From: brien riff <riffbrien@gmail.com>
Sent: Monday, August 31, 2020 10:35 AM
To: Cynda Herrick <cherrick@co.valley.id.us>
Subject: Narrative for 328 Westview

Solar Ground Mount Project for 328 Westview Cascade ID

20 panel Ground Mount solar system to be placed on the northern most portion of lot 51. The measurements are 34 by 14 and 12 feet high on the north side and 3 feet high on the south side.

The project will be interconnect to the Idaho Power meter at the east side of the house via conduit. The conduit will be 24 inches underground. This a stationary ground mount and the panels meet the FAA requirements for anti reflective.

Construction time for this project is 2 days. The Ground mount uses ground screws to secure the structure. These screws withstand the 115 mile per hour wind load requirements for Valley County verified with Building department. We complete a full building and electrical permit and comply with all local and state laws for construction.

The first day of construction is the trenching and securing of the ground mount. Inspections occur and the second day is placing the modules and wiring the project to the Idaho Power connection. We have completed our Idaho Power interconnection Customer Generation request and are in the process of getting the required additional permits.

The area where the panels are located is on the north east portion of the property. The homeowner to the north east is protected by trees. The area behind the panels is a slope that exists already and the property itself blocks any view of the panels from neighboring properties due to topography. No new landscaping is required. The area where the panels are being placed is already grated and gravel.

Comet Energy
Brien Riff
208-573-5779

Valley County Planning & Zoning Department

219 N. Main
PO Box 1350
Cascade, ID 83611
www.co.valley.id.us
Phone 208-382-7115
Fax 208-382-7119

Conditional Use Permit Application

TO BE COMPLETED BY THE PLANNING AND ZONING DEPARTMENT

FILE # C.U.P. 20-24 FEE $ 300 - CHK

ACCEPTED BY Cynda DEPOSIT $ ____

CROSS REFERENCE FILE(S): ____ DATE 8-31-2020

PROPOSED USE: ____

When an application has been submitted, it will be reviewed in order to determine compliance with application requirements. A hearing date will be scheduled only after an application has been accepted as complete or if applicant requests the hearing in writing.

Applicant's Signature: ____ **Date:** 08/31/2020

The following must be completed and submitted with the conditional use permit application:

- A detailed project description disclosing the purpose, strategy, and time frame of construction. Include a phasing plan if appropriate.
- A plot plan, drawn to scale, showing the boundaries, dimensions, area of lot, existing and proposed utilities, streets, easements, parking, setbacks, and buildings.
- A landscaping plan, drawn to scale, showing elements such as trees, shrubs, ground covers, and vines. Include a plant list indicating the size, quantity, location and name (both botanical and common) of all plant material to be used.
- A site grading plan clearly showing the existing site topography and detailing the best management practices for surface water management, siltation, sedimentation, and blowing of dirt and debris caused by grading, excavation, open cuts, side slopes, and other site preparation and development.
- A lighting plan.
- Names and addresses of property owners within 300 feet of the property lines. Information can be obtained through the Assessor's Office. Only one copy of this list is required.
- Ten (10) copies of the application, project description, plot plan, landscaping plan, grading plan, and impact report are required.

We recommend you review the Valley County Codes online at www.co.valley.id.us/planning-zoning or at the Planning & Zoning Office at 219 North Main Street, Cascade, Idaho

Subject to Idaho Statute 55-22 Underground Facilities Damage Prevention.

APPLICANT Comet Energy LLC Brady Ruff PHONE 208-573-577

Owner ☐ Purchaser ☐ Lessee ☐ Renter ☐ X INSTALLER Suite 102

APPLICANT'S MAILING ADDRESS 13607 W. McMILLAN RD ZIP 83713

OWNER'S NAME Tom Hennold

OWNER'S MAILING ADDRESS 328 WESTVIEW ZIP 83611

AGENT/REPRESENTATIVE _____ FAX _____ PHONE _____

AGENT/REPRESENTATIVE ADDRESS _____ ZIP _____

CONTACT PERSON (if different from above) APPLICANT

CONTACT'S ADDRESS SAME ZIP _____ PHONE _____

ADDRESS OF SUBJECT PROPERTY 328 WESTVIEW CASCADE, ID 83611

PROPERTY DESCRIPTION (either lot, block & subdivision name or attach a recorded deed with a metes and bounds description.)

SINGLE FAMILY RESIDENCE PONDEROSA ESTATES SUB

LOTS 51 + 52 BLOCK 2

TAX PARCEL NUMBER RP00701006205 1A

Quarter _____ Section _____ Township _____ Range _____

1. PROPOSED USE: Residential ☒ Civic or Community ☐ Commercial ☐ Industrial ☐

2. SIZE OF PROPERTY 1841 Acres ☐ or Square Feet ☐

3. EXISTING LAND USES AND STRUCTURES ON THE PROPERTY ARE AS FOLLOWS:

RESIDENTIAL 537 RES IMP. ON CAT 15

SFR HOME + DETACHED GARAGE

4. ARE THERE ANY KNOWN HAZARDS ON OR NEAR THE PROPERTY (such as canals, hazardous material spills, soil or water contamination)? If so, describe and give location: NO

5. ADJACENT PROPERTIES HAVE THE FOLLOWING BUILDING TYPES AND/OR USES:

North VACANT LOT

South SFR + SHOP

East VACANT LOT

West SFR + SHOP

6. MAXIMUM PROPOSED STRUCTURE HEIGHT: 12 FOOT

7a. NON-RESIDENTIAL STRUCTURES OR ADDITIONS (If applicable):

Number of Proposed Structures: 1 Number of Existing Structures: _____

Proposed Gross Square Feet		Existing Gross Square Feet
1st Floor _____	SOLAR ARRAY	1st Floor _____
2nd Floor _____	34ft WIDE	2nd Floor _____
Total _____	14ft deep	Total _____

8a. TYPE OF RESIDENTIAL USE (If applicable): N A

Single family residence ☐ Mobile home for single family residence ☐ Multiple residences on one parcel ☐

8b. SQUARE FOOTAGE OF PROPOSED RESIDENTIAL STRUCTURES (If applicable): N/A

SQUARE FOOTAGE OF EXISTING RESIDENTIAL STRUCTURES: N/A

8c. DENSITY OF DWELLING UNITS PER ACRE: N/A

9. SITE DESIGN:

Percentage of site devoted to building coverage: _____

Percentage of site devoted to landscaping: _____

Percentage of site devoted to roads or driveways: _____

Percentage of site devoted to other uses: 1%, describe: SOLAR ARRAY

Total: 100%

10. PARKING (If applicable):

a. Handicapped spaces proposed: _____

b. Parking spaces proposed: _____

c. Number of compact spaces proposed: _____

d. Restricted parking spaces proposed: _____

e. Are you proposing off-site parking: _____

Office Use Only

Handicapped spaces required: _____

Parking spaces required: _____

Number of compact spaces allowed: _____

11. SETBACKS:

	BUILDING Proposed	Office Use Only Required	PARKING Proposed	Office Use Only Required
Front	70 ft			
Rear	20 ft			
Side	10 ft			
Street Side	70 ft			

12a. NUMBER OF EXISTING ROADS: 1 Width: 20ft (Private) or Public? PRIVATE

Are the existing road surfaces paved or graveled? gravel

12b. NUMBER OF PROPOSED ROADS: _____ Proposed width: _____

Will the proposed roads be publicly or privately maintained? _____

Proposed road construction: Gravel ☐ Paved ☐

13a. EXISTING UTILITIES ON THE PROPERTY ARE AS FOLLOWS:

IDAHO POWER 2 meters

13b. PROPOSED UTILITIES: SAME

Proposed utility easement width N/A Location _____

14a. SEWAGE WASTE DISPOSAL METHOD: Septic ☐ N/A Central Sewage Treatment Facility ☐

14b. POTABLE WATER SOURCE: Public ☐ N/A Water Association ☐ Individual ☐

If individual, has a test well been drilled? ____ Depth _____ Flow _____ Purity Verified? _____

Nearest adjacent well _____ Depth _____ Flow _____

15. ARE THERE ANY EXISTING IRRIGATION SYSTEMS? YES

Are you proposing any alterations, improvements, extensions or new construction? NO

If yes, Explain: _____

16. DRAINAGE (Proposed method of on-site retention): N/A

Any special drains? _____ (Please attach map)

Soil type (Information can be obtained from the Soil Conservation District): GRAVEL/SANDY CLAY

17a. IS ANY PORTION OF THE PROPERTY LOCATED IN A FLOODWAY OR 100-YR FLOODPLAIN? (Information can be obtained from the Planning & Zoning Office) NO

17b. DOES ANY PORTION OF THIS PARCEL HAVE SLOPES IN EXCESS OF 15%? NO

17c. ARE THERE WETLANDS LOCATED ON ANY PORTION OF THE PROPERTY? NO

18. IS THERE ANY SITE GRADING OR PREPARATION PROPOSED? NO If yes, Explain:

19. COMPLETE ATTACHED PLAN FOR IRRIGATION if you have water rights and are in an irrigation district. N/A

20. COMPLETE ATTACHED WEED CONTROL AGREEMENT N/A

21. COMPETE ATTACHED IMPACT REPORT. It must address potential environmental, economic, and social impacts and how these impacts are to be minimized. N/A

VALLEY COUNTY

WEED CONTROL AGREEMENT

The purpose of this agreement is to establish a cooperative relationship between Valley County and the undersigned Cooperator to protect the natural and economic values in the Upper Payette River watershed from damages related to the invasion and expansion of infestations of noxious weeds and invasive plants. This is a cooperative effort to prevent, eradicate, contain and control noxious weeds and invasive plants on public and private lands in this area. Factors related to the spread of weeds are not related to ownership nor controllable at agency boundaries. This agreement formalizes the cooperative strategy for management of these weeds addressed in Valley County's Integrated Weed Management Plan.

In this continuing effort to control Noxious Weeds, Valley County Weed Control will consult with the undersigned Cooperator and outline weed identification techniques, present optional control methods and recommend proper land management practices.

The undersigned Cooperator acknowledges that he/she is aware of any potential or real noxious weed problems on his/her private property and agrees to control said weeds in a timely manner using proper land management principles.

COOPERATOR

TOM HENNOLD

COMET ENERGY

By: ANDREW RIOFF

Date: 08/31/2020

By: _____

Valley County Weed Control

Date: _____

IMPACT REPORT (from Valley County Code 9-5-3-D)

You may add information to the blanks below or attach additional sheets.

- ❖ An impact report shall be required for all proposed Conditional Uses.
- ❖ The impact report shall address potential environmental, economic, and social impacts and how these impacts are to be minimized as follows:

1. Traffic volume, character, and patterns including adequacy of existing or proposed street width, surfacing, alignment, gradient, and traffic control features or devices, and maintenance. Contrast existing with the changes the proposal will bring during construction and after completion, build-out, or full occupancy of the proposed development. Include pedestrian, bicycle, auto, and truck traffic.

2. Provision for the mitigation of impacts on housing affordability.

3. Noise and vibration levels that exist and compare to those that will be added during construction, normal activities, and special activities. Include indoor and outdoor, day and night variations.

4. Heat and glare that exist and that might be introduced from all possible sources such as autos in parking areas, outdoor lights, water or glass surfaces, buildings or outdoor activities.
LOW REFLECTIVE REC TWIN PEAK PANELS PLACED IN LOW AREA TO AVOID ANY VISIBILITY + GLARE FOR ANY SURROUNDING HOMES FAA GLARE APPROVED FOR AIRPORT USE PANELS
5. Particulate emissions to the air including smoke, dust, chemicals, gasses, or fumes, etc., both existing and what may be added by the proposed uses.

6. Water demand, discharge, supply source, and disposal method for potable uses, domestic uses, and fire protection. Identify existing surface water drainage, wet lands, flood prone areas and potential changes. Identify existing ground water and surface water quality and potential changes due to this proposal.

7. Fire, explosion, and other hazards existing and proposed. Identify how activities on neighboring property may affect the proposed use.

8. Removal of existing vegetation or effects thereon including disturbance of wet lands, general stability of soils, slopes, and embankments and the potential for sedimentation of disturbed soils.

9. Include practices that will be used to stabilize soils and restore or replace vegetation.

10. Soil characteristics and potential problems in regard to slope stability, embankments, building foundation, utility and road construction. Include suitability for supporting proposed landscaping.

11. Site grading or improvements including cuts and fills, drainage courses and impoundments, sound and sight buffers, landscaping, fencing, utilities, and open areas.

12. Visibility from public roads, adjoining property, and buildings. Include what will be done to reduce visibility of all parts of the proposal but especially cuts and fills and buildings. Include the affect of shadows from new features on neighboring property.

NO NEW GRADING USING EXISTING COW AREA
NO BLOCKING OF VIEWS OR INTERFERENCE
WILL BE MADE

13. Reasons for selecting the particular location including topographic, geographic and similar features, historic, adjoining land ownership or use, access to public lands, recreation, utilities, streets, etc., in order to illustrate compatibility with and opportunities presented by existing land uses or character. NO NEW GRADING REQUIRED
OUT OF SITE
EXISTING FLAT SURFACES

14. Approximation of increased revenue from change in property tax assessment, new jobs available to local residents, and increased local expenditures.

0

15. Approximation of costs for additional public services, facilities, and other economic impacts.

0

16. State how the proposed development will impact existing developments providing the same or similar products or services.

17. State what natural resources or materials are available at or near the site that will be used in a process to produce a product and the impacts resulting from the depletion of the resource. Describe the process in detail and describe the impacts of each part.

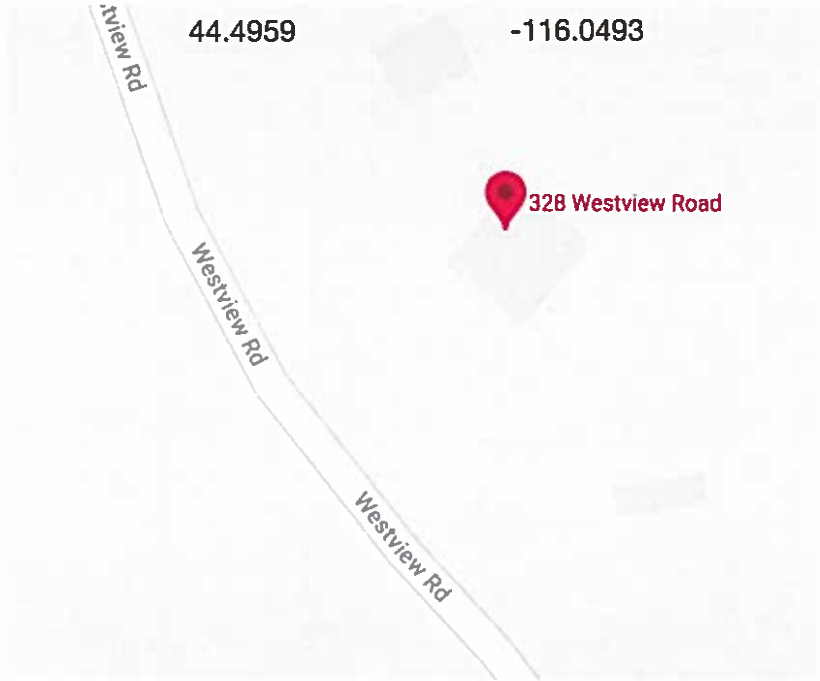
18. What will be the impacts of a project abandoned at partial completion?

N/A

19. Number of residential dwelling units, other buildings and building sites, and square footage or gross non-residential floor space to be available.

20. Stages of development in geographic terms and proposed construction time schedule.

21. Anticipated range of sale, lease or rental prices for dwelling units, building or other site, or non-residential floor space in order to insure compatibility with adjacent land use and development.



Inverter

20 Module Ground Mount Array

(34'x14')

10' Off Side Property Line

Utility Meter Base

Pv Utilitv Disconnect

Indoor Load Center

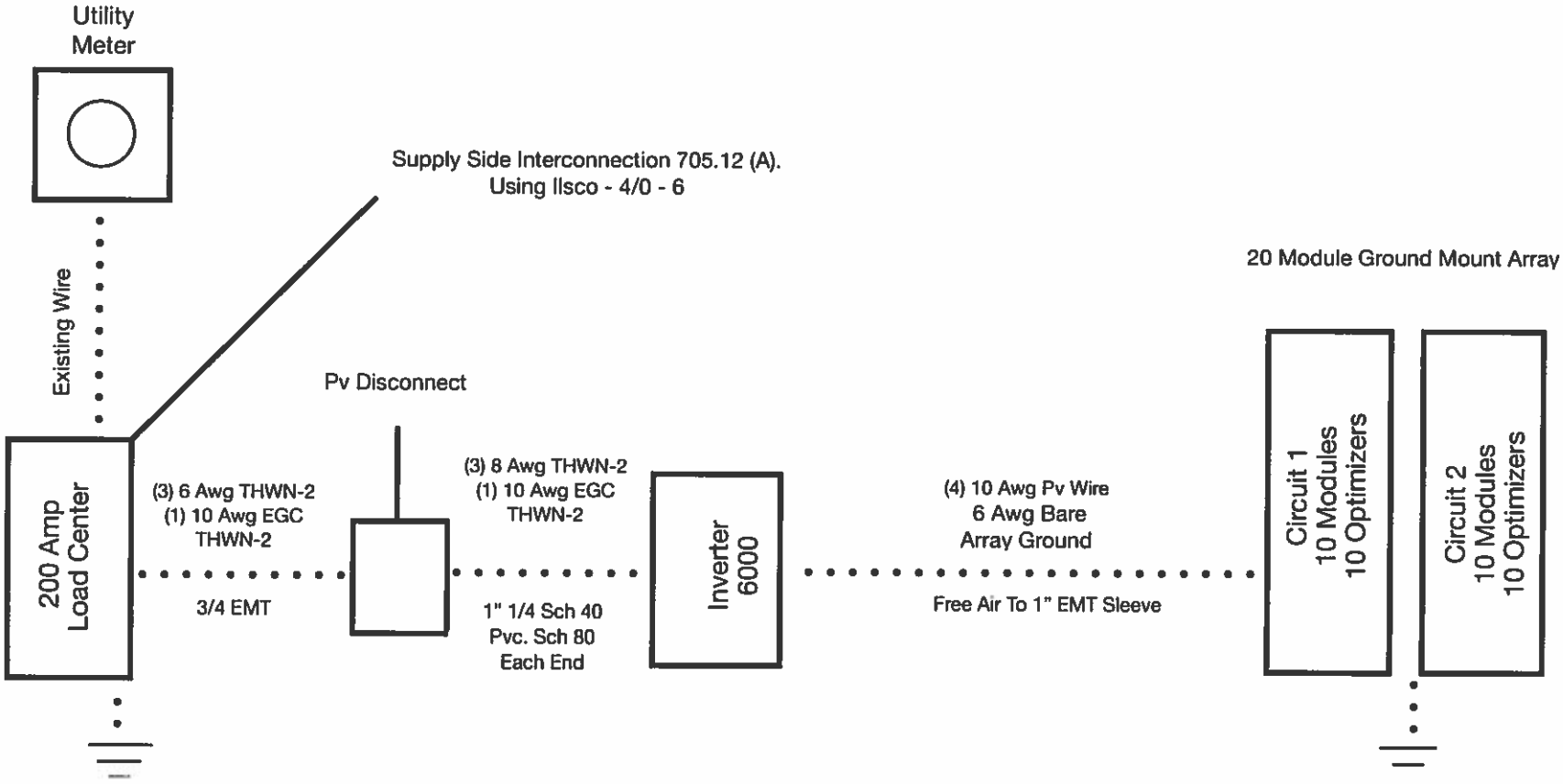
N

Tom Honnold
328 Westview Rd, Cascade, ID 83611
208-810-0872

Notes

1. Utility Meter (Existing)
2. 200 Amp Rated Indoor Load Center. Located in Laundry Room. (Existing)
3. 60 Amp Rated (Fused) Outdoor Pv Utility Disconnect. To be located within 10' of point of interconnection. To be fused with 35 amp fuses. (New)
4. Solar Edge 6000 H-US Inverter. (New)
5. Rec Twin Peak 380 watt Modules. Solar Edge p401 Optimizers. (New)

Tom Honnold
328 West View Rd, Cascade ID
83611
208-810-0872



NOTE:TO BE INSTALLED ON THE UTILITY/METER NEC 690.56(C)(1)(A).

A

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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

NOTE:TO BE INSTALLED ON PV DISCONNECT NEC 690.13(B)

B

PHOTOVOLTAIC SYSTEM
AC DISCONNECT

RATED AC OUTPUT CURRENT	A
NOMINAL OPERATING AC VOLTAGE	V

NOTE:TO BE INSTALLED ON PV DISCONNECT NEC 690.13(B)

C

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

NOTE:TO BE INSTALLED ON RAPID SHUTDOWN DEVICE NEC 690.56(C)(3)

D

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

NOTE:TO BE INSTALLED ON INVERTER/ DC DISCONNECT NEC 690.13(B)

E

DC DISCONNECT

NOTE:TO BE INSTALLED ON INVERTER/ DC DISCONNECT NEC 690.53

F

DIRECT CURRENT
PHOTOVOLTAIC
POWER SOURCE

MAXIMUM VOLTAGE	VDC
MAX CIRCUIT CURRENT	AMPS

NOTE:TO BE INSTALLED AT POINT OF INTECONNECTION AND ANY UPSTREAM PANELBOARDS NEC 705.12(B)(3-4) & NEC 690.59

G

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

NOTE:TO BE INSTALLED AT SOLAR PV BACKFED BREAKER NEC 705.12(B)(2)(C)

H

NOTE:TO BE INSTALLED ON ANY RACEWAYS/ CABLES CONTANING DC CONDUCTORS NEC 690.31(C)(3)(4)

I

WARNING: PHOTOVOLTAIC POWER SOURCE

PV PHOTOVOLTAIC CABLE 600V Rated

Cross-Linked Polyethylene Insulated
18 - 4/0 AWG • 600 Volts • -40°C to 105°C Dry and 90°C Wet

Solarlink
connecting solar to power

INTERTEK ISO 9001:2008

RoHS COMPLIANT

Cable Identification

"ADVANCED DIGITAL CABLE ## AWG (UL) PV WIRE 600V 105°C (-40C) SUN RES UV RATED VW-1 OR RHW-2 600V 90C WET OR DRY DIRECT BURIAL RoHS E324841"

Description

ADC's ***Solarlink*** brand Photovoltaic cable has a chemically cross-linked polyethylene insulation.

Applications

For use in grounded interconnection and ungrounded Photovoltaic power systems.

Construction

Conductors: Stranded bare and tinned copper conductors per ASTM B-3, B-8. Available in 7 or 19 stranded versions.

Insulation: Chemically Cross-linked polyethylene

Colors: Black, Green, White, Red. Print on one side with a contrasting ink. An extruded stripe and other colors are available upon request.

Industry Listings & Standards

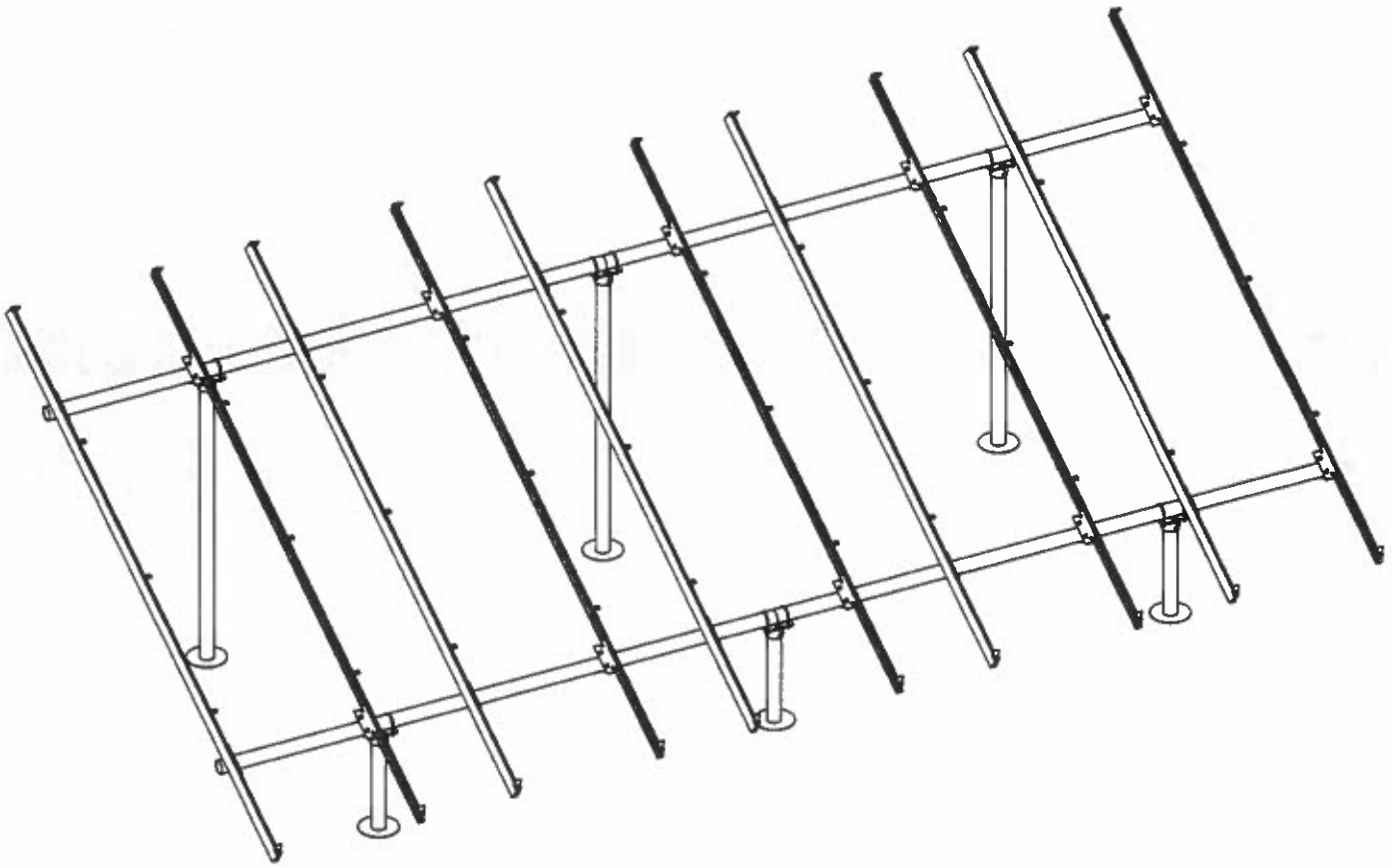
UL Listed as Photovoltaic Cable per Standard Subject 4703, 44 and 854
-40°C/90°C Wet/105°C Dry Rated
Gasoline and Oil Resistant II
RoHS Compliant
Sunlight Resistant
VW-1 Rated

UL LISTED

Cable Data

Part Number	AWG	Strand	Insulation Thick-ness (mils)	Nominal O.D. (inch)	Approximate Net Weight lbs/1M'	Copper Weight per lbs/1M'
318PV	18	7	60	.166	14	5.4
316PV	16	7	60	.178	18	7.97
314PV	14	7	60	.193	24	12.78
312PV	12	7	60	.212	33	20.2
310PV	10	7	60	.237	48	32.05
308PV	8	7	75	.297	76	51.05
306PV	6	7	75	.335	110	80.9
304PV	4	7	75	.384	164	128.9
303PV	3	7	75	.412	200	162.5
302PV	2	7	75	.444	246	204.9
301PV	1	19	95	.482	320	258
3010PV	1/0	19	95	.563	393	326
3020PV	2/0	19	95	.609	485	411
3030PV	3/0	19	95	.660	601	518
3040PV	4/0	19	95	.718	684	653

GROUND MOUNT



INSTALLATION MANUAL

IRONRIDGE

CHECKLIST

PRE-INSTALLATION

- ☐ Verify module compatibility. See Page 12 for info.
- ☐ Purchase 2" or 3" ASTM A53 Grade B Schedule 40 Pipe, galvanized to a min of ASTM A653 G90 or ASTM A123 G35, or 2.375" or 3.500" Allied Mechanical Tubing with Gatorshield or FlowCoat Zinc coating (ASTM A1057).

TOOLS REQUIRED

- ☐ Post Hole Digger or Powered Auger
- ☐ Socket Drive (7/16", 9/16", and 1/2" Sockets)
- ☐ Torque Wrenches (0-240 in-lbs and 10-40 ft-lbs)
- ☐ Transit, String Line, or Laser Level
- ☐ 3/16" Allen Head

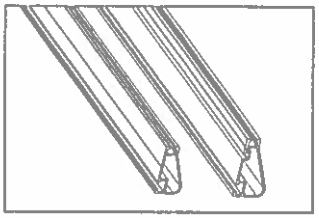
TORQUE VALUES

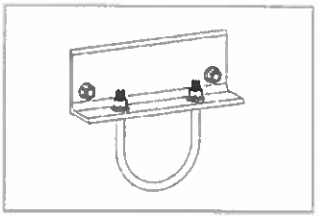
- ☐ Top Cap Set Screws (3/16" Allen Head)
- ☐ Schedule 40 Grade B Pipe: 20 ft-lbs
- ☐ 2." Allied Mechanical Tubing: 11 ft-lbs
- ☐ 3" Allied Mechanical Tubing: 16 ft-lbs
- ☐ Top Cap U-Bolt Nuts (9/16" Socket): 15 ft-lbs
- ☐ Rail Connector Bracket Nuts (9/16" Socket): 21 ft-lbs
- ☐ Rail Connector U-Bolt Nuts (9/16" Socket): 60 in-lbs
- ☐ Grounding Lug Nuts (7/16" Socket): 80 in-lbs
- ☐ Grounding Lug Terminal Screws (7/16 Socket): 20 in-lbs
- ☐ Universal Fastening Objects (7/16" Socket): 80 in-lbs
- ☐ Diagonal Brace Set Screws (1/2" Socket): 15 ft-lbs
- ☐ Diagonal Brace Bolts (1/2" Socket): 40 ft-lbs
- ☐ Microinverter Kit Nuts (7/16" Socket): 80 in-lbs
- ☐ Frameless Module Kit Nuts (7/16" Socket): 80 in-lbs

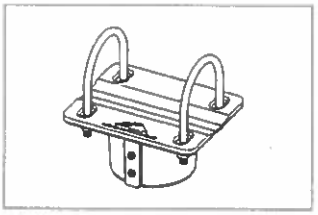
If using previous version of: Integrated Grounding Mid Clamps, Grounding Lug, End Clamps, and Expansion Joints please refer to Alternate Components Addendum (Version 1.30).

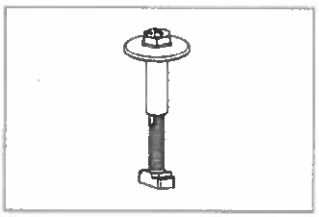
If installing on a low slope roof please refer to Ground Mount for Flat Roof Applications Addendum (Version 2.0).

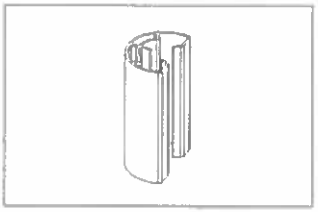
IRONRIDGE COMPONENTS

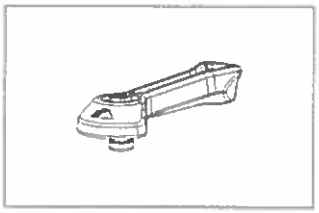

XR100 & XR1000 Rail

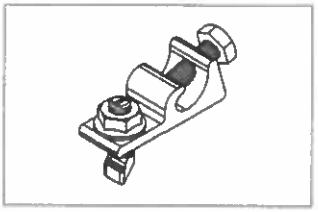

Rail Connector

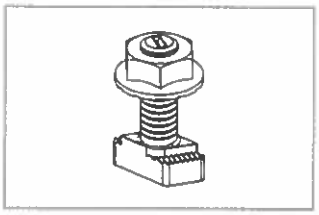

Top Cap

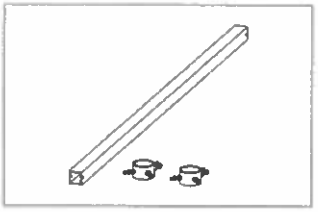

UFO


Stopper Sleeve


CAMO

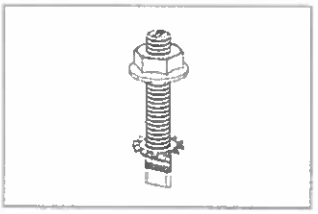

Grounding Lug

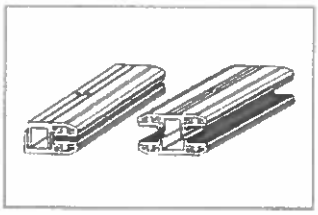

Microinverter Kit


Diagonal Brace

End Cap


Wire Clip


Frameless Module Kit


Frameless End/Mid Clamp

SOLAR'S MOST TRUSTED REC

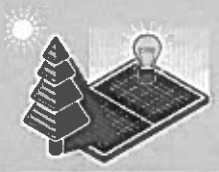
REC TWINPEAK 2S MONO 72 SERIES

PREMIUM SOLAR PANELS 100% MADE IN SINGAPORE

REC TwinPeak 2S Mono 72 Series solar panels feature an innovative design with high efficiency and an industry-leading lightweight, yet robust construction, enabling customers to get the most out of the installation area.

Combined with the product quality and reliability of a strong and established European brand, REC TwinPeak 2S Mono 72 Series panels are ideal for all types of commercial rooftop and utility installations worldwide.

REDUCES BALANCE OF SYSTEM COSTS

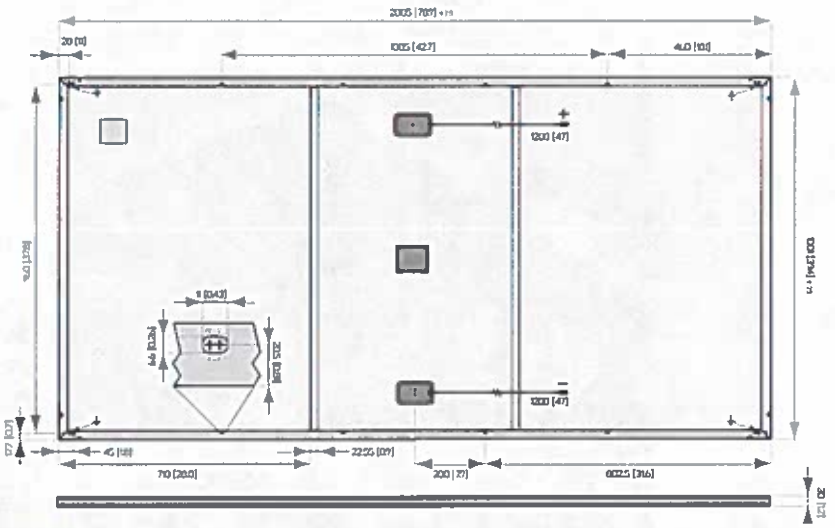


IMPROVED PERFORMANCE IN SHADED CONDITIONS

INDUSTRY-LEADING LIGHTWEIGHT 72-CELL PANEL

100% PID FREE

REC TWINPEAK 2S MONO 72 SERIES



All measurements in mm [in]

ELECTRICAL DATA @ STC	Product code*: RECxxxTP2SM72						
Nominal Power - P_{MPP} (Wp)	370	375	380	385	390	395	400
Watt Class Sorting - (W)	0/+5	0/+5	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage - V_{MPP} (V)	39.8	40.1	40.3	40.5	40.7	40.9	41.1
Nominal Power Current - I_{MPP} (A)	9.30	9.36	9.43	9.51	9.58	9.66	9.73
Open Circuit Voltage - V_{OC} (V)	47.0	47.4	48.0	48.6	49.2	49.8	50.4
Short Circuit Current - I_{SC} (A)	10.02	10.04	10.05	10.07	10.08	10.09	10.10
Panel Efficiency (%)	18.4	18.7	18.9	19.2	19.4	19.7	20.0

Values at standard test conditions STC (airmass AM 1.5, irradiance 1000 W/m², cell temperature 77°F (25°C)).
At low irradiance of 200 W/m² (AM 1.5 and cell temperature 77°F (25°C)) at least 95% of the STC module efficiency will be achieved.
* xxx indicates the nominal power class (P_{MPP}) at STC, and can be followed by the suffix XV for modules with a 1500 V maximum system rating.

ELECTRICAL DATA @ NMOT	Product code*: RECxxxTP2SM72						
Nominal Power - P_{MPP} (Wp)	276	280	283	287	290	295	298
Nominal Power Voltage - V_{MPP} (V)	37.1	37.3	37.5	37.7	37.9	38.1	38.3
Nominal Power Current - I_{MPP} (A)	7.44	7.49	7.54	7.60	7.66	7.73	7.78
Open Circuit Voltage - V_{OC} (V)	43.7	44.1	44.7	45.3	45.8	46.4	46.9
Short Circuit Current - I_{SC} (A)	8.02	8.03	8.04	8.06	8.06	8.07	8.08

Nominal cell operating temperature NOCT (800 W/m², AM 1.5, windspeed 1 m/s, ambient temperature 68°F (20°C)).
* xxx indicates the nominal power class (P_{MPP}) at STC, and can be followed by the suffix XV for modules with a 1500 V maximum system rating.

CERTIFICATION

C US

UL 1703, Fire classification: Type 1 (1500 V XV); Type 2 (1000 V),
IEC 61215, IEC 61730, IEC 62804 (PID), IEC 62716 (Ammonia),
IEC 61701 (Salt Mist level 6),
ISO 9001: 2015, ISO 14001: 2004, OHSAS 18001: 2007

WARRANTY

20 year product warranty
25 year linear power output warranty
Max. performance degression of 0.5% p.a. from 97.5% in year 1
See warranty conditions for further details.

20.0% EFFICIENCY

20 YEAR PRODUCT WARRANTY

25 YEAR LINEAR POWER OUTPUT WARRANTY

GENERAL DATA

Cell type:	144 half-cut monocrystalline PERC cells 6 strings of 24 cells in series
Glass:	0.13" (3.2 mm) solar glass with anti-reflection surface treatment
Backsheet:	Highly resistant polymeric construction
Frame:	Anodized aluminum
Support bars:	Anodized aluminum
Junction box:	3-part, 3 bypass diodes, IP67 rated in accordance with IEC 62790
Cable:	4 mm² solar cable, 1.2 m + 1.2 m in accordance with EN 50618
Connectors:	Tonglin TL-Cable01S-F (4 mm²) in accordance with IEC 62852, IP68 only when connected
Origin:	Made in Singapore

MAXIMUM RATINGS

Operational temperature:	-40 ... +185°F (-40 ... +85°C)
Maximum system voltage:	1000 V / 1500 V
Design load (+): snow Maximum test load (+):	75.2 lbs/ft² (3600 Pa)* 112.8 lbs/ft² (5400 Pa)*
Design load (-): wind Maximum test load (-):	33.4 lbs/ft² (1600 Pa)* 50.1 lbs/ft² (2400 Pa)*
Max series fuse rating:	25 A
Max reverse current:	25 A

+ Calculated using a safety factor of 1.5
* See installation manual for mounting instructions

TEMPERATURE RATINGS

Nominal Module Operating Temperature:	44.6°C (±2°C)
Temperature coefficient of P_{MPP}:	-0.37 %/°C
Temperature coefficient of V_{OC}:	-0.28 %/°C
Temperature coefficient of I_{SC}:	0.04 %/°C

*The temperature coefficients stated are linear values

MECHANICAL DATA

Dimensions:	78.9" x 39.4" x 1.2" (2005 x 1001 x 30 mm)
Area:	21.6 ft² (2.01 m²)
Weight:	48.5 lbs (22 kg)

Specifications subject to change without notice.

Ref: PMDS-07-73 Rev-R 07.12

Founded in Norway in 1996, REC is a leading vertically integrated solar energy company. Through integrated manufacturing from silicon to wafers, cells, high-quality panels and extending to solar solutions, REC provides the world with a reliable source of clean energy. REC's renowned product quality is supported by the lowest warranty claims rate in the industry. REC is a Bluestar Elkem company with headquarters in Norway and operational headquarters in Singapore. REC employs around 2,000 people worldwide, producing 1.5 GW of solar panels annually.

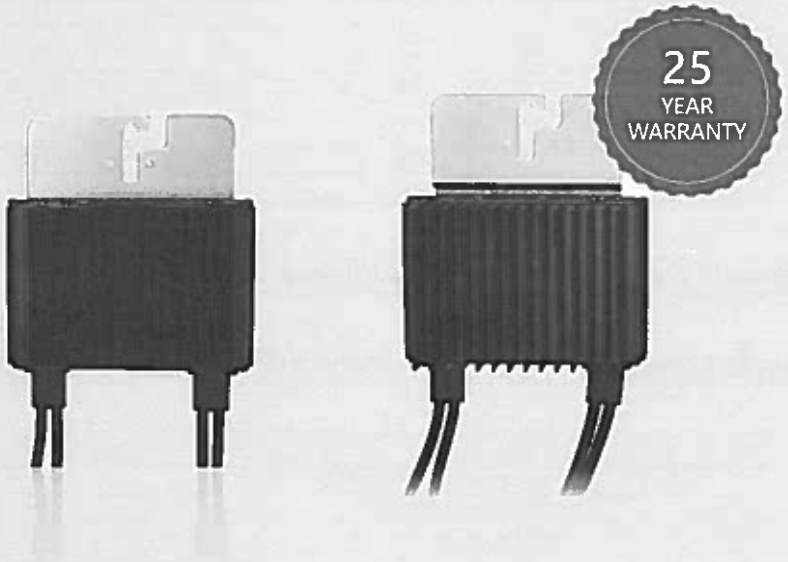
REC
www.recgroup.com

Power Optimizer

For North America

P320 / P340 / P370 / P400 / P401 / P405 / 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

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 Input DC Power[1]	320	340	370	400		405	485	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		60	80	60	125[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	11		14	Adc
Maximum DC Input Current	13.75			12.5	14.65	12.5		17.5	Adc
Maximum Efficiency	99.5								%
Weighted Efficiency	98.8							98.6	%
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 ± 0.1								Vdc
STANDARD COMPLIANCE									
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3								
Safety	IEC62109-1 (class II safety), UL1741								
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]						Single or dual MC4[3][4]	MC4[3]	
Input Wire Length	0.16 / 0.52								m / ft
Output Wire Type / Connector	Double Insulated / MC4								
Output Wire Length	0.9 / 2.95	1.2 / 3.9							m / ft
Operating Temperature Range[5]	-40 - +85 / -40 - +185								°C / °F
Protection Rating	IP68 / NEMA6P								
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) For dual version for parallel connection of two modules use P485-4NMDMRM. In the case of an odd number of PV modules in one string, installing one P485 dual version power optimizer connected to one PV module. When connecting a single module seal the unused input connectors with the supplied pair of seals
(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.

PV System Design Using a SolarEdge Inverter[6][7][8]		Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	P320, P340, P370, P400, P401	8		10	18	
	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[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 P405/P485/P505 with P320/P340/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

Intertek RoHS

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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.

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Applicant:	SolarEdge Technologies Ltd	**Manufacturer:**	Jabil Circuit (Guangzhou) LTD
Address:	1 HaMada Street Herzeliya 4673335	**Address:**	DEV EAST DISTRICT 128 JUN CHENG RD GUANGZHOU, GUANGDONG 510530
Country:	Israel	**Country:**	China
Contact:	Mr. Oren Bachar or Mr. Meir Adest	**Contact:**	Elaine Ouyang
Phone:	+972 9 957 6620 #293 or +972 9 957 6620 #131	**Phone:**	020-2805-4025/ 135-7023-5852
FAX:	972 9 957 6591	**FAX:**	N/A
Email:	OREB.B@SOLAREDGE.COM MEIR.A@SOLAREDGE.COM	**Email:**	Elaine.ouyang@jabil.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland NY 13045

Control Number: *4004590* **Authorized by:** _____

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

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Intertek

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

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

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Applicant:	SolarEdge Technologies Ltd	**Manufacturer:**	Celestica Romania
Address:	1 HaMada Street Herzeliya 4673335	**Address:**	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 #293 or +972 9 957 6620 #131	**Phone:**	+40-359-403-661
FAX:	972 9 957 6591	**FAX:**	+40-722-964-215
Email:	OREB.B@SOLAREDGE.COM MEIR.A@SOLAREDGE.COM	**Email:**	rbodan@celestica.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Cortland NY 13045

Control Number: 4004590 **Authorized by:**

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

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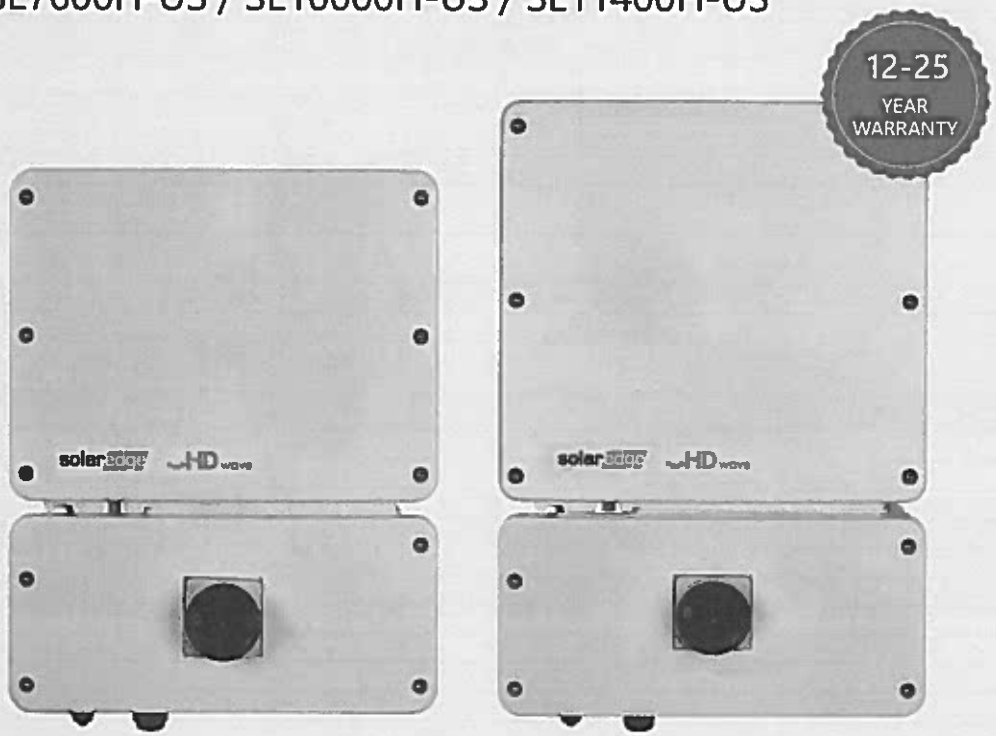
Product:	Grid support Utility Interactive Inverter - Non Isolated Photovoltaic Inverter with MPPT function and Rapid
Brand Name:	SolarEdge
Models:	SE3000H-US, SE3800H-US, SE5000H-US, SE6000H-US, SE7600H-US, SE10000H-US and SE11400H-US

INVERTERS

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 and 2017, 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)

solaredge

/ 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	600kΩ 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

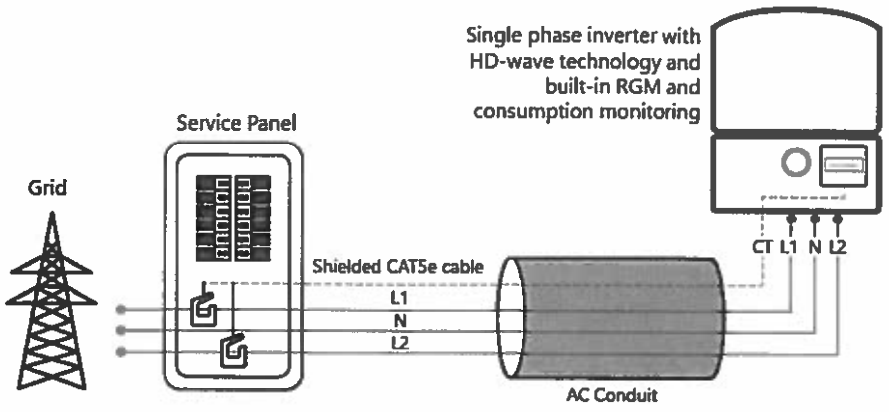
MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Metering, ANSI C12.20	Optional[3]							
Consumption metering								
Inverter Commissioning	With the SetApp mobile application using Built-in Wi-Fi Access Point for Local Connection							
Rapid Shutdown - NEC 2014 and 2017 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		in / mm
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: SExxxxH-US000BNC4; Inverter with Revenue Grade Production and Consumption Meter P/N: SExxxxH-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



RoHS