Schneider Electric™ has demonstrated its long-term commitment to the development of the Solar industry with the launch of many new products and solutions. These new offers address the needs expressed by customers in all market segments for competitiveness, reliability, ease of installation and service. We are particularly proud to have been distinguished as one of the Top 3 “most competitively positioned PV inverter companies” by GTM Research, in part thanks to the competitiveness of our new products and solutions.

In the Large Commercial Buildings and PV Power Plants Solutions section of this catalogue, our offer is based on the best-in-class architecture which is standardised around Conext™ Core XC inverters, Conext Control system, our new range of array boxes and various PV boxes which are adapted to local regulations and environmental conditions. This solution package has proven its competitiveness and versatility to numerous customers and projects.

In the grid-tie rooftop market, we have launched a comprehensive series of great products with Conext RL for residential applications, Conext TL for buildings or decentralised farms, a large range of DC and AC protection boxes and Conext Monitor 20, our new communication gateway.

All these products benefit from Schneider Electric’s stringent design for reliability process, which includes our proprietary MEOST approach (Multiple Environmental Over-Stress Testing).

Price competitiveness, product reliability and the global service footprint of Schneider Electric combine to bring you unrivalled peace of mind.

Laurent Bataille
Sr. VP Solar Business
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All products illustrated in this catalog may not be exactly as shown.
As a global specialist in energy management, Schneider Electric has a 177-year legacy of innovation, international scope and corporate responsibility. Across three centuries, we have contributed to the transformation of multiple industries, including iron, steel, shipbuilding and electricity. Today, our 140,000+ employees in over 100 countries bring a singular mission to their work each day: to help people make the most of their energy.

Schneider Electric at a glance

Schneider Electric by the numbers

177 years of history

€24 billion in consolidated revenue

140,000 total workforce in 100+ countries

€1 billion devoted to R&D representing almost 4.4% of our sales
Western Europe

- 30% Revenue
- 33% People

Asia Pacific

- 27% Revenue
- 31% People

41% sales in new economies

€2.02 billion net income*
+12% vs. 2011

110 volunteers acting as delegates of the Schneider Electric Foundation in 75 countries

#1 or #2 player in 90% world group sales

*Adjusted from impairment of goodwill.
Delivering solutions which align business performance and sustainability

Schneider Electric delivers intelligent solutions across the energy chain, providing performance and sustainability across the grid in towns and cities.

> **Efficiency:** Implementing the right services, systems and technology to reduce energy consumption, cost per kWh and operating expenditure

> **Intelligence:** Accessing smart, real-time data and information which can be shared, optimised and delivered across integrated systems through connected and open platforms, with the right level of information for each user

> **Sustainability:** Coupling efficient solutions with actionable data to provide the capability for any user to optimise energy usage, curb CO2 emissions and improve long-term ROI on CapEx and OpEx

Enhancing the smart grid revolution...

By supporting renewable energy, flexible distribution, active energy efficiency and energy management, electric vehicles and real-time grid management.

Supporting urban efficiency...

By setting the vision, bringing in the technology, working on the integration, adding the innovation and driving collaboration.

Making infrastructure, industry IT, buildings and homes more efficient...

By enabling up to 30 per cent energy savings, improving productivity, reducing costs, enhancing comfort and increasing security.
Schneider Electric is focused on designing and developing products and solutions for the solar power conversion chain by providing best-in-class global customer services and technical support.

As the solar market goes through a rapid wave of growth, the industry is increasingly concerned about securing the long-term future of installations. Peace of mind is key and not every solar PV company can offer assurance that spare parts, service and technical support will be continually available over the 20+ year life of a solar installation.

Schneider Electric is a bankable partner you can trust for providing superior designed, neatly integrated solutions packages and excellent long term technical support world wide.

Why Partner with Schneider Electric?

- A reliable solution for all projects, no matter the size
- Experience you can depend upon, with world wide leadership in power conversion and electric distribution technologies
- Complete photovoltaic solutions for any size installation from a single supplier
- Global service and support infrastructure with local presence in over 100 countries
- Products are designed and built to the highest standards and are engineered specifically to meet the demanding requirements of your installation

For more information about Schneider Electric and solar solutions, please visit www.schneider-electric.com/solar/uk
Comprehensive global services

> Global service and on-site support: with global service and support infrastructure and local presence in over 100 countries, we can support your PV parks anywhere in the world.

> Product warranty and service contracts: Schneider Electric can provide different service levels to address customer demands, ranging from basic product warranty, preventive maintenance or guaranteed performance of inverters, low voltage components, medium voltage equipments and monitoring system; this wide spectrum of technical competencies of our service teams position Schneider Electric as one of the leader in offering operation and maintenance of the PV plant.

> Commissioning support: visual inspections, functional testing and system support.

> Technical support: specialist in system design, installation, safety, system operation and quality.

Overview of Global service offering

<table>
<thead>
<tr>
<th>Warranty</th>
<th>Technical support</th>
<th>Preventive activities</th>
<th>Corrective Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spare parts availability</td>
<td>Technical support</td>
<td>Spares costs</td>
<td>Labour costs</td>
</tr>
<tr>
<td>Labour costs</td>
<td>Spares costs</td>
<td>Labour costs</td>
<td>Performance guarantee</td>
</tr>
</tbody>
</table>

Choose Schneider Electric for state-of-the-art products and reliable services you can depend upon.

24-hour technical assistance.
Designing robust solar products

At Schneider Electric, all of our products are designed within stringent guidelines of quality and reliability throughout the product development cycle.

In addition our testing process doesn’t stop once the product is launched. As a part of ongoing continuous improvement, we perform ongoing reliability monitoring to ensure the product robustness is maintained.

Key aspects of design for quality and reliability

- WCA (Worst Case Analysis)
- Useful life analysis
- Design standard check
- D-FMEA (Design Failure Modes, Effects Analysis)
- A-FMEA (Application Failure Modes, Effects Analysis)
- FIT/MTBF (Failure In Time/ Mean Time Between Failures) prediction
- List of preventive maintenance parts for field serviceable products
- Reliability testing

Types of reliability testing during product development cycle

- THB (Temperature Humidity Bias)
- Salt-fog testing
- HALT (Highly Accelerated Life Test):
  - Product evaluation process during which thermal stress is combined with vibration and the product’s functionality is tested at these combined environments
- MEOST (Multiple Environmental Over Stress Testing):
  - Advanced version of HALT, the difference is in combining more stresses based on product application
  - STRESSORS: temperature step/shock, vibration, power, input DC voltage, output AC voltage and frequency cycling
- Custom reliability testing:
  - Used for our large three phase inverters tested in walk-in chamber

Product life cycle reliability testing

- Qualification of major design improvements
- Continuous reliability monitoring to ensure the same level of reliability throughout the product life cycle
At Schneider Electric’s Solar Business, customer satisfaction is everyone’s priority.

- Providing outstanding solutions, products and services
- Addressing customer issues professionally
- Ensuring a consistent experience worldwide
- Complying with the requirements

We are committed to bringing a differentiated and superior experience to our customers.

We develop an exemplary customer-centric culture.

- Giving precedence to customer satisfaction over any other priority
- Listening and acting on our customers’ feedback
- Delivering on our commitments
- Communicating proactively and transparently

We empower and train our people to make no compromise on quality.

- Our managers lead by example
- Our people enjoy autonomy and develop accountability
- We plan, control and relentlessly improve with our business process excellence tools and methodologies
- We recognise and share best practices and attitudes

The ultimate measure of quality is customer satisfaction.
Why choose Schneider Electric's solar products and services?

- True bankability
- Higher return on investment
- Designed for reliability
- Flexible
- Easy to service
- Easy to install
When it comes to large-scale solar projects, Schneider Electric has both the experience and the proven technology to help make your investment a success.

Schneider Electric solutions for PV power plants and large commercial buildings combine proven products with the kind of support only a global company can provide. Our balance-of-system solutions include everything you need to efficiently distribute and manage locally generated solar energy, from panel DC output to the grid connection.
Designing your solar solution

Schneider Electric solutions for large commercial buildings and PV power plants include everything you need to efficiently distribute and manage locally generated solar energy, from panel DC output to the grid connection.

Large commercial building solutions using the Conext Core XC or the PV Box

A balance-of-system solution from Schneider Electric includes:

- Power collection and string monitoring
- Power Conversion and integration to the grid
- Supervision, monitoring and control
- Site security
PV power plants solutions using the PV Box

- PV modules
- Array Box
- PV Box
- Grid Box
- Conext Core XC
- LV/MV transformer
- MV switchgear
- Monitoring
- Grid

Puglia (Italy)
PV Box

Containerised plug and play power conversion system adapted to customer requirements and local standards

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 the maintenance people and the installation against electrical faults such as short-circuit and lightning. The optimised versions of the PV Box allow a reduction of the balance of systems cost, an increase of the reliability and an improvement of construction lead times.

Why choose PV Box?

**True bankability**
- Warranty from a trusted partner with over 177 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

**Higher return on investment**
- Compressed construction lead-times through factory integrated solution
- Reduced transportation, off-loading and on-site labour costs
- Enhanced uptime thanks to qualified and reliable designs

**Designed for reliability**
- Designed to withstand severe weather conditions
- Undergone extensive safety, quality and reliability risk mitigation
- Robust design through rigorous Custom Reliability Testing

**Flexible**
- Customisable to be compliant with customer local building codes

**Easy to service**
- Fully monitored solution
- Convenient and safe enclosure design for maintenance purposes
- Local Schneider Electric service and maintenance available in 100+ countries

**Easy to install**
- Ease in transportation due to its compact and light design (<20t, minimised width, height and length for easy shipping by road and by sea)
- Solution delivered pre-assembled, configured and tested to reduce on-site labour and project duration

**Product applications**
- Large commercial
- Centralised PV plants
<table>
<thead>
<tr>
<th>Device short name</th>
<th>PV Box 1080</th>
<th>PV Box 1260</th>
<th>PV Box 1360</th>
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</thead>
<tbody>
<tr>
<td><strong>Electrical specifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input ratings (DC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended PV power</td>
<td>2 x 621 kWp</td>
<td>2 x 725 kWp</td>
<td>2 x 782 kWp</td>
</tr>
<tr>
<td>Voltage range, MPPT</td>
<td>440 - 800 V (at PF=1)</td>
<td>510 - 800 V (at PF=1)</td>
<td>550 - 800 V (at PF=1)</td>
</tr>
<tr>
<td>Max. input voltage, open circuit</td>
<td>1000 V</td>
<td>1000 V</td>
<td>1000 V</td>
</tr>
<tr>
<td>Max. DC current</td>
<td>2 x 1280 A</td>
<td>2 x 1280 A</td>
<td>2 x 1280 A</td>
</tr>
<tr>
<td><strong>Output ratings (AC)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal power</td>
<td>1080 kW</td>
<td>1260 kW</td>
<td>1360 kW</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>up to 36 kV</td>
<td>up to 36 kV</td>
<td>up to 36 kV</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz</td>
<td>50 Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td><strong>General specifications</strong></td>
<td></td>
<td></td>
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<tr>
<td>Inverters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power rating</td>
<td>2 x XC 540</td>
<td>2 x XC 630</td>
<td>2 x XC 680</td>
</tr>
<tr>
<td>DC recombine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard configuration 1</td>
<td>2 x 6 input channels max. with fuses between 350 and 400 A</td>
<td>2 x 6 input channels max. with fuses between 350 and 400 A</td>
<td>2 x 6 input channels max. with fuses between 350 and 400 A</td>
</tr>
<tr>
<td>Standard configuration 2</td>
<td>2 x 8 input channels max. with fuses between 160 and 350 A</td>
<td>2 x 8 input channels max. with fuses between 160 and 350 A</td>
<td>2 x 8 input channels max. with fuses between 160 and 350 A</td>
</tr>
<tr>
<td>Transformer</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Power rating</td>
<td>1080 kVA</td>
<td>1260 kVA</td>
<td>1360 kVA</td>
</tr>
<tr>
<td>Standard</td>
<td>IEC 60076</td>
<td>IEC 60076</td>
<td>IEC 60076</td>
</tr>
<tr>
<td><strong>MV protection</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid voltage &lt; 24 kV</td>
<td>RM6</td>
<td>RM6</td>
<td>RM6</td>
</tr>
<tr>
<td>Grid voltage 24 to 36 kV</td>
<td>Flusarc</td>
<td>Flusarc</td>
<td>Flusarc</td>
</tr>
<tr>
<td><strong>Auxiliary power supply</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Voltage / frequency</td>
<td>230 V / 50 Hz</td>
<td>230 V / 50 Hz</td>
<td>230 V / 50 Hz</td>
</tr>
<tr>
<td>Power rating</td>
<td>2500 VA, ensured by UPS</td>
<td>2500 VA, ensured by UPS</td>
<td>2500 VA, ensured by UPS</td>
</tr>
<tr>
<td><strong>Enclosure</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During transportation (H x W x D)</td>
<td>310 x 250 x 886 cm</td>
<td>310 x 250 x 886 cm</td>
<td>310 x 250 x 886 cm</td>
</tr>
<tr>
<td>Installed on site (H x W x D)</td>
<td>260 x 250 x 886 cm</td>
<td>260 x 250 x 886 cm</td>
<td>260 x 250 x 886 cm</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Weight with standard content</td>
<td>&lt; 20 Tons</td>
<td>&lt; 20 Tons</td>
<td>&lt; 20 Tons</td>
</tr>
<tr>
<td>Layout</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Subdivision</td>
<td>Fully separated LV and MV compartments</td>
<td>Fully separated LV and MV compartments</td>
<td>Fully separated LV and MV compartments</td>
</tr>
<tr>
<td>Cooling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV compartment</td>
<td>Forced, ensured by inverter fans. No extra fans</td>
<td>Forced, ensured by inverter fans. No extra fans</td>
<td>Forced, ensured by inverter fans. No extra fans</td>
</tr>
<tr>
<td>MV compartment</td>
<td>Natural</td>
<td>Natural</td>
<td>Natural</td>
</tr>
<tr>
<td><strong>IP grade</strong></td>
<td></td>
<td></td>
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<tr>
<td>LV compartment</td>
<td>IP54 (with filters)</td>
<td>IP54 (with filters)</td>
<td>IP54 (with filters)</td>
</tr>
<tr>
<td>Transformer / MV protection</td>
<td>IP21 / IP33</td>
<td>IP21 / IP33</td>
<td>IP21 / IP33</td>
</tr>
<tr>
<td><strong>Operating conditions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-10°C / +45°C, power derating for higher ambient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. relative humidity</td>
<td>95% non condensing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altitude</td>
<td>&lt; 1500 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. solar irradiance</td>
<td>1200 W / m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. wind speed</td>
<td>123 km / h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. snow load</td>
<td>250 kg / m²</td>
<td></td>
<td></td>
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<tr>
<td>Seisms</td>
<td>Peak horizontal acceleration up to 0.3* g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanically active pollution</td>
<td>&lt; 0.2 mg / m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemically active pollution</td>
<td>Rural and suburban environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other features</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>Indoor and outdoor lighting</td>
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<td></td>
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<tr>
<td>Energy supply for servicing</td>
<td>Socket outlets</td>
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<td></td>
</tr>
<tr>
<td>Heating</td>
<td>Heater with thermostat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Emergency lighting, safety and information kit according to IEC 62271-202</td>
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</table>

Specifications are subject to change without notice.
Conext™ Core XC series central inverters

High availability and enhanced efficiency from a provider you can trust

The Conext Core XC Series is a new line of central inverters designed for high efficiency and flexibility for any PV panel type and installation. The Conext Core XC Series has peak efficiencies of 98.9% and its flexibility allows the inverter to be configured with voltage and power outputs up to 680 kW. In addition, the Conext Core XC Series is designed to allow for DC inputs up to 1000 Vdc for longer string lengths. It contains the latest grid management features to meet global utility requirements.

Why choose Conext Core XC?

True bankability
• Warranty from a trusted partner with over 177 years of experience
• World leader in industrial power drives, UPS and electrical distribution
• Strong service infrastructure worldwide to support your global needs

Higher return on investment
• Best in class efficiency: 98.9% peak efficiency and 98.6% weighted EU
• Increased uptime due to high reliability and comprehensive global service network

Designed for reliability
• Robust design through rigorous Custom Reliability Testing

Flexible
• Variety of power outputs from 540 kW to 680 kW
• Full grid management features including voltage/frequency high and low ride through, reactive current support, VAR control and frequency based active power control
• Configurable firmware to allow for easy adjustments to changing utility requirements

Easy to service
• Integrated switchgear using Masterpact NW air circuit breakers
• Full suite of alarms and troubleshooting tools allow for remote diagnostics

Easy to install
• Compact footprint for easy integration into compact enclosures
• Integrated AC and DC switchgear standard
• In-built hardware for 1000 VDC start-up and LVRT features

Product applications

Large commercial
Centralised PV plants
Device short name | XC 540 | XC 630 | XC 680
---|---|---|---
**Electrical specifications**

**Input (DC)**
- Suggested photovoltaic power: 621 kW, 725 kW, 782 kW
- Input voltage range, MPPT: 440 - 800 V (at PF=1), 510 - 800 V (at PF=1), 550 - 850 V (at PF=1)
- Input voltage range, operating: 440 - 850 V, 510 - 850 V, 550 - 850 V
- Max. input voltage, open circuit: 1000 V, 1000 V, 1000 V
- Max. input current: 1280 A, 1280 A, 1280 A

**Output (AC)**
- Nominal output power: 540 kVA, 630 kVA, 680 kVA
- Output voltage: 300 V, 350 V, 380 V
- Frequency: 50 / 60 Hz, 50 / 60 Hz, 50 / 60 Hz
- Nominal output current: 1040 A, 1040 A, 1040 A
- Power Factor: 0.8 to 1.0 lead / lag, 0.8 to 1.0 lead / lag, 0.8 to 1.0 lead / lag
- Harmonic distortion: < 3% at rated power, < 3% at rated power, < 3% at rated power

**Efficiency (to IEC61683)**
- Maximum (at 50Hz): 98.5%, 98.7%, 98.9%
- European (at 50Hz): 98.3%, 98.4%, 98.6%
- CEC (at 60Hz): 98.5%, 98.5%, 98.7%

**General specifications**
- Power consumption, night time: < 100 W, < 100 W, < 100 W
- IP degree of protection: IP20, IP20, IP20
- Enclosure material: Steel, Steel, Steel
- Product weight: 1590.0 kg (3505.0 lb), 1590.0 kg (3505.0 lb), 1590.0 kg (3505.0 lb)
- Product dimensions (H x W x D): 208.5 x 240.0 x 66.0 cm (82.0 x 94.5 x 26.0 in), 208.5 x 240.0 x 66.0 cm (82.0 x 94.5 x 26.0 in), 208.5 x 240.0 x 66.0 cm (82.0 x 94.5 x 26.0 in)
- Ambient air temperature for operation: -10°C to 45°C (14ºF to 113ºF) full power. Power derating to 50°C
- Operating altitude: 1000 m, derating for higher altitudes
- Relative humidity: 0 to 95% non-condensing

**Features and options**
- Type of cooling: Temperature-dependent forced convection cooling
- Display type: LCD multifunction removable display standard
- Communication interface: RS485/Modbus standard
- AC/DC disconnect: Load break rated DC disconnect and AC circuit breaker standard
- Ground fault detection/interruption: Optional isolation monitoring relay or GFDI with circuit breaker
- Sub-array combiner: Optional external combiners with various quantities and trip ratings

**Regulatory approvals**
- Conext Core XC Series are CE marked for the EMC Directive (EN61000-6-2 and EN61000-6-4) and Low Voltage Directive (EN50178)
- Conext Core XC Series complies with the French order of April 23, 2008
- IEC 61727, PO 12.3 (Spain), French Order of April 23, 2008 (France), US-MV (FERC 661/661A, FRCC, WECC, NERC PRC-024-1), BDEW (Germany)

Specifications are subject to change without notice. Other input voltage windows and power outputs available.
Conext Control

String to grid monitoring and control system for PV power plants
Conext Control is the global modular monitoring and control solution for large photovoltaic installations. It is designed to efficiently operate any site by providing site technicians the means to make prompt decisions, analyse long-term trends and manage the life cycle performance of your assets. Conext Control also includes plant control features, enabling smooth integration of PV installations on the grid and implementation of complex grid support services.

<table>
<thead>
<tr>
<th>Why choose Conext Control?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>True bankability</strong></td>
<td></td>
</tr>
<tr>
<td>- Warranty from a trusted partner with over 177 years of experience</td>
<td></td>
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<tr>
<td>- World leader in automation, SCADA and process control in diverse industries</td>
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<tr>
<td>- Strong service infrastructure worldwide to support your global needs</td>
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<tr>
<td><strong>Higher return on investment</strong></td>
<td></td>
</tr>
<tr>
<td>- CAPEX and feature level adapted to any need</td>
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<tr>
<td>- Minimises OPEX</td>
<td></td>
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<tr>
<td>- Improves energy harvest</td>
<td></td>
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<tr>
<td>- Contributes to extend equipment life duration</td>
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<tr>
<td><strong>Designed for reliability</strong></td>
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<tr>
<td>- Robust design through rigorous Custom Reliability Testing</td>
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<tr>
<td><strong>Flexible</strong></td>
<td></td>
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<tr>
<td>- Various features levels (Optimum+, Optimum, Essential) to meet any customer requirements</td>
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<tr>
<td>- Modular hardware and software based on standardised bricks</td>
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<tr>
<td><strong>Easy to service</strong></td>
<td></td>
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<tr>
<td>- Complete multi-site solution including data acquisition, remote control, grid interaction management, supervision, data storage and analysis</td>
<td></td>
</tr>
<tr>
<td><strong>Easy to install</strong></td>
<td></td>
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<tr>
<td>- An easy to adapt control system able to withstand harsh environments</td>
<td></td>
</tr>
</tbody>
</table>

**Product applications**

- Utility scale power plants
- Large commercial rooftops
## Monitoring features

### Conext Control Optimine + Optimine Essential

<table>
<thead>
<tr>
<th>Feature</th>
<th>PV Box</th>
<th>Grid Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring features</td>
<td>Inverters</td>
<td>Grid coupling breaker status</td>
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<tr>
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<td>Transformer (fault)</td>
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<td>Transformer (pre-alarm)</td>
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<td>RMU status</td>
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<td>LV switchboard</td>
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<td>Energy reserve</td>
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<td>Weather sensors</td>
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<td>Safety sensors</td>
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<td>Sub-array current acquisition</td>
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<td>Array Box</td>
<td>Plane-of-array pyranometer</td>
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<td>Back-of-module temperature</td>
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<td>Safety sensors</td>
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<td>Sub-array current acquisition</td>
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<td>Grid Box</td>
<td>2 seconds acquisition cycle</td>
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<td>Time synchronisation</td>
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<td>Sub-array failure detection</td>
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<td>1' data averaging</td>
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<td>1' data and alarm timestamping</td>
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<td>1' data and alarm storage (up to 40 days)</td>
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<td>Communications status</td>
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<td>Control features</td>
<td>PV Box Inverter remote control</td>
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<td>Inverter (P, Q) fast control</td>
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<td>Array Box Main switch remote control (LOTO)</td>
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<td>Grid Box Grid coupling breaker remote control</td>
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<td>RMU remote control</td>
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<td>Coupling / uncoupling management</td>
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<td>Grid operator interface</td>
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<td></td>
<td>Power plant size Recommended reference Part number # of monitoring points # of web clients</td>
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<td>Clear Scada PV 5 [TBUCDEM-7500 PV] 7500 5</td>
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<td>Clear Scada PV 10 [TBUCDEM-015 KPV] 15000 6</td>
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<td>Clear Scada PV 20 [TBUCDEM-025 KPV] 25000 8</td>
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<td>Clear Scada PV 40 [TBUCDEM-050 KPV] 50000 10</td>
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<td>Extra web client [TBUCDEM-0001 CWC] 1</td>
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<td>Specifications are subject to change without notice.</td>
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<td>Supervision and data analysis features</td>
<td>Multi-site management Client server access (ViewX)</td>
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<td>Predefined</td>
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<td>Alarming Real time alarming</td>
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<td>Customised (on demand)</td>
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<td>Alarm filtering (root cause display)</td>
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<td>Key performance PR, AL, Energy not supplied</td>
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<td>Trend analysis</td>
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<td>SQL database</td>
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<td>Customised (on demand)</td>
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<td>Optimal interface          [OCP AE, OCP DA, HDA, OCP HDA]</td>
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<tr>
<td></td>
<td>Optional interface [OCP AE, OCP DA, HDA, OCP HDA]</td>
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<td>Hardware configuration</td>
<td>PV Box Opitum + monitoring cabinet</td>
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<td>Grid Box Grid Box monitoring cabinet</td>
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<td>SCADA / SQL server cabinet*</td>
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<td>Software configuration</td>
<td>Application software Conext Control</td>
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<td>Supervision software</td>
<td>Clear Scada (see table below)</td>
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## Power plant size

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<thead>
<tr>
<th>Power plant size</th>
<th>Recommended reference</th>
<th>Part number</th>
<th># of monitoring points</th>
<th># of web clients</th>
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<td>&lt; 5 MWp</td>
<td>Clear Scada PV 5</td>
<td>TBUCDEM-7500 PV</td>
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<td>5 to 10 MWp</td>
<td>Clear Scada PV 10</td>
<td>TBUCDEM-015 KPV</td>
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<td>10 to 20 MWp</td>
<td>Clear Scada PV 20</td>
<td>TBUCDEM-025 KPV</td>
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<td>8</td>
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<tr>
<td>20 to 40 MWp</td>
<td>Clear Scada PV 40</td>
<td>TBUCDEM-050 KPV</td>
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<tr>
<td>Extra web client</td>
<td>Clear Scada PV 40</td>
<td>TBUCDEM-0001 CWC</td>
<td>50000</td>
<td>1</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. *The SCADA / SQL database may be alternatively hosted in a remote data center.*
Array Box

Protect and enhance the performance of your photovoltaic installation

An Array Box is a PV string combiner box installed between the PV modules and the inverter, providing protection and performance monitoring to your PV power plant.

Why choose Array Box?

True bankability
- Warranty from a trusted partner with over 177 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

Higher return on investment
- Reduced CAPEX: Highly cost competitive range, offers capability to connect weather sensors
- Reduced OPEX: precise power production tracking, detection of PV modules failure and aging

Designed for reliability
- Resistant to corrosion and pollution thanks to the use of an isolating polyester enclosure reinforced with fibreglass
- Optimal cooling of the switch-disconnector and PV fuses to increase their useful life
- Undergone extensive safety, quality and reliability testing
- Robust design through rigorous Custom Reliability Testing

Flexible
- Fits every PV plant design and module technology with a range of 8/16/24 input channels and 160/300 A STC output currents
- Range available with and without monitoring of string currents
- On-field weather sensors easily connected inside the Array Box to avoid any additional equipment

Easy to service
- Conext Control™ identifies the service needs of the Array Box
- Motorised switch controlled remotely by Conext Control accelerates lock-out / tag-out procedure and allows an easy return to operation

Easy to install
- Mounting on a support bracket or on a plinth for independence to the racking system, or hanged on the racking system for less civil work
- Capabilities to directly connect up to 2 PV string cables and 2 DC output cables per polarity

Product applications

Large commercial
Centralised PV plants
Device short name | AB08-160 | AB16-160 | AB16-300 | AB24-300
--- | --- | --- | --- | ---
**Electrical specifications**

**DC inputs**
- Number of inputs: 8, 16, 16, 24
- Max. voltage in open circuit: 1000 Vdc, 1000 Vdc, 1000 Vdc, 1000 Vdc
- Max. input current in short circuit at STC: 20 A, 20 A, 20 A, 20 A

**DC output**
- Max. output current in short circuit at ambient temperature ≤ 40°C: 200 A, 200 A, 375 A, 375 A
- at ambient temperature ≤ 45°C: 180 A, 200 A, 350 A, 350 A
- at ambient temperature ≤ 50°C: 160 A, 200 A, 315 A, 315 A
- Max. output current in short circuit at ambient temperature ≤ 40°C, at ambient temperature ≤ 45°C, at ambient temperature ≤ 50°C: 160 A, 160 A, 300 A, 300 A
- at ambient temperature ≤ 45°C, at ambient temperature ≤ 50°C: 145 A, 160 A, 280 A, 280 A
- at ambient temperature ≤ 50°C: 125 A, 160 A, 250 A, 250 A

**AC supply**

**Environmental specifications (in operation)**
- Ambient temperature: -25°C to +50°C, above contact Schneider Electric, -25°C to +50°C, above contact Schneider Electric, -25°C to +50°C, above contact Schneider Electric, -25°C to +50°C, above contact Schneider Electric
- Relative humidity: 0 to 100% condensing, 0 to 100% condensing, 0 to 100% condensing, 0 to 100% condensing
- Altitude: 0 to 2000 m without derating, 0 to 2000 m without derating, 0 to 2000 m without derating, 0 to 2000 m without derating

**Mechanical specifications**
- **Enclosure**
  - Type: Outdoor use, full insulating cabinet (polyester reinforced with fibreglass)
  - Fire withstand: Self-extinguishing (does not propagate fire during the glow-wire test at 960 °C), halogen-free
- **Color**
  - RAL 7032, grey
- **Dimensions (H x W x D)**
  - AB08-160: 84.7 x 63.6 x 30.0 cm (33.3 x 25.0 x 11.8 in)
  - AB16-160: 105.6 x 85.2 x 35.0 cm (41.6 x 33.5 x 13.8 in)
  - AB16-300: 105.6 x 85.2 x 35.0 cm (41.6 x 33.5 x 13.8 in)
  - AB24-300: 105.6 x 85.2 x 35.0 cm (41.6 x 33.5 x 13.8 in)
- **Weight (essential / monitored / controlled)**
  - AB08-160: 33.0 / 37.0 / 40.0 kg (72.8 / 81.6 / 88.1 lb)
  - AB16-160: 58.0 / 62.0 / 65.0 kg (127.9 / 136.7 / 143.3 lb)
  - AB16-300: 63.0 / 67.0 / 71.0 kg (138.9 / 147.7 / 156.5 lb)
  - AB24-300: 67.0 / 71.0 / 75.0 kg (147.7 / 156.5 / 165.3 lb)
- **Mounting**
  - Floor-standing on support, wall-fixing or hanging with lugs (must be installed protected from direct sunshine)
- **Degrees of protection**
  - IP54 (IP55 with optional covers), IK10

**Features**
- **Protection**
  - DC inputs overcurrent protection: Protection on both polarities, gPV fuses, size 10 x 38 (fuses not provided with product)
  - DC overvoltage protection: Surge arrester, 1000 Vdc, type 2, Imax 40 KA
  - AC supply overvoltage protection*: Surge arrester, 230 Vac, type 2, Imax 40 KA
  - Electric shock protection: Class II equipment
- **Monitoring and control***
  - DC input currents*: 0 to 30 A, accuracy +/- 0.5% full scale (one measurement per input)
  - DC voltage*: 0 to 1000 V, accuracy +/- 0.5%
  - Internal temperature*: -30 to +120°C, accuracy +/- 1°C
  - Temperature sensor input**: -30 to +120°C, accuracy +/- 1°C, for external PT1000 2 wires temperature sensor
  - Communication**: Profibus DP, RS485 link
  - Switch disconnector remote control**: Motor pack and MX shunt release
- **Compliance**
  - LV switchgear: IEC / EN 61439-1 and 61439-2
  - CE marking: According LV directive 2006 / 95 / CE and EMC directive 2004 / 108 / CE

**Available models**
- Essential: protection only
  - PVSAB31101
- Monitored: protection and monitoring
  - PVSAB31201
- Controlled: Protection, monitoring and switch control
  - PVSAB31301
- Optional weather module
  - PVSAB31211
- and switch control
  - PVSAB31321
- Optional weather module
  - PVSAB31221
- and switch control
  - PVSAB31341
- Optional weather module
  - PVSAB31231
- and switch control
  - PVSAB31351
- Optional weather module
  - PVSAB31241
- and switch control
  - PVSAB31361

**Accessories**
- Support bracket for roof-mounting: Product no. NSYCCNS1400
- Support bracket for ground-mounting: Product no. NSYCCNS1800 SPECIAL see page 33 for more details
- Purlin for ground-mounting: For AB31-08 models product no. NSY2M283
- Sealing cover IP55: Product no. NSYCAP125LZFSF see page 33 for more details
- Set of 4 x lugs for wall-mounting: Product no. NSYPPFLM see page 33 for more details
- Set of 4 x feet for ground-mounting with plinths: Product no. NSYAEFIZ see page 33 for more details

Specifications are subject to change without notice. *For monitored and controlled models. **With optional weather sensors connection module. ***For controlled models.
MV/LV offer (CE compliant)

**RM6**
The RM6 is a compact, self-contained totally insulated switchgear which comprises 1 to 4 integrated, low dimension functional units. It enables the connection, supply and protection of transformers on an open ring or radial network. Available up to 24 kV.

**SM6**
The SM6 is a modular, comprehensive range of metal-enclosed switchgear and control gear units up to 24 kV. SM6 units are used for the MV section in MV/LV transformer substations in public distribution systems and MV consumer or distribution substations up to 36 kV.

**Flusarc 36**
The Flusarc 36 is a medium voltage switchgear, suitable for 36 kV rated voltage and specifically conceived for the secondary distribution substations in MV with either ring or radial type networks. With its flexibility and low operating cost, it is the ideal choice for utilities all over the world, in every environment.

**Minera HE**
Ultra high efficiency amorphous distribution transformers up to 1250 kVA and 36 kV, 50 / 60 Hz.

**Minera PV**
High efficiency oil immersed transformer for photovoltaic systems up to 1600 kVA and 36 kV, 50 / 60 Hz.

MV/LV offer (UL and IEEE compliant)

**Solar disconnect switch**
The 1000 Vdc disconnect switch functions as a local disconnect for a string of PV panels and is IEC 60947 and UL compliant for use in photovoltaic systems at a maximum of 1000 Vdc. This compact disconnect is available in both 100 and 200 amp, 2-pole and 4-pole versions.

**Heavy duty safety switches (fusible and non-fusible) on direct current and photovoltaic systems**
Schneider Electric™ provides a solar disconnect switch solution encompassing all of the quality, durability and ease of use for photovoltaic applications. The product offering spans 30 – 100 A, 2- and 3-pole fusible and non-fusible heavy duty safety switches. All Square D® brand heavy duty safety switches with dc ratings (2 and 3-pole fusible and non-fusible) are Underwriters Laboratories® (UL®) Listed for use on DC applications when properly wired.
PowerLogic metering
Schneider Electric offers a full portfolio of metering and monitoring products and solutions, scaleable from simple metering and analysis to remote, online enterprise wide power management solutions. Whether you are an energy supplier or consumer, our integrated solutions provide the tools to deliver fast and quantifiable payback by helping you to manage the quality and cost of your energy.

Padmount liquid transformers
Schneider Electric three-phase, pad-mounted, liquid-filled transformers for use on underground power distribution systems, meet modern design requirements for flexibility and provide a low profile, visually pleasing installation. Construction allows installation in locations accessible to the general public without the need for protective fencing or vaults.

Accessories for the Array Box

Support bracket for roof-mounting and ground-mounting
(For roof-mounting NSYCOCNS1400, NSYCOCNS1800, for ground-mounting NSYCOCNS1800 SPECIAL)
Support bracket with anti-tilt kit. In roof-mounting, it can be used when the Array Box cannot be hung from a wall or a post. In ground-mounting, it can be partially buried and it is an alternative to the use of plinths.

Plinth for ground-mounting
(NSYZM263 for AB31-08 models, NSYZM283 for AB31-16/24 models)
Support for Array Box in polyester material reinforced with fibreglass. Plinth height of 200 mm stackable to obtain a 400-mm plinth.
The frontal parts of the plinth can be opened and removed for easier cable installation. In stacked position, the bottom plinth can be partially buried.

Sealing cover IP55
(NSYCAP125LZF)
Protection of a ventilation grille from any direct spray. It provides an efficient air flow for cooling and a true IP 55 rating. The cover is placed over the grille with a filter located at the bottom of the cover to prevent the entry of particles.

Set of 4 x lugs for wall-mounting
(NSYPFPLM)
Set of four lugs delivered with fixings, in polyamide reinforced with fibreglass, for fixing Array Box by the front face.

Set of 4 x feet for ground-mounting with plinths
(NSYAEBFZ)
Set of four feet with a standard length of 750 mm to be attached to one plinth and allowing to partially bury the plinth before completion of the floor. Possibility of horizontal adjustment of the plinth.

For more products and information please visit our website at www.schneider-electric.com/solar/uk
Grid-tie residential and commercial building solutions

For any solar application, it’s critical that the solution is flexible enough to meet your needs and deliver the greatest possible return on investment. Schneider Electric offer a complete portfolio of reliable, easy-to-install grid-tie residential and commercial building products, supported by our global service infrastructure – all from a bankable partner which you can trust.
Designing your solar solution

Schneider Electric™ solutions for grid-tie residential and commercial building applications include everything you need from the DC output to the grid connection.

Residential solar solution using Conext RL
Using Conext TL inverters in a decentralised PV architecture, the PV array is broken up into smaller sub-arrays, each with its own small power string inverters.
Conext™ RL single-phase grid-tie inverter

Flexible and efficient residential solar solution

The Schneider Electric Conext™ RL inverters are specially designed to maximise yields for a wide range of rooftops of detached houses and multiple dwellings. The rich MPPT features, high energy efficiency, partial shading algorithm and a wide temperature and voltage operating range enable you to maximise your ROI. Supported by Schneider Electric’s global service infrastructure and expertise in energy management, the Conext RL series are the inverters you can trust for quality and reliability.

Why choose Conext RL?

True bankability
- Warranty from a trusted partner with over 177 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

Higher return on investment
- Best in class conversion efficiency: 97.5% peak efficiency
- Broad operating range to harvest more energy (early mornings and late afternoons)
- Higher ROI with dual MPPT
- Shade tolerant MPPT algorithm designed to minimise the effect of partial shading on the energy output

Designed for reliability
- Robust design through rigorous Multiple Environmental Over Stress Testing (MEOST) and Temperature Humidity Bias (THB)
- IP65 compliant rugged, completely sealed unit to stand the harshest environmental conditions

Flexible
- Dual MPPTs with wide MPPT voltage range (160-500V*) to support multiple roof orientations
- Ability to support unbalanced arrays
- Local as well as remote monitoring options available to track PV plant performance

Easy to service
- No moving parts (e.g. fans) for low maintenance and increased uptime
- Easily replaceable communication card
- Integrated DC switch (optional)

Easy to install
- Compact unit which allows easy and fast mounting with included bracket
- Pluggable AC and DC connectors (MC4)
- Auto country/multilingual configurations

Product applications

| Flat roofs | Multiple pitched roofs | Partial shading | Odd number of modules | Different orientation roofs (East – West) |

* Full power MPPT voltage range for RL 3000E: 160-500V; RL 4000E/5000E: 180-500V
<table>
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<th>RL 5000 E*</th>
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<tr>
<td>Max. output current</td>
<td>16 A</td>
<td>16 A</td>
<td>23.2 A</td>
</tr>
<tr>
<td>Total harmonic distortion</td>
<td>&lt;3 %</td>
<td>&lt;3 %</td>
<td>&lt;3 %</td>
</tr>
<tr>
<td>Power factor (adjustable)</td>
<td>0.8 lead to 0.8 lag</td>
<td>0.8 lead to 0.8 lag</td>
<td>0.8 lead to 0.8 lag</td>
</tr>
<tr>
<td>AC connection type</td>
<td>IP67 connector</td>
<td>IP67 connector</td>
<td>IP67 connector</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>97.5%</td>
<td>97.5%</td>
<td>97.5%</td>
</tr>
<tr>
<td>European</td>
<td>97.0%</td>
<td>97.0%</td>
<td>97.0%</td>
</tr>
<tr>
<td><strong>General specifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption, night time</td>
<td>&lt;1 W</td>
<td>&lt;1 W</td>
<td>&lt;1 W</td>
</tr>
<tr>
<td>IP degree of protection</td>
<td>IP65 (electronics and balance)</td>
<td>IP65 (electronics and balance)</td>
<td>IP65 (electronics and balance)</td>
</tr>
<tr>
<td>Climatic category (per IEC 60721-3-4)</td>
<td>K4H</td>
<td>K4H</td>
<td>K4H</td>
</tr>
<tr>
<td>Cooling</td>
<td>Natural convection</td>
<td>Natural convection</td>
<td>Natural convection</td>
</tr>
<tr>
<td>Enclosure material</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Product weight</td>
<td>20.0 kg (44.1 lb)</td>
<td>21.0 kg (46.3 lb)</td>
<td>20.0 kg (45.9 lb)</td>
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<tr>
<td>Shipping weight</td>
<td>25.0 kg (55.1 lb)</td>
<td>25.0 kg (55.1 lb)</td>
<td>25.0 kg (55.1 lb)</td>
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<tr>
<td>Product dimensions (H x W x D)</td>
<td>42.0 x 48.0 x 16.0 cm</td>
<td>42.0 x 48.0 x 16.0 cm</td>
<td>42.0 x 48.0 x 16.0 cm</td>
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<td>Shipping dimensions (H x W x D)</td>
<td>50.5 x 59.5 x 29.5 cm</td>
<td>50.5 x 59.5 x 29.5 cm</td>
<td>50.5 x 59.5 x 29.5 cm</td>
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<tr>
<td>Ambient air temperature for operation</td>
<td>-10 to 65°C (24°F to 149°F)**</td>
<td>-10 to 65°C (24°F to 149°F)**</td>
<td>-10 to 65°C (24°F to 149°F)**</td>
</tr>
<tr>
<td>Operating altitude</td>
<td>Up to 2000 m</td>
<td>Up to 2000 m</td>
<td>Up to 2000 m</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>4 - 100% condensing</td>
<td>4 - 100% condensing</td>
<td>4 - 100% condensing</td>
</tr>
<tr>
<td>Noise emission (at 1 m distance)</td>
<td>&lt;40 dBA</td>
<td>&lt;40 dBA</td>
<td>&lt;40 dBA</td>
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<tr>
<td><strong>Features and options</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embedded data logger</td>
<td>365 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>LCD 2 - line 16 digits, 2 Buttons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication interface standard/optional</td>
<td>RS 485, MODBUS / Ethernet (with built-in web server)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multifunction relay</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty in years standard/optional</td>
<td>5 / 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regulatory approvals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical safety</td>
<td>CE marked for the Low Voltage Directive EN / IEC 62109-1 EN / IEC 62109-2, AS3100/AS5033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid interconnection</td>
<td>VDE-AR-N 4105, RD1699, CEI0-21, G59/2, G58/1, UTE C15-712-1, AS4777, VDE 0126, EN50438, IEC 62116, IEC 61727</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental RoHS, REACH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMC</td>
<td>CE marked for the EMC directive 2004-108-EC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Available product variants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>PVSNVC3000 (RL 3000 E)</td>
<td>PVSNVC4000 (RL 4000 E)</td>
<td>PVSNVC5000 (RL 5000 E)</td>
</tr>
<tr>
<td>With integrated DC switch</td>
<td>PVSNVC3000S (RL 3000 E-S)</td>
<td>PVSNVC4000S (RL 4000 E-S)</td>
<td>PVSNVC5000S (RL 5000 E-S)</td>
</tr>
<tr>
<td><strong>Monitoring accessories</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local monitoring</td>
<td>Ethernet card (PVSNC1105)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote monitoring</td>
<td>Conext Monitor 20 (PVSNC1120)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. **-20°C cold start temperature.
Why choose Conext TL?

True bankability
- Warranty from a trusted partner with over 177 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs

Higher return on investment
- High conversion efficiency: >98% peak efficiency
- Broad operating range to harvest more energy (early mornings and late afternoons)
- Higher ROI with dual MPPT
- Great value for money: DC switch, AC connectors and RS485 ports are included

Designed for reliability
- Robust design through rigorous Multiple Environmental Over Stress Testing (MEOST) and Temperature Humidity Bias (THB)
- IP65 compliant rugged, completely sealed unit to stand the harshest environmental conditions
- Design and qualified for applications in tropical environments through conformal coating and salt fog testing

Flexible
- Wide MPPT voltage range (350 - 850 V)
- Modular system designs using a combination of models
- Easy to connect to third party monitoring solutions

Easy to service
- Easily replaceable fan block and communications card
- Integrated DC switch
- Ability to remotely disable

Easy to install
- Easy and fast mounting with included bracket
- Pluggable AC and DC Connectors (MC4)
- Auto country/multilingual configurations

Product applications

Ideal solution for commercial buildings, carports and decentralised power plants

The new Conext TL 8, 10, 15 kW and TL 20 kW grid-tie solar inverters are suited for outdoor use and are the ideal solution for commercial buildings, carports and decentralised PV plants up to the MW range. The inverters provide dual MPP (Maximum Power Point) trackers with a wide voltage range, peak efficiency of greater than 98% for fast ROI. The embedded Modbus communication card allows connectivity with a large range of Schneider Electric™ products, as well as the option to easily add third party monitoring solutions. Backed by Schneider Electric’s global service infrastructure and its expertise in energy management, the Conext TL series are the inverters you can trust for quality and reliability.
### Device short name

**TL 8000 E**

**TL10000 E**

**TL 15000 E**

**TL 20000 E**

### Electrical specifications

#### Input (DC)

- **MPPT voltage range, full power**: 350 - 850 V
- **Operating voltage range**: 200 - 1000 V
- **Starting voltage**: 200 V
- **Max. input voltage, open circuit**: 1000 V
- **Number of MPPT**: 2
- **Max. input current per MPPT**: 17 A
- **Max. DC input power per MPPT**: 5.5 kW
- **DC connection type**: Integrated

#### Output (AC)

- **Nominal output power**: 8 kVA
- **Nominal output voltage**: 230 / 400 V, three-phase
- **Isolation**: Transformerless
- **AC voltage range**: 184 - 276 V
- **Frequency**: 50 / 60 Hz
- **Max. output current**: 12.8 A
- **Total harmonic distortion**: < 3 %
- **AC connection type**: IP67 connector
- **Efficiency**:
  - **Peak**: 98.2 %
  - **European**: 97.4 %

#### General specifications

- **Power consumption, night time**: < 2 W
- **IP degree of protection**: IP65 (electronics), IP55 (balance)
- **Cooling**: Fan cooled
- **Enclosure material**: Aluminium
- **Product weight**: 41.0 kg (90.2 lb)
- **Shipping weight**: 48.5 kg (106.9 lb)
- **Product dimensions (H x W x D)**: 62.5 x 61.2 x 27.8 cm
- **Shipping dimensions (H x W x D)**: 75.0 x 74.0 x 40.0 cm
- **Ambient air temperature for operation**: -20 to 60ºC
- **Operating altitude**: Up to 2000 m
- **Relative humidity**: 4 - 100 % (condensing)
- **Noise emission (at 1 m distance)**: < 50 dBA
- **Power factor (adjustable)**: 0.8 lead to 0.8 lag

#### Features and options

- **Embedded data logger**: 365 days
- **Display**: 5" Graphic LCD (320 x 240 pixels), 4 buttons
- **Communication interface**: Modbus (RS485)
- **Multifunction relay**: Yes
- **Warranty in years (standard/optional)**: 5 / 10

#### Regulatory approval

- **Electrical safety**: CE marked for the Low Voltage Directive EN / IEC 62109-1 / EN / IEC 62109-2
- **Grid interconnection**:
- **Environmental**: RohS, REACH
- **EMC**: CE marked for the EMC directive 2004-108-EC

#### Available product variants

- **Standard PVSNV8000**
- **PVSNV10000**
- **PVSNV15000**
- **PVSNV20000**

*Specifications are subject to change without notice. **More available upon request. ***-15ºC cold start temperature. Vpv ≥ 500V. **Only for TL 15000 E and TL 20000 E.*
Conext™ Monitor 20 communication device

Compact and easy to use remote monitoring solution for residential PV installations

Conext Monitor 20 is a compact monitoring and control unit. This data logger allows simple configuration and operation. Connecting the data logger to the internet via Ethernet allows the operating data to be visualised and monitored regardless of location using the web portal. The key data displayed in the web portal includes current and historical energy generation, environmental impact and system set-up data.

With four digital inputs and a power control function, it also meets the grid feed-in management requirements by allowing the connection of a ripple control receiver to the inverter through the data logger.

Conext Monitor 20 is suitable for Conext RL and Conext TL series of inverters for PV systems up to 20 kW (not more than three inverters).

Why choose Conext Monitor 20?

- **True bankability**
  - Warranty from a trusted partner with over 177 years of experience
  - World leader in industrial power drives, UPS and electrical distribution
  - Strong service infrastructure worldwide to support your global needs

- **Higher return on investment**
  - Energy generation charts and regional benchmarking to proactively address PV plant performance issues, if any
  - Meets current grid feed-in management guidelines to avoid any blanket reduction e.g. in Germany

- **Designed for reliability**
  - Undergone extensive safety, quality and reliability testing

- **Flexible**
  - Compatible with Conext RL and TL series of inverters
  - Access to PV plant performance regardless of location
  - Both visual and audible alarm available for quick error reporting

- **Easy to service**
  - Provision to backup and to load data logger configuration
  - Easy replacement of data logger without losing any portal data

- **Easy to install**
  - Compact unit which is very easy to mount
  - Configuration software included for installation assistance
  - Simple registration process for web portal

Product applications

- Residential
- Small commercial
**Device short name** | **Conext Monitor 20**
---|---
**Electrical specifications** |  

**Communication interfaces**  
Inverter (Modbus RS 485)  
Connector: 1x RJ12, 2-wire serial, termination: 120 Ohms  
Inverter connect cable (length: 2 m / 6.56 ft) and RJ45 - RJ45 adapter for extension provided  
Products supported: Conext RL, Conext TL (max. plant size 20 kW, max. number of inverters: 3)

Ethernet  
Connector: 1 x RJ45, 10 Mbps (HTTP(s), DHCP, REST)  
Ethernet connect cable provided (length: 1 m / 3.28 ft)

USB-device  
Connector: USB-MicroTypeB, full speed 12 Mbps, protocols: CDC, RS232 emulation  
USB connect cable provided (length: 1.8 m / 5.91 ft)

**Other interfaces**  
Ripple control receiver  
Connector: 1x RJ45, 4x digital inputs (EN62053-31)

**Power supply options**  
DC input  
24 V +/- 5% , using 2.1 x 5.5 mm (0.08 x 0.22 in) center positive socket

AC frequency of power adapter  
47 - 63 Hz

AC voltage of power adapter  
100 - 240 VAC

Power consumption  
1.7 W typical

**Memory**  
Internal flash  
5 days data

**General specifications**  
Product weight  
0.2 kg (0.4 lb)

Shipping weight  
0.7 kg (1.5 lb)

Product dimensions (H x W x D)  
10.7 x 15.2 x 3.7 cm (4.2 x 6.0 x 1.5 in)

Shipping dimensions (H x W x D)  
16.0 x 33.2 x 12.2 cm (6.3 x 13.1 x 4.8 in)

Housing/mounting system  
ABS PA-765A / Wall-mount: 2-screw

IP rating/mounting location  
IP 21 / indoor only

Status display  
8x Light Emitting Diodes (LEDs)

Push buttons  
3x (menu, action and reset)

Switch  
1x (for power control on/off)

Audible alarm  
Yes (with on/off control)

Temperature  
Operating: 0°C to 40°C (32 to 104 F); Storage: -20°C to 65°C (-4 to 149 F)

Relative humidity  
Rel. 20 to 90% (non-condensing)

Part number  
PVSCMC1120

**Features and options**  
Warranty  
2 years

Portal compatibility with browsers  
IE8 and above, Firefox 13.0.1 and above, Google Chrome 20.0.1132.47m and above, Apple Safari 5.1.7 and above

**Regulatory approvals**  
Marking  
CE, RCM

Safety  
EN 60950-1

EMC immunity  
EN61000-6-2, EN61000-4-11

EMC emission  
EN55022 Class B, EN 61000-3-2, EN61000-3-3

Substances/environmental  
RoHS

**Works with**  
Conext TL  
TL 8000 E product no. PVSNVC8000,  
TL 1000 E product no. PVSNVC10000,  
TL 15000 E product no. PVSNVC150000,  
TL 20000 E product no. PVSNVC200000

Conext RL  
RL 3000 E product no. PVSNVC3000 / PVSNVC3000S,  
RL 4000 E product no. PVSNVC4000 / PVSNVC4000S,  
RL 5000 E product no. PVSNVC5000 / PVSNVC5000S

Specifications are subject to change without notice.
System accessories

**PV emergency stop**
- Isolation from the AC source at the combiner box level
- Isolation from the DC source at the DC box level
  (at the location upstream if both)

**DC Box**
- Disconnects each MPPT input of the inverter from the DC line
- Protects the inverter against voltage surges coming from DC lines
- Controls the release of the switches remotely for emergency purpose

**AC Box**
- Disconnects inverter from the AC line
- Protects the inverter against voltage surges coming from AC lines

To order a solution tailored to your plant design and local regulatory requirements, please contact your local country representative.
Best-in-class products and reliable support from a partner you can trust
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 energy and infrastructure, industrial processes, building automation and data centres/networks, as well as a broad presence in residential applications.

Schneider Electric is dedicated to making individuals’ and organisations’ energy safe, reliable, efficient, productive and green from Power Plant to Plug™.

We are changing our brand names and becoming one Schneider Electric. You’ll get the same great quality products, but from one name you can remember and trust. This provides you and your customers with the reassurance associated with Schneider Electric.

Some of our market leading brands have already become Schneider Electric including Merlin Gerin, Telemecanique, Square D, GET, Mita, Sarel, Himel, Thorsman, Tower and TAC.

Working as one Schneider Electric makes it clearer which our ranges are highly compatible for integrated solutions.