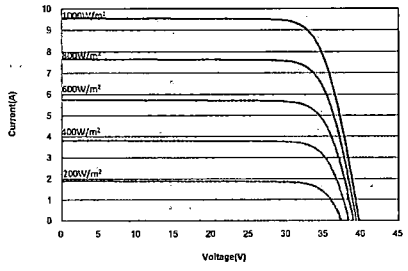
PRODUCTS	POWER RANGE
TSM-DD05A.08(II)	275-295W
TSM-DD05A.05(II)	270-290W

DIMENSIONS OF PV MODULE
unit:mm/inches

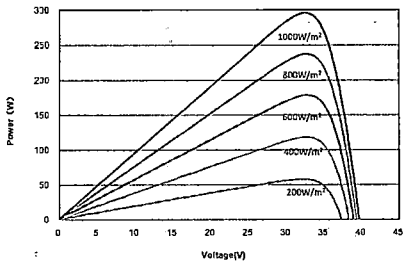




I-V CURVES OF PV MODULE(295W)



P-V CURVES OF PV MODULE(295W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	270	275	280	285	290	295
Power Output Tolerance-P_{MAX} (W)	0~+5					
Maximum Power Voltage-V_{MPP} (V)	31.2	31.4	31.7	31.8	32.2	32.5
Maximum Power Current-I_{MPP} (A)	8.66	8.76	8.84	8.97	9.01	9.08
Open Circuit Voltage-V_{OC} (V)	38.4	38.7	39.0	39.3	39.5	39.7
Short Circuit Current-I_{SC} (A)	9.18	9.26	9.35	9.45	9.50	9.55
Module Efficiency η_m (%)	16.5	16.8	17.1	17.4	17.7	18.0

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Test tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power-P_{MAX} (Wp)	201	205	209	212	216	220
Maximum Power Voltage-V_{MPP} (V)	28.9	29.2	29.4	29.6	29.9	30.2
Maximum Power Current-I_{MPP} (A)	6.96	7.02	7.10	7.17	7.23	7.28
Open Circuit Voltage-V_{OC} (V)	35.7	36.0	36.3	36.6	36.7	36.9
Short Circuit Current-I_{SC} (A)	7.41	7.48	7.55	7.63	7.67	7.71

NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline 156 × 156 mm (6 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1650 × 992 × 35 mm (65.0 x 39.1 x 1.38 inches)
Weight	18.6 kg (41.0 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White (DD05A.08(II)); Black (DD05A.05(II))
Frame	Black (DD05A.08(II), DD05A.05(II))
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), 1000 mm (39.4 inches)
Connector	MC4 Compatible or Amphenol H4/UTX
Fire Type	Type 1 or Type 2

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	44°C(± 2°C)
Temperature Coefficient of P_{MAX}	- 0.39%/°C
Temperature Coefficient of Voc	- 0.29%/°C
Temperature Coefficient of Isc	0.05%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC (IEC) 1000V DC (UL)
Max Series Fuse Rating	15A

WARRANTY

10 year Product Workmanship Warranty.
25 year Linear Power Warranty
(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 30 pieces
Modules per 40' container: 840 pieces

TSM_EN_2016_C

Trinasolar
Smart Energy Together

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

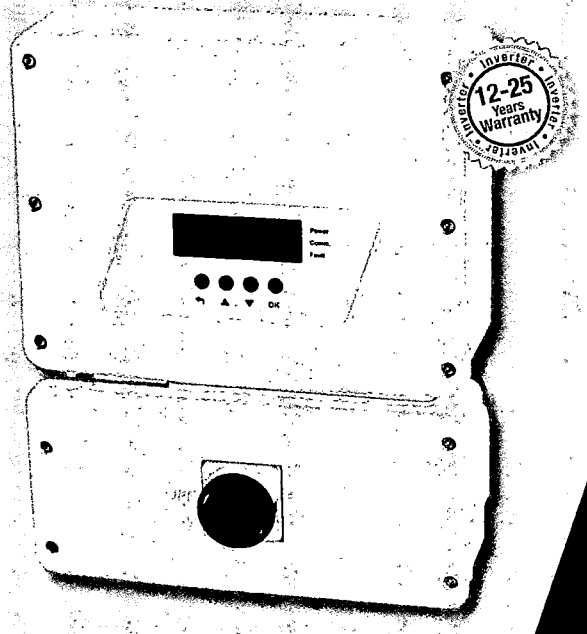
solaredge

SolarEdge Single Phase Inverters

for North America

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

INVERTERS



Optimized installation with HD-Wave technology

- Record-breaking efficiency
- Integrated arc fault protection for NEC 2011 690.11 and integrated rapid shutdown for NEC 2014 690.12
- Extremely smal
- High reliability without any electrolytic capacitors
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)
- Optional: Self-Sustaining Power - produce up to 1.5kW directly from PV during grid failure

HD wave

Single Phase Inverters for North America

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

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	
OUTPUT						
Rated AC Power Output	3000	3800	5000	6000	7600	VA
Max. AC Power Output	3000	3800	5000	6000	7600	VA
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	-	✓	-	-	Vac
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]					Hz
Maximum Continuous Output Current 208V	-	-	24	-	-	A
Maximum Continuous Output Current 240V	12.5	16	21	25	32	A
GFDI Threshold	1					A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes					
INPUT						
Maximum DC Power	4650	5900	7750	9300	11800	W
Transformer-less, Ungrounded	Yes					
Maximum Input Voltage	480					Vdc
Nominal DC Input Voltage	380				400	Vdc
Maximum Input Current 208V	-	-	15.5	-	-	Adc
Maximum Input Current 240V	8.5	10.5	13.5	16.5	20	Adc
Max. Input Short Circuit Current	45					Adc
Reverse-Polarity Protection	Yes					
Ground-Fault Isolation Detection	600kΩ Sensitivity					
Maximum Inverter Efficiency	99	99.2				%
CEC Weighted Efficiency	99					%
Nighttime Power Consumption	< 2.5					W
SELF-SUSTAINING POWER OUTLET (OPTIONAL)						
Nominal Output Voltage	120					V
Maximum Output Power	1500[2]					W
External Outlet with GFDI	Yes					
ADDITIONAL FEATURES						
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)					
Internal RGM support	ANSI C12.20 class 0.5 compliant					
Rapid Shutdown - NEC 2014 690.12	Automatic Rapid Shutdown					
STANDARD COMPLIANCE						
Safety	UL1741, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07					
Grid Connection Standards	IEEE1547, Rule 21, Rule14 (HI)					
Emissions	FCC Part 15 Class B					
INSTALLATION SPECIFICATIONS						
AC Output Conduit Size / AWG Range	0.75-1" Conduit / 14-6 AWG					
DC Input Conduit Size / # of Strings / AWG Range	0.75-1" Conduit /1-2 strings / 14-6 AWG					
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174					in / mm
Weight with Safety Switch	25.3 / 11.5					lb / kg
Noise	< 25					dBA
Cooling	Natural Convection					
Operating Temperature Range	-13 to +140 / -25 to +60[3] (-40°F / -40°C option)					°F / °C
Protection Rating	NEMA 3R (Inverter with Safety Switch)					

[1] For other regional settings please contact SolarEdge support
[2] Depends on PV availability
[3] Power de-rating from 50°C

SUNSPEC ALLIANCE **RoHS**

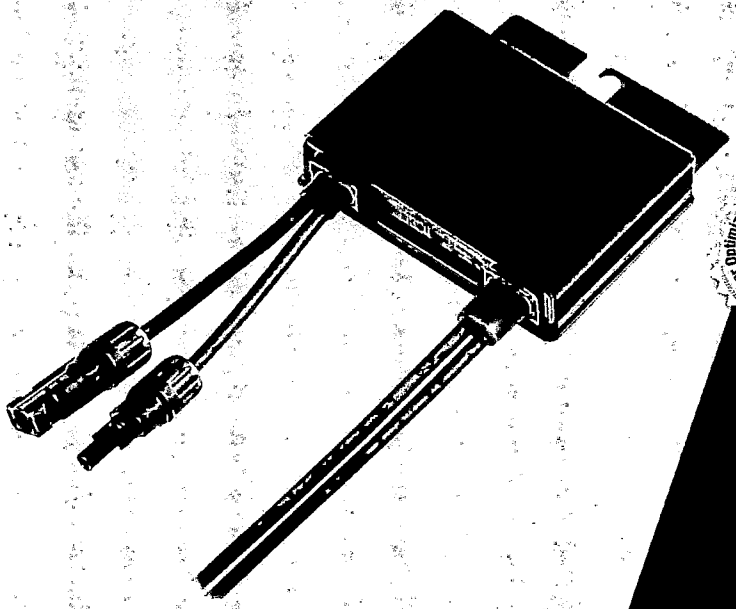
solaredge

SolarEdge Power Optimizer

Module Add-On For North America

P300 / P320 / P400 / P405

POWER OPTIMIZER



PV power optimization at the module-level

- 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
- Module-level voltage shutdown for installer and firefighter safety

SolarEdge Power Optimizer

Module Add-On for North America

P300 / P320 / P400 / P405

	P300 (for 60-cell modules)	P320 (for high-power 60-cell modules)	P400 (for 72 & 96-cell modules)	P405 (for thin film modules)	
INPUT					
Rated Input DC Power[1]	300	320	400	405	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		80	125	Vdc
MPPT Operating Range	8 - 48		8 - 80	12.5 - 105	Vdc
Maximum Short Circuit Current (Isc)	10	11	10		Adc
Maximum DC Input Current	12.5	13.75	12.5		Adc
Maximum Efficiency	99.5				%
Weighted Efficiency	98.8				%
Overvoltage Category	II				
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)					
Maximum Output Current	15				Adc
Maximum Output Voltage	60			85	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)					
Safety Output Voltage per Power Optimizer	1				Vdc
STANDARD COMPLIANCE					
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3				
Safety	IEC62109-1 (class II safety), UL1741				
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)	128 x 152 x 27.5 / 5 x 5.97 x 1.08		128 x 152 x 35 / 5 x 5.97 x 1.37	128 x 152 x 48 / 5 x 5.97 x 1.89	mm / in
Weight (including cables)	770 / 1.7		930 / 2.05	930 / 2.05	gr / lb
Input Connector	MC4 Compatible				
Output Wire Type / Connector	Double Insulated; MC4 Compatible				
Output Wire Length	0.95 / 3.0		1.2 / 3.9		m / ft
Operating Temperature Range	-40 - +85 / -40 - +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

[1] Rated STC power of the module. Module of up to +5% power tolerance allowed.

PV SYSTEM DESIGN USING A SOLAREDGE INVERTER[2]	SINGLE PHASE	THREE PHASE 208V	THREE PHASE 480V	
Minimum String Length (Power Optimizers)	8	10	18	
Maximum String Length (Power Optimizers)	25	25	50	
Maximum Power per String	5250	6000	12750	W
Parallel Strings of Different Lengths or Orientations	Yes			

[2] It is not allowed to mix P405 with P300/P400/P600/P700 in one string.