

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT



This is to certify that

MURRAY PETER L & DEBORAH D MURRAY
JTS/Revision Energy LLC

PERMIT ID: 2013-00220

Located at

104 NORTH ST

CBL: 012 Q004001

has permission to **Installing solar panels to roof.**

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise clsoed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

A handwritten signature in black ink, appearing to be 'J. Murray', written over a horizontal line.

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
THERE IS A PENALTY FOR REMOVING THIS CARD**

PERMIT ID: 2013-00220

Located at: 104 NORTH ST

CBL: 012 Q004001

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 (ONLY)
or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

REQUIRED INSPECTIONS:

Close-in Plumbing/Framing
Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2013-00220	Issue Date:	CBL: 012 Q004001
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Location of Construction: 104 NORTH ST	Owner Name: MURRAY PETER L & DEBORAH D MURRAY JTS	Owner Address: 89 WEST ST PORTLAND, ME 04102	Phone:
Business Name:	Contractor Name: Revision Energy LLC	Contractor Address: 142 Presumpscot street Portland ME 04101	Phone (207) 323-1805
Lessee/Buyer's Name	Phone:	Permit Type: Structure other than Building	Zone: R6
Past Use: New Single Family	Proposed Use: New Single Family	Permit Fee: \$170.00	Cost of Work: \$15,000.00
Proposed Project Description: Installing solar panels to roof.		FIRE DEPT: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied <input checked="" type="checkbox"/> N/A Signature: <i>[Signature]</i>	INSPECTION: Use Group: R-3 Type: HVAC <i>Solar Panels</i> Signature: <i>[Signature]</i>
		PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____	

Permit Taken By: bjs	Date Applied For: 02/01/2013	Zoning Approval
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>2/14/13</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: _____</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>[Signature]</i></p>
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CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

5-8-13

G-BKL

FINAL - PASS

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2013-00220	Date Applied For: 02/01/2013	CBL: 012 Q004001
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Location of Construction: 104 NORTH ST	Owner Name: MURRAY PETER L & DEBORAH	Owner Address: 89 WEST ST	Phone:
Business Name:	Contractor Name: Revision Energy LLC	Contractor Address: 142 Presumpscot street Portland	Phone (207) 323-1805
Lessee/Buyer's Name	Phone:	Permit Type: Structure other than Building	

Proposed Use: New Single Family	Proposed Project Description: Installing solar panels to roof.
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 02/04/2013
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Building	Status: Approved w/Conditions	Reviewer: Tammy Munson	Approval Date: 02/28/2013
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
1) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.			



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>104 North St</u>		
Total Square Footage of Proposed Structure/Area	Square Footage of Lot	Number of Stories
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant: (must be owner, lessee or buyer) Name <u>Revision Energy</u> Address <u>142 Presumpscot St</u> City, State & Zip <u>Portland, ME 04103</u>	Telephone: <u>221-6342</u>
Lessee/DBA RECEIVED FEB 01 2013 Dept. of Building Inspections City of Portland Maine	Owner: (if different from applicant) Name Address City, State & Zip	Cost of Work: \$15,000 C of O Fee: \$ Historic Review: \$ Planning Amin.: \$ Total Fee: \$ <u>170</u>
Current legal use (i.e. single family) <u>dw sf</u> Number of Residential Units <u>1</u> If vacant, what was the previous use? <u>land</u> Proposed Specific use: _____ Is property part of a subdivision? _____ If yes, please name _____ Project description: <u>Adding solar panels to roof</u>		
Contractor's name: <u>Applicant</u> Email: _____		Address: _____
City, State & Zip _____ Telephone: _____		Who should we contact when the permit is ready: <u>Jen</u> Telephone: <u>221-6342</u>
Mailing address: _____		

Please submit all of the information outlined on the applicable checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: [Signature] Date: 2/1/2013

This is not a permit; you may not commence ANY work until the permit is issued



Professional design, installation and service of renewable energy systems

February 1, 2013

City of Portland
389 Congress Street
Portland, ME 04101

RE: ReVision Energy Solar Installation at 104 North Street

Dear Code Enforcement,

ReVision Energy has been contracted to design and install a solar electric and solar hot water system at the above address in Portland. This letter is to confirm that all work will be performed by licensed and qualified installers, expert in the field and in compliance with both manufacturer's recommendations and all applicable local and state codes and standards. This also confirms that the roof structure can handle the weight of the panel load, in addition to snow load. The weight of the panels does not change the structural integrity of the building.

ReVision Energy employs licensed engineers, plumbers, and electricians and carries the solar industries highest certifications (NABCEP) in both solar thermal and photovoltaic installation. We're committed to high quality, code compliant work and look forward to working together with the city and the CEO to ensure that all your requirements and needs are met and that our customer ends up with a system that is beautiful, functional and safe.

Electrical and grounding:

All electrical work to be performed by a licensed ME electrician and will conform to NEC 2011 revision as well as NABCEP standards. Specifically, wiring and grounding of the photovoltaic system will be governed by manufacturer's recommendations and article 690. All installed metal components are grounded via the grounding electrode conductor.

If you have any questions or concerns, we'd like to address them as quickly and completely as possible. Please don't hesitate to call or e mail anytime.

Respectfully,

Fortunat Mueller, P.E.
Co-owner
ReVision Energy
(207) 752-6358
fortunat@revisionenergy.com

Bangor
207-570-4222

Liberty
207-589-4171

Portland
207-221-6342

Portsmouth
603-486-7170

www.revisionenergy.com



ARRAY ORIENTATION:
180° (True)

ARRAY PITCH:
40° angle

Collectors to be mounted in three rows of 6 modules each on the roof as shown.

Project Summary

System	Performance	Cost	Incentives	Net Cost
Grid-tied photovoltaic array with CSI modules and Solectria string inverter	<ul style="list-style-type: none"> Produce roughly 5,759 kWhrs of clean, renewable energy annually. Offset roughly 7,486 lbs. of CO2 emissions annually. 	\$15,218 Installed	-(\$4,565) 30% Federal Tax Credit -(\$2,000) Rebate from Efficiency Maine	\$8,652

Economic & Environmental Return on Investment

The system we are proposing is guaranteed to pay for itself by harvesting abundant solar energy to replace finite, polluting and increasingly costly fossil fuels. Once you get 100% of your initial investment returned through government financial incentives and energy savings, the system will continue to deliver a revenue stream for decades to come. Plus, the system will eliminate thousands of pounds of CO2 emissions each year, delivering a powerful environmental benefit.

ReVision Energy's mission is to eliminate over-reliance on fossil fuels and the associated emissions. We are succeeding in this mission by installing solar energy systems that are as robust and reliable as traditional mechanical systems. To ensure maximum performance and longevity in a harsh climate, each system is designed by our in-house engineers (Brown, Dartmouth, MIT, UNH) and installed by our experienced team of certified solar professionals. Please join us in the mission to create a clean energy future--we promise to deliver the peace of mind that comes from knowing you have made one of the best investments of your life.



Major System Components

Based on a professional evaluation of your available roofspace, site configuration, and energy demand, ReVision Energy proposes a roof-mounted photovoltaic array of 4.32 kilowatts (nominal).

The system features these major components:

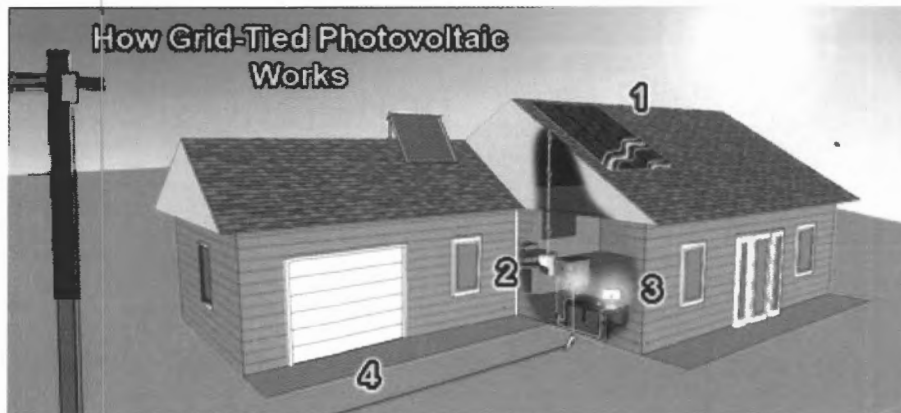
- (18) 240 watt Monosilicon Canadian Solar photovoltaic panels; CS6P-240M or equivalent (www.canadian-solar.com)
- (1) Solertia PVI4000 Grid Tied Inverter (www.solren.com)
- (124) Feet of Iron Ridge extruded aluminum solar mounting rail with hardware
- (1) Flashed Metallic Junction Box

System Operation

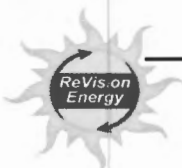
Whenever sun shines on the solar electric panels, they will generate direct current (DC) electricity. That DC electricity is transmitted to an inverter, which then converts it into AC electricity which can be used in your home. Any electric loads (TV, dryer, electronics, etc.) operating while the sun is shining will use available solar electricity. Any excess will flow out to the grid and you will receive a credit for the production.

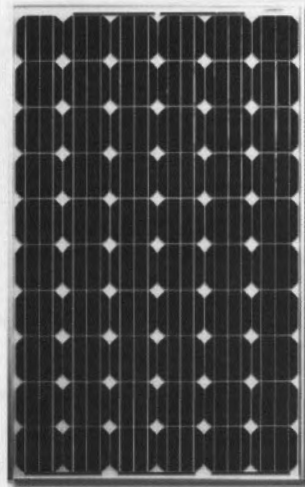
Whenever the sun is not out, you will continue to purchase grid electricity as you do now. The local utility company will record electricity you feed into the grid. If at the end of the month your generation is greater than your consumption, you will earn a credit on your next bill. You can bank your surplus from month to month for up to a year.

System Diagram



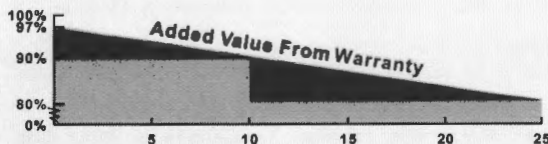
- 1 - Sun hits rooftop panels, creating electricity
 - 2 - Inverter turns DC solar power into AC power
 - 3 - Solar powers household loads - lights, TV, etc.
 - 4 - Any excess power sold to the grid for a credit.
- Use power as you do now - no need for batteries!



CS6P
230/235/240/245/250M


Key Features

- Industry first comprehensive warranty insurance by AM Best rated leading insurance companies in the world
- Industry leading plus only power tolerance: 0 ~ +5W
- Strong framed module, passing mechanical load test of 5400Pa to withstand heavier snow load
- The 1st manufacturer in the PV industry certified for ISO:TS16949 (The automotive quality management system) in module production since 2003
- ISO17025 qualified manufacturer owned testing lab, fully complying to IEC, TUV, UL testing standards
- **Backed By Our New 10/25 Linear Power Warranty Plus our added 25 year insurance coverage**



- 10 year product warranty on materials and workmanship
- 25 year linear power output warranty

On-grid Module

CS6P is a robust solar module with 60 solar cells. These modules can be used for on-grid solar applications. Our meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Our rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

Applications

- On-grid residential roof-tops
- On-grid commercial/industrial roof-tops
- Solar power stations
- Other on-grid applications

Quality Certificates

- IEC 61215, IEC 61730, UL1703, CEC Listed, MCS, CE
- ISO9001: 2008: Standards for quality management systems
- ISO/TS16949:2009: The automotive quality management system

Environmental Certificates

- ISO14001:2004: Standards for Environmental management systems
- QC080000 HSPM: The Certification for Hazardous Substances Regulations
- Reach Compliance



CS6P-230/235/240/245/250M

Electrical Data

STC	CS6P-230M	CS6P-235M	CS6P-240M	CS6P-245M	CS6P-250M
Nominal Maximum Power (Pmax)	230W	235W	240W	245W	250W
Optimum Operating Voltage (Vmp)	29.9V	30.1V	30.2V	30.3V	30.4V
Optimum Operating Current (Imp)	7.70A	7.82A	7.95A	8.09A	8.22A
Open Circuit Voltage (Voc)	37.1V	37.2V	37.3V	37.4V	37.5V
Short Circuit Current (Isc)	8.22A	8.34A	8.46A	8.61A	8.74A
Module Efficiency	14.30%	14.61%	14.92%	15.23%	15.54%
Operating Temperature	-40°C~+85°C				
Maximum System Voltage	1000V (IEC) /600V (UL)				
Maximum Series Fuse Rating	15A				
Application Classification	Class A				
Power Tolerance	0 ~ +5W				

Under Standard Test Conditions (STC) of irradiance of 1000W/m², spectrum AM 1.5 and cell temperature of 25°C

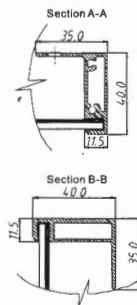
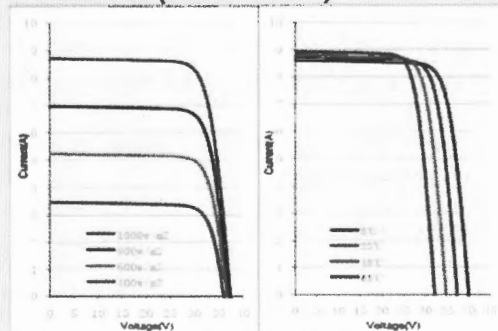
NOCT	CS6P-230M	CS6P-235M	CS6P-240M	CS6P-245M	CS6P-250M
Nominal Maximum Power (Pmax)	166W	170W	173W	177W	180W
Optimum Operating Voltage (Vmp)	27.3V	27.5V	27.5V	27.6V	27.7V
Optimum Operating Current (Imp)	6.09A	6.18A	6.29A	6.40A	6.51A
Open Circuit Voltage (Voc)	34.0V	34.1V	34.2V	34.3V	34.4V
Short Circuit Current (Isc)	6.65A	6.75A	6.85A	6.97A	7.08A

Under Normal Operating Cell Temperature, Irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s

Mechanical Data

Cell Type	Mono-crystalline 156 x 156mm, 2 or 3 Busbars
Cell Arrangement	60 (6 x 10)
Dimensions	1638 x 982 x 40mm (64.5 x 38.7 x 1.57in)
Weight	20kg (44.1 lbs)
Front Cover	3.2mm Tempered glass
Frame Material	Anodized aluminium alloy
J-BOX	IP65, 3 diodes
Cable	4mm ² (IEC)/12AWG(UL), 1100mm
Connectors	MC4 or MC4 Comparable
Standard Packaging (Modules per Pallet)	24pcs
Module Pieces per container (40 ft. Container)	672pcs (40'HQ)

I-V Curves (CS6P-250M)



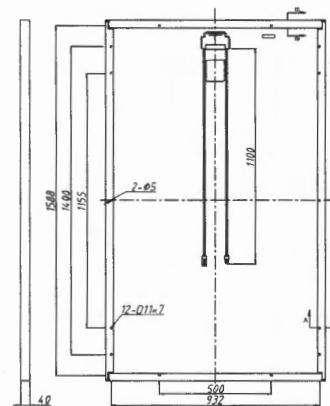
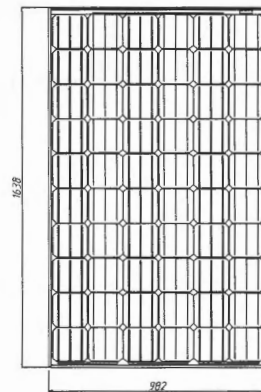
Temperature Characteristics

Temperature Coefficient	Pmax	-0.45%/°C
	Voc	-0.35%/°C
	Isc	0.060%/°C
Normal Operating Cell Temperature	45±2°C	

Performance at Low Irradiance

Industry leading performance at low irradiation environment, +95.5% module efficiency from an irradiance of 1000w/m² to 200w/m² (AM 1.5, 25 °C)

Engineering Drawings



*Specifications included in this datasheet are subject to change without prior notice.

About Canadian Solar

Canadian Solar Inc. is one of the world's largest solar companies. As a leading vertically-integrated manufacturer of ingots, wafers, cells, solar modules and solar systems. Canadian Solar delivers solar power products of uncompromising quality to worldwide customers. Canadian Solar's world class team of professionals works closely with our customers to provide them with solutions for all their solar needs.

Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006. Canadian Solar has already expanded its module manufacturing capacity to 2.05GW and cell manufacturing capacity to 1.3GW in 2011.

Headquarters | 650 Riverbend Drive, Suite B
Kitchener, Ontario | Canada N2K 3S2
Tel: +1-519-954-2057
Fax: +1-519-578-2097
inquire.ca@canadiansolar.com
www.canadiansolar.com

IRONRIDGE XR ROOF MOUNT PLATFORM

KEY FEATURES

- ◆ Extruded aluminum components are lightweight for easy handling yet strong enough for most roof mount applications
- ◆ Choice of XRL (lightweight) and XRS (standard) rails
- ◆ Both XRL and XRS rails come with slots for attaching L-feet and top slots for attaching panel clamps
- ◆ XRS rails has slot for bottom mounting clamps
- ◆ Hidden internal splice bars are aesthetically pleasing
- ◆ Internal splices provide superior strength and flexibility with L-feet placement
- ◆ Adjustable L-feet have vertical extension slots for easy adjustability of up to 1-3/8"
- ◆ Standoffs provide increased airflow and ventilation and enable precise placement of flashings
- ◆ Standoffs come in four standard heights: 3", 4", 6", and 7"
- ◆ XR platform compatible with popular flashings including QuickMount and Oatey
- ◆ Panel clamps for both top and bottom mounting
- ◆ Panel clamps for most popular photovoltaic modules
- ◆ Mid-clamp design maximizes panel density
- ◆ Ground clips eliminate the need for copper wire between modules
- ◆ The XR Roof Mount components are covered with an industry-leading 10 year limited product warranty and a 5 year limited finish warranty
- ◆ All XR Roof Mount components are PE certified



The IronRidge XR platform is a reliable, comprehensive, and feature rich photovoltaic mounting solution. Anchored by the XRS (Standard) and XRL (Light) rails, the XR platform includes all of the components necessary for supporting virtually any commercial or residential roof mount installation, regardless of surface material or roof grade.

The XRS and XRL rails are manufactured from extruded aluminum to maximize spans while minimizing weight for improved handling. The graceful curves of the XRS rail will please even the most aesthetically demanding customers. Rails can be extended with the IronRidge patent-pending internal splice bars, providing a strong support connection and ultimate flexibility in footing attachment locations. Installers have a variety of options in attaching IronRidge rails to the roof, including adjustable L-feet, aluminum standoffs, and tilt legs for optimizing power. In addition, IronRidge accommodates modules from most major manufacturers. Top-down panel clamps securely grip the outside frame of the module, freeing the installer from the constraints of panel mounting holes. The XRS rail has an additional side slot to enable the option of bottom mounting. Lastly, grounding clips pierce the anodized rails, creating a ground path through the equipment and eliminating the need to run copper wire between every module.

IronRidge provides a complete technical support system that includes step-by-step installation guides, engineering certification documentation, easy-to-read span charts, and on-line configurator software.

See reverse for product specifications and ordering information. Please contact your local distributor for configuration assistance.

SPECIFICATIONS

- ◆ XRL/XRS Rail – 6105-T5 extruded anodized aluminum
- ◆ XRL/XRS Splice Bars – 6105-T5 extruded aluminum
- ◆ Standoffs – 6105-T5 extruded aluminum
- ◆ L-feet: 6105-T5 extruded aluminum
- ◆ Clamps: 5052-H32 aluminum
- ◆ Hardware: 18-8 Stainless Steel

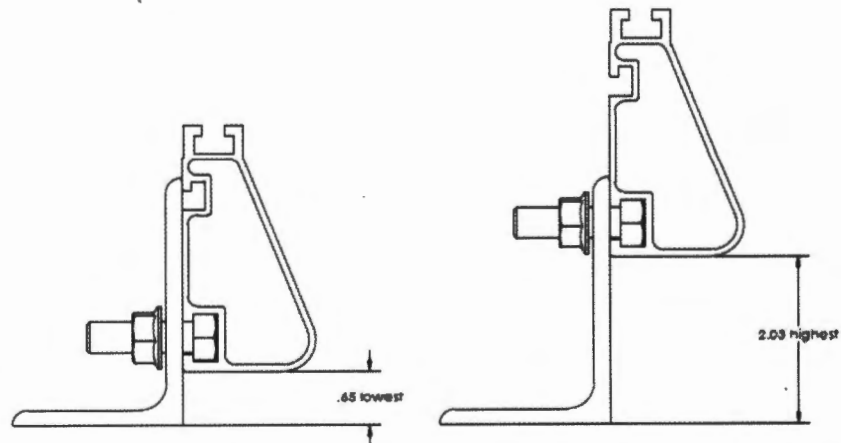
XRS PROPERTIES

- ◆ Area = .807136 inches²
- ◆ Centroid relative to output coordinate system origin
 - ◆ X = 0.5556
 - ◆ Y = 1.4097
 - ◆ Z = 120.000
- ◆ Moments of Inertia of the area (at the centroid)
 - ◆ Lxx = 0.8430
 - ◆ Lxy = 0.1117
 - ◆ Lxz = 0.0000
 - ◆ Lyx = 0.1117
 - ◆ Lyy = 0.1822
 - ◆ Lyz = 0.0000
 - ◆ Lzx = 0.0000
 - ◆ Lzy = 0.0000
 - ◆ Lzz = 1.0252
- ◆ Polar Moment of Inertia
 - ◆ At Centroid = 1.0252⁴
- ◆ Principal Moments of Inertia
 - ◆ Ix = 0.1638
 - ◆ Iy = 0.8614
- ◆ Principal-Part Axes
 - ◆ Angle = 99.343 degrees
- ◆ Moments of Inertia (output)
 - ◆ LXX = 11625.205
 - ◆ LXY = 0.5204
 - ◆ LXZ = 53.8153
 - ◆ LYX = 0.5204
 - ◆ LYY = 11623.1909
 - ◆ LYZ = 136.5369
 - ◆ LZX = 53.8153
 - ◆ LZY = 136.5369
 - ◆ LZZ = 2.8784

ORDERING INFORMATION

XR Rails		
Part Number	Description	Weight
51-7000-144a	XRS Standard Rail (1) – 12 feet	11.364 lbs
51-7000-168a	XRS Standard Rail (1) – 14 feet	13.258 lbs
51-7000-192a	XRS Standard Rail (1) – 16 feet	15.152 lbs
51-7000-216a	XRS Standard Rail (1) – 18 feet	17.046 lbs
51-6000-144a	XRL Light Rail (1) – 12 feet	6.288 lbs
51-6000-168a	XRL Light Rail (1) – 14 feet	7.336 lbs
51-6000-192a	XRL Light Rail (1) – 16 feet	8.384 lbs
51-6000-216a	XRL Light Rail (1) – 18 feet	9.432 lbs
29-7000-010	XRS Splice Kit (1)	0.442 lbs
29-7000-000	XRL Splice Kit (1)	0.151 lbs
Panel Clamps		
Part Number	Description	Weight
29-7000-xxx	End Clamps (4) – depends on panel	.251-.290 lbs
29-7000-10x	Mid Clamps (4) – depends on panel	.213-.251 lbs
29-7000-117	Under Clamps (4)	0.324 lbs
Footing Attachments & Flashings		
Part Number	Description	Weight
29-7000-017	L-foot Kit (4)	0.872 lbs
51-600x-500	3"-7" Standoffs – Specify L-foot or Tilt leg	.533-.710 lbs
31-1000-001	Oatey Galvanized Flashing 11830 (12)	8.750 lbs
31-1000-000	QuickMount QMSCA12 (12)	13.390 lbs
51-7200-0XX	Tilt Legs (7" – 40")	.0658 lbs/inch
51-7210-000	Tilt Leg Bracket	1.576 lbs
Grounding		
Part Number	Description	Weight
29-4000-001	WEEB DMC-Clip (100)	0.258 lbs
29-4000-002	WEEB Grounding Lug (100)	12.356 lbs
29-4000-003	WEEB Bonding Jumper (100)	17.614 lbs
29-4000-006	WEEB ACC-PV Wire Clip (100)	0.625 lbs

L-FOOT DIMENSIONS



STRING INVERTERS

PVI 3000

PVI 4000

PVI 5000

PVI 5300

PVI 6500

PVI 7500

FEATURES

- 96% CEC efficiency
- Wide input operating voltage window
- 208 VAC, 240 VAC or 277 VAC
- Fully-integrated design
- Detachable wiring box
- Standard 10 year warranty
- RS232/RS485 communications
- User interactive LCD display

OPTIONS

- Integrated panel assembly
- Web-based monitoring



STRING INVERTERS

At 96% CEC efficiency, the Solectria Renewables string inverter series, ranging from 3.0 kW to 7.5 kW, is the most efficient transformer isolated string inverter on the market. The PVI 3000-PVI 7500 series of inverters consist of six power ratings to optimally match your grid-tied PV system, and boasts fully-integrated DC and AC disconnects, an LCD display, and a 3, 4, or 5 fuse string combiner all contained within a detachable wiring box. This feature allows for a clean, simple, and safe installation with easy serviceability. The integrated panel assembly option allows for this inverter series to be pre-wired and mounted on an industrial grade aluminum panel with kWh meter and optional AC visible-blade disconnect or circuit breakers on a two-inverter panel assembly.



Built for the real world

SPECIFICATIONS		PVI 3000	PVI 4000	PVI 5000	PVI 5300	PVI 6500	PVI 7500	
DC Input								
Absolute Maximum Input Voltage				600 VDC				
MPPT Input Voltage Range		200-550 VDC			230-500 VDC			
Maximum Operating Input Current		16 A	20 A	25 A	25 A	35 A	35 A	
AC Output								
Nominal Output Voltage		208 or 240 VAC			208, 240 or 277 VAC			
AC Voltage Range (Standard)		-12%/+10%						
Continuous Output Power	208 VAC	2700W	3400W	4300W	4600W	6500 W	7500 W	
	240 VAC	2900W	3900W	4900W	5300W	6500 W	7500 W	
	277 VAC			--		6500 W	7500 W	
Continuous Output Current	208 VAC	13 A	16.3 A	20.7 A	22.1 A	31.3 A	36.1 A	
	240 VAC	13 A	16.3 A	20.7 A	22.1 A	27.1 A	31.3 A	
	277 VAC			--		23.5 A	27.1 A	
Maximum Backfeed Current		0 A						
Nominal Output Frequency		60 Hz						
Output Frequency Range		59.3-60.5 Hz						
Power Factor		Unity, >0.99						
Total Harmonic Distortion (THD)		<3%						
Efficiency								
Peak Efficiency	208 VAC	96.4%	96.5%	96.4%	96.2%	96.0%	96.2%	
	240 VAC	96.7%	96.7%	96.7%	96.4%	96.3%	96.5%	
	277 VAC			--		96.7%	96.7%	
CEC Efficiency	208 VAC	95.5%	95.5%	96.0%	95.5%		95.5%	
	240 VAC	96.0%	96.0%	96.0%	96.0%		96.0%	
	277 VAC			--			96.0%	
Tare Loss		0.5 W						
Integrated String Combiner								
Fused String Inputs		3	4	4	4	5	5	
Temperature								
Ambient Temperature Range (full power)		-13°F to +131°F (-25°C to +55°C)					-13°F to +122°F (-25°C to +50°C)	
Storage Temperature Range		-13°F to +131°F (-25°C to +55°C)					-13°F to +149°F (-25°C to +65°C)	
Relative Humidity (non-condensing)		5-95%						
Monitoring Options								
Web-based Monitoring (Inverter Direct)		SolrenView						
Revenue Grade Monitoring		External						
Third Party Compatibility		Standard via RS232/RS485						
Testing & Certifications								
Safety Listings & Certifications		UL 1741/IEEE 1547, IEEE 1547.1, CSA C22.2#107.1, FCC part 15 B						
Testing Agency		ETL						
Warranty								
Standard		10 year						
Enclosure								
AC/DC Disconnects		Standard, fully-integrated (internal)						
Dimensions (H x W x D)		28.8 in x 17.9 in x 6.9 in (732 mm x 454 mm x 175 mm)		28.8 in x 17.9 in x 8.3 in (732 mm x 454 mm x 210 mm)		28.8 in x 17.3 in x 8.2 in (732 mm x 438 mm x 208 mm)		
Weight		47 lbs (21.4 kg)	48 lbs (21.8 kg)	58.5 lbs (26.6 kg)	60 lbs (27.4 kg)	88.9 lbs (40.4 kg)		
Enclosure Rating		NEMA 3R						
Enclosure Finish		Painted aluminum						