Building Codes: 2017 NEC, AND 2018 NORTH CAROLINA RESIDENTIAL CODE and AHJ VICINITY MAP Amendments

STIMPSON, RONALD PV SYSTEM 215 MOONLIGHT DRIVE . FUQUAY-VARINA, NC, 27526 APN: 040674 0046 10 JURISDICTION: HARNETT COUNTY (NC) GENERAL INFORMATION

SYSTEM SIZE:

ROOF PITCHED: INVERTER: MODULES: STRINGS: ELECTRICAL SERVICE RATING: PV SYSTEM OVERCURRENT RATING: PV SYSTEM DISCONNECT SWITCH: ROOF TYPE: ROOF FRAMING: RACKING: ATTACHMENT METHOD: 4.810 kW-DC-STC 3.800 kW-AC 27 DEGREES (1) SOLAREDGE SE3800H-US W/ P401 OPTIMIZERS (13) LG370N1K-E6 (1) x 13 MODULE SERIES STRING 200A 20A EATON DG221URB (30A / 2P) COMP SHINGLE MANUFACTURED/ENGINEERED TRUSS EVEREST MIN. 5/16" x 3 ½ LAG SCREWS EA. STANDOFF

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ELECTRICAL 3 LINE DIAGRAM	THREE LINE	PV 6
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NOTES

EC	QUIPMENT LOCATION	GE	ENE
1.	ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26.	1.	MC
2.	WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR		STA
	EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC690.31(A),(C) AND	2.	INV
	NEC TABLES 310.15(B)(2)(A) AND 310.15(B)(3)(C).		STA
3.	JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES	3.	DR/
	ACCORDING TO NEC 690.34.		ARF
4.	ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS		MIC
	NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT.	4.	WC
5.	ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL		WIL
	ACCORDING TO NEC APPLICABLE CODES.	5.	ALL
6.	ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR		GR
	USAGE WHEN APPROPRIATE.	6.	ALL
W	IRING & CONDUIT NOTES		OTH
1.	ALL CONDUITS AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE.	7.	WH
	CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE		CO
	REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.	8.	THE
2.	CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.		UN'
3.	DC WIRING LIMITED TO MODULE FOOTPRINT. MICRO INVERTER WIRING	9.	RO
	SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY WITH SUITABLE		REG
	WIRING CLIPS.		SUC
4.	AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK,		WI
	PHASE B OR L-2 RED, OR OTHER CONVENTION IF THREE PHASE, PHASE C OR	10.	PV
	L3-BLUE, YELLOW, ORANGE, OR OTHER CONVENTION NEUTRAL- WHITE OR		ARF
	GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH THE HIGHER		

VOLTAGE TO BE MARKED ORANGE NEC 110.15.



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE , FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308



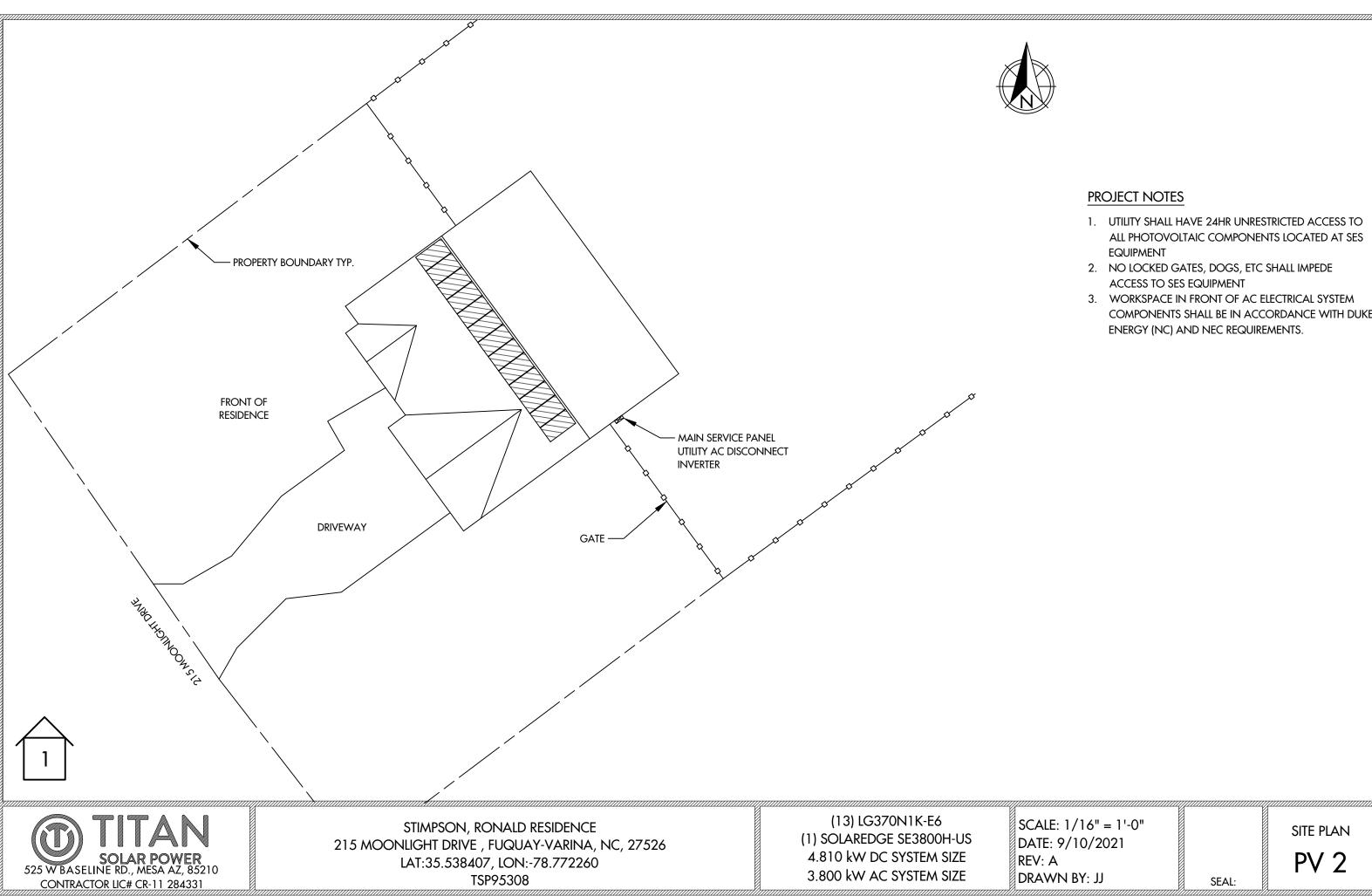
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Fua	uay-Varina, NC	



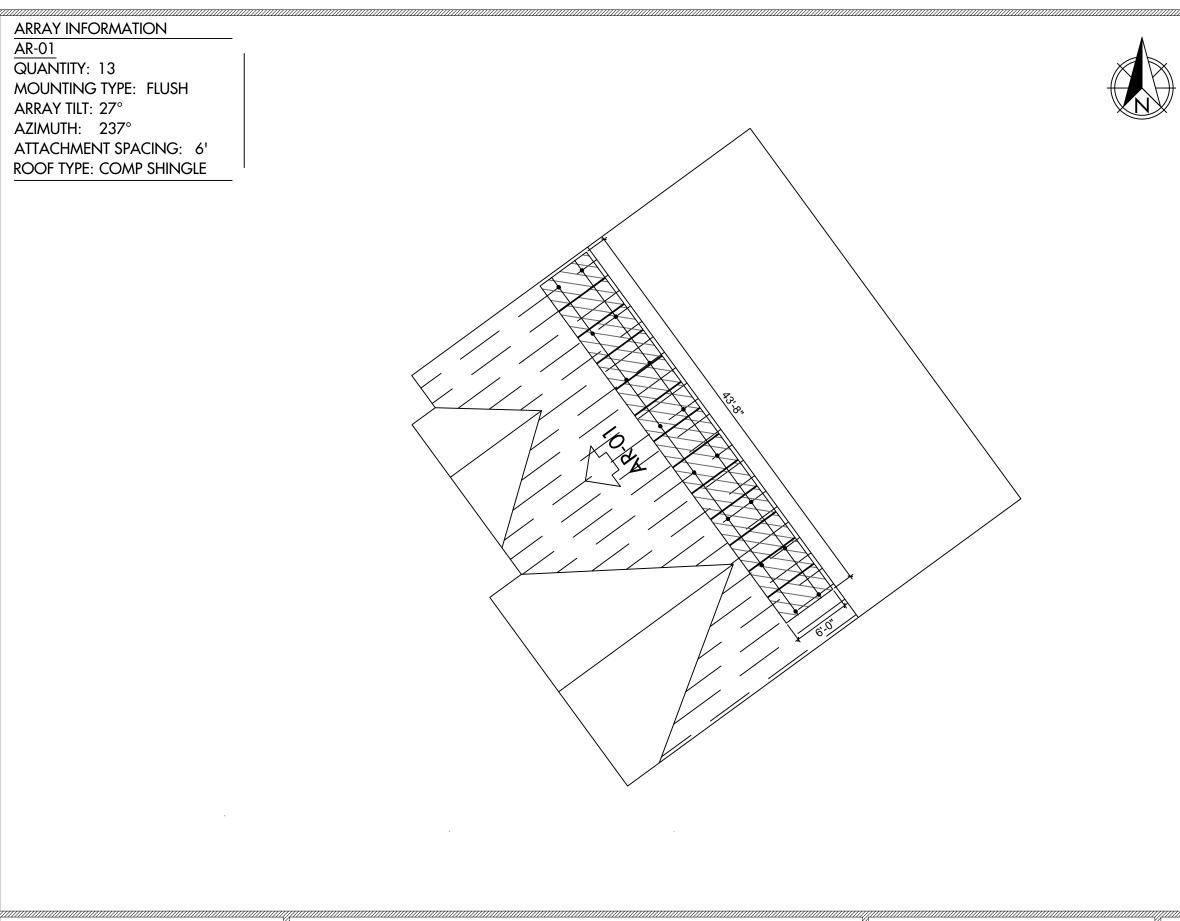
IERAL NOTES

- ODULES ARE LISTED UNDER UL 1703 AND CONFORM TO THE TANDARDS.
- IVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE TANDARDS.
- RAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL
- RRANGEMENT OF THE PV SYSTEM AND THE ACTUAL SITE CONDITION IGHT VARY.
- ORKING CLEARANCES AROUND THE NEW PV ELECTRICAL EQUIPMENT /ILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.
- LL GROUND WIRING CONNECTED TO THE MAIN SERVICE
- ROUNDING IN MAIN SERVICE PANEL/SERVICE COMPONENT.
- LL CONDUCTORS SHALL BE 600V, 75° C STANDARD COPPER UNLESS THERWISE NOTED.
- /HEN REQUIRED, A LADDER SHALL BE IN PLACE FOR INSPECTION IN OMPLIANCE WITH OSHA REGULATIONS.
- HE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR NTIL APPROVAL FROM THE LOCAL JURISDICTION AND/OR THE UTILITY. DOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT EQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS JCH AS WINDOWS WHERE THE ACCESS POINT DOES NOT CONFLICT /ITH OVERHEAD OBSTRUCTIONS SUCH AS TREES, WIRES OR SIGNS. / ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM RRAY WIRING TO CONDUIT WIRING.

	//////////////////////////////////////	
ATE: 9/10/2021		COVER PAGE
EV:A RAWN BY: JJ		PV 1
	SEAL:	



- COMPONENTS SHALL BE IN ACCORDANCE WITH DUKE





STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE , FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308 (13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE

NOTES

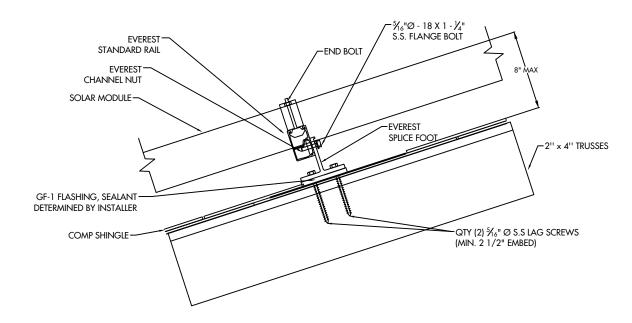
ROOF VENTS, SKYLIGHTS, WILL NOT BE COVERED UPON PV INSTALLATION

- TOTAL ROOF AREA = 2337 SQ-FT
- TOTAL ARRAY AREA = 257.62 SQ-FT
- ARRAY COVERAGE = 11.02%

SCALE: 25/256" = 1'-0" DATE: 9/10/2021 REV:A DRAWN BY: JJ SEAL:

MODULE & RACKING INFORMATION MODULE: LG370N1K-E6 MODULE WEIGHT: 40.78 LBS MODULE DIMENSIONS: 69.6''x 41'' x 1.5" RACKING/RAIL: EVEREST / EVEREST

ROOF & FRAMING INFORMATION MATERIAL: COMP SHINGLE RAFTER/TRUSS SIZE: 2'' x 4'' RAFTER/TRUSS SPACING: 2'



ARRAY 01: 13 MODULES

<u>UPLIFT = 7728.50 LBS.</u>

POINT LOAD = 35.98 LBS. PER MOUNTING POINT

PULLOUT STRENGTH = 8400.00 LBS.

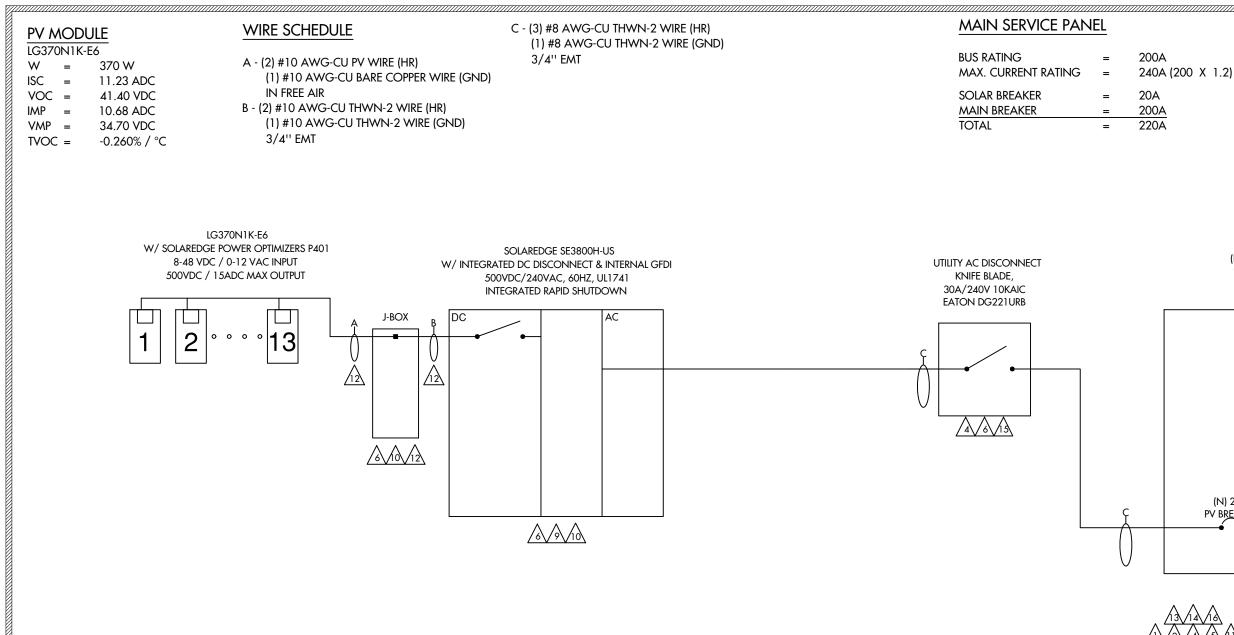
DISTRIBUTED LOAD = 2.23 PSF

MODULE & RACKING WEIGHT = 575.64 LBS



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE , FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308 (13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE

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ATE: 9/10/2021				DETAIL	S
:V:A RAWN BY: JJ		05.41		PV 4	4
	Ø	SEAL:	Ø		



WIRE SIZE CALCULATIONS

TEMP CORRECTION FACTOR: 0.87 (43° AMBIENT) ROOFTOP TEMP CORRECTION FACTOR: 1.00 (43° ADJUSTED) (2" ABOVE ROOFTOP / 0° TEMP ADDERS - AS OCCURS) (TEMP DATA TAKEN FROM ASHRAE 2% AVG HIGH TEMP)

DC WIRING CONDUIT FILL FACTOR = OPTIMIZER MAX. CURRENT = #10- AWG CU. AMPACITY = FREE AIR #10 - AWG CU. AMPACITY = **ROOFTOP CONDUIT**

1.00 18.75A DC (15.00A X 1 X 1.25) 47.85A (55A X 0.87) 34.80A (40A X 0.87 X 1.00)

AC WIRING CONDUIT FILL FACTOR MAX. INVERTER CURRENT =

MIN. INVERTER OCP INVERTER OCP #8 - AWG CU AMPACITY

- 1 (3) CONDUCTORS
 - 16A (PER INVERTER SPECS)
- 20A (16A X 1.25)

=

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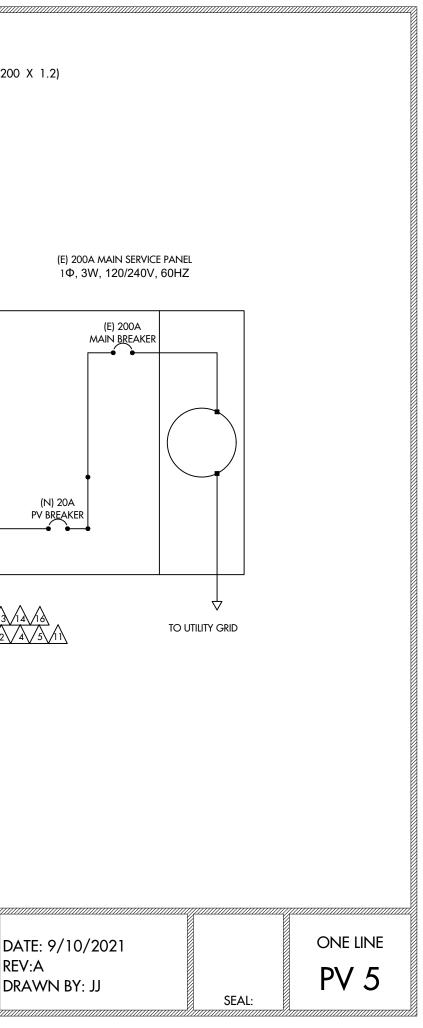
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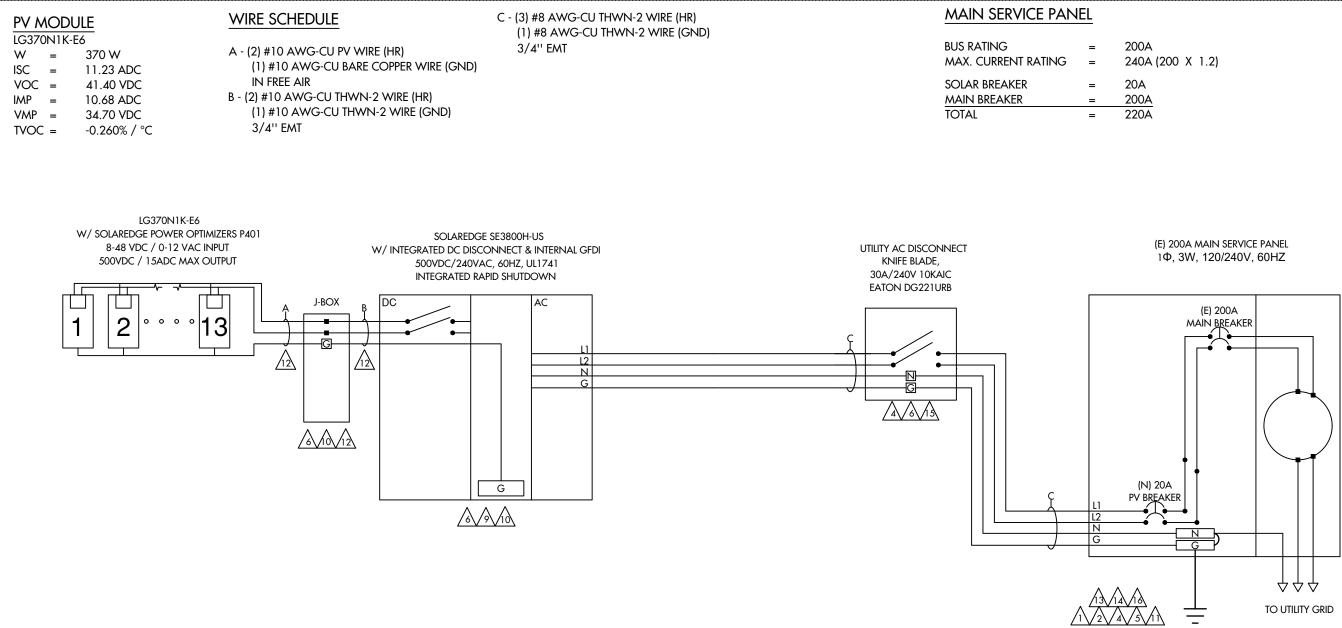
- 20A
- 47.85A (55A X 1 X 0.87)



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE, FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE





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 - 16A (PER INVERTER SPECS)
- 20A (16A X 1.25)

=

=

- 20A
- 47.85A (55A X 1 X 0.87)



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE, FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

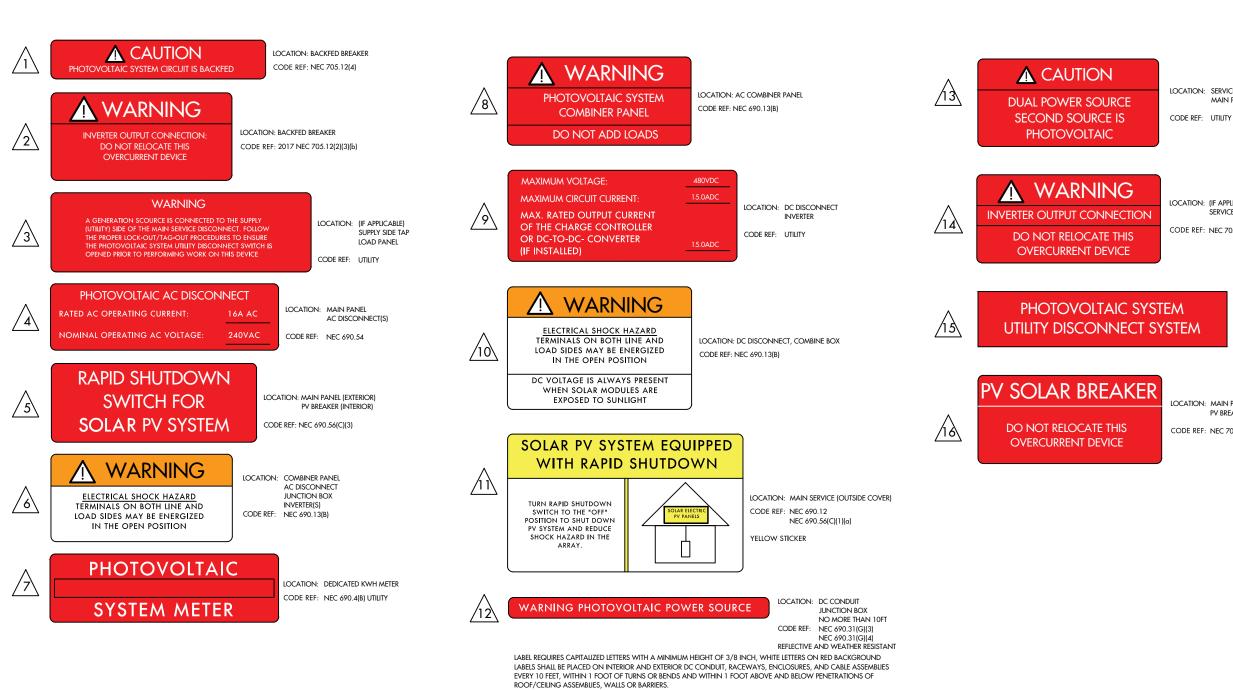
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(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE



ATE: 9/10/2021		THREE LINE
V:A		PV 6
AWN BY: JJ	CEAL	FV O
	SEAL:	a E

(E) GROUNDING ELECTRODE





STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE, FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE

LOCATION: SERVICE METER MAIN PANEL

LOCATION: (IF APPLICABLE) SERVICE PANEL

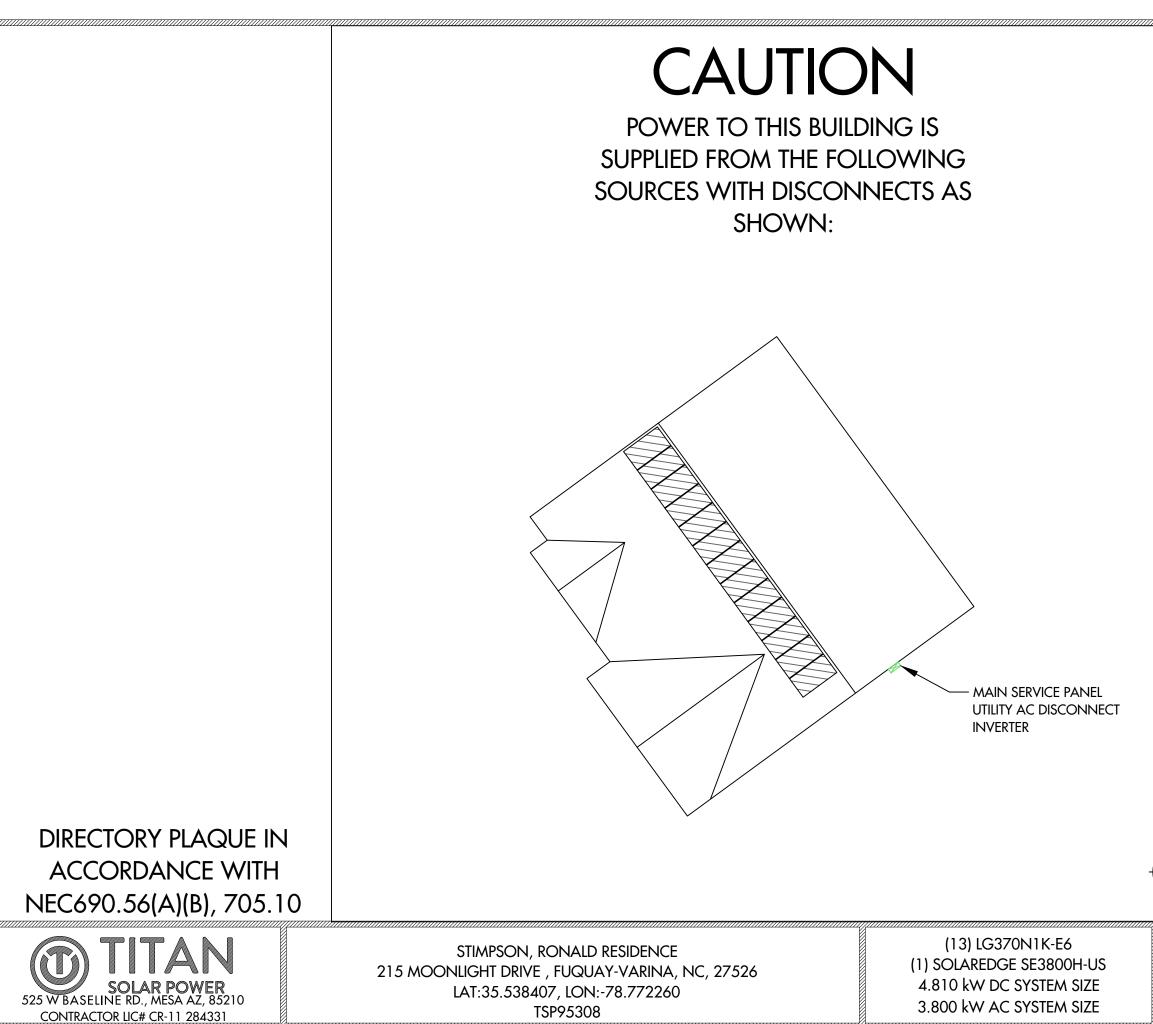
CODE REF: NEC 705.12(7)

LOCATION: AC DISCONNECT CODE REF: UTILITY

LOCATION: MAIN PANEL:(EXTERIOR) PV BREAKER: (INTERIOR)

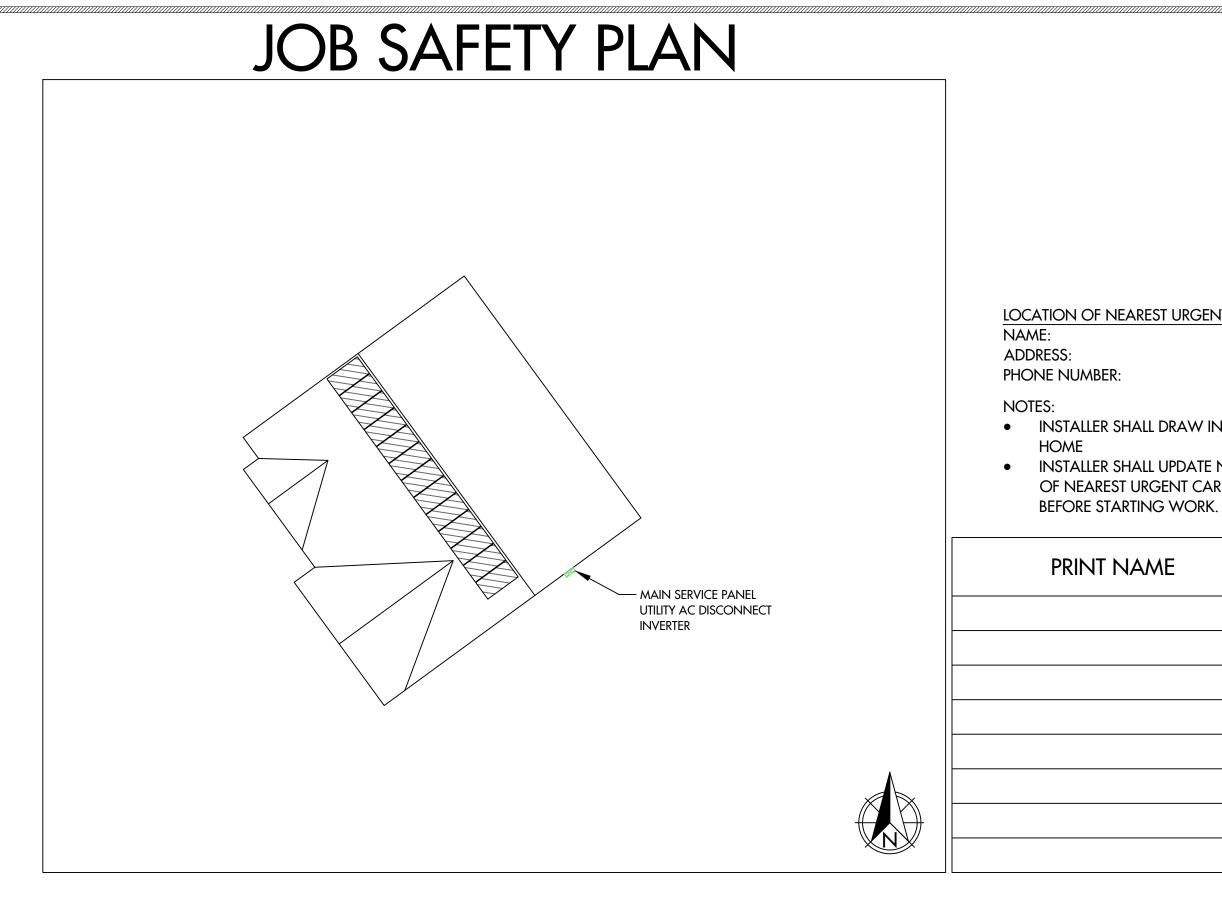
CODE REF: NEC 705.12(B)(2)(3)(B)

DATE: 9/10/2021			LABELS
REV: A DRAWN BY: JJ			PV 7
	S	EAL:	



D RI D

DATE: 9/1 EV: A DRAWN B		SEAL:	placard PV 8	





STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE , FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE



LOCATION OF NEAREST URGENT CARE FACILITY

INSTALLER SHALL DRAW IN DESIGNATED SAFETY AREA AROUND

INSTALLER SHALL UPDATE NAME, ADDRESS, AND PHONE NUMBER OF NEAREST URGENT CARE FACILITY RELATIVE TO THE JOB SITE

ME	INITIAL	YES	NO

DATE: 9/10/2021 REV: A DRAWN BY: JJ

SAFETY PLAN PV 9

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 / UL1741 SA certified, for CPUC Rule 21 grid compliance
- Record-breaking 99% weighted efficiency
- I 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 and 2017, per article 690.11 and 690.12

solaredge.com

/ 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 MinNomMax. (211 - 240 - 264)	~	~	1	*	~	*	~	Vac
AC Output Voltage MinNomMax. (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		3	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	Add
Max. Input Short Circuit Current				45				Adc
Reverse-Polarity Protection				Yes				
Ground-Fault Isolation Detection		600ka Sensitivity						
Maximum Inverter Efficiency	99			Ģ	99.2			%
CEC Weighted Efficiency				99			99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption		< 2.5						

 $^{\circl}$ For other regional settings please contact SolarEdge support $^{\circl}$ 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

MODEL NUMBER	SE300
ADDITIONAL FEATURES	
Supported Communication Interfaces	
Revenue Grade Metering, ANSI C12.20	
Consumption metering	
Inverter Commissioning	
Rapid Shutdown - NEC 2014 and 2017 690.12	
STANDARD COMPLIANCE	
Safety	
Grid Connection Standards	
Emissions	
INSTALLATION SPECIFICA	TIONS
AC Output Conduit Size / AWG Range	
DC Input Conduit Size / # of Strings / AWG Range	
Dimensions with Safety Switch (HxWxD)	
Weight with Safety Switch	
Noise	
Cooling	
Cooling Operating Temperature Range	

household energy usage helping them to avoid high electricity bills



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE, FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

INVERTERS

Small, lightweight, and easy to install both outdoors

Øptional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade

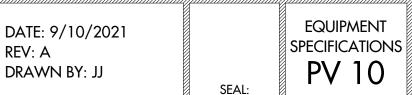
solaredge

metering (0.5% accuracy, ANSI C12.20)

or indoors

I Built-in module-level monitoring

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE



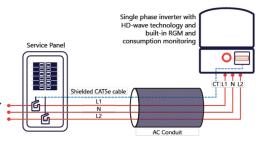
SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/

SE7600H-US / SE10000H-US / SE11400H-US

SE3800H-US SE5000H-US SE6000H-US SE7600H-US SE10000H-US SE11 RS485, Ethernet, ZigBee (optional), Cellular (opt Optional⁽³⁾ With the SetApp mobile application using Built-in Wi-Fi Access Point for Local Connection Automatic Rapid Shutdown upon AC Grid Disconne UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07 IEEE1547, Rule 21, Rule 14 (HI) FCC Part 15 Class B 1" Maximum / 14-6 AW 1" Maximum /14-4 AW 1" Maximum / 1-2 strings / 14-6 AWG 1" Maximum / 1-3 strings / 14-6 AWG 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 25.1 / 11.4 lb / kg dBA Natural Convection °F/°C -40 to +140 / -40 to +60 NEMA 4X (Inverter with Safety Swite nverter with Revenue Grade Production and Con 0750-400NA-20. 20 units per box

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



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AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant: Address:	SolarEdge Technolog 1 HaMada Street Herzeliya 4673335	jies Ltd	Manufacturer: Address:	Celestica Romania 88 Soseaua Borsului, Bors, Bihor county, 417075
Country:	Israel		Country:	Romania
Contact:	Mr. Oren Bachar or Mr. Meir Adest		Contact:	Renata Bodan
Phone:	+972 9 957 6620 #29 +972 9 957 6620 #13		Phone:	+40-359-403-661
FAX:	972 9 957 6591		FAX:	+40-722-964-215
Email:	OREB.B@SOLARED MEIR.A@SOLARED		Email:	rbodan@celestica.com
Party Author Report Issui	ized To Apply Mark: ng Office:	Same as Manufacture Cortland NY 13045	r	
Control Num	ber: 4004590	Authorized by:	l	elic play



for Dean Davidson, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are Inis Authorization to Mark is for the exclusive use of interfacts Client and is provided pursuant to the Certification agreement between Interfacts and its Client. Interfacts accusive accusive

> Intertek Testing Services NA Inc. 545 East Algonquin Road, Arlington Heights, IL 60005 Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Inverters, Converters, Controllers And Interconnection System Equipment For Use With Distributed Energy Resources [UL 1741:2010 Ed.2(Supplement SA)+R:07Sep2016]					
	Power Conversion Equipment [CSA C22.2#107.1:2016 Ed.4].					
	UL SUBJECT 1699B Issued: 2013/01/14 Ed: 2 Outline of Investigation for Photovoltaic (PV) DC ARC- Fault Circuit Protection					
Product:	Grid support Utility Interactive Inverter - Non Isolated Photovoltaic Inverter with MPPT function and Rapid					
Brand Name:	SolarEdge					
Models:	SE3000H-US, SE3800H-US, SE5000H-US, SE6000H-US, SE7600H-US, SE10000H-US and SE11400H-US					

ATM for Report 102144760CRT-001e

HEG

Page 2 of 2

ATM Issued: 10-Oct-2017 ED 16.3.15 (20-Apr-17) Mandatory

ATM for Report 102144760CRT-001e TIEL

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Page 1 of 2



STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE, FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE

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Applicant: Address:	SolarEdge Technolog 1 HaMada Street Herzeliya 4673335	jies Ltd	Manufacturer: Address:	Jal DE 12 GL
Country:	Israel		Country:	Ch
Contact:	Mr. Oren Bachar or		Contact:	Ela
	Mr. Meir Adest			
Phone:	+972 9 957 6620 #29	93 or	Phone:	02
	+972 9 957 6620 #13	31		13
FAX:	972 9 957 6591		FAX:	N/A
Email:	OREB.B@SOLARED	GE.COM	Email:	Ela
	MEIR.A@SOLARED	GE.COM		
Party Author	ized To Apply Mark:	Same as Manufacture	er	

Report Issuing Office: Cortland NY 13045 Control Number: 4004590 Authorized by:

intertek

Ulla-Pia Johansson-Nilsson for Dean Davidson, Certification Manager



Intertek

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Intertek Testing Services NA Inc. 545 East Algonquin Road, Arlington Heights, IL 60005 Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Inverters, Converters, Controllers And Interconnection System Equipment For Use With Distributed
	Energy Resources [UL 1741:2010 Ed.2(Supplement SA)+R:07Sep2016]
	Power Conversion Equipment [CSA C22.2#107.1:2016 Ed.4].
	UL SUBJECT 1699B Issued: 2013/01/14 Ed: 2 Outline of Investigation for Photovoltaic (PV) DC ARC-
	Fault Circuit Protection
Product:	Grid support Utility Interactive Inverter - Non Isolated Photovoltaic Inverter with MPPT function and Rapid
Brand Name:	SolarEdge
Aodels:	SE3000H-US, SE3800H-US, SE5000H-US, SE6000H-US, SE7600H-US, SE10000H-US and SE11400H

AUTHORIZATION TO MARK

abil Circuit (Guangzhou) LTD EV EAST DISTRICT 28 JUN CHENG RD UANGZHOU, GUANGDONG 510530 hina laine Ouyang

20-2805-4025/ 35-7023-5852 /A laine.ouyang@jabil.com

NU

ATM Issued: 10-Oct-2017 ED 16.3.15 (20-Apr-17) Mandatory

DATE: 9/10/2021 REV: A DRAWN BY: JJ

EQUIPMENT **SPECIFICATIONS** PV 1

Power Optimizer

For North America P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505



PV power optimization at the module-level

- I Specifically designed to work with SolarEdge inverters
- / Up to 25% more energy
- Superior efficiency (99.5%)

solaredge.com

- 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
- I Next generation maintenance with modulelevel 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

OPTIMIZE

ア

/ Power Optimizer

For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high- power 60-cell modules)	P370 (for higher- power 60 and 72- cell modules)	P400 (for 72 & 96-cell modules)	P401 (for high power 60 and 72 cell modules)	P405 (for high- voltage modules)	P485 (for high- voltage modules)	P505 (for higher current modules)	
INPUT									
Rated nput DC Power®	320	340	370	4	00	405	485	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	4	8	60	80	60	12	5(2)	83(2)	Vdc
MPPT Operating Range	8 -	48	8 - 60	8 - 80	8-60	12.5	- 105	12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)		11		10.1	11.75	1	1	14	Adc
Maximum Efficiency				99.	5				%
Weighted Efficiency				98.8				98.6	%
Overvoltage Category				1					
OUTPUT DURING OPER	ATION (POV	VER OPTIMI	ZER CONNEC	TED TO OPE	RATING SOI	LAREDGE IN	VERTER)		
Maximum Output Current				15	i				Adc
Maximum Output Voitage			60				85		Vdc
OUTPUT DURING STAND	DBY (POWER	OPTIMIZER	DISCONNECT	ED FROM SC	DLAREDGE IN	VERTER OR	SOLAREDG	E INVERTER O	OFF)
Safety Output Voltage per Power Optimizer				1±	0.1				Vdc
STANDARD COMPLIAN	CE								
EMC		FCC Part15 Class 3, IEC61000-6-2, IEC61000-6-3							
Safety				IEC62109-1 (class	safety), U_1741				
Material				UL94 V-0 , U	IV Resistant				
RoHS		Yes							
INSTALLATION SPECIFIC	CATIONS								
Maximum Allowed System Voltage				100	00				Vdc
Compatible inverters			All SolarE	dge Single Phase	and Three Phase i	inverters			
Dimensions (W x L x H)	129	< 153 x 27.5 / 5.1 >	: 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 / 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			MC	4(3)			Single or dua MC4 ⁽³⁾⁽⁴⁾	MC4 ^(B)	
Input Wire Length				0.16 /	0.52				m/ft
Output Wire Type / Connector				Double Insul	ated / MC4				
Output: Wire Length	0.9 /	2.95			1.2 /	3.9			m / ft
Operating Temperature Range®				-40 - +85 /	-40 - +185				°C / *=
Protection Rating				IP68 / N	EMA6P				
Relative Humidity				C - 1	00				%

Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power lolerance are allowed
Rot C2017 requires maximput voltage be not more than 80V
For other connector types places contract State fage
For other connecting types places contract State fage
For other connecting as single module seal the unused input connector with the supplied pair of seals.
For ambient temperature above +85°C / +85°F power de-rating is applied. Refer to Power Optimizer Temperature De-Rating Technical Note for more details.

			-	
PV System Desi a SolarEdge Inv		Single Phase HD-Wave	Single phase	Three Phas 208V gi
	D000 D040 D070			

PV System D a SolarEdge	esign Using Inverter ⁽⁶⁾⁽⁷⁾	Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length	P320, P340, P370, P400, P401	8		10	18	
(Power Optimizers)	P405, P485, P505	6		8	14	
Maximum String Length (Power Optimizers)		25		25	50(8)	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400- US)	5250	6000%	1275C ⁽¹⁰⁾	W
Parallel Strings of Different Lengths or Orientations			,	Yes		

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SOLAR POWER 525 W BASELINE RD., MESA AZ, 85210 CONTRACTOR LIC# CR-11 284331

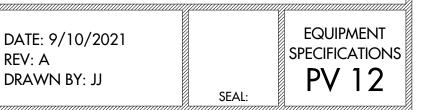
STIMPSON, RONALD RESIDENCE 215 MOONLIGHT DRIVE , FUQUAY-VARINA, NC, 27526 LAT:35.538407, LON:-78.772260 TSP95308

(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE









LG NeON[®]H Black



LG370N1K-E6

370W

The LG NeON® H is one of the most powerful and versatile modules on the market today. The cells are designed to appear all-black at a distance, and the performance warranty guarantees 87.2% of labeled power output at 25 years.





Features



Enhanced Performance Warranty

LG NeON® H Black has an enhanced performance warranty. After 25 years, LG NeON® H Black is guaranteed at least 87.2% of initial performance.



Solid Performance on Hot Days

LG NeON[®] H Black performs well on hot days due to its low temperature coefficient.



25-Year Limited Product Warranty

The NeON[®] H Black is covered by a 25-year limited product warranty.

Roof Aesthetics

LG NeON® H Black has been designed with aesthetics in mind using thinner wires that appear all black at a distance.

When you go solar, ask for the brand you can trust: LG Solar

About LG Electronics USA, Inc.

LG Electronics is a global leader in electronic products in the clean energy markets by offering solar PV panels and energy storage systems. The company first embarked on a solar energy source research program in 1985, supported by LG Group's vast experience in the semi-conductor, LCD, chemistry and materials industries. In 2010, LG Solar successfully released its first MoncX[®] eries to the market, which is now wailable in 32 countries. The NetON[®] (previous MonoX[®] NeON), NeON[®]2, NeON[®]2, BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG's leadership and innovation in the solar industry.



LG NeON[®]H Black

LG370N1K-E6

General Data	
Cell Properties (Material/Type)	Monocrystalline/N-type
Cell Maker	LG
Cell Configuration	120 Cells (6 x 20)
Number of Busbars	9 EA
Module Dimensions (L x W x H)	1,768mm x 1,042mm x 40 mm
Weight	18.5 kg
Glass (Material)	Tempered Glass with AR coating
Backsheet (Color)	Black
Frame (Material)	Anodized Aluminium
Junction Box (Protection Degree)	IP 68 with 3 Bypass Diodes
Cables (Length)	1,200mm x 2EA
Connector (Type/Maker)	MC 4/MC

Certifications and Warranty

UL 61730-1 : 2017, UL 61730-2 : 2017
ISO 9001, ISO 14001, ISO 50001
OHSAS 18001
IEC 61701:2011 Severity 6
IEC 62716:2013
Type 2 (UL 61730)
Class C (UL 790)
25 Year Limited
Linear Warranty*

Temperature Characteristics

NMOT*	[°C]	42 ± 3
Pmax	[%/°C]	-0.33
Voc	[%/°C]	-0.26
lsc	[%/°C]	0.04

Wind speed 1 m/s, Spectrum AM 1.5

Electrical Properties (NMOT)

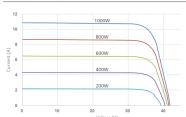
Model		LG370N1K-E6
Maximum Power (Pmax)	[VV]	276
MPP Voltage (Vmpp)	[V]	32.3
MPP Current (Impp)	[A]	8.56
Open Circuit Voltage (Voc)	[V]	38.6
Short Circuit Current (Isc)	[A]	9.06

I-V Curves

(-1)

LG

Life's Good



nics LISA Ir Solar Business Divisio 2000 Millbrook Drive Lincolnshire, IL 60069

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(13) LG370N1K-E6 (1) SOLAREDGE SE3800H-US 4.810 kW DC SYSTEM SIZE 3.800 kW AC SYSTEM SIZE



Electrical Properties (STC*)

Model

Maximu MPP Volt MPP Cur

Open Cir Short Cir Module B Power To

Operatin Maximu

Maximu

Mechanie Mechan

		LG370N1K-E6
n Power (Pmax)	[W]	370
tage (Vmpp)	[V]	34.7
rrent (Impp)	[A]	10.68
cuit Voltage (Voc ± 5%)	[V]	41.4
rcuit Current (Isc ± 5%)	[A]	11.23
Efficiency	[%]	20.1
olerance	[%]	0~+3

*STC (Standard Test Condition): Irradiance 1000 W/m², cell temperature 25°C, AM 1.5 Measurement Tolerence of Pmax: \pm 3%

Operating Conditions

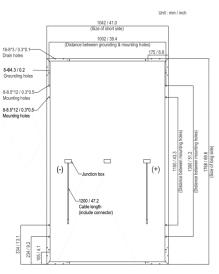
ng Temperature	[°C]	-40 ~+85	
m System Voltage	[V]	1,000 (UL/IEC)	
m Series Fuse Rating	[A]	20	
ical Test Load* (Front)	[Pa/psf]	5,400	
ical Test Load* (Rear)	[Pa/psf]	4,000	

*Based on IEC 61215-2 : 2016 (Test Load = Design Load × Safety Factor (1.5)) Mechanical Test Loads 6,000Pa/5,400Pa based on IEC 61215:2005

Packaging Configuration

Number of Modules per Pallet	[EA]	25
Number of Modules per 40' Container	[EA]	650
Number of Modules per 53' Container	[EA]	850
Packaging Box Dimensions (L \times W \times H)	[mm]	1,790 x 1,120 x 1,213
Packaging Box Dimensions (L x W x H)	[in]	70.5 x 44.1 x 47.8
Packaging Box Gross Weight	[kg]	510
Packaging Box Gross Weight	[lb]	1,124

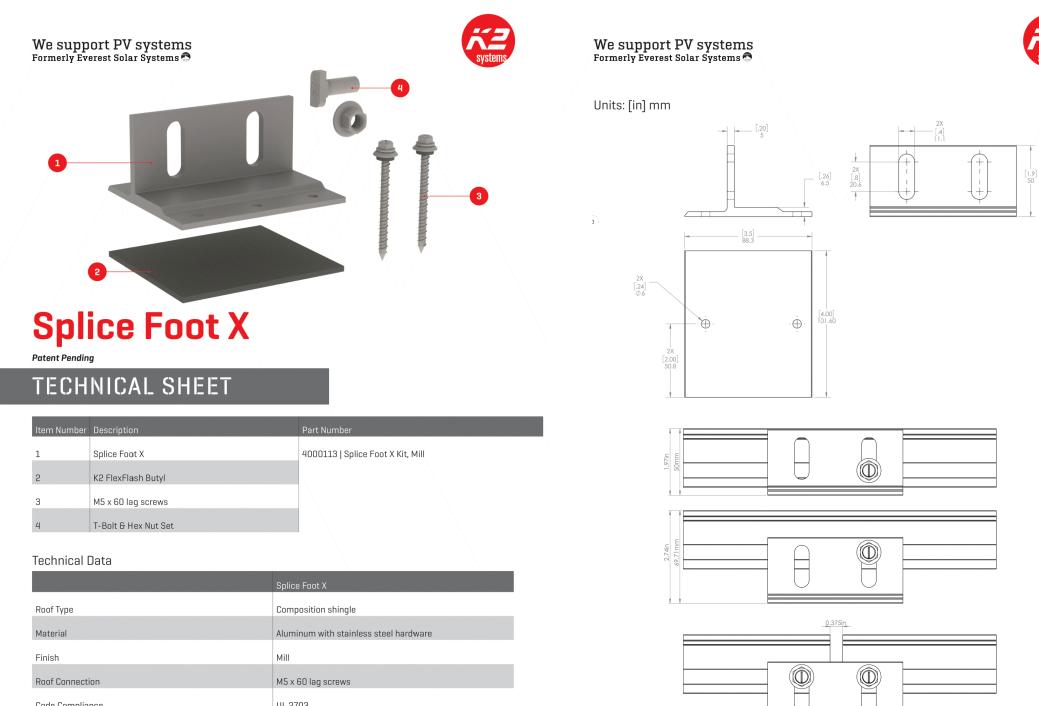
Dimensions (mm/inch)



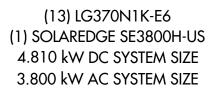
Product specifications are subject to change without notice

DATE: 9/10/2021 REV: A DRAWN BY: JJ





	Shire Loor V
Roof Type	Composition shingle
Material	Aluminum with stainless steel hardware
Finish	Mill
Roof Connection	M5 x 60 lag screws
Code Compliance	UL 2703
Compatibility	CrossRail 44-X, 48-X, 48-XL, 80
	k2-systems.com





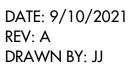


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CrossRail 48-X

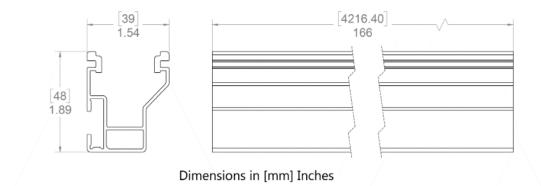


Mechanical Properties

	CrossRail 48-X
Material	6000 Series Aluminum
Ultimate Tensile Strength	37.7 ksi (260 MPa)
Yield Strength	34.8 ksi (240 MPa)
Weight	0.56 lbs/ft (0.833 kg/m)
Finish	Mill or Dark Anodized

Section Properties

	CrossRail 48-X
Sx	0.1980 in ³ (3.261 cm ³)
Sy	0.1510 in ³ (2.507 cm ³)
A (X-Section)	0.4650 in ² (3.013 cm ²)



Notes:

- Structural values and span charts determined in accordance with Aluminum Design Manual and ASCE 7-10
- UL2703 Listed System for Fire and Bonding

www.everest-solarsystems.com



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