



*Grid-Tied PV Inverters*

**PVI 60KW PVI 82KW PVI 95KW**  
*a breakthrough in price and quality*



Solectria introduces the PVI 60KW, PVI 82KW and PVI 95KW inverter:  
exceptional quality and efficiency at an extraordinary price.



## OVERVIEW: INTEGRATED PV INVERTER

The Solectria Renewables PVI 60KW, PVI 82KW and PVI 95KW are rugged, DSP-controlled, premium efficient PV inverters for grid-connected commercial, industrial and utility 3-phase PV systems. The core of the inverter, a 600VDC version of Solectria's proven DMGI 660 distributed generation inverter, uses state-of-the-art control techniques and devices including space vector PWM, a precision MPT algorithm, and low-loss IGBTs. With peak inverter power electronics efficiency over 98% (over 96.5% including the transformer and filters) and fully integrated packaging, these inverters set a new industry standard for efficiency, ease of installation and use, reliability and installed cost.

## APPLICATIONS

- 40-95kWAC, 60Hz, 480, 240 or 208VAC, 3-phase, grid-tied commercial PV systems (50-115kWDC STC array).
- Multiple inverters can be used together in any combination for 150, 200, 500kW, MW or larger PV systems.
- Designed for mounting as desired, in full sun, driving rain and drifting snow: rooftop/ground or indoors.
- Can be used for other renewable and distributed generation applications such as wind power, hydro, geothermal and biomass as new technologies develop.

## FEATURES & OPTIONS

- Fully integrated design includes transformer, filters, and heavy duty, visible blade AC & DC disconnects (with optional DC sub-combiner fuses).
- No nighttime standby losses.
- Industry-leading overall efficiency.
- Simple set-up and connections (connect DC from PV combiners and 3-phase AC connections).
- Precision DSP-controlled Maximum Power Tracking Algorithm.
- High-reliability design, based on 20 years of power electronics development, includes sealed power and signal electronics unit and high-efficiency magnetics.
- Optional fused DC sub-combiner (2-48 fuses, 8-250A).
- Optional positive grounded version.
- Optional fwd. facing disconnect orientation (AC, DC or both).
- Optional stainless steel enclosure & disconnects

## CONNECTIVITY

- RS232 and PC software for diagnostics and data capture.
- RS485 port for communication with multiple inverters in larger systems, or with long communication lines.
- SolrenView or Fat Spaniel Inverter-Direct Internet, and/or revenue-grade monitoring options available. Also compatible with Energy Recommerce, Draker and others.

## SAFETY FEATURES

- Electronic temperature protection.
- DC Ground-fault detection and interrupt.
- Current limit protections.
- Standards-compliance: All inverters Listed to UL 1741 and IEEE Std 1547 and certified to IEEE 62.41 (NY SIR Surge Test Requirements). Units are also listed on CEC's eligible equipment list.



## SPECIFICATIONS

|  | PVI 60KW   | PVI 82KW                              | PVI 95KW             |
|--|--|---------------------------------------|----------------------|
| <b>Output</b>  |  |                                       |                      |
| Continuous AC Power (CEC)  | 60 kW  | 83 kW                                 | 95 kW                |
| Power Factor   | > 0.98   |                                       |                      |
| Voltage (L-L), ±10%  | 208 / 240 / 480 VAC, 3-Ph  |                                       |                      |
| Rated Current  | (CEC) 208VAC<br>240VAC<br>(CEC) 480VAC   | 166A<br>146A<br>73A                   | 229A<br>200A<br>100A |
|  |  |                                       | 261A<br>230A<br>115A |
| Current Distortion   | < 5% THD, Nom Power  |                                       |                      |
| Frequency, ±1 %  | 60 Hz  |                                       |                      |
| Inverter Electronics Peak Efficiency                                   | > 98% (50%-100% load)  |                                       |                      |
| Overall Peak Efficiency <sup>1</sup>                                   | > 96.5% (50%-100% load) @ 480 VAC  |                                       |                      |
| CEC Efficiency   | > 95.5% (50%-100% load) @ 480 VAC  |                                       |                      |
| <b>Input</b>   |  |                                       |                      |
| Array Configuration:   | Monopole, negative grounded<br>(Positive ground option)                          |                                       |                      |
| Max V <sub>OC</sub> <sup>2</sup>                                       | 600 VDC  |                                       |                      |
| Maximum DC Current   | 190A   | 248A                                  | 287A                 |
| CEC Eligible DC Current  | 177A   | 241A                                  | 279A                 |
| MPT Voltage Range <sup>3</sup>   | 330-500 VDC  |                                       |                      |
| CEC Full Power Voltage Range   | 346-480 VDC  |                                       |                      |
| <b>Protection <sup>4</sup></b>   |  |                                       |                      |
| AC Grid-connection<br>(Standards Compliance: See<br>"Safety Features") | Over/Under Voltage, Over Current<br>Over/Under Freq.,<br>DC Ground Fault (GFDI)  |                                       |                      |
| AC Disconnect (Integral)   | NEMA 3R, Integral  |                                       |                      |
| DC Sub-Combiner w/Fuses<br>(Optional <sup>5</sup> )                    | 8A-250A fuses available, 2-48 pole,<br>NEMA 3R, TVSS                             |                                       |                      |
| DC Disconnect (Integral)   | Break load rated, NEMA 3R  |                                       |                      |
| <b>Environmental</b>   |  |                                       |                      |
| Ambient Temperature  | -25 to 50 deg C (full power)   |                                       |                      |
| Cooling  | Automatic Forced Convection  |                                       |                      |
| Enclosure  | Rain Proof (UL 1741)   |                                       |                      |
| Electronics Enclosure  | Sealed (IP62)  |                                       |                      |
| <b>General</b>   |  |                                       |                      |
| Weight lb (kg)   | 1526 (694)   | 1615 (734)                            | 1748 (794)           |
| Dimensions: inch [mm] <sup>6</sup>                                     | 208VAC   | 76[1930] H x 56[1422] W x 29.3[744] D |                      |
| (Height w/o lifting eyes)  | 480VAC   | 76[1930] H x 54[1372] W x 25.3[643] D |                      |
| Communications, Optional Data<br>Acquisition                           | RS232, RS485, optional SolrenView or<br>Fat Spaniel, also compatible with others |                                       |                      |
| Warranty   | 5 years standard<br>(optional 10 & 15 year warranties)                           |                                       |                      |

<sup>1</sup> Fully Integrated Package: Includes premium efficient transformer, filters, brushless blower, AC & DC disconnects. (>95.5% peak efficiency for 208VAC versions).

<sup>2</sup> Max Open circuit voltage (V<sub>OC</sub>) of PV array = 1.25 x V<sub>OC</sub> rated (per NEC 690-7).

<sup>3</sup> 5% Low DC voltage tap option available for lower voltage PV arrays or hot climates.

<sup>4</sup> Complies with grid connection and safety standards ("Safety Features").

<sup>5</sup> Integrated into inverter package if selected.

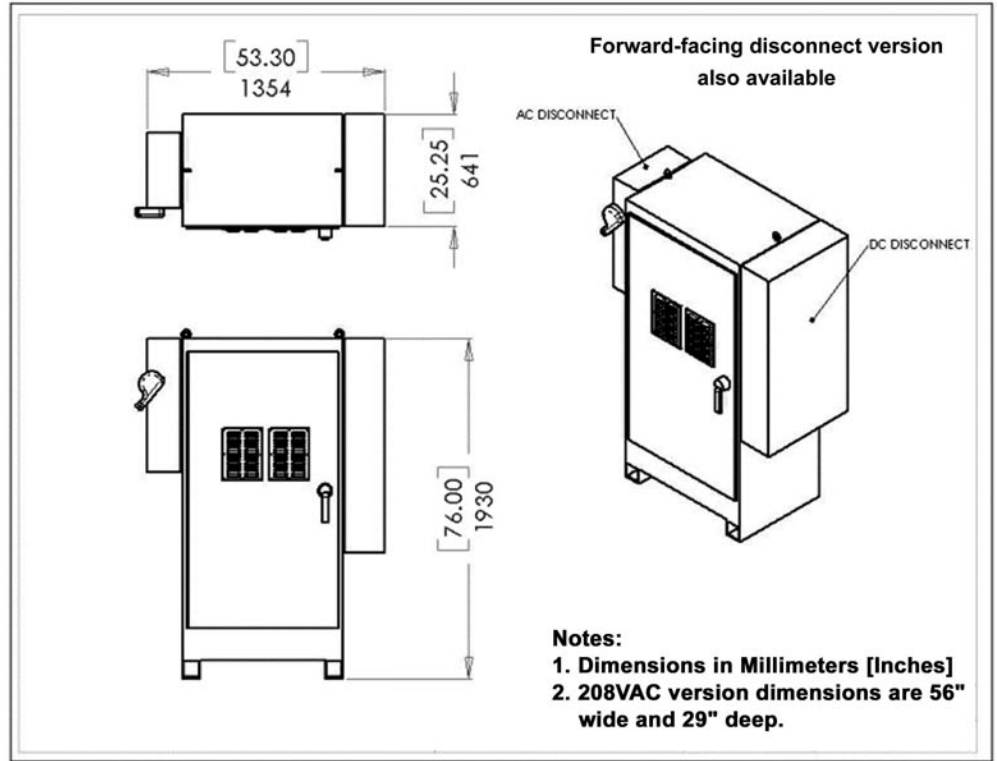
<sup>6</sup> Fwd face disco width: AC only-68" (79"-208V), DC only-71" (73"-208V), both-82.5" (93.5"-208V)

# PVI 60KW PVI 82KW PVI 95KW

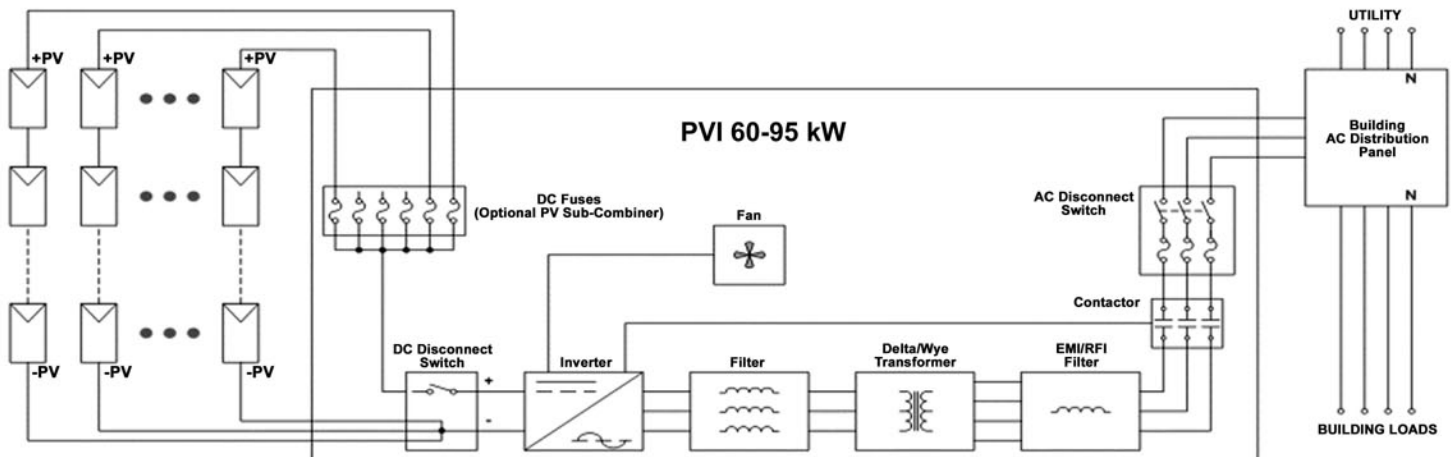
## Grid-Tied PV Inverters

### INTEGRATED INVERTER

### DIMENSIONS



### PVI 60-95KW 3-PHASE COMMERCIAL / INDUSTRIAL INVERTER BLOCK DIAGRAM



Note: Ground Fault Detection/Interrupt not shown in this diagram.



# proven history, sustainable future

Solectria Renewables designs and manufactures power electronics for renewable power generation systems. Feature-packed and highly integrated, the products lead the industry in installation ease and total value. At the heart of Solectria's products are its reliable and efficient core inverters, which have been proven over the past 20 years in the extremely harsh environment of truck, bus and military transportation applications. Solectria Renewables is run by the renowned MIT engineers who founded the Solectria brand in 1989. With a customer-focused team, high quality suppliers and a best practices manufacturing process, Solectria is committed to your success.



Lawrence, Massachusetts  
USA

Ph: 978.683.9700 (MA)

Ph: 562.608.8913 (CA)

Fax: 978.683.9702

[inverters@solren.com](mailto:inverters@solren.com)

[www.solren.com](http://www.solren.com)



Background: 118kW Spire Corporation installation at North Coast Seafoods includes a PVI 95KW inverter.

Left: 1.26MW Chico Electric/DC Power Systems installation at Sierra Nevada Brewery.

Right: 1.2MW Third Energy Development installation at Hyundai Heavy Industries in Hae Nam, South Korea.