**ABB solar inverter solutions**

Global product offering

ABB solar inverter solutions are developed to meet requirements regarding high performance, robust enclosures, ease of installation, and a quick return on investment, covering a wide range of applications.

### STRING INVERTERS

ABB offers one of the broadest portfolios of inverters currently on the market, including a powerful line of single and three-phase string inverters for photovoltaic (PV) systems installed on residential, commercial and industrial buildings as well as energy storage systems for efficient power management in smart homes.

<table>
<thead>
<tr>
<th>Product / Offering</th>
<th>Benefits and features</th>
<th>Suggested applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNO-DM-TL-PLUS</td>
<td>Large variety of power ratings from 1.2 to 6.0 kW, offering high performance in minimum space thanks to compact design and volume. Simple and fast installation without needing to open inverter cover, thanks to the presence of Plug and Play connectors. Easy commissioning routine lowers time and cost of configuration process. Its future-proof and flexible design enables integration with current and future devices for smart building automation. The built-in User Interface enables access to advanced features such as advanced inverter configuration settings, dynamic feed-in control and load manager.</td>
<td>Residential-scale single-phase PV applications</td>
</tr>
<tr>
<td>UNO-DM-TL-PLUS-US from 1.2 to 6.0 kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACT</td>
<td>Power ratings of 3.6 or 4.6 kW, single-phase grid connected inverter equipped with a built-in battery, which allows to store unused energy for use when really needed. Integrated Li-Ion battery with 2 kWh capacity, expandable up to 3x (6kWh). Embedded load manager for control of energy consumption. Auxiliary AC back-up output in case of black out or absence of grid. Energy meter for management of energy flows and control of energy production. Control and monitoring with the dedicated mobile app MyREACT.</td>
<td>Residential PV + energy storage applications</td>
</tr>
<tr>
<td>PVI-5000/6000-TL-OUTD</td>
<td>Power ratings of 5.0 and 6.0 kW, single-phase output, with transformerless topology. Each inverter is set on specific grid codes which can be selected in the field. Dual input section with independent MPPT and wide input voltage range, allow optimal energy harvesting from two subarrays oriented in different directions. Natural convection cooling for maximum reliability and outdoor enclosure for unrestricted use under any environmental conditions. Connection to laptop or datalogger through RS-485 communication interface.</td>
<td>Residential and small commercial single-phase PV applications</td>
</tr>
<tr>
<td><strong>STRING INVERTERS</strong></td>
<td><strong>Benefits and features</strong></td>
<td><strong>Suggested applications</strong></td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>TRIO-5.8/7.5/8.5-TL-OUTD</strong></td>
<td>Power ratings from 5.8 to 8.5 kW, wide input voltage range for flexible installations and powerful output. Commercial grade engineering at residential scale to ensure high conversion efficiency. Optional integrated dataloggers and smart grid functionality, remote firmware upgrade and sliding front covers make these all-in-one devices easy to install and maintain.</td>
<td>Residential and small commercial three-phase PV applications.</td>
</tr>
<tr>
<td><strong>PVI-10.0/12.5-TL-OUTD</strong></td>
<td>Power ratings of 10.0 and 12.5 kW, three-phase output. This transformerless device has two independent MPPTs and efficiency ratings of up to 97.8%. Flat efficiency curves ensure high efficiency at all output levels ensuring consistent and stable performance across the entire input voltage and output power range. The wide input voltage range makes the inverter suitable for low power installations with reduced string size.</td>
<td>Small commercial three-phase PV applications.</td>
</tr>
<tr>
<td><strong>TRIO-20.0/27.6-TL-OUTD</strong></td>
<td>Power ratings of 20.0 and 27.6 kW, three-phase output. The dual input section containing two independent Maximum Power Point Tracking (MPPT), allows optimal energy harvesting from two sub-arrays oriented in different directions. The TRIO features a high speed and precise MPPT algorithm for real power tracking and improved energy harvesting. The very wide input voltage range makes the inverter suitable for installations with reduced string size.</td>
<td>Commercial three-phase PV applications with varying aspects or orientations.</td>
</tr>
<tr>
<td><strong>TRIO-50.0-TL-OUTD</strong></td>
<td>Power ratings of 50.0 and 60.0 kW, three-phase output. The double stage conversion topology offers the advantage of a wide input voltage range for maximum flexibility of the system design. Separate and configurable AC and DC compartments for ease of installation and maintenance. Forced air cooling system, designed for a simple and fast maintenance. Mounting supports for both horizontal and vertical positions, which allow for the best use of space available beneath the solar panels.</td>
<td>Large decentralized three-phase photovoltaic systems for both commercial and utility applications.</td>
</tr>
<tr>
<td><strong>TRIO-TM-50.0-400</strong></td>
<td>Power ratings of 50.0 (400 Vac of output voltage), and 60.0 kW (480 Vac of output voltage), with 3 independent MPPT, designed to maximize the ROI in large systems with all the advantages of a decentralized configuration. Transformerless inverter with double stage topology for a wide input range. Large set of specific grid codes available which can be selected directly in the field. Separate AC and DC compartments are available in different configurations. Both vertical and horizontal installation installation for best use of space beneath the solar panels. Embedded multi-communication interfaces (WLAN, Ethernet, RS485) combined with a Sunspec compliant Modbus protocol (RTU/TCP) for easy integration with third party monitoring and control systems. Remote monitoring and FW update via Aurora Vision® (logger free).</td>
<td>ABB’s latest string inverter solution for cost-efficient large decentralized photovoltaic systems for both rooftop and ground mounted applications.</td>
</tr>
</tbody>
</table>
ABB offers one of the broadest portfolios of inverters currently on the market, including a powerful line of single and three-phase string inverters for photovoltaic (PV) systems installed on residential, commercial and industrial buildings as well as energy storage systems for efficient power management in smart homes.

<table>
<thead>
<tr>
<th>Product / Offering</th>
<th>Benefits and features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCESSORIES</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>
| VSN300 WIFI LOGGER CARD | - The Wi-Fi Certified™ mark assures interoperability, security, easy installation and reliability  
- Local, remote monitoring in one solution  
- SunSpec certified Modbus mapping for easy integration  
- Secured and encrypted data transfer to Aurora Vision® Plant Management Platform  
- Modbus TCP server for SCADA integration  
- Easily installed on new and existing UNO and TRIO string inverters |
| VSN700 Data Logger | - Data management system with serial and Ethernet ports for data and event logging  
- Quick installation and fast plug-n-play commissioning with device discovery mechanism  
- Network Provisioning with dynamic IP addressing (DHCP client and server)  
- Reliable and secure transmission of operational data to Aurora Vision® Plant Management Platform  
- Remote configuration and management capabilities, including firmware upgrades over the Internet using Plant Portfolio Manager |
| VSN800 Weather Station | - Automatically monitors site meteorological conditions and photovoltaic panel temperature in real-time, transmitting sensor measurements to the data center  
- Shipped preconfigured and ready for installation, requiring no special tools.  
- The advanced sensor set improves monitoring of weather conditions that can effect energy production. |
| **Monitoring accessories** | **PVI-PMU** | - Allows active and reactive power control according to EEG-2009§6 and BDEW  
- Offers 4 digital inputs and 2 analog inputs for active and reactive power control  
- Capable to control up to 32 Inverters or 55 kW modules |
|                 | **PVI-RS485-Modbus** | - Protocol converter from Aurora proprietary protocol to Modbus RTU or Modbus TCP  
- Up to 32 Inverters or 55 kW modules connected  
- Multi-drop bus connection allowed for RTU  
- No active-reactive power control in Modbus RTU |
|                 | **PVI-USB-RS232_485** | - Allows serial interfacing between photovoltaic inverters and computer via RS485 link  
- Works with centralized and string inverters  
- No power supply needed (auto-supplied via USB port) |

Please note: This is ABB’s solar inverters global offering and some products might not be available in your country. Refer to abb.com/solarinverters for your location.
Support and Service
ABB supports its customers with dedicated, global service organization in more than 60 countries and strong regional and national technical partner networks providing complete range of life cycle services.

ABB
For more information and local contacts, please visit:
new.abb.com/power-converters-inverters/solar
new.abb.com/solar
new.abb.com

© Copyright 2017 ABB. All rights reserved.
Specifications subject to change without notice.