Solutions for Photovoltaic Systems
Large buildings and power plants

Make the most of your energy™
Optimize your total cost of ownership

You deserve a trusted solar partner
When it comes to large-scale installations, you need a modular solar solution with maximum efficiency in converting raw DC power into sellable AC energy. Schneider Electric provides expertly designed solar solutions tailored to your needs. That means you will have confidence in performance, a faster ROI, and an accelerated design and build phase on your projects. Rely on Schneider Electric™ customizable solar solutions to provide you with an end-to-end electrical infrastructure complete with power conversion, electrical distribution, supervision, and security.

Who is Schneider Electric?
As The Global Specialist in Energy Management™, Schneider Electric is unconditionally committed to sustainable development. Customers in over 140 countries count on us to provide energy-efficient solutions from Power Plant to Plug™. Schneider Electric has been an active contributor in the solar market for more than a decade, making significant investments in product design, reliability, and support. We will continue to provide industry-leading products in the future. You can depend on Schneider Electric to deliver state-of-the-art inverters, balance of system components, complete substation design, construction services, and nation-wide support in one complete solution.

Added value from our solutions

Reliable products and services
- Designed to the highest standards
- Product life cycle reliability testing
- Continuous improvements

Warranty coverage
- Comprehensive warranty extensions
- Multiple levels of coverage and term length

Operations and maintenance support
- Specialists at your service 24/7
- Preventative maintenance
- Performance and uptime guarantees

Bankable solutions
- Over 175 years of experience in energy management
- A worldwide leader in power conversion
Turnkey solutions from Schneider Electric Services

A unique partner for all phases of your solar project. From site assessment to final testing and commissioning. Schneider Electric Services can support your every need.

**Engineering services**
- Site assessment
- Site planning and development
- Grid-tie substation
- Solar system design
- Monitoring and control system design
- Specification development

**Project management**
- Project construction management
- Single-source procurement
- On-site installation supervision
- Site safety plan development and implementation
- Start-up and commissioning services

**Site system maintenance**
- Predictive and preventive maintenance programs
- Emergency response
- Extended warranty
- Energy dashboard
- Operational- and performance-based reporting
- Operational systems and safety training

The turnkey advantage:
- Complete design capabilities
  - From civil to grid-tie substation
- Single-source procurement
  - Simplified logistical and delivery coordination for field installation
- Single-source project management team
  - Accelerated project completion
  - Control production cycles
- Seamless component compatibility
- Minimize field installation costs
  - Pre-wired, prefabricated PV boxes
  - Factory verified and tested
- Extended warranty
- Multi-year service contract
  - Preventive maintenance
  - Spare parts
  - Emergency response
- Lower overall system costs
The PV Box is a power conversion system. In PV plant installation, it operates between DC field and AC MV grid connection point. The PV Box performs the DC power concentration, the DC/AC conversion, and the AC voltage elevation to the grid voltage level. It ensures the protection of maintenance people and the installation against electrical defaults such as short-circuit and lightning.

The PV Box typically includes the following items:
- One or more PV inverters
- DC combiner boxes with optional current monitoring
- Pre-wired SCADA monitoring and communication equipment
- LV ancillary package including an optional UPS
- LV/MV step-up transformer
- MV cubicle for switching and transformer protection

Other items can be added to the package including internal climate controls or specific ventilation filters for dusty, rainy, or snowy environments.

> Features:

**Smart design:**
Weatherproof walk-in type design provides environmental protection that helps assure long equipment life, optimal production, ease-of-maintenance, and security of your investment. Optimized to match the requirements of BoS costs reduction.

**Expertise:**
The proven know-how of Schneider Electric in the design of LV/MV substations ensures proper operation of all included equipment, reducing your risk of downtime.

**Pre-wired equipment:**
This simplifies project planning and reduces installation time because on-site work and wiring errors are reduced.

**Compact and light weight:**
Can be transported on standard carriers with suitable “standard roads and bridges clearances.” Also provides reduced crane load capability for off-loading on site.

**Robust:**
Simulated and tested for reliability, this is a qualified design for harsh environments. Maximize inverter energy generation even in rough environmental conditions.
Inverters

The GT500 is a Grid Tie Solar Inverter for large commercial and utility applications with a CEC efficiency of 96 percent. The GT500 inverter features an industrial design for improved reliability. A two-section enclosure with inverter and DC section in one cabinet and transformer and AC section in another reduces installation time and simplifies site preparation requirements. This new inverter design also integrates high-quality Schneider Electric components, including AC and DC circuit breakers and a transformer.

Reliable
Industry-leading efficiency harvests more power from PV systems
> Ground fault detection and interruption
> Protected sensitive components
> Film-type capacitors and bus bars

Installation
Simplifies site preparation requirements
> Integrated isolation transformer
> AC and DC disconnects
> Direct transformer connection

Design
Industrial design for improved reliability and easy installation
> Zero clearance installation
> Back and side wiring access
> Zinc primed and powder coated steel
Monitoring solutions (SCADA)

**Reduction of operating costs**
Automated site management and highly reliable data acquisition

**Increase total site production**
Information, alarms, and reports in real time

**Planning improvements**
Detailed cost information, system stress, and capacity

**Interoperability with other systems**
Security CCTV, site and equipment access control

**Multi-site, scalable, and flexible**
Remote access and monitoring of all your PV power plant asset
MV Switchgear

AC and DC switching and protection
Provides the quality you have come to expect from Square D by Schneider Electric.

Square D AC and DC disconnect switches
DC disconnect switches are heavy-duty, non-fusible devices featuring a safety switch and NEMA® 3R outdoor enclosures.

Square D switchboards and circuit breakers
Schneider Electric can supply custom-tailored arrangements to meet your PV installation needs. From single add on breakers to existing switchboards or if you need a new custom switchboard, we are your single source.

Transformer

> Square D Oil Filled Pad Mount Transformers
> 500 kVA, 1 MVA, or 1.25 MVA step-up transformers for up to 35 kVac
> Aluminum winding meets or exceeds DOE 2010 efficiency rules
> Integrated fused disconnect
> Switch state visible via viewing window for added safety
> Bottom entry cable landing location for outgoing MV connection via junction box mounted on exterior of the PV Box

Recombiner

> Configure-to-order ensures design optimization and lowers total cost
> Available with fuses, fuses with main disconnect, or DC circuit breakers for improved safety and maintenance flexibility
> 600 Vdc and 1,000 Vdc configurations
> String monitoring with Modbus and/or Ethernet communications
> DC installation cabling feed flexibility from bottom and sides

600 Vdc PV string combiner

> Vertical, horizontal, and angled mounting options
> Substantial wire-bending space
> Dust- and rain-tight engineered enclosure for outdoor use, UV-resistant white exterior coating to reduce solar gain by 35%
> Square D traditional visible blade switch architecture for confirmation of disconnect
> Touch-safe interior shielding guards against accidental contact with current-carrying components
Take your next step with these FREE materials from Schneider Electric.

Visit [www.SEreply.com](http://www.SEreply.com) and enter the key codes below to discover the power of solar.

**Sign up for our FREE, flexible training at Energy University™ so you can develop new, more efficient solutions.**

**Enter key code:** r756v

**Download our Solutions brochure to learn more about the Schneider Electric full solar offer.**

**Enter key code:** r750v

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**Schneider Electric**

As The Global Specialist in Energy Management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in Utilities & Infrastructures, Industries & Machine Manufacturers, Non-residential Buildings, Data Centers & Networks, and Residential. Focused on making energy safe, reliable, efficient, productive, and green, the company’s 130,000 plus employees achieved sales of about 31 billion U.S. dollars in 2011, through an active commitment to help individuals and organizations make the most of their energy.

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