OUR SOLUTIONS

ALWAYS ENERGY



salicru



ENERGY EFFICIENT SOLUTIONS

Over the past 60 years, **Salicru** has been able to adapt to the evolution of the power electronics market and constantly develop in all of its business areas. This has enabled the company to become **a leading centre of technological transfer** in the field of security electronics, as a way of **responding to the new challenges and needs of society,** with the main mission to guarantee a continuous, clean, economical, reliable and ecological electricity supply to its customers.





SOLUTIONS

To ensure energy availability, at Salicru we offer the following solutions:

Uninterruptible Power Supply systems (UPS)

Electrical protection with backup for all kinds of critical environments

Integrated solar solutions

Generation of AC voltage with inverters and energy management devices

Variable frequency drives (VFD)

Efficient control of any application driven by asynchronous motors

Power supplies and inverters

Solutions AC/DC, AC/AC, DC/AC and DC/DC

Transformers and autotransformers

Voltage adjustment in generation, transmission and distribution

Voltage stabilisers

Regulation of the input voltage of the power supply

MARKETS

With our products and services, we are present in the domestic, corporate, industrial, infrastructure, telecommunications, railway, electricity and renewable energy markets, also operating through the electrical and IT channels.

We lead each of the segments in which we operate with our products within the Spanish manufacturing sector, especially in Uninterruptible Power Supply (UPS) systems, a segment in which we introduced the first prototype in Spain in 1973.

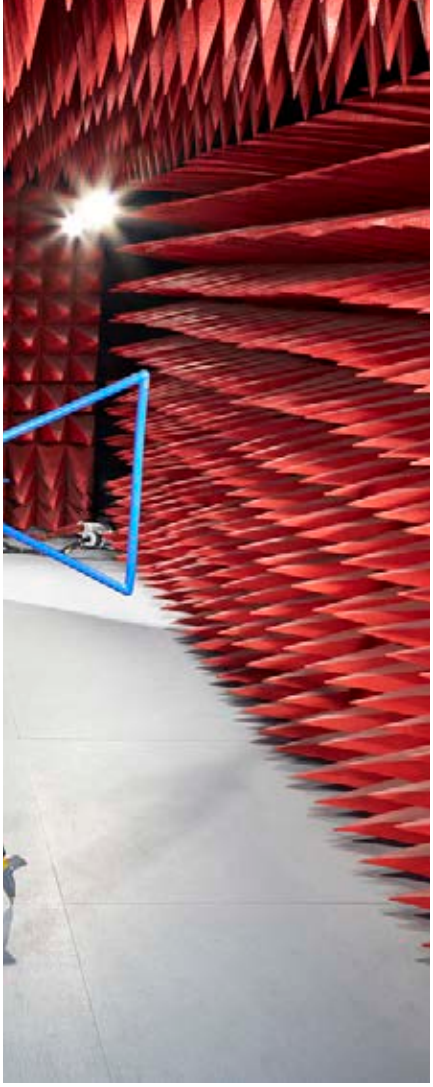
We manufacture at our headquarters in Santa Maria de Palautordera (Barcelona) and distribute from there and from our offices in Madrid, Valencia, Bilbao, Alicante, Malaga, the Balearic Islands, the Canary Islands, Zaragoza, Galicia, Asturias and Seville.

Thanks to a **half-century strategy of internationalisation**, we are present in more than 130 countries, with a strong presence in the markets of Europe, Africa, Asia Pacific and South America.

At Salicru, we understand that each customer is unique and has specific needs, which is why **we also offer tailor-made solutions** designed to perfectly adapt to each requirement. From initial assessment to final implementation, our team of experts works with the customer to create a customised solution that guarantees the continuity and security of all their energy at all times.

+130 COUNTRIES
with installed devices

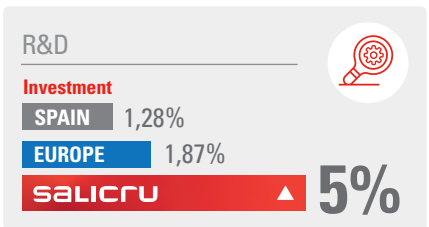






R&D in our DNA

Our mission is to ensure energy availability with the highest level of quality and reliability. In order to always offer new solutions and products to our customers, at Salicru we never stop researching and innovating, and **we allocate 5% of our turnover to Research and Technological Development** (R&D), four times more than the Spanish average and almost triple the European average.



Research, development and technological innovation are **our industrial growth strategy**. Through different lines of action, we constantly reinforce our activity in this area, with the aim of promoting a continuous process of improvement in our products and services.

In this way, we enhance **new technological skills** and position ourselves at the forefront of the sector, anticipating future challenges and opportunities.

Like other priorities in the service area, at Salicru we focus on the **continuous training of customers, distributors and technical field staff**.

Having a **Connected Software** department has enabled us to achieve maximum autonomy and excellence in this field by developing connectivity applications that allow us to manage our solutions in an intuitive and accessible way, with full security and an in-house data policy.

By consolidating the specialisation of our team, our **greatest differential value**, with its extensive knowledge of the market and its problems, **we also consolidate all the solutions needed** to contribute in each situation, making us the perfectally.

SINCE 1965
industrial activity









ENERGY EFFICIENCY

Saving energy and reducing our carbon footprint are key to cutting energy consumption and maintaining services without compromising comfort and quality of life, while protecting the environment and promoting sustainable behaviour in energy use.

Energy efficiency is a business value that increases competitiveness, as it contributes to the optimisation of processes and associated facilities. As a business strategy, a set of new energy-saving applications and technologies is also being implemented in the manufacturing process of all products.

COMMITTED TO GROWTH

At Salicru, we are committed to business excellence and sustainable development, values that we fully share with the **CRE100DO Foundation** of the Spanish middle market, whose objective is to stimulate growth, innovation and cooperation between strategic sectors. We also participate in the **Forum of Renowned Spanish Brands** (FMRE), a strategic alliance created to defend the importance of branding and internationalisation.

SERVICE

Our more than 60 years of experience in the power electronics sector is not only reflected in a wide range of products, but also extends to a broad spectrum of services. **One of our main pillars is Salicru Services**, implemented at the company's headquarters and in its national and international offices. This structure allows us to be closer to our customers and enables us to respond immediately to any need.

We offer remote connection and equipment monitoring directly from our headquarters, for predictive maintenance and a rapid response to any incidents.

+160.000 EQUIPMENTS
production per year

+2.000.000 EQUIPMENTS
in operation worldwide

200 MVA/YEAR
safe power supply

ISO 9001
Quality

ISO 14001
Environment

ISO 45001
Safety and health







UNIQUE PROJECTS

Our reputation and experience have led us to participate in projects that, due to their characteristics, can be considered singular. We have carried out various types of work in collaboration with other clients, including the following notable examples.

- Electrical guarantee for Spotify Camp Nou
- Electrical protection for Gewan Island and Neom Islands (Qatar)
- Offices and ATMs of the Bank of Riyadh (Saudi Arabia)
- Lighting for access to the Great Wall of China (China)
- Lighting and security protection for the Pyramids of Giza and the temples of Luxor (Egypt)
- Energy coverage for railway network stations (Sweden)
- Energy coverage for all high-speed rail lines AVE (Spain)
- Madrid and Bilbao Metro (Spain)
- Electrical protection for Charles de Gaulle Airport (France)
- Power supply for the Pepsico production plant (Pakistan)
- Energy guarantee equipment for the Aviation Authority control centres in Dublin and Shannon (Ireland)
- Lighting for Barcelona Airport, Torres Mega (Spain)
- Electrical backup for the Echelon data centre network (Ireland)
- Video signal protection for television broadcasts in 1st and 2nd division football stadiums (Spain)
- Photovoltaic power supply for the 'Galápagos con luz propia' project in the Galápagos Islands (Ecuador)
- Power supply for the Oxigen Data Centre (Spain)
- Protection of public lighting in the main municipalities of Tunisia (Tunisia)
- Protection for the 2015 Africa Cup of Nations (Equatorial Guinea and Gabon)
- Power supply for engine control equipment at the AIRBUS plant in Bremen (Germany)
- Energy coverage for all Ferrocarrils de la Generalitat de Catalunya railway junctions (Spain)
- Prototype of Ferrolinera, a device for transforming DC from commuter and high-speed rail catenaries to power stations, substations and electric charging points (Spain)
- CaixaBank electrical network protection (Spain)
- Emergency power supply to turbines on the Spanish Navy's F-100 frigates (Spain)
- TRAC project for rural cellular access (Spain)
- Protection of the traffic light system in Barcelona and Zaragoza (Spain)
- Collaboration on the Smart City Project of the Rivas Vaciamadrid City Council with the protection of public lighting (Spain)

1965



1968



1971



1973



1982



1987



1997



2000

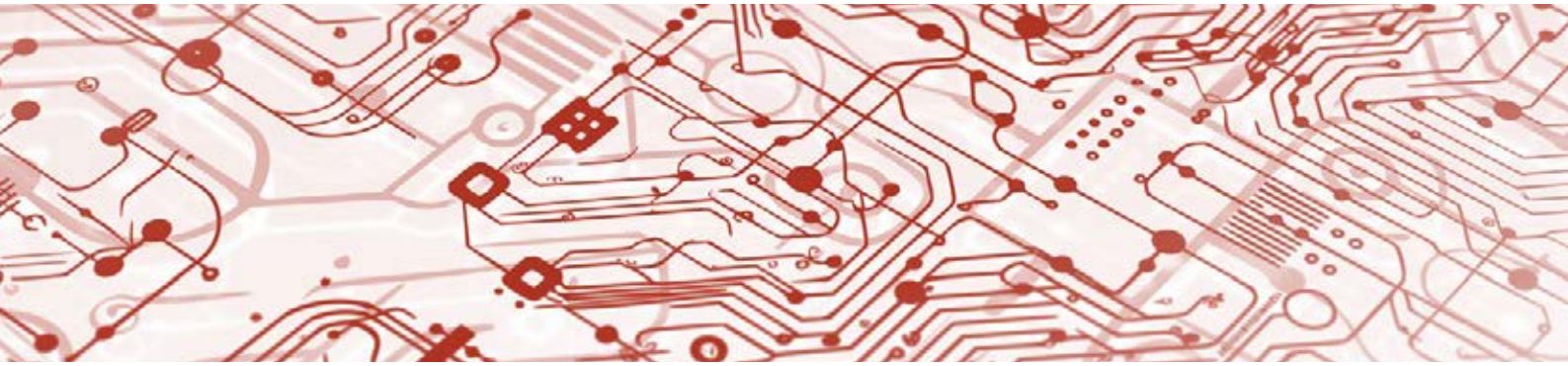


2005



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HOMES, OFFICES & SHOPS

ADVANCED AND VERSATILE PROTECTION OF COMPUTER, TELECOMMUNICATIONS AND MULTIMEDIA EQUIPMENT

We live in a society of digital information, in the age of connectivity. In our homes, offices and small businesses, we have numerous computer and audiovisual devices connected to the power supply which we also use to store large amounts of important personal and professional files. These documents, as well as the technologies and systems associated with them, have high strategic value, but they also have one thing in common: they are all dependent on a stable and good-quality power supply to ensure uninterrupted enjoyment of their benefits. To make this possible, Salicru offers optimum solutions to ensure their integrity and maximum protection at all times.







Storms, lightning, excess demand... there are many different causes of electrical disturbances that can affect computer and electronic equipment in the office and home environments.

These power failures can affect computer systems and its vulnerability. In fact, the main factor of data loss in digital environments is power supply disturbances. On top of viruses and cyber attacks, this circumstance causes about half of all data losses. Its economic impact on offices and businesses can be enormous, with an indeterminate duration, and it represents serious implications for customers, suppliers, and workers. It is estimated that 40% of the disturbances cause incidents in the connected loads, including data loss.

Changes in the electrical network can also endanger the integrity of computer, audiovisual or telephone equipments. Nowadays, technologies are more and more precise and the components more complex and with more electrical involvement. A cut of power or an overvoltage reduces the useful life of equipment and in some cases destroys it, increasing investment costs.

Salicru's mission is to ensure optimum energy availability and advanced and versatile protection of equipments in the home and office environments.

- **Uninterruptible Power Supplies (UPS):** these store energy to ensure continuity of AC supply.
- **Active electrical protectors:** multi-socket power strips for powering and protecting equipment in the office and home.

DISTURBANCES

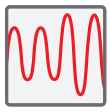
In home, office and small business environments, these are the most common and harmful electrical disturbances for computer and electronic equipment connected to the power supply.



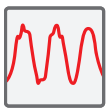
Power cuts and micro-cuts



Undervoltages and voltage gaps



Transient and permanent overvoltages



High frequency disturbances

UNINTERRUPTIBLE POWER SUPPLIES (UPS)

Current storage systems, servers and associated network electronics use miniaturised components that are more sensitive to electrical disturbances than their predecessors from previous generations. This means that prolonged exposure to these disturbances without adequate protection can contribute to reducing the life of electronic components and to causing some of the most common faults, without us being able to perceive them in all of their magnitude.

To prevent these situations, the best solution is an Uninterruptible Power Supply (UPS), synonymous with efficiency and savings for various reasons.

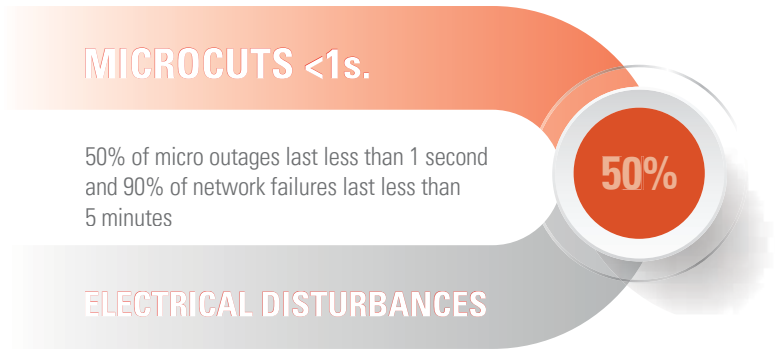
- They are more efficient sources of energy, because the equipment experiences higher performances
- They eliminate the harmonics that come from the loads towards the network, allowing a better power quality
- They eliminate network fluctuations (power outages, surges) and prevent shutdown and restart of systems

Salicru's UPS adapt to the specific needs of each installation, and with a single piece of equipment it is possible to protect the different components that can be found in homes, offices and shops, in single-user or multi-user environments.

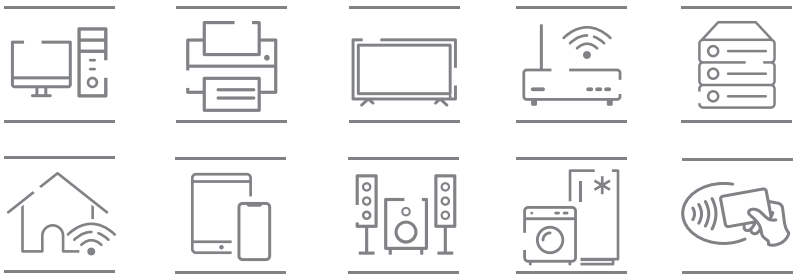
ACTIVE ELECTRICAL PROTECTORS

The latest generation multiple bases act against overloads, overvoltages and atmospheric discharges. Some models have technology to prevent vampire or phantom loads, which are those consumptions that some devices have in stand-by mode.

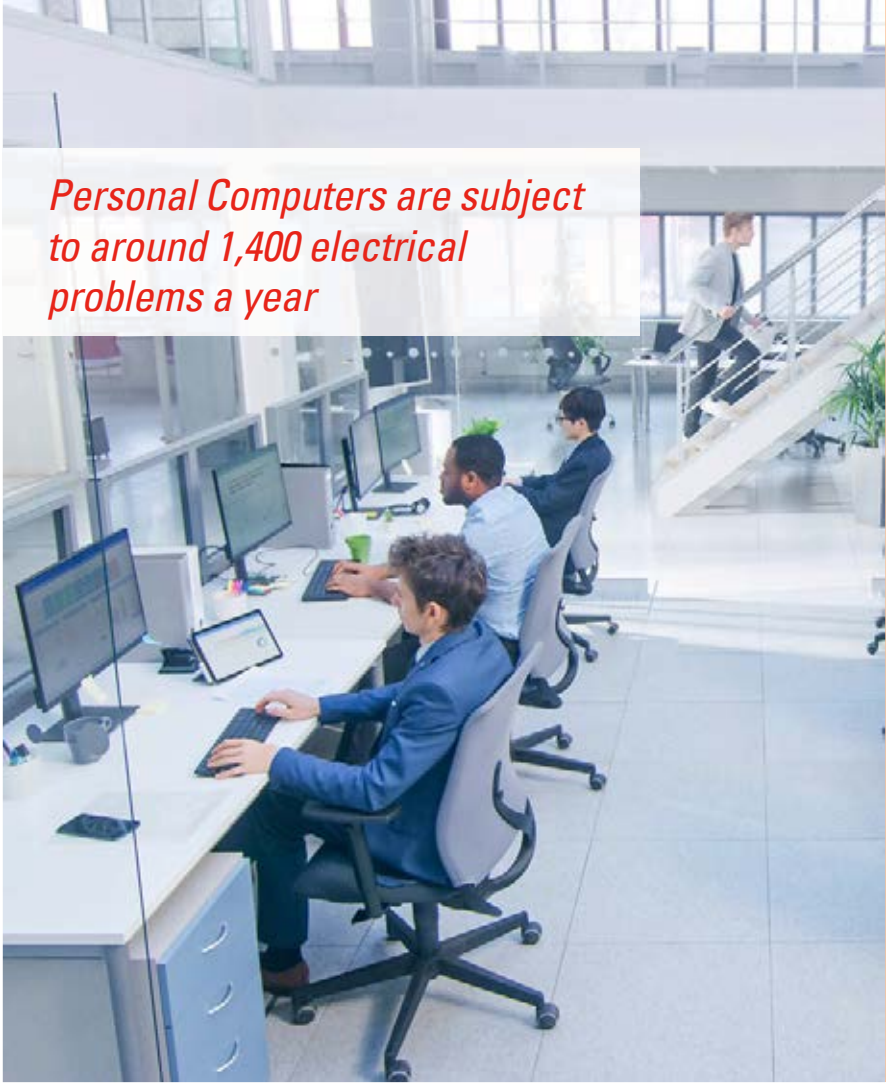
- Wide range of models
- Dual USB charger for charging electronic devices
- Orientated sockets for easy connection
- Overvoltage indicator
- EMI/RFI filter for electrical noise reduction
- Master/slave function for energy saving
- Integrated cable winder



APPLICATIONS







Personal Computers are subject to around 1,400 electrical problems a year



SPS SAFE S

Active electrical protectors



SPS NET2

Compact DC UPS with lithium-ion batteries



SPS HOME+

Line-interactive APFC multi-socket UPS 650 VA, 850 VA and 1,000 VA



SPS ONE

Line-interactive UPS 500VA - 2,200VA



SPS SOHO+

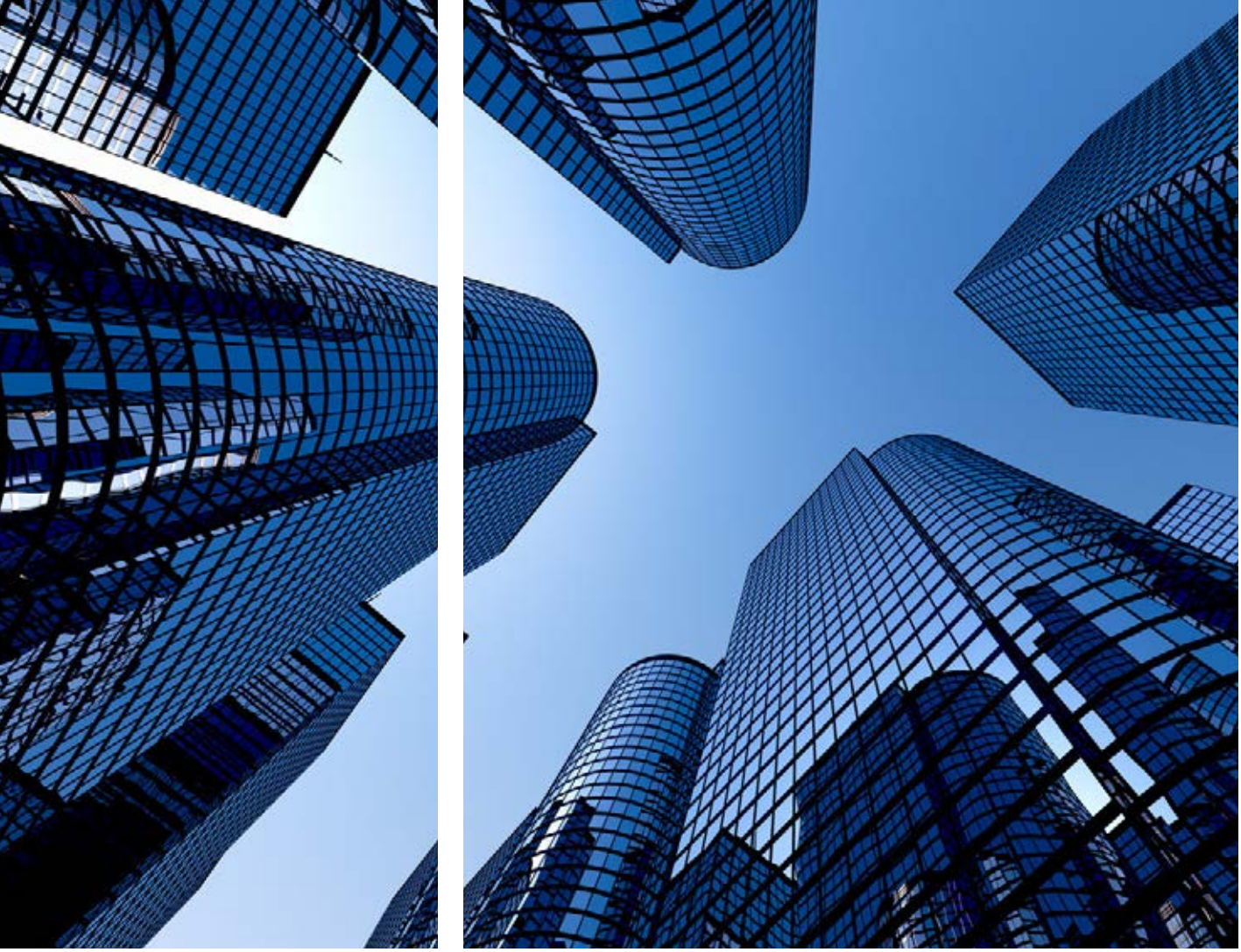
Line-interactive UPS 750VA - 2,250VA with dual USB charger



SPS ADVANCE T

Line-interactive sine-wave UPS tower 850VA to 3,000VA





SMES, LARGE CORPORATIONS & PUBLIC SECTOR BODIES

TAILOR-MADE SOLUTIONS TO ENSURE THE SECURITY OF THE POWER SUPPLY AND PROTECT SENSITIVE INFORMATION

In today's world, both the public and private sectors are committed to security and energy efficiency in their production and information systems. What both have in common is that they need to store and process a large volume of information that requires the utmost security to guarantee absolute confidentiality and continuous availability.







Salicru's uninterruptible power supplies (UPSs) feature the technology and know-how necessary to protect the facilities of SMEs, large corporations and public authorities from all kinds of electrical disturbance.

Today, practically all companies and public authorities, whether medium-sized or large, have some sort of data centre, with the largest even having several. One of the most important factors that influences the creation of centres of this kind is the need to ensure continuity of service to customers, employees, suppliers, citizens and partner companies.

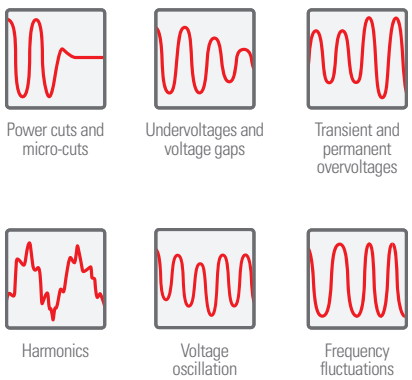
In these environments, physical protection of computer or communications equipment, as well as database servers that may contain critical or sensitive information, by systems that ensure a stable and permanent power supply is very important.

A UPS is a key factor to take into account when making decisions that affect the energy security of data centres. Incorporating them into this kind of centre accounts for approximately 3-5% of total expenditure, a relatively small percentage that could represent a considerable saving by preventing data losses.

On the other hand, flexibility, scalability and redundancy are rising parameters in the ICT market. Having equipment that adapts to the specific growth needs of a company represents an important economic and operational advantage. **Salicru** has a **specific range of modular systems**, options that significantly increase the safety of classic systems. These are options that improve power availability, ensure reliability, and offer enhanced protection for data centers.

DISTURBANCES

The electrical network should behave as an ideal source, but in practice there are certain problems derived from electrical disturbances. In this area, these are the electrical disturbances that occur most frequently and that most seriously damage computer and electronic equipment.

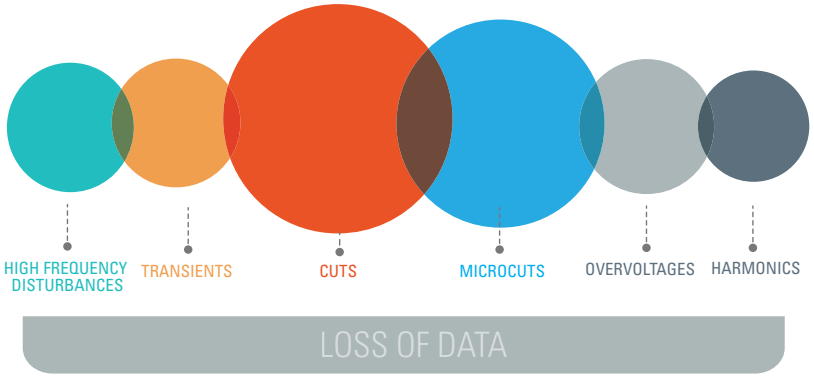


MAIN FEATURES

Salicru innovates, and its teams and services associated with them offer a recurring set of functionalities that constantly seek to improve their performance. The most notable are **SLC Greenergy Solution** and **SMART Solutions**, which the company has promoted for several years in the research and development of innovative products to respond to the new protection needs of its customers. The **SLC Greenergy Solution** encompasses highly energy-efficient devices built with more than 80% recyclable materials and incorporating innovative options such as 'eco-mode' and the prioritised output function for the most critical loads.

The **SMART Solution** features devices that have a set of services associated with the product such as management software, connectivity solutions, monitoring, communication encryption in SNMP environments, virtual server management, remote maintenance service and use of DSP processors.

The Remote Management and Supervision System offers the possibility of remote controlling different equipment interactively performing maintenance and setting parameters.



APLICATIONS

High design specifications coupled with great adaptability (optional extras, growth, communication, etc.) make **Salicru's** UPSs the best protection and security option for applications that require a high level of security against all kinds of electrical disturbances.

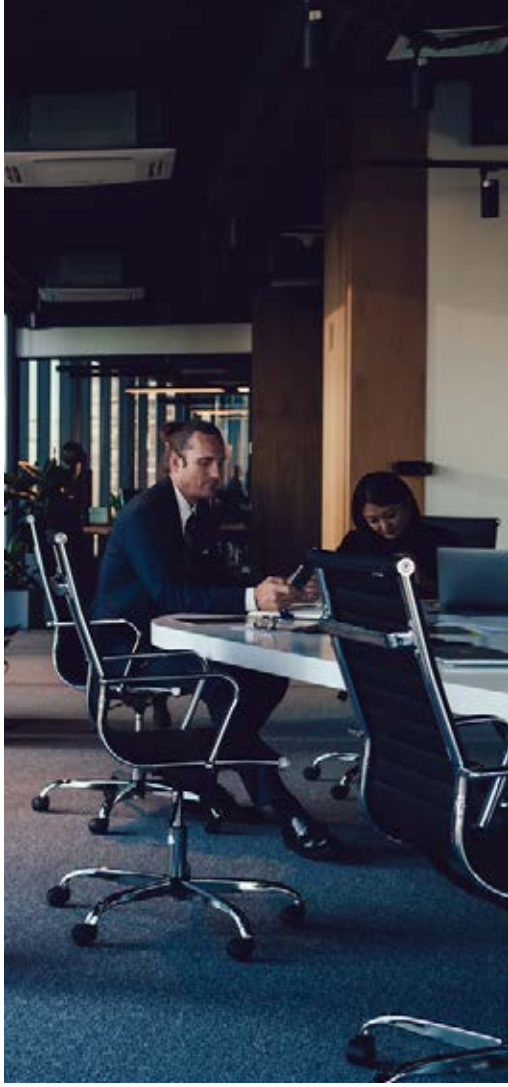
- Data centres
- Hosting and housing
- IT networks
- Routers and switches
- Hubs
- Server farms
- Voice and data networks
- IT servers
- CAD/CAM
- Document management
- Unified communications (UC)
- Video streaming
- ERP and CRM systems
- Business intelligence (BI)
- Virtualised servers

REFERENCES





50% of information losses are due to interruptions and disturbances in the power supply.



SPS ADVANCE RT2

Line-interactive sine-wave UPS
800VA to 3,000VA



SLC TWIN PRO2

On-line double-conversion UPS
700VA to 3,000VA



SLC TWIN PRO3

On-line IoT double-conversion UPS
4kVA to 10kVA



SLC TWIN RT3

On-line IoT double-conversion tower/rack UPS
1,000VA to 10kVA PF=1



SLC CUBE4

Uninterruptible power supply with IoT
from 7.5kVA to 80kVA



SLC ADAPT2

On-line double-conversion modular rack UPS
10kVA to 1,500kVA







INDUSTRY

MAXIMUM PROTECTION IN THE CORPORATE ENVIRONMENT

The supply of power in the industrial field is basic and essential to ensure maximum profitability. For this reason, ensuring a continuous, reliable, efficient and economical electricity supply in industrial environments is as critical as it is vital to ensure maximum business competitiveness. **Salicru** has 60 years of service experience in the industrial field and has installed more than 2,000,000 devices around the world. And always with the same maxim: being close to the customer to meet their needs.







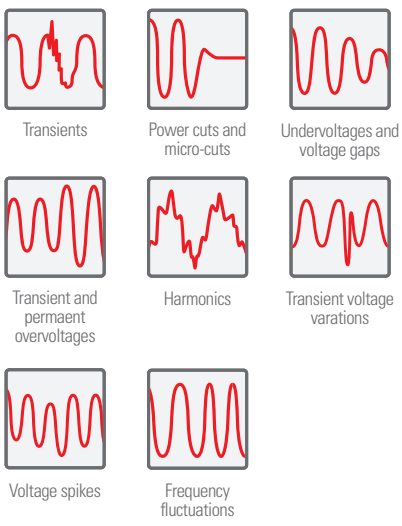
Salicru has a wide-ranging portfolio that provides appropriate solutions to every type of problem or electrical disturbance, guaranteeing 24 hours of electrical power for the most sensitive systems in a sector as demanding as the industrial, and offering a continuous, clean, economical, reliable and environmentally friendly electrical supply within a wide range of power ratings, both in alternating and direct current.

In addition, thanks to the know-how acquired for 60 years of industrial activity, it can also offer solutions tailored to specific problems, work that is more typical in many cases of a power electronics engineering firm than a manufacturing company.
The main solutions offered are:

- **Uninterruptible Power Supply Systems (UPS)** store energy to ensure continuity of AC supply.
- **Voltage stabilizers** ensure output voltage stability against voltage variations
- **Variable frequency drives** control the rotating speed of machinery and motors
- **Power supplies** convert altern current voltage into direct current.
- **Control transformers** provide quality and versatility in low-power transformation

DISTURBANCES

The range of possible electrical problems that can affect industry is very extensive and can affect all kinds of industrial processes: continuous manufacturing systems, control-command automations, instrumentation and measurement, supervision and control of processes, safety systems, etc.



INTERRUPTIONS

According to the Spanish Association of the Electrical Industry, interruptions in the electricity supply cost to Spain's economy around 6.2 billion euros per year.

MAIN FEATURES

Salicru believes in innovation, and its associated services offer a recurring set of functionalities that constantly improve their performance. Aware of the impact of energy expenditure in the industrial sector, Salicru has developed equipment with a high energy efficiency component that enables the equipment connected reduce its consumption and its environmental impact.

Another outstanding functionality is the connectivity of the equipments. Monitoring them remotely means saving on resources and gaining in operability, in addition to having a remote maintenance service that optimizes their conservation to the maximum and that advances any unforeseen event, without specifically dedicated human resources.

APPLICATIONS

The demanding construction specifications and the multiple adaptation capacity (optional equipment, modularity, communication, etc.) make Salicru's UPS the best protection and security option for technologies that require a high level of security against all kinds of electrical disturbances. Uninterruptible power supplies, voltage stabilisers, variable frequency drives and power supplies are some of the most outstanding solutions that Salicru offers today to meet the different needs of a sector as diverse as the industrial. It is a range of solutions that provides maximum reliability in electrical protection, production and control systems and industrial processes that require the use of machinery that is highly sensitive to voltage variations,

- Electric drives and furnaces
- Electrical discharge machines
- Graphic printing equipment
- Lathes and presses
- Lifiting devices
- Medical equipment
- Milling machines and polishers
- Numerical controls
- Trimming machines
- TV repeater stations

REFERENCES





The main cause of data loss in the industrial world is not viruses, but the lack of electricity supply, which causes 40% of all losses





SLC TWIN RT3 Lion

Uninterruptible power supply on-line double conversion tower/rack from 1,000VA to 3,000VA with lithium-ion batteries



SLC CUBE4

Uninterruptible power supply with IoT from 7.5kVA to 80kVA



SLC X-PERT

Uninterruptible power supplies 80 to 400kVA



CONTROLVIT

Variable frequency drives from 0.2kW to 500kW



DC POWER-L

Thyristor-controlled rectifiers 10A to 800A



EMI3

Servomotor voltage stabiliser 5 kVA to 5 MVA







INFRASTRUCTURES

HIGH-PERFORMANCE PROTECTION FOR LARGE CRITICAL APPLICATIONS

Transport, energy or hydraulic infrastructures are basic for social development, and our professional and personal well-being depends to a large extent on their correct functioning. Airports, ports and highways as transport infrastructures; electricity and fuel networks as energy infrastructures, drinking water or drainage networks as hydraulic infrastructures... These facilities constitute a set of networks and services that are very critical for our society. For this reason and because of their ability to influence the development of multiple activities, these large structres need a continuous and stable electricity supply that does not suffer interruptions that affect their normal operation.

What would happen if the air traffic control radars lacked power supply? Or the traffic lights, operation rooms or water treatment plants?







Salicru offers a range of advanced technological solutions at the service of infrastructures as critical as those in this sector. It consists of devices that can work individually or as a complement, depending on the type of facilities to which they are connected, and offer alternating current supply continuity solutions, stability against voltage variations, control of the speed of machinery motors and adjustment of the level of voltage coming from the distribution grid. Our portfolio has appropriate solutions for each type of problem or electrical disturbance, which guarantee 24-hour power supply for the most sensitive systems.

Our main solutions are the **Uninterruptible Power Supplies (UPS).** These systems store energy to ensure continuity of AC supply.

The **variable frequency drives** control the rotating speed of machinery and motors.

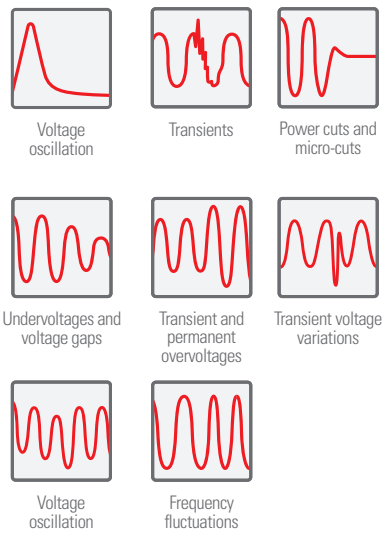
The **DC/AC systems** ensure output voltage stability against voltage variations.

The **Transformers and Autotransformers** adjust the level of voltage coming from the distribution grid.

We also offer tailor-made solutions adapted to specific challenges, in a role that in many cases is closer to that of a power electronics engineering company than that of a manufacturer.

DISTURBANCES

A wide range of electrical disturbances, as diverse and varied as the infrastructure sector itself, can affect normal operation. In addition to voltage drops and losses in the conventional distribution system, this collection of infrastructures are subjected to the adverse climatic conditions.



MAIN FEATURES

Salicru believes in innovation, its devices and associated services offer a recurring range of outstanding features that constantly seek to improve performance. Remote monitoring means saving on resources and gaining operational capacity, in addition to having a remote maintenance service that fully optimises upkeep. And another of Salicru's outstanding systems is Remote Management and Supervision which offers the possibility of remotely controlling different power equipment.

Aware of the current impact of energy expenditure on the industrial sector, Salicru has developed a number of devices with a high degree of energy efficiency that enable any devices connected to them to reduce both their consumption and environmental impact.

In addition to developing, manufacturing and marketing products, the experience that Salicru has accumulated over its history has led it to also providing engineering and consulting services to its customers to assist them in resolving electricity supply issues.

UPS

Salicru has developed a range of uninterruptible power supplies (UPS) whose features are ideal for large critical applications such as transport, power and water infrastructures, as they ensure the safeguarding of equipment and the proper management of systems.

They also boast parallel growth capacity or unlimited redundant security, monitoring and remote management options, incident notification, equipment health monitoring and preventive maintenance.

VARIABLE FREQUENCY DRIVES

There are increasingly different types of facilities that need to regulate the speed of their motors in order for them to adapt to changing load needs and for their energy consumption to be reduced. Salicru's variable frequency drives enable simple and efficient control of any application driven by asynchronous motors from 0.2kW to 500kW.

DC/AC SYSTEMS

Ensuring the functioning of all of these infrastructures is essential, and to achieve this, we also offer products that ensure alternative power sources, such as our DC/AC systems, devices that convert alternating into direct current (rectifiers, chargers) or direct into alternating current (inverters). They are specially designed to operate in very harsh and demanding operating environments.

TRANSFORMERS AND AUTOTRANSFORMERS

Salicru's IT series of low-voltage electrical transformers and autotransformers are used as electrical isolation for the reduction of mains disturbances or to adjust the level of voltage coming from the distribution grid. Autotransformers, with their serially-connected coils that do not provide galvanic isolation, have the function of converting one voltage to another, and, as such, are a more economical solution than transformers.

REFERENCES

aena · ecopetrol · DOW · TotalEnergies · Kuwait Oil Company · REPSOL · TEXACO · PEMEX · SIEMENS · Grupo Hospitalario quirónsalud · Institut Català de la Salut · SERVIZO GALEGO DE SAÚDE · Hospiten · SaludMadrid · SERVICIO ANDALUZ DE SALUD Consejería de Salud y Consumo





93% of power supply problems are micro-cuts, which are easily preventable with a UPS



SLC CUBE4

Uninterruptible power supply with IoT
from 7.5kVA to 80kVA



SLC X-PERT

Uninterruptible power supplies
80 to 400kVA



DC POWER-S

DC energy systems



DC POWER-L

Thyristor-controlled rectifiers 10A to 800A



IT

Electrical Transformers and Autotransformers



CONTROLVIT

Variable frequency drives from 0.2kW to 500kW







RAILWAY

OFF-BOARD ELECTRICAL SOLUTIONS FOR SUBSTATIONS, SIGNALLING AND AUXILIARY SERVICES

We develop and supply systems designed to guarantee the quality, stability and availability of the power supply in highly critical operating environments, such as electric traction substations, signalling, control, communications and auxiliary services, minimising operational risk. An interruption, even of milliseconds, can compromise the operation of an interlocking, a signalling cabin or a control centre. For this reason, our solutions are designed to protect critical loads against network disturbances and ensure service continuity at all times. All of them comply with current international railway regulations and are prepared to operate in severe environmental conditions, with extended temperature ranges, resistance to high humidity, electrical noise, harmonics, transients and electromagnetic demands. They have remote monitoring through industrial interfaces and are compatible with SCADA, BMS and predictive diagnostic systems.







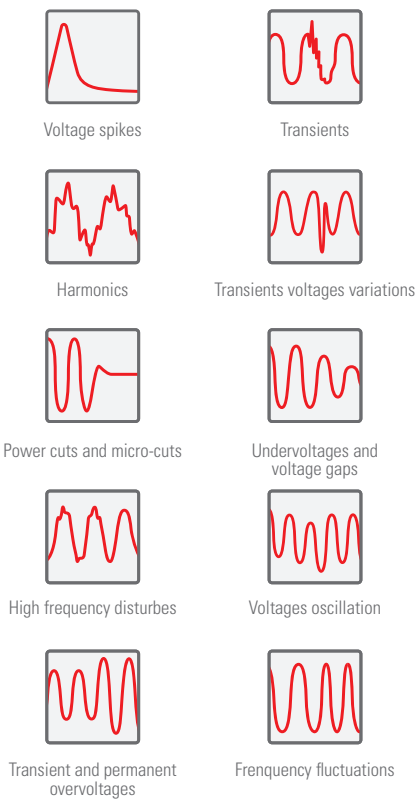
Our product range meets the primary electrical needs of railway infrastructure in both alternating and direct current and has been designed to withstand harsh environmental conditions with extended temperature ranges and resistance to high humidity, electrical noise, harmonics, transients, and electromagnetic forces.

We offer on-line double conversion **Uninterruptible Power Supply (UPS) systems** with redundant modular architecture and parallel operation capability, ideal for signalling, electronic interlockings and control systems; **DC power systems** with rectifiers and stationary battery chargers, configurable in N+1 redundant mode, with output voltages from 24 to 220 Vdc and adaptable to various network topologies; high-efficiency **DC/AC and DC/DC converters** for the conversion and distribution of energy from battery banks to alternating or auxiliary loads; electronic or servomotor **voltage stabilisers** for dynamic and precise regulation of mains voltage in railway installations prone to drops or overvoltages, and isolation **transformers and autotransformers**. The **automatic detection of single-phase or three-phase input** is one of the most important features in our projects. They're especially useful when it comes to railway solutions, where power supply conditions can vary based on the connection point and technical constraints. The **same solutions can also act as single-phase input to three-phase output converters**, which is a highly sought-after feature that very few manufacturers offer.

Furthermore, we collaborate with a consolidated network of partners, including engineering firms and certified installers in the railway sector, which enables us to approach each project with a holistic vision, from the initial identification of the most suitable solution to startup, training, maintenance, and long-term after-sales support. These partnerships help us respond quickly and accurately to end-customer needs and guarantee the reliability of the installation throughout its entire life cycle. Our product range extends beyond the railway sector to include data centres, industrial automation, and telecommunications networks, offering solutions designed to provide unbeatable reliability.

DISTURBANCES

The railway environment can be affected by a wide spectrum of electrical disturbances.



REFERENCES

Our references include railway installations in metropolitan, conventional and high-speed transport networks. Each project is proof of our ability to adapt to technical requirements and comply with regulations while maintaining a commitment to operational reliability and energy efficiency.

We have established ourselves as a leader in advanced electrical protection systems across a diverse range of critical infrastructures. In Spain, highlights include supplying and upgrading modular UPS systems from the **SLC ADAPT2** series, together with EMI3 stabilisers, isolation transformers and **DC POWER-S** rectifiers for various high-speed lines, notably the Madrid–Seville high-speed line. This project follows others on the high-speed network, such as the Madrid–Galicia line (which also has **DC POWER-L** chargers), the Madrid–Lleida section, the Vandellós–Camp de Tarragona line and the Extremadura network, with **SLC ADAPT** models, **EMI3** stabilisers and a large number of **F-RW** catenary filters.

Salicru has been actively involved in various high-speed rail projects in Egypt. The Cairo–Alexandria corridor has **SLC CUBE3+** units installed, while 24 V rectifiers and UPS units have been supplied for the Cairo–Behna and Asyut–Naga Hammadi routes. As with the Blue, Red and Green lines, these are modular **SLC ADAPT2** systems.

The Tren Maya line in Mexico, one of Latin America's most ambitious railway projects, features our modular **DC POWER-L** 125 V rectifier UPS units, guaranteeing uninterrupted power supply to signal boxes, signalling and control systems along more than 1,500 km of track. The Bandirma high-speed line in Turkey and the Rail Baltica project (Estonia, Latvia and Lithuania) in the Baltic countries both feature modular UPS and **DC POWER-L** rectifiers.

Multiple UPS solutions, isolation transformers, rectifiers and batteries have been deployed on conventional Spanish lines section, including substations. ADIF's safety and communications systems in Barcelona are equipped with our **SLC ADAPT2** series, as are all FGC (Catalan Government Railways) signal boxes, where each one has a module that can be adapted to three-phase, single-phase or three-phase 220 V systems.

The most important projects in the urban and conventional sector include our collaboration with TMB for the Barcelona and Madrid underground lines (**SLC ADAPT2**), and the CAF for the Uruguay rail network (**SLC ADAPT2** and **SLC CUBE3+**). We have also supplied 30 kVA single-phase UPS units and frequency converters for the Quito underground and for the Sofia (**SLC CUBE3+** and **IT** transformers) and Constantina (**SLC CUBE3+**) metro systems.

Administrador de Infraestructuras Ferroviarias Spanish Railways Organization

Deutsche Bahn

State Railways of the Turkish Republic

Egyptian Railways Organization

Morocco's National Railways operator

Agencia Reguladora de Transporte Ferroviario de Mexico

Rail Baltica Global Project

Saudi Railways Organization

Czech Railways Organization

Greek Railways Organization

Bulgarian Railways Organization

Ferrocarril Central Uruguay

Catalonia Railways Organization

Barcelona Subway Organization

Lisboa Subway Organization

Santo Domingo Subway Organization

Málaga Subway Organization

Madrid Subway Organization

Ciudad de México Subway Organization

Quito Subway Organization

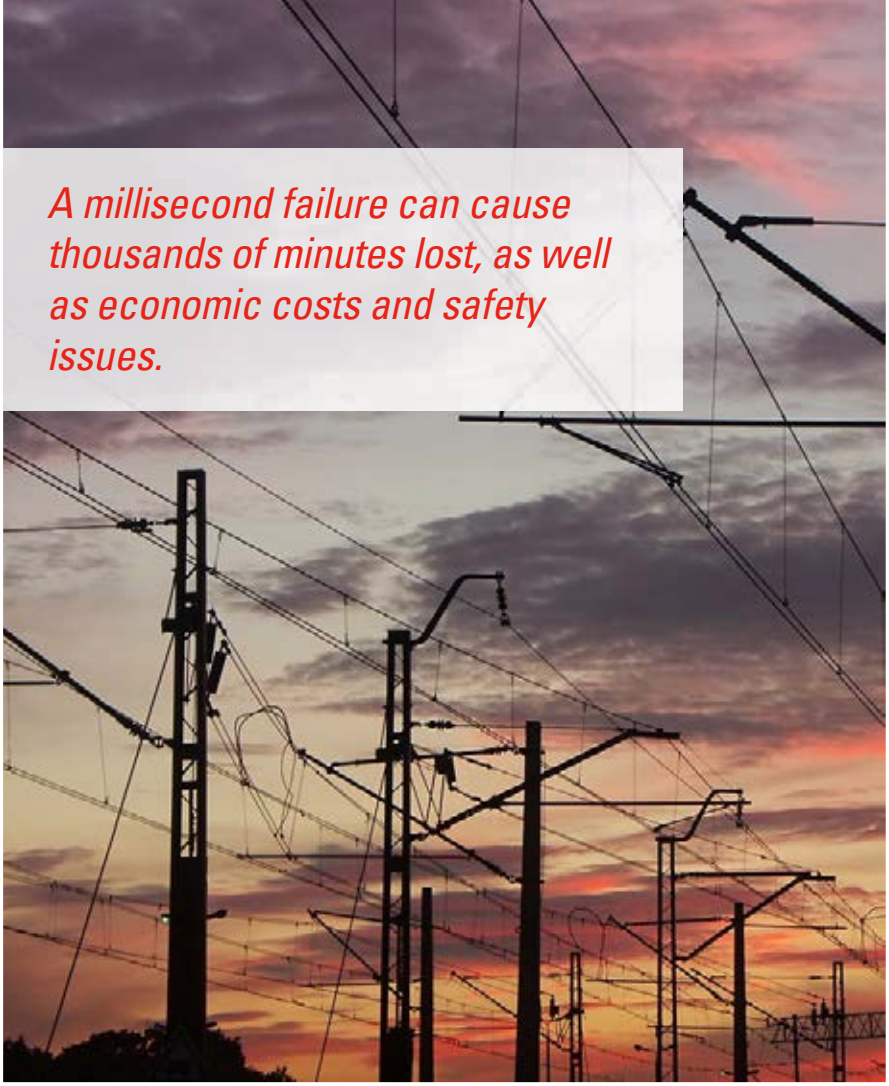
Santiago de Chile Subway Organization

Lima Subway Organization

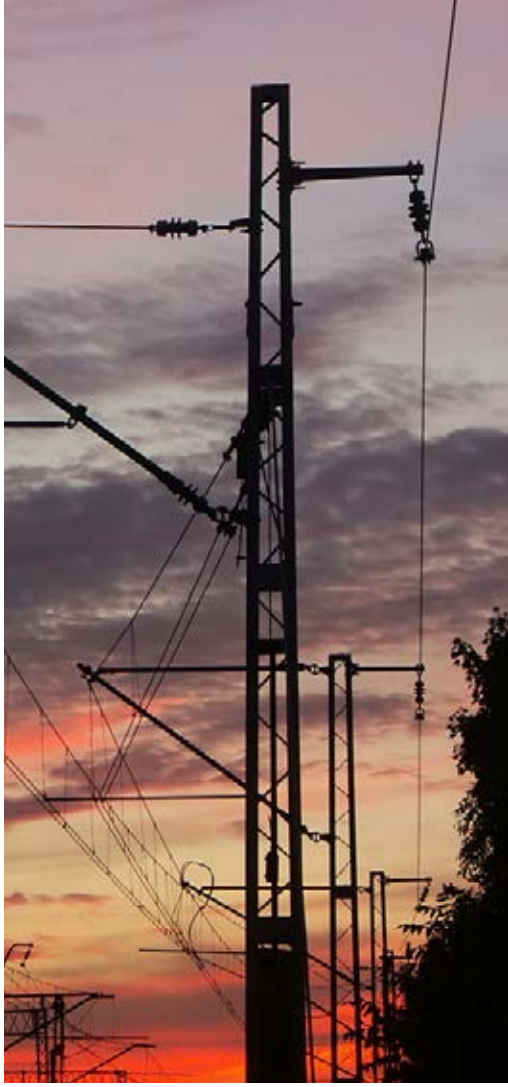
Chile Railways Organization

SIEMENS ALSTOM HITACHI cobra syneox

ELECTREN CAF FCC indra 中國中鐵 CHINA RAILWAY



A millisecond failure can cause thousands of minutes lost, as well as economic costs and safety issues.



SLC ADAPT 2

Modular On-line double conversion UPS from 10 kVA to 1500 kVA



CS-MV

Bidirectional DC/AC catenary converter



EMI3

Servomotor voltage stabiliser from 5 kVA to 5 MVA



DC POWER-L

Thyristor rectifiers 10 A - 800 A



DC POWER-S

DC power systems



IT

Electrical transformers and autotransformers





GRID & POWER UTILITIES

SAFETY IN POWER GENERATION, TRANSMISSION AND DISTRIBUTION

At Salicru, we've been protecting the electricity grid against elements that can cause interruptions for six decades. Much like a nervous system, it is sensitive, interconnected and vulnerable to any disturbance, requiring constant layers of protection.

Our mission is not to mitigate failures, but to protect the foundation of the electrical system by anticipating risks that range from local micro-cuts to disturbances that affect critical infrastructure.

Our track record has positioned us uniquely within the energy ecosystem. We have first-hand knowledge of the vulnerabilities affecting each link in the chain, and it is precisely there that we take action.







In terms of generation, we work with technologies capable of stabilising voltages that can easily exceed 20–25 kV in both conventional and renewable power plants. Given that fluctuations typically occur at the initial stage of supply, we implement solutions that ensure a safe start-up and continuous operation, as well as a power quality that meets the highest industrial and regulatory standards. We also offer integrated solar energy solutions to enhance generation efficiency.

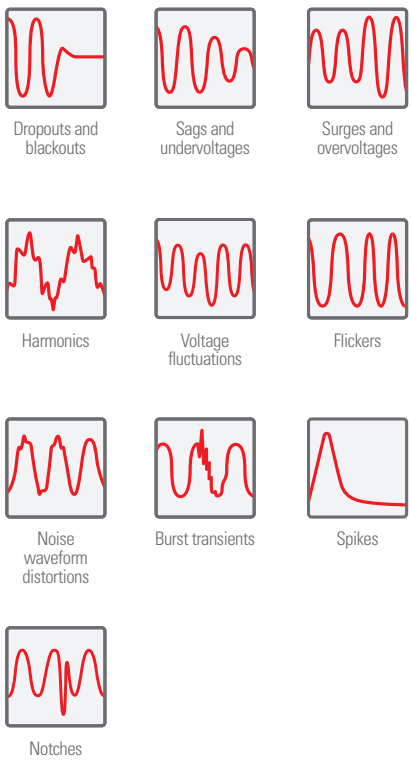
In the field of transportation, we work with high- and extra-high-voltage power lines ranging from 66 to 400 kV, where even the slightest deviation can have region-wide repercussions. We provide voltage transformation systems, uninterruptible power supplies and specialised power electronics designed to shield control centres, substations and internal network communications. Our mission is to ensure that minor auxiliary failures do not escalate into significant structural problems.

When it comes to distribution, at voltages ranging from 1 to 36 kV, the network approaches the point where the energy is converted into a service. This is the segment most vulnerable to atmospheric phenomena, overloading and load fluctuations. Our backup solutions—from UPS systems to stabilisers and rectifiers—support the operation of transformers, remote control systems and sensitive equipment, ensuring that homes, businesses, industries and essential services receive a stable, usable voltage.

Every device, every architecture and every technological advance we develop has a purpose: to ensure that electricity reaches its destination with the required quality and without interruption. Remote monitoring, redundant communications, and predictive analysis allow actions to be taken before the network suffers, transforming reactive maintenance into preventive maintenance.

DISTURBANCES

Disturbances occur very frequently at all stages of the electrical system.

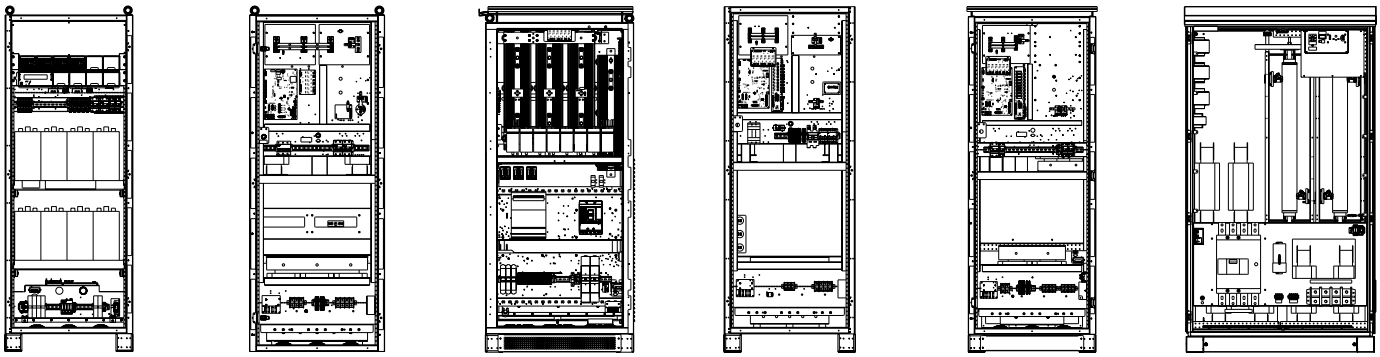


CUSTOM SOLUTIONS

Customisation makes it possible to provide protection tailored to the specific needs of each customer, seamlessly guaranteeing the continuity and security of all their operations. In a world driven by electricity, having systems that ensure an uninterrupted, high-quality power supply is essential to prevent losses, breakdowns and associated risks. At Salicru, we understand these needs through more than six decades of experience and offer our engineering team to design solutions and respond to the most demanding market challenges. For this reason, our custom solutions are designed to perfectly adapt to the particular requirements of each project. We embrace flexibility as one of our core principles and offer customisations that always incorporate in-house developments, as existing market options rarely cover the specific requirements of each customer in a uniform way. To achieve this, we develop solutions from scratch or adapt existing equipment, always under the strictest quality controls.

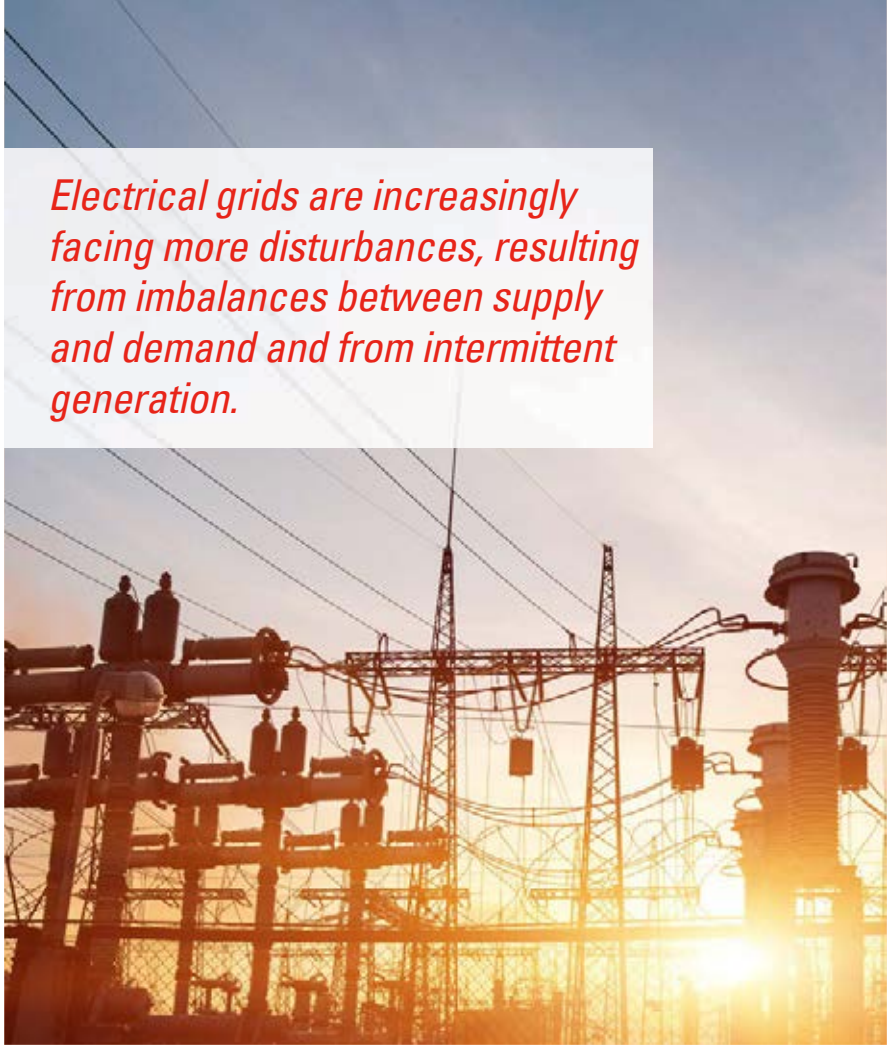
DC Systems are units that convert alternating current into direct current (rectifiers, chargers), or direct current into alternating current (inverters). These systems are capable of storing energy in a battery bank, providing continuity of DC supply or AC supply (via an inverter) without interruptions.

When rectifiers, chargers and inverters are integrated into a single unit, they form what is known as a DC System, allowing the connection of both AC- and DC-powered loads. In addition, these systems include a control unit to manage all parameters and communication ports to interface with the outside world, enabling integration into management software and allowing remote monitoring of the system's status, alarms, events and measurements. DC Systems guarantee flawless operation without unexpected power outages. Depending on requirements, and with the option of a modular design, they can grow as needs increase, optimising the Total Cost of Ownership (TCO).



REFERENCES





Electrical grids are increasingly facing more disturbances, resulting from imbalances between supply and demand and from intermittent generation.



DC POWER-S

DC power systems



DC POWER-SD

DC/DC power systems



DC POWER-L

Thyristor rectifiers 10 A - 800 A



CS-IS

DC power converters



EMI3

Servomotor voltage stabilisers from 5 kVA to 5 MVA



RE3

Electronic voltage stabilisers from 300 VA to 150 kVA







TELECOM

THE BEST TECHNOLOGY AND PROTECTION FOR A STRATEGIC AND INNOVATIVE SECTOR

In order for telecommunications companies to offer their services, they need a constant and reliable electricity supply. An interruption means the paralysis of communication services -calls, messaging, network access-, corruption or loss of data, damage to equipment and downtime, which affects not only users but also companies.

To prevent this from happening and affecting the competitiveness of our work and wellbeing in our daily lives, uninterruptible power supplies (UPS) have been developed, devices that Salicru started manufacturing for over half a century.







Few sectors, like that of telecommunications, better reflect the technological progress of recent years and its contribution to the development of the information society. Because to talk today about telecommunications is to talk about the technology related to television, radio, landline and mobile telephones, voice and data networks and the Internet. Certain basic services that, in the event of disruption, can have major consequences for the economy, security, health, transport, etc., not to mention the loss of confidential information stored in data centres.

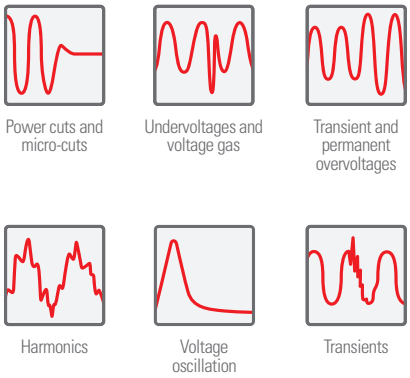
Therefore, due to their fundamental role in society, these critical infrastructures require very high levels of reliability in their numerous security protocols. And among those security protocols, UPSs play an essential role.

In addition to a permanent power supply, current telecommunication systems also need devices that store energy as an alternative, as is the case of DC/AC systems or battery chargers, which also meet the needs of a wide variety of critical loads that have to be correctly powered and protected.

Particularly suited to the telecommunications sector are rectifiers and inverters, which help to provide a high-quality AC power supply from a DC power source.

DISTURBANCES

Telecommunications and their infrastructures can be affected by a wide spectrum of electrical disturbances.



MODULAR TECHNOLOGY: THE LATEST EVOLUTION IN UPS

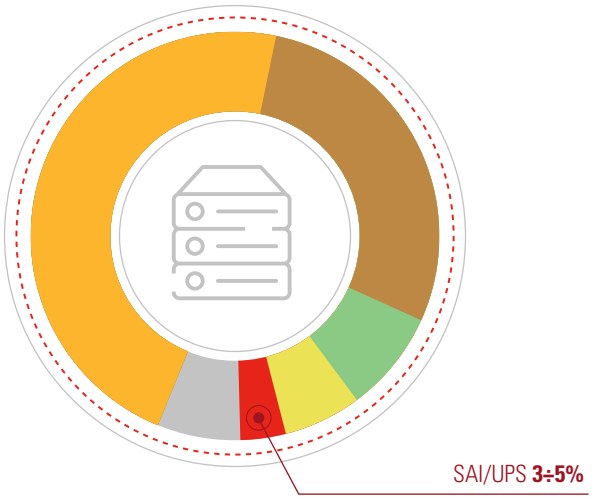
Salicru is firmly committed to modular UPS systems, devices that combine efficiency, flexibility, scalability, redundancy and reliability. These are devices that incorporate the most advanced technology, significantly improving the availability of energy and substantially increasing the security of classic power systems.

Modular technology offers an especially important advantage in data centre level and tier classification, enabling data centres to obtain high ratings (Tier III or Tier IV). And this is possible not only because of the strict specifications of the UPS used, but also because of the complete design of the DC environment, cooling system and electrical distribution to the critical loads.

- High reliability from manufacturing identical modules
- Redundancy and high availability
- Greater scalability
- Improved module performance
- Redundant static bypass
- Intelligent system management
- Drastic reduction of MTTR

- Adaptability to any kind of facility
- Optimisation of power converters
- Cycling to equalise the operation of all modules
- Improves total cost of ownership (TCO) and operational expenses (OPEX)

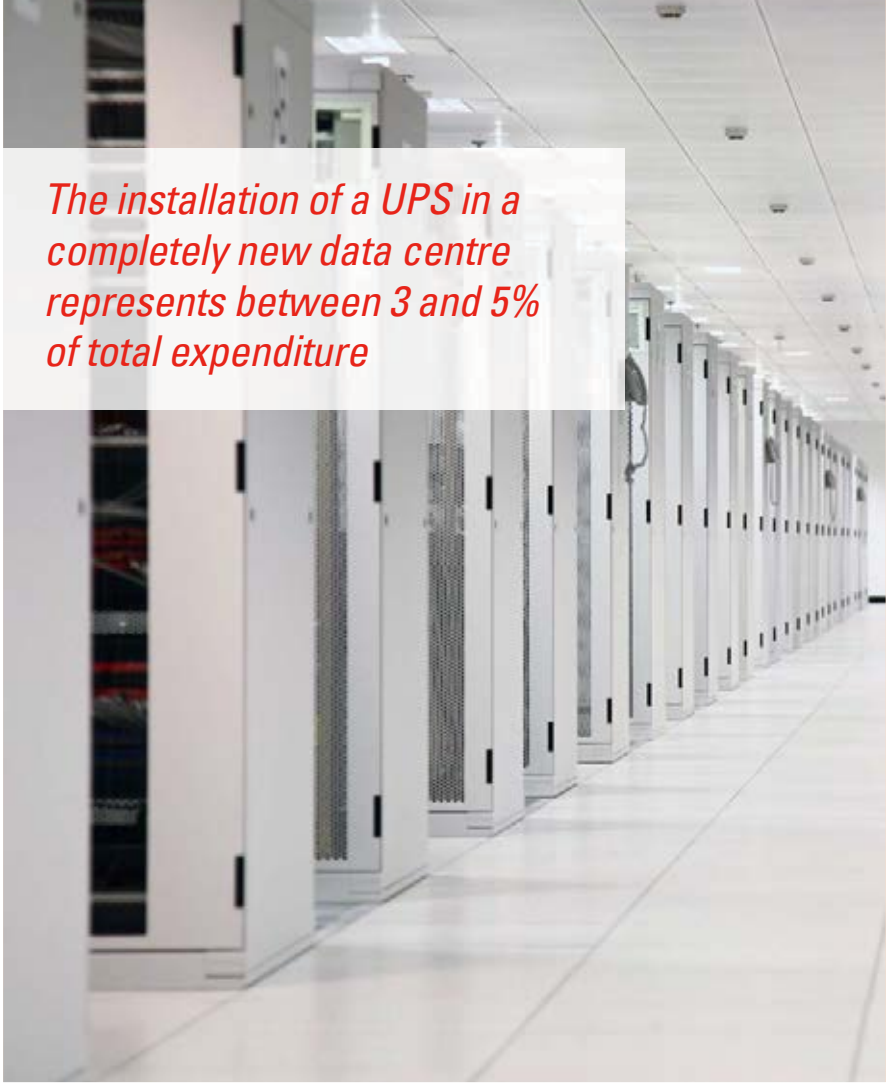
INVESTMENT IN DATA CENTER



REFERENCES







The installation of a UPS in a completely new data centre represents between 3 and 5% of total expenditure



DC POWER-S

DC energy systems



SPS ADVANCE R2

Line-interactive sine-wave UPS 1U rack
750VA to 1,500VA



SPS ADVANCE RT2

Line-interactive sine-wave UPS
800VA to 3,000VA



SLC TWIN RT3

UPS On-line de conversão dupla torre/rack
de 1,000 VA a 10kVA com FP=1



SLC X-PERT

Uninterruptible power supplies
80 to 400kVA



SLC ADAPT2

On-line double-conversion modular rack UPS
10kVA to 1,500kVA







ENERGY EFFICIENCY & RENEWABLES

COMMITMENT TO SUSTAINABILITY AS A CORPORATE VALUE

Society in general and industry in particular demand equipment that, in addition to responding to their business needs, reduce energy consumption, save on economic costs and promote sustainable use to protect the environment.

For many years, as a corporate value to provide greater competitiveness, Salicru has been committed to renewable energy and the most advanced technology applied to energy efficiency through its **SLC Greenergy Solutions** line, which includes a wide range of products and services.







Our mission is to guarantee our customers a stable, continuous and reliable power supply at a competitive cost, while ensuring an efficient and environmentally responsible electricity supply. Through our **SLC Greenergy Solutions** product range, Salicru has strengthened its commitment to implementing clean technologies in electrical equipment and systems. This allows us to access new industrial and professional markets by offering increasingly sustainable and competitive solutions.

This approach delivers numerous benefits, including efficient energy consumption, reduced production and maintenance costs, and an extended service life for electrical and electronic equipment. All of this is achieved while reducing CO_2 emissions and the use of natural resources.

SLC Greenergy Solutions reflects our commitment to responsible innovation and the energy transition. We view sustainability as a necessity for ensuring the future of electrical infrastructure and the planet. For this reason, we continue to invest in developing solutions that integrate efficiency, digitalisation, and environmental responsibility. In doing so, we are actively contributing to global decarbonisation objectives and the optimisation of energy resources. With each advance, we reaffirm our mission to lead the transition towards a smarter, more sustainable energy model focused on the well-being of future generations.

MANUFACTURING COMMITMENT

Energy efficiency is one of the main pillars of our corporate strategy and is embedded in the development of all new applications and technologies, as well as in the manufacturing process of all Salicru products.

This involves integrating a set of parameters designed to reduce energy consumption and heat dissipation, thereby improving overall efficiency.

We manufacture in accordance with ISO standards to ensure quality, environmental protection and occupational health and safety.

ENERGY MANAGER AND PLATFORM

The **SLC Energy Manager** is the brains behind any solar installation. In conjunction with the Equinox platform, which is accessible via an app or web interface, it facilitates load monitoring and redistribution, surplus energy management and discharge control.

Salicru's development team works on both the hardware and the software to ensure 100% integration. Thanks to this in-house development, a wide range of applications can be deployed in professional settings, including large industrial facilities, residential blocks and single-family homes.

In industrial applications, a single **SLC Energy Manager** device can operate with up to 30 solar inverters connected in parallel. It incorporates advanced, proprietary algorithms, including control loop integration.

SOLAR INVERTERS

The **Equinox2** series comprises transformerless grid-connected solar inverters. Lightweight, compact and highly reliable, they are designed to simplify installation and operation, ensuring greater convenience.

Backed by our experience in the power electronics market, their innovative technology enables high efficiency in photovoltaic installations, ranging from small- to large-scale systems, through parallel inverter configurations. This modular approach provides a higher level of reliability.

The **Equinox2** range covers both single-phase and three-phase grid-connected power ratings.

VARIABLE FREQUENCY DRIVES

The **Controlvit CV30-PV** series and the **ACV30-PV** cabinet are designed primarily for water pumping applications, using solar radiation captured by photovoltaic panels as the energy source.

The sunlight is converted into direct current, which supplies the inverter. The inverter then supplies an alternating current to a submersible pump, enabling water to be extracted from the ground. Depending on the requirements of the installation, the water can be stored in a tank or reservoir for later use or used directly for irrigation.

This functionality makes it particularly suitable for applications requiring a reliable, cost-effective, long-lasting water supply with low maintenance costs. Additionally, it produces no pollution and operates silently.



European countries consume less energy than 10 years ago, mainly thanks to increased energy efficiency





SLC ENERGY MANAGER

Smart energy meter



EQUINOX2 S/SX

Single-phase solar power inverters for mains connection from 2 to 10kW



EQUINOX2 T/T-RV

Solar power inverters for three-phase mains connection from 4 to 100kW



EQUINOX2 HSX

Single-phase hybrid solar inverters from 3 to 8kW



EQUINOX2 HT/HT+

Three-phase hybrid solar inverters from 4 to 50kW



CV30-PV

Variable frequency drives for solar-powered water pumping from 0.4 kW to 75kW



SPS SAFE S

Active electrical protectors



SPS SAFE S: Multiple connections to power and protect your electronic devices.

Protect your electronic devices from unpredictable power fluctuations with the new **SPS SAFE S** range from Salicru. A range offering between 4 and 6 AC power outlets, and two models that include two USB-C ports and a USB-A port for charging up to 20 W, ensuring reliable protection against power surges, lightning strikes and electrical pollution. They are ideal for laptops, video game consoles, speakers and other medium-sized electronic devices, while also providing safe charging for your mobile devices.

In addition, the **SPS SAFE Master+** model includes a master/slave function, designed to optimise energy savings by preventing standby power consumption.

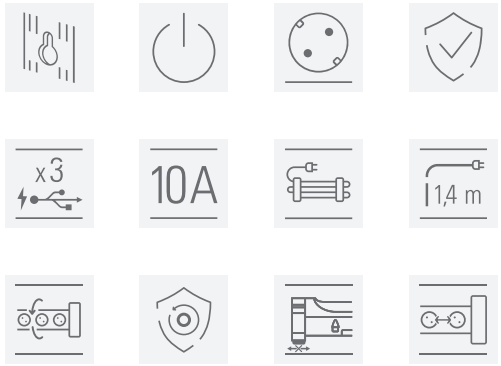
Applications: Advanced protection from power surges and voltage fluctuations

The **SPS SAFE S range of surge protection power strips** from Salicru provides robust protection for your electronic devices in both domestic and office environments, including PCs, peripherals, network devices, audiovisual systems, home automation, and electrical appliances, shielding them from unexpected power surges, such as short circuits and lightning strikes. Furthermore, this sophisticated protector shields your equipment from sudden voltage fluctuations, as well as minor power surges or drops, thereby preventing cumulative damage that could compromise the integrity and functionality of your devices in the long term.



Features

- Swivel system (Except the SPS SAFE Master+)
- Cable tidy (Except the SPS SAFE Master+)
- Rated current 10 A
- Number of sockets (4, 5 or 6)
- On/off switch
- Resettable protection
- Sockets with safety device and child protection
- Non-slip rubber pads
- 2 USB Type C and one Type A (SPS SAFE 5s+ and SPS SAFE Master+)
- Master-slave sockets (SPS SAFE Master+ only)
- Surge protection
- 1.4 m cable
- Possibility of wall mounting



Technical specifications

MODEL		SPS SAFE 4S	SPS SAFE 6S	SPS SAFE 5S+	SPS SAFE MASTER+
OUTPUT	Rated current (A)	10			
	Rated voltage	230 V AC			
	Socket type	4 × Schuko	6 × Schuko	5 × Schuko	6 × Schuko
USB CHARGER	Quantity	No		2 USB C + 1 USB A	
	Maximum current	No		20 W	
ELECTRICAL	Maximum power dissipation (F-N, N-T and F-T) (J)	350		600	
	Maximum peak current	8 kA		13 kA	
	Maximum peak voltage	1.5 kV			
	Response time	< 25 ns			
GENERAL	On/off switch	Yes			
	Possibility of wall mounting	Yes			
	Length of power cable (m)	1.4			
	Child protection in the sockets	Yes			
	Sockets orientated for easy connection	Yes			
	LED overvoltage indicator	Yes			
	Active electrical protector	Yes			
	Electrical protection	Thermal fuse			
	Swivel system / cable tidy	Yes			No
	Master / Slave	No			Yes
	Additional space for large sockets	Yes			
STANDARDS	Safety	UNE 20315-1-1; UNE 20315-1-2; UNE 20315-2-7; IEC 60884-1; IEC 60884-2-7; EN IEC 61643-11		UNE 20315-1-1; UNE 20315-1-2; UNE 20315-2-7; UNE 20315-3-1; IEC 60884-1; IEC 60884-2-7; IEC 60884-3-1; EN IEC 61643-11	
	Corporate certifications	ISO 9001, ISO 14001, ISO 45001			
CODE		680DA000001	680DA000002	680DA000003	680DA000004

Information subject to change without notice.

SPS NET2

The smart and efficient mini DC UPS



SPS NET2: Protection and back-up for your network devices in the event of power cuts

Whether you're working from home or enjoying your favourite series on the sofa, Salicru's **SPS NET2** is the ultimate protection against power outages. This innovative device is designed to guarantee constant connectivity for essential devices like routers, IP cameras, and personal assistants. With a high-capacity 10000 mAh battery, the **SPS NET2** gives you peace of mind, keeping your devices up and running during power outages.

The **SPS NET2** replaces the standard power supply to your connected devices, giving you exceptional versatility by allowing you to choose between 3 output voltages with 2 different types of connectors.

It can be easily mounted on the wall or placed on a desk, adapting harmoniously to any space.

With the **SPS NET2** from Salicru, you can enjoy uninterrupted connectivity and stylish, effective protection for your electronic devices.

Applications: Stay online at all times

The **SPS NET2** is powered by the standard 230 V mains supply and offers exceptional compatibility with most digital home devices, from modems and switches to routers and IP cameras. It has been designed to prevent interruption during power outages, making it ideal for small and medium-sized businesses and people who work from home. Activities such as video conferencing, sending critical emails, staying connected to a virtual private network (VPN), or simply enjoying digital entertainment can sometimes be affected by unexpected network outages; the **SPS NET2** gives you peace of mind, guaranteeing a stable connection when you need it most.



Performances

- 10000 mAh lithium ion battery.
- Cold start (battery start-up).
- Multiple outputs 3 DC (5, 9 and 12 V) + 1 USB (5 V).
- Supports up to 4 devices simultaneously. (1)
- Dual output cable with DC connectors and adapters (x2) compatible with the vast majority of routers on the market.
- Rapid response from AC to DC in 0 ms.
- Silent advanced cooling system.
- Compact and lightweight design.
- V-0 flame-proof housing for extra safety.
- Short-circuit protection.
- 4 LEDs to indicate back-up time and failure.
- Automatic restart on network recovery.
- ON/OFF button.
- Wall mounting possible.

(1) Provided they don't exceed 18 W.



Technical specifications

MODEL		SPS NET2
INPUT	Rated voltage	230 V
	Rated frequency	50 Hz ~ 60 Hz
OUTPUT	Rated voltage	5 - 9 - 12 V DC
	Voltage accuracy (battery mode)	± 5%
	Power	18 W
	Maximum power	20 W
	Transfer time	0 ms.
	Admissible overloads in battery mode	Yes, up to 120% overload for 5 sec.
	Admissible overloads in-line mode	Yes, up to 120% overload for 5 sec.
BATTERY	Battery type	Lithium-Ion
	Rated voltage	3,6 VDC
	Capacity	10000 mAh
	Charging voltage	8,3 V DC
	Recharge time	4 hours to 100% capacity
	Back up time	Up to 4 hours
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
PROTECTION	Output short circuits	Yes, protects the load
STANDARDS	Safety	EN62368-1
	Electromagnetic compatibility (EMC)	EN55032 Class B / EN61000-3-2 / EN61000-3-3 / EN55035
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001
CONTENTS	Contents of the box	1 × SPS NET2, 1 × Input adapter, 1 × Output cable 2.5 mm Y-type, 2 × 2.5 to 2.1 mm connectors, 1 × Quick-start guide, 1 × Warranty
DIMENSIONS	Depth × Width × Height (mm)	36 × 91 × 123
WEIGHT	Weight (kg)	0.31

Information subject to change without notice.

SPS HOME+

Line-interactive APFC multi-socket UPS 650 VA, 850 VA and 1000 VA



SPS HOME+: Multi-plug solution to guarantee power during unforeseen events.

The **SPS HOME+** UPS is an advanced solution for power protection and power management in home and office environments, acting as a lifeline for your essential devices. Available in three variants (650, 850 and 1000 VA) and a compact design, this eight-socket UPS with line interactive technology ensures a constant and clean power flow in the event of power outages or electrical fluctuations. It protects against power surges, ensuring the safety of connected devices, and provides autonomy in the event of power outages, allowing activities to continue without interruption.

APFC (Active Power Factor Correction) compatibility ensures optimum energy efficiency, while the master-slave function (1000 VA model only) allows intelligent control of power consumption. Six of its sockets can guarantee clean battery power in case of emergency, and all of them are child-proofed. LED indicators provide a clear and quick system status readout, and the two USB ports (A and C) are perfect to charge mobile devices with ease, adding an extra layer of functionality. In addition, a USB HID port (850 VA and 1000 VA models only) is available for PC/MAC setup and shutdown, as well as software packages for monitoring on Windows, Linux and Mac operating systems.

Don't let power outages catch you off guard, avoid interruptions with Salicru UPSs!

Applications: Integrated surge protection and back-up power system

When faced with power interruptions caused by storms, power cuts, high electricity demand, fluctuations and surges, our UPS is your best ally to keep your devices fully operational, ensuring a stable and reliable power supply. Salicru's **SPS HOME+** series is the ideal solution for individual systems with all their connected devices, such as hard disks, monitors, printers (*), NAS devices, routers, modems, switches and security cameras. Imagine your essential devices working seamlessly. The perfect solution is in your reach: It's called Salicru's **SPS HOME+**!

(*) Please note that laser printers must only be connected to surge protection sockets



Performances

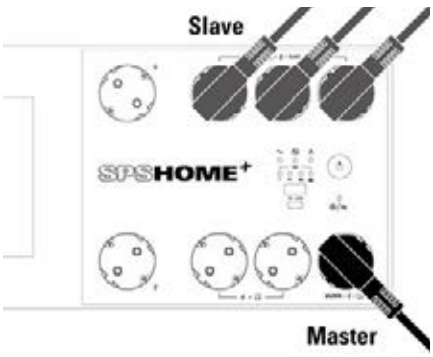
· Line-interactive technology with AVR.
· Multi-base design with 8 oriented and spaced sockets.
· Sockets with UPS reserve and line protection.
· Orientated sockets for easy connection.
· Compatibility with APFC loads.(1)
· USB interface with HID protocol.(2)
· Downloadable software for Windows, Linux and Mac.(2)
· User-replaceable battery.
· Detachable cable organiser.
· Cold-start function.
· ON/OFF button and mute.
· LED status and autonomy(2) indicators.
· Master-slave function, 1 master and 3 slave sockets (1000 VA model only).
· Wall brackets for wall mounting.
· Non-slip rubber feet.
· USB charger port: Type A and Type C - 5V/2.4A.(2)

(1) APFC: Active Power Factor Correction.
(2) Only SPS 850/1000 HOME+ models.



Master-Slave Connections

The UPS Master-Slave connections support smart control of power consumption, automatically shutting down secondary devices when the main UPS shuts down. This optimises energy efficiency, reduces operating costs and extends the life of connected equipment.(*) 1000 VA model only

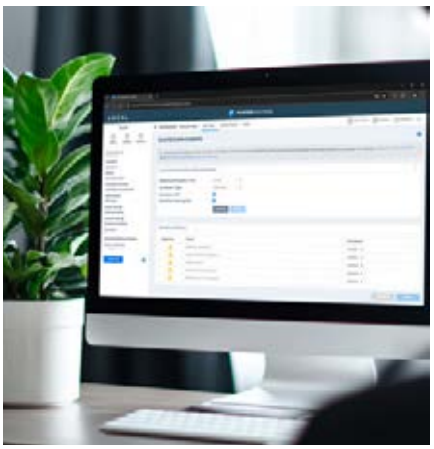


UPS with Cable Organizer

The perfect solution for keeping things tidy, the UPS offers convenient cable routing thanks to its integrated cable management system. It not only keeps cables organised and helps prevent accidents, but also facilitates equipment maintenance, improving air circulation and preventing overheating.

Software

UPS monitoring and management software for closing files and applications. Compatible with Windows, Linux and Mac.



USB interface with HID protocol

Parameter configuration, UPS control and computer shutdown/hibernation through the USB port. Available for Windows, Linux and Mac environments.

Multiple base format

SPS HOME offers 8 sockets in different configurations. All outlets are surge protected and 6 offer power backup. The layout and orientation of the sockets in both designs has been selected to provide the easiest possible connection for the user and child protection to safeguard young children.



Range

MODEL	CODE	POWER (VA / W)	NO. OF SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 650 HOME+	693DA000001	650 / 360	8 (6 UPS + 2 Prot.)	335 × 185 × 122	4.6
SPS 850 HOME+	693DA000002	850 / 480	8 (6 UPS + 2 Prot.)	335 × 185 × 122	5.2
SPS 1000 HOME+	693DA000003	1000 / 600	8 (6 UPS + 2 Prot.)	335 × 185 × 122	5.8

Dimensions



SPS 650÷1000 HOME+

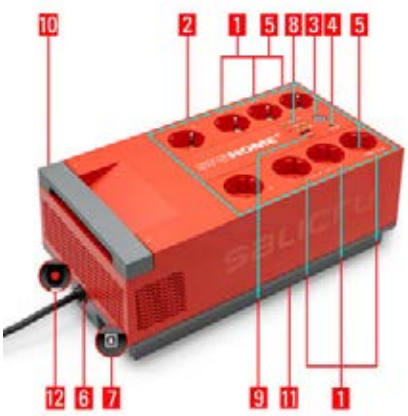
Connections



SPS 650 HOME+



SPS 850 HOME+



SPS 1000 HOME+

1. UPS back-up sockets.
2. Surge protection sockets.
3. ON/OFF button.
4. Mute button.
5. Master-Slave (1000 VA version only).
6. AC input.
7. USB-HID interface.
8. LED status and autonomy indicators.
9. USB A and USB C charging ports.
10. Cable organiser.
11. User-replaceable battery.
12. Thermal resettable input.

Technical specifications

MODEL		SPS 650 HOME+	SPS 850 HOME+	SPS 1000 HOME+
TECHNOLOGY		Line interactive		
FORMAT		Multiple socket		
INPUT	Rated voltage	230 V		
	Voltage range	162 ÷ 290 V		
	Stabiliser	AVR Buck / Boost		
	Rated frequency	50 / 60 Hz (auto-detection)		
	Protection	Resettable thermal cutoff (10 A)		
OUTPUT	Rated voltage	230 V		
	Voltage accuracy (battery mode)	±10%		
	Waveform (battery mode)	Pseudo sine wave		
	Frequency	50/60 Hz (same as input)		
	Frequency accuracy (battery mode)	±1Hz		
	Transfer time	Typical 2-6 ms, Max. 10 ms		
	Compatibility with APFC loads	Yes (280W)	Yes (320W)	Yes (410W)
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free		
	Recharge time	8 hours to 90% charge		
	User replaceable battery	Yes		
COMMUNICATION	Ports	No	USB (protocolo HID)	
	Monitoring software	For Windows, Linux and Mac		
INDICATIONS	Type	LED		
	Audible	Every 10 seconds for battery-powered operation; every 1 second for low battery; every 0.5 seconds for overloads; continuous for failures		
OTHER FUNCTIONS	Self-charge	Yes, even with the device switched off		
	Cold start (start-up from batteries)	Yes		
	Automatic restart	Yes, after end of backup		
	Master/Slave	No		Yes
USB CHARGER	Quantity	-	1 type A + 1 type C	
	Voltage	-	5VDC	
	Maximum current	-	2,4A	
GENERAL	Operating temperature	0º C ÷ 40º C		
	Relative humidity	Up to 90%, non-condensing		
	Maxium operating altitude	3000 m.a.s.l.		
	Acoustic noise at 1 metre	<40 dB		
STANDARDS	Safety	EN-IEC 62040-1		
	Electromagnetic compatibility (EMC)	EN 62040-2		
	Operation	EN 62040-3		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

Information subject to change without notice.

SPS ONE

Line-interactive UPS 500 to 2000 VA



SPS ONE: The best electrical protection for home and professional office

An uninterruptible power supply (UPS) in a mini tower format with Line-interactive topology, Salicru's **SPS ONE** series provides battery backup (with pseudo sine wave inverter output) and overload protection. During power failures, **SPS ONE** devices provide battery backup to enable computer systems to shut down properly and protect against data loss and electronics damage. Operation through automatic voltage regulation (AVR) to correct small voltage fluctuations without having to use the battery, thus extending its life. The AVR function is essential in areas where voltage fluctuations occur frequently.

It features a UPS/PC communication interface via USB with HID protocol, which allows parameter setting, UPS control and shutdown or hibernation of the computer through the USB port. Compatible with Windows, Linux and Mac operating systems. UPS management and monitoring software is also available for closing files/applications for Windows, Linux and Mac families. Free and downloadable from www.salicru.com.

The **SPS ONE** series is available in 500, 700, 900, 1100,1500 and 2000 VA power ratings.

Applications: Essential security to ensure the continuity of typical office computing tasks.

The numerous computer and multimedia devices we have in our homes, offices and small businesses hold large amounts of personal and professional files and data. All of these systems, however, are highly dependent on one thing: a good quality, stable power supply to ensure that they can be used and enjoyed without interruption. The best solution to prevent interruptions, damage or data loss is the protection provided by a UPS from Salicru's **SPS ONE** series.



Performances

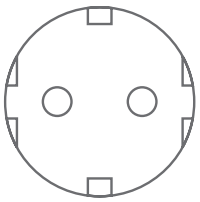
- Line-interactive technology.
- Backup battery for power supply interruptions.
- Overvoltage protection for sensitive devices.
- Automatic voltage stabilisation (AVR)
- Pseudo sine wave output voltage.
- USB interface with HID protocol for all models.
- Management and monitoring software for Windows, Linux and Mac.
- A single on/off button for ease of use.
- LED status indications.
- Automatic restart when power supply restored.
- Compact mini tower format.
- Protection against overloads, short circuits and transients.
- Economic guarantee for connected devices (EU countries only).
- SLC Greenergy solution.



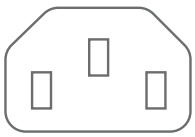
Socket formats available

The **SPS ONE** is available in 2 different socket versions. The sockets are located at the rear of the UPS. The popular Schuko version conforms to the German DIN 49440-1 standard used by the majority of European countries and is also compatible with the standard aviation plugs used in France. The IEC C14 version is widely used to connect computing devices.

SCHUKO



IEC



USB interface with HID protocol

- Parameter configuration, UPS control and computer shutdown/hibernation through the USB port.
- Available for Windows, Linux and Mac environments.

Mac Linux Windows

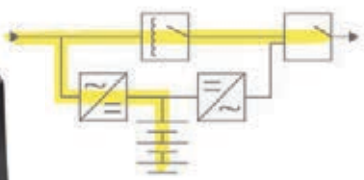
Software

- UPS monitoring and orderly closing of files/applications for Windows, Linux and Mac families.
- Free and downloadable from: www.salicru.com.



Line-interactive technology

Ideal for office environments. It combines Off-line technology with an internal voltage stabiliser for better compensation of the voltage fluctuations and to avoid a greater use of the batteries and so prolong their life time.





Range

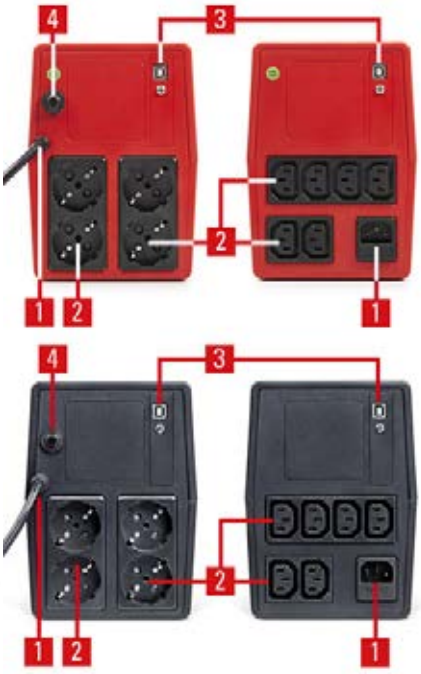
RED MODEL	CODE	POWER (VA / W)	NO. OF SOCKETS	SOCKET TYPE	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 500 ONE	662AF000001	500 / 240	2	Schuko	300 × 101 × 142	3.5
SPS 500 ONE IEC	662AF000013	500 / 240	4	IEC	300 × 101 × 142	3.5
SPS 700 ONE	662AF000002	700 / 360	2	Schuko	300 × 101 × 142	4.5
SPS 700 ONE IEC	662AF000014	700 / 360	4	IEC	300 × 101 × 142	4.5
SPS 900 ONE	662AF000003	900 / 480	2	Schuko	300 × 101 × 142	4.9
SPS 900 ONE IEC	662AF000015	900 / 480	4	IEC	300 × 101 × 142	4.9
SPS 1100 ONE	662AF000004	1100 / 600	4	Schuko	320 × 130 × 182	8.2
SPS 1100 ONE IEC	662AF000016	1100 / 600	6	IEC	320 × 130 × 182	8.2
SPS 1500 ONE	662AF000005	1500 / 900	4	Schuko	320 × 130 × 182	10.4
SPS 1500 ONE IEC	662AF000017	1500 / 900	6	IEC	320 × 130 × 182	10.4
SPS 2000 ONE	662AF000006	2000 / 1200	4	Schuko	320 × 130 × 182	11
SPS 2000 ONE IEC	662AF000018	2000 / 1200	6	IEC	320 × 130 × 182	11

RED BLACK	CODE	POWER (VA / W)	NO. OF SOCKETS	SOCKET TYPE	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 500 ONE BL	662AG000001	500 / 240	2	Schuko	300 × 101 × 142	3.5
SPS 500 ONE BL IEC	662AG000002	500 / 240	4	IEC	300 × 101 × 142	3.5
SPS 700 ONE BL	662AG000004	700 / 360	2	Schuko	300 × 101 × 142	4.5
SPS 700 ONE BL IEC	662AG000005	700 / 360	4	IEC	300 × 101 × 142	4.5
SPS 900 ONE BL	662AG000007	900 / 480	2	Schuko	300 × 101 × 142	4.9
SPS 900 ONE BL IEC	662AG000008	900 / 480	4	IEC	300 × 101 × 142	4.9
SPS 1100 ONE BL	662AG000010	1100 / 600	4	Schuko	320 × 130 × 182	8.2
SPS 1100 ONE BL IEC	662AG000011	1100 / 600	6	IEC	320 × 130 × 182	8.2
SPS 1500 ONE BL	662AG000013	1500 / 900	4	Schuko	320 × 130 × 182	10.4
SPS 1500 ONE BL IEC	662AG000014	1500 / 900	6	IEC	320 × 130 × 182	10.4
SPS 2000 ONE BL	662AG000016	2000 / 1200	4	Schuko	320 × 130 × 182	11
SPS 2000 ONE BL IEC	662AG000017	2000 / 1200	6	IEC	320 × 130 × 182	11

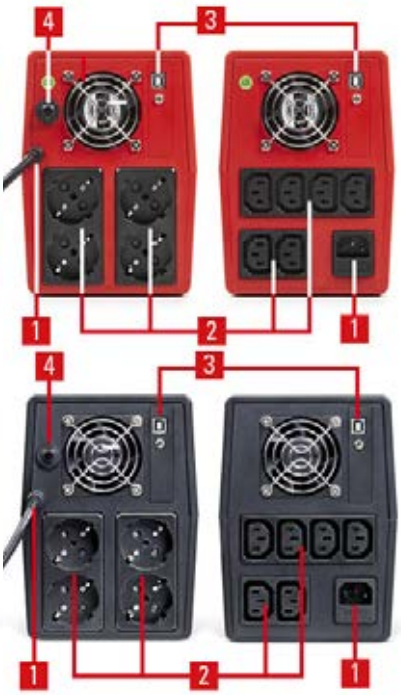
Connections



SPS 500÷900 ONE (IEC) /
SPS 500÷900 ONE BL (IEC)



SPS 1100 ONE (IEC) /
SPS 1100 ONE BL (IEC)



SPS 1500/2000 ONE (IEC) /
SPS 1500/2000 ONE BL (IEC)

1. AC input.
2. UPS sockets.
3. USB port.
4. Thermal rearmable input.

Technical specifications

MODEL		SPS ONE
TECHNOLOGY		Line-interactive
FORMAT		Tower
INPUT	Rated voltage	220 V / 230 V / 240 V AC
	Voltage range	Until 162 V ÷ 290 V
	Stabiliser	AVR Buck / Boost
	Rated frequency	50 / 60 Hz
	Auto~detection of frequency	Yes
	Protection	Thermal re-arm or fuse (depending on model)
OUTPUT	Rated voltage	220 V / 230 V / 240 V AC
	Voltage accuracy (battery mode)	±10%
	Waveform (battery mode)	Simulated sineware
	Frequency	50 / 60 Hz ± 1 Hz (1)
	Transfer time	2 / 6 ms
	Socket type	Schuko (DIN) o IEC
BATTERY	Battery type	Enclosed batteries Pb-Ca without maintenance, sealed, design life 3-5 years
	Recharge time	4-6 hours until 90% capacity
	User replaceable battery	Yes
	Back up time	Up to 20 minutes
	Battery replacement alarm	Yes
COMMUNICATION	Ports	USB HID
	Monitoring software	Compatible with Windows, Linux, Unix and Mac
	Downloadable from	support.salicru.com
INDICATIONS	Type	LED
	Operating modes	Normal / Stabilisation (AVR) / Battery
	Mains present	Green LED
	Alarm	Output battery mode, low battery , charger failure and overload
	Audible	Every 10 s for battery operation. Every 1 s for low battery. Every 0.5 s for overcharge. Continuous for fault 2 s for battery replacement.
	Failure	Red LED
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Automatic restart	Yes, after the end of back up time
GENERAL	Operating temperature	0º C ÷ + 40º C
	Relative humidity	Utill 90%, without condensation
	Maxium operating altitude	2,400 masl
	Acoustic noise at 1 metre	< 40 dB
STANDARDS	Safety	EN IEC 62040-1
	Electromagnetic compatibility (EMC)	EN IEC 62040-2
	Operation	EN IEC 62040-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Battery mode

Information subject to change without notice.

SPS SOHO+

Line-interactive 750 VA - 2250 VA UPS with double USB charger



SPS SOHO+: Safe and stable power for your IT and office equipment

The **SPS SOHO+** series from Salicru is a range of Uninterruptible Power Supply (UPS) systems that guarantee a stable and uninterrupted power supply, combining high reliability, energy efficiency, and smart management. They incorporate Line-interactive topology with AVR (Buck/Boost) that automatically stabilises the input voltage, reducing battery usage and extending their service life, while ensuring compatibility with APFC loads for modern IT equipment.

Two practical front USB ports (type A and C) provide fast charging for mobile devices. They also have intuitive LED bars (on the front) that allow you to quickly identify the equipment's operating mode. Available in five different power ratings (750 VA, 900 VA, 1250 VA, 1650 VA and 2250 VA), the series offers the flexibility to choose between Schuko or IEC connectors for a perfect fit in any installation.

It also features a USB interface with HID protocol, allowing for direct system control, configuration of operational settings and the capability to automatically shut down or hibernate the computer in the event of a mains failure. Additionally, it comes with management and monitoring software that is compatible with all major operating systems, which makes it easy to monitor the UPS status and customise its operating parameters.

Applications: Electrical protection to prevent disruptions to your business

The UPS devices in the **SPS SOHO+ series** from Salicru offer the perfect protection for IT and office equipment, whether for individual workstations (design, communication, etc.) or small networks with servers. They guarantee a stable and secure power supply at all times.

In addition, their design features two convenient front USB ports for easy charging of mobile devices, making them an ideal choice for shops and businesses, freelancers and professionals, small offices and co-working spaces, as well as franchises and distributors.



Features

- Line-interactive technology
- Permanent AVR stabilisation (buck-boost)
- Tower format
- Control panel with LCD display and keypad
- Compatibility with APFC loads
- USB interface with HID protocol
- Easy battery replacement
- IEC and Schuko sockets
- 2 x USB chargers
- LED indicators
- ON/OFF button
- Management software
- Master-Slave (1250 to 2250 VA models only)



Dual USB charger on the front

The device is equipped with two front USB ports, one USB-C and one USB-A, allowing for fast and convenient charging of mobile devices such as smartphones, tablets or electronic accessories without the need for additional adapters.



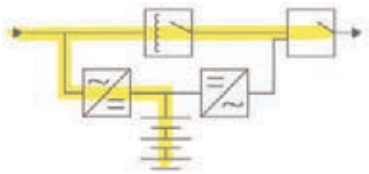
Master-Slave connections

The UPS' Master-Slave connections (1250 VA to 2250 VA models only) support smart control of power consumption, automatically shutting down secondary devices when the main UPS shuts down. This optimises energy efficiency, reduces operating costs and extends the life of connected equipment. The function can also be easily disabled if not required, offering additional flexibility to suit your needs.



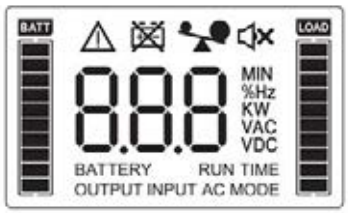
Line-interactive technology

The system features an automatic voltage regulator (AVR) (Buck/Boost), which compensates for variations in the mains supply without resorting to the battery. This not only stabilises the power supply, but also extends the battery life and ensures optimum backup when you need it most.



Display

The UPS is equipped with a backlit display that provides a clear and detailed view of its operating status at all times. It displays essential information such as the available battery level, the percentage of charge connected, the input and output voltage, as well as the operating mode: normal, AVR mode (automatic voltage stabilisation) or battery mode (in the event of a power failure). It also notifies you of any faults in the unit or other incidents, enabling quick and efficient management.



USB interface with HID protocol

The device features a USB port with HID protocol, enabling quick setup and precise control of the system. In addition, it has an automatic shutdown or hibernation function in the event of a power failure, ensuring system continuity. Monitoring software compatible with virtualised environments is also included for advanced, real-time management (please visit the website to obtain support software).

Range

Schuko MODEL	CODE	POWER (VA / W)	NO. OUTPUTS	DIMENSIONS (D x W x H mm)	WEIGHT (kg)
SPS 750 SOHO+	647EA000001	750 / 420	4	287 × 99 × 320	6,5
SPS 900 SOHO+	647EA000002	900 / 510	4	287 × 99 × 320	7,5
SPS 1250 SOHO+	647EA000003	1250 / 720	4	410 × 99 × 320	10,1
SPS 1650 SOHO+	647EA000004	1650 / 900	4	410 × 99 × 320	11,8
SPS 2250 SOHO+	647EA000005	2250 / 1200	4	410 × 99 × 320	12,5

IEC MODEL	CODE	POWER (VA / W)	NO. OUTPUTS	DIMENSIONS (D x W x H mm)	WEIGHT (kg)
SPS 750 SOHO+ IEC	647EA000006	750 / 420	6	287 × 99 × 320	6,5
SPS 900 SOHO+ IEC	647EA000007	900 / 510	6	287 × 99 × 320	7,5
SPS 1250 SOHO+ IEC	647EA000008	1250 / 720	6	410 × 99 × 320	10,1
SPS 1650 SOHO+ IEC	647EA000009	1650 / 900	6	410 × 99 × 320	11,8
SPS 2250 SOHO+ IEC	647EA000010	2250 / 1200	6	410 × 99 × 320	12,5

Dimensions

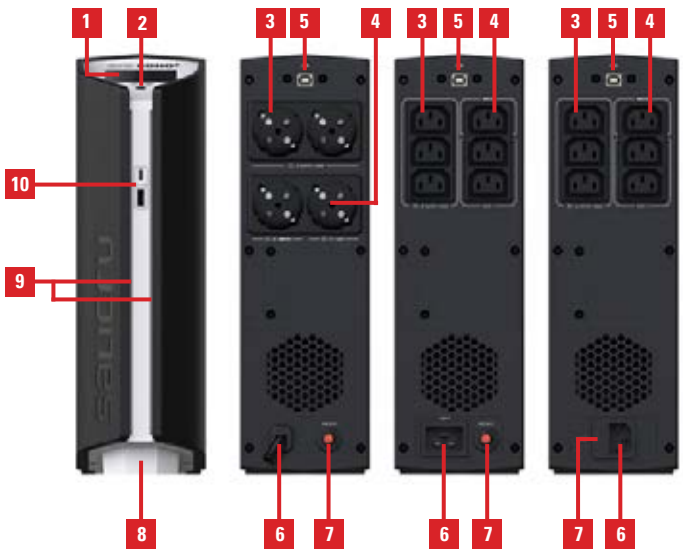


SPS 750÷900 SOHO+ (IEC)



SPS 1250÷2250 SOHO+ (IEC)

Connections



1. LCD screen.
2. Buttons.
3. Battery sockets + surge protector.
4. Battery sockets MASTER/SLAVE + surge protector.
5. USB-HID port.
6. AC input.
7. Input protection via thermal fuse or standard fuse depending on the model.
8. Battery cover
9. LED indicators.
10. USB C ports (top) and USB A (bottom).

Technical specifications

		SPS SOHO+
TECHNOLOGY		Line - interactive
FORMAT		Tower
INPUT	Rated voltage	230 V
	Voltage range	170-280 V
	Stabiliser	AVR (Buck & Boost)
	Rated frequency	50 / 60 Hz (auto-detection)
	Protection	Resettable breaker ÷ Fuse
OUTPUT	Rated voltage	230 V
	Voltage accuracy (battery mode)	±10%
	Waveform (battery mode)	Pseudosenoidal
	Frequency	50/60 Hz (same as input)
	Frequency accuracy (battery mode)	±1 Hz
	Compatibility with APFC loads	Yes
	Socket type	Schuko / IEC
BATTERY	Protection	Against deep discharge and overload
	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Recharge time	6-8 hours to 90%
COMMUNICATION	Ports	USB (HID protocol)
	Monitoring software	For Windows, Linux and Mac
INDICATIONS	Type	LCD + LED
	Operating modes	Normal / Stabilisation (AVR) / Battery / Standby
OTHER FUNCTIONS	Cold-start (start-up from batteries)	Yes
	Master - Slave	Yes (1)
	Automatic restart	Yes
USB CHARGER	Quantity	2
	Voltage	5 V
	Maximum current	2.1 A
GENERAL	Operating temperature	0°C ÷ +40°C
	Relative humidity	Up to 90%, no condensing
	Maximum operating altitude	2000 m.a.s.l.
	Acoustic noise at 1 metre	<40 dB ÷ <45 dB
STANDARDS	Safety	IEC 62040-1
	Electromagnetic compatibility (EMC)	IEC 62040-2
	Operation	EN-62040-3
	Corporate certifications	ISO 9001, ISO 14001, ISO 45001

(1) 1250 to 2250 VA models only

Information subject to change without notice.

SPS NODE

Off-line 900VA UPS in rack format



SPS NODE: Protect your devices using a compact design that fits in tight spaces

Introducing the **SPS NODE**, the 2U rackmount Uninterruptible Power Supply (UPS) that provides reliable protection for your critical equipment. Featuring an Off-line (standby) topology, this UPS ensures reliable battery backup in the event of power outages, providing a pseudo-sine wave output voltage to keep your devices running smoothly during power failures. Six connections on the front panel and two on the rear panel are available, making it flexible enough to connect a variety of essential electronic devices.

USB HID interface and downloadable software support complete UPS monitoring and control from your computer. The battery provides adequate backup time to protect your equipment, with cold start to turn the UPS on even in the total absence of power. Its ability to automatically switch between 50 Hz and 60 Hz means it is compatible with a wide range of electrical systems.

Applications: Ensures continuity in your day-to-day activities

Salicru's **SPS NODE** series UPS provides the optimal solution to prevent data loss and guarantee uninterrupted workflow in environments with interconnected IT and multimedia devices, guaranteeing that your devices are safe from power outages, giving you the peace of mind you need to work or enjoy whatever you are doing without worrying.



Performances

· Off-line technology.
· Multiple outlets (8).
· USB interface with HID protocol.
· Downloadable software for Windows, Linux and Mac.
· Backup battery for power supply interruptions.
· Compatibility with APFC loads(*).
· Automatic frequency detector 50/60 Hz.
· Multifunction ON/OFF button.
· Cold Start function for start-up from batteries.
· Pseudo sine wave output voltage.
· Mounting height 2U rack.
· Fanless system for silent operation.
· Compact 150 mm deep design.
· LED fault indication via ON/OFF button.
· EPO (Emergency Power Off).

(*) APFC: Active power factor correction.



Silent operation

Our UPS has been designed to operate in complete silence using fanless technology. You can enjoy a quiet working environment without compromising your system's security and stability.



Automatic reboot and advanced features

Packed with features such as auto reboot, EPO (Emergency Power Off), APFC (Active Power Factor Correction), USB HID, the **SPS NODE** provides efficient and secure power management. In addition, the Cold Start function guarantees reliable start-up of your systems even in adverse conditions. Multi-function illuminated ON/OFF button indicates equipment status.



Rack format (2U)

More than just a conventional rackmount, the **SPS NODE** adapts to server or office environments. Its rubber feet make it easy to place on tables or as a monitor mezzanine without damaging the surface. Swivel lugs allow unobtrusive mounting under tables or desks. Its versatility is perfect for small spaces and diverse work environments.



Very compact design

At just 150 mm depth, this rack-mounted UPS is ideal for small businesses with limited space. It fits perfectly into 400 mm wall-mounted cabinets, maximizing efficiency without sacrificing power or equipment protection. With 8 protected outlets, ensure that your data and time are always safe.



Range

SCHUKO MODEL	CODE	POWER (VA / W)	NO. OF SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 900 NODE	647DA000002	900 / 480	8	153 × 438 × 86	5

Dimensions



SPS 900 NODE

Connections



SPS 900 NODE



SPS 900 NODE

1. Battery back-up and surge protection outlets
2. AC input
3. USB-HID port
4. Thermal resettable input
5. EPO emergency stop
6. ON/OFF switch

Technical specifications

MODEL		SPS 900 NODE
TECHNOLOGY		Off-line
FORMAT		Multiple socket
INPUT	Rated voltage	230 V
	Voltage range	190 ÷ 260 V
	Rated frequency	50 / 60 Hz (auto-detection)
	Auto~detection of frequency	Yes
	Protection	Resettable thermal cutoff
OUTPUT	Rated voltage	230 V
	Voltage accuracy (battery mode)	±7%
	Waveform (battery mode)	Pseudo sine wave
	Frequency	50/60 Hz (same as input)
	Frequency accuracy (battery mode)	±1Hz
	Transfer time	4 ms, Max. 14 ms
	Compatibility with APFC loads	Yes
	Admissible overloads in battery mode	110% output voltage cut-off after 10 seconds; >120% immediate output voltage cut-off
	Admissible overloads in-line mode	100%, alarm only; >130%, immediate output voltage cut-off
	Socket type	Schuko
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Recharge time	8 hours to 90% charge
	User replaceable battery	Yes
COMMUNICATION	Ports	USB (HID protocol)
	Monitoring software	For Windows, Linux and Mac
INDICATIONS	Type	LED
	Operating modes	Normal / Battery / Fault
	Alarm	Output battery mode, low battery (back up time), charger failure and overload
	Audible	Every 30 seconds for battery-powered operation / every 2 second for low battery / every 0.5 seconds for overloads / continuous for failures
OTHER FUNCTIONS	Self-charge	Yes, even with the device switched off
	Cold start (start-up from batteries)	Yes
	Automatic restart	Yes, after the end of back up time
	Emergency stop (EPO)	Yes
GENERAL	Operating temperature	0° C ÷ 40° C
	Relative humidity	Utill 90%, without condensation
	Maxium operating altitude	2,400 masl
	Acoustic noise at 1 metre	<40 dB
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2
	Operation	EN 62040-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001
DIMENSIONS	Depth × Width × Height (mm)	153 × 438 × 86
WEIGHT	Weight (kg)	5
CODE		647DA000002

Information subject to change without notice.

SPS ADVANCE T

Line-interactive sine-wave UPS tower 850 VA to 3000 VA



SPS ADVANCE T: Reliable protection in tower format for computer rooms

Salicru's **SPS ADVANCE T** series offers, as a UPS solution, optimum levels of efficiency and reliability for all critical devices that require power supply continuity and dependability. They come in a very compact tower format to save space in server and computer rooms. They also feature line-interactive technology to combat any fluctuations in the mains supply together with an output voltage that is always sine-wave, the highest quality possible to power all sensitive loads.

For easier and more convenient use, they feature a display that shows all necessary information on the operation of the device and power supply (input/output voltage, % load, % battery, etc.) and a wide range of communication options through the USB interface with HID protocol, monitoring and management software (downloadable) and integrated smart slot (SNMP).

Also noteworthy is their compatibility with current APFC (active power factor correction) power supplies.

The power range for the **SPS ADVANCE T** series is: 850, 1,000, 1,500, 2,000 and 3,000 VA.

Applications: Reliable electrical backup with high availability

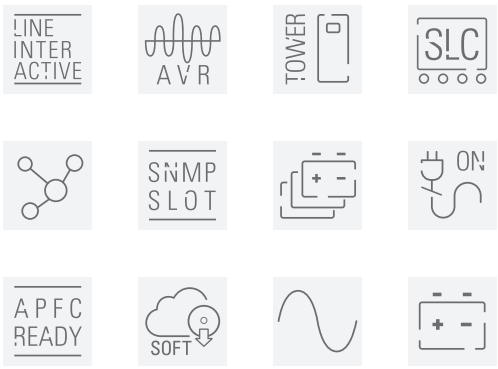
Salicru's **SPS ADVANCE T** series UPSs provide an optimum combination of features to protect all computer room equipment, from entry-level servers, through routers, switches, hubs, network devices and access points, to backup systems.



Performances

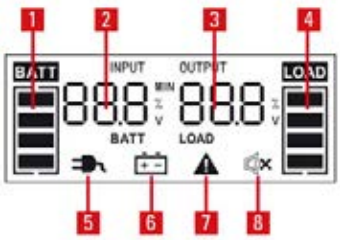
· Line-interactive technology with sine-wave output.
· Permanent AVR stabilisation (buck-boost).
· Compact tower format.
· RS-232 and USB-HID communication interfaces.
· Monitoring and management software for Windows, Linux and Mac.
· Smart slot for SNMP adapter.
· Compatible with APFC power supplies.
· Possibility of backup extension.(1)
· Complete display showing all operating information.
· IEC output sockets.
· Automatic battery test on each start-up.
· Cold-start function for start-up from batteries.
· SLC Greenergy solution.

(1) Through additional modules, except for 850 VA model.



Display

1. Level of battery available.
2. Values for input/battery/backup.
3. Values for output/charging.
4. Level of load connected.
5. Normal operation.
6. Battery operation (power cut).
7. Device fault.
8. Audible alarm and alarm cancellation.



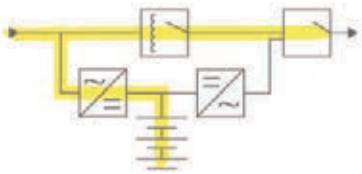
Communications

· USB interface with HID protocol: Parameter configuration, UPS control and computer shutdown/hibernation through the USB port. Available for Windows, Linux and Mac.
· UPS management and monitoring software for closing files/applications for Windows, Linux, Unix and Mac. Free and downloadable from www.salicru.com.
· Smart slot for the connection of SNMP environment integration cards and signal cards via potential-free contacts or Modbus protocol.

Mac Linux Windows

Line-interactive technology

Ideal for office environments. It combines Off-line technology with an internal voltage stabiliser for better compensation of the voltage fluctuations and to avoid a greater use of the batteries and so prolong their life time.





Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 850 ADV T	6A0EA000001	850 / 595	6 × IEC C13	327 × 140 × 191	11.3
SPS 1000 ADV T	6A0EA000002	1000 / 700	6 × IEC C13	327 × 140 × 191	11.4
SPS 1500 ADV T	6A0EA000003	1500 / 1050	6 × IEC C13	327 × 140 × 191	13.3
SPS 2000 ADV T	6A0EA000004	2000 / 1400	6 × IEC C13	327 × 140 × 191	14.2
SPS 3000 ADV T	6A0EA000005	3000 / 2100	4 × IEC C13 + terminals	416 × 196 × 342	29.7

Dimensions and weights for devices with standard backup

Dimensions



SPS 850÷2000 ADV T



SPS 3000 ADV T

Connections



SPS 850÷2000 ADV T



SPS 3000 ADV T

1. Socket input.
2. Socket IEC output.
3. Intelligent slot for SNMP/web adapter.
4. RS-232 interface.
5. Emergency stop (EPO).
6. USB interface.
7. Thermal rearmable input.
8. Connection for battery module (only in models with extra charger).

Technical specifications

MODEL		SPS ADVANCE T
TECHNOLOGY		Line-interactive
FORMAT		Tower
INPUT	Rated voltage	230 V
	Voltage range 100% load	165 ÷ 290 V
	Stabiliser	AVR (Buck & Boost)
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	±5 Hz
	Protection	Resettable breaker
OUTPUT	Rated voltage	230 V
	Voltage accuracy (battery mode)	±10%
	Total harmonic distortion (THDv)	<5%
	Waveform (battery mode)	Pure sine wave
	Frequency	50/60 Hz (same as input)
	Frequency accuracy (battery mode)	±1 Hz
	Compatibility with APFC loads	Yes (1)
	Performance Stabiliser mode (AVR)	>92%
	Performance Battery mode	>80%
	Admissible overloads in battery mode	110% for 1 min / >130% immediate
	Admissible overloads in-line mode	110% 1min / 120% immediate
	Socket type	IEC C13
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	4 hours to 90%
	Battery test	Automatic on each start-up + manual
COMMUNICATION	Ports	RS-232 / USB (HID)
	Intelligent slot	Slot for SNMP/potential-free contacts/ MODBUS
	Monitoring software	For Windows, Linux and Mac
INDICATIONS	Type	LCD + keypad
	Values	Input and output voltage / % load / % battery / backup
	Levels	Connected load / overload / battery / low battery
	Alarm	Battery / low battery / overload / failure
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
GENERAL	Operating temperature	0° C ÷ 40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl
	Acoustic noise at 1 metre	<45 dB (2)
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2
	Operation	EN 62040-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Power degradation of 20%
(2) <50 dB for 3000 VA mode

Information subject to change without notice.

SPS ADVANCE R2

Onduleur Line-interactive sinusoïdal rack 1U de 750 VA à 1500 VA



SPS ADVANCE R2: High-density security in 1U rack format

Salicru's **SPS ADVANCE R** line embodies an innovative generation of Uninterruptible Power Supply Systems (UPS) based on Line-interactive technology, which incorporates sophisticated AVR stabilisation with Buck&Boost regulation and a pure sine wave output, engineered to guarantee uninterruptible and reliable power supply to a wide range of critical workloads.

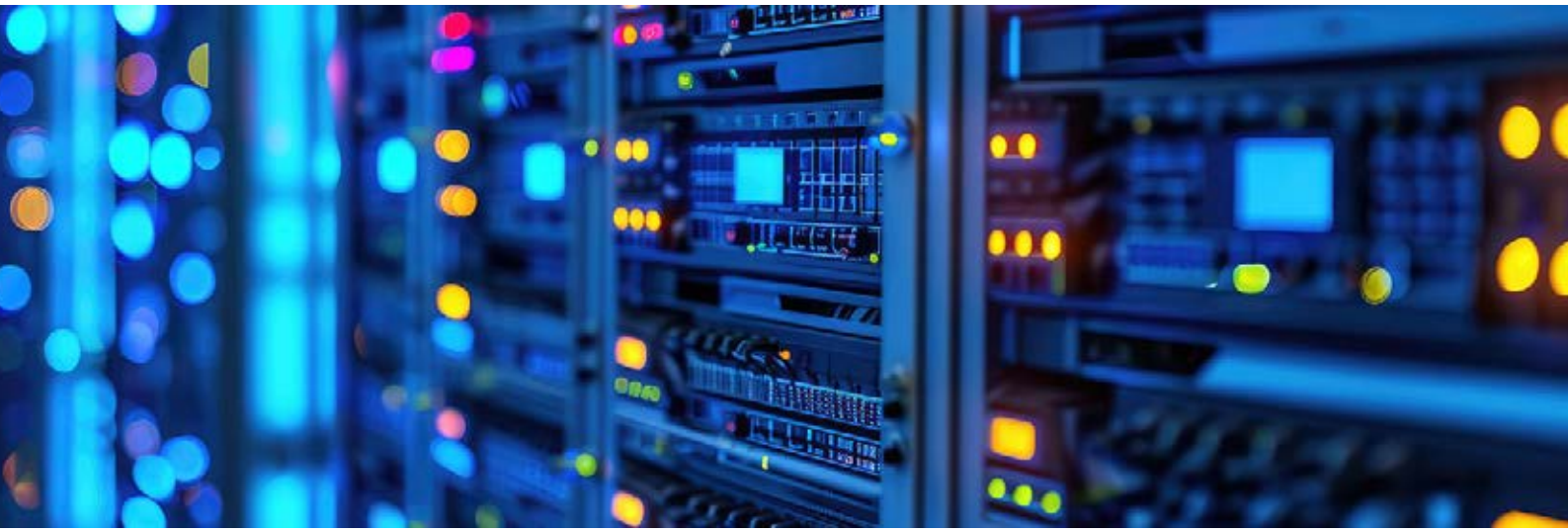
This advanced technology ensures high efficiency, while providing significant savings in overall rack power consumption and is fully compatible with modern APFC (Active Power Factor Correction) power supplies, further optimising performance.

Communication capabilities include RS-232 interface, standard USB HID interface along with management and monitoring software that is compatible with Windows, Linux and Mac operating systems. Alternatively, additional adapters (such as the SNMP/Web adapter) can be fitted into the smart slot provided with the unit.

The **SPS ADVANCE R** series is available in 750, 1,000 and 1,500 VA power ratings, all in 19" rack format and with a height of 1U. The 750 VA model has a depth of 216 mm, while the 1,000 and 1,500 VA models have a depth of 485 mm, ensuring perfect integration into any rack environment.

Applications: Top performance in a compact design

Purpose-designed for rack environments with high occupancy density, Salicru's **SPS ADVANCE R** series UPSs/UPSs free up space for other devices thanks to their height of just one U. This frees up valuable rack space for other devices, while at the same time facilitating the connection of all components via IEC-type electrical sockets, thus optimising the management of complex IT environments.



Performances

· Line-interactive technology with AVR stabilisation (buck-boost).
· Pure sine wave.
· Ultra-compact 1U rack format.
· Efficiency of up to 98%.
· Compatible with APFC power supplies.
· LCD display + keys for operation and information.
· Smart slot for SNMP/potential-free contacts/Modbus.
· RS-232 and USB-HID communication interface.
· 2 programmable outputs.
· Monitoring and management software for Windows, Linux and Mac.
· IEC output sockets.
· Automatic battery test on each start-up.
· Cold-start function for start-up from batteries.
· SLC Greenergy solution.



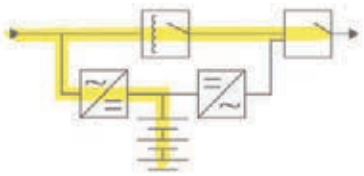
Software

UPS monitoring and management software for closing files and applications. Compatible with Windows, Linux and Mac.

Mac Linux Windows

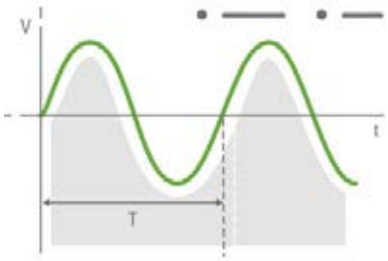
Line-interactive technology

Ideal for office environments. It combines Off-line technology with an internal voltage stabiliser for better compensation of the voltage fluctuations and to avoid a greater use of the batteries and so prolong their life time.



Sine-wave output voltage

This UPS system offers clean, high-quality output voltage with a pure sine wave. This feature is particularly suitable for use with sensitive loads and guarantees optimum operation for the devices connected.





Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 750 ADV R2	6A0DA000004	750 / 450	4 x IEC C13	230 × 433 × 44	8.6
SPS 1000 ADV R2	6A0DA000005	1000 / 600	6 x IEC C13	390 × 433 × 44	14.2
SPS 1500 ADV R2	6A0DA000006	1500 / 900	6 x IEC C13	390 × 433 × 44	15.8

It's recommended to keep a front distance of 35mm, parallel to the fixing plane of the ears on the rack cabinet. This distance is not included in the "Depth" total dimension.

Dimensions



SPS 750 ADV R2

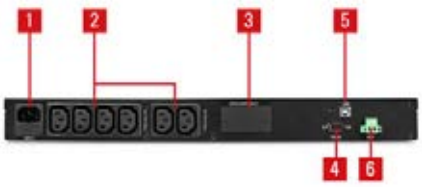


SPS 1000/1500 ADV R2

Connections



SPS 750 ADV R2



SPS 1000/1500 ADV R2

1. IEC 14 AC Input socket with fuse.
2. Output sockets (X2 programmables).
3. Intelligent slot for SNMP/web adapter.
4. RS-232 interface.
5. USB HID port.
6. Emergency power off (EPO).

Technical specifications

MODEL		SPS ADVANCE R2
TECHNOLOGY		Line-interactive
FORMAT		Rack 1U
INPUT	Rated voltage	220 - 240 V
	Voltage range 100% load	165 ÷ 290 V
	Stabiliser	AVR (Buck & Boost)
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	±5 Hz
	Protection	Fuse
OUTPUT	Rated voltage	230 V
	Voltage accuracy (battery mode)	±10%
	Total harmonic distortion (THDv)	<5% linear load / <10% non-linear load
	Waveform (battery mode)	Pure sinusoidal
	Frequency	50 / 60 Hz ±1 HZ
	Frequency accuracy (battery mode)	±1 Hz
	Compatibility with APFC loads	Yes (1)
	Performance Stabiliser mode (AVR)	>95%
	Performance Battery mode	>75%
	Admissible overloads in battery mode	110% for 1 min / 130% immediate
	Admissible overloads in-line mode	110% for 1 min / 130% immediate
	Socket type	IEC C13
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	4 hours to 90%
	User replaceable battery	Yes
	Battery test	Automatic on each start-up + manual
COMMUNICATION	Ports	RS-232 / DB9 + USB (HID)
	Intelligent slot	Slot for SNMP/potential-free contacts/ MODBUS
	Monitoring software	For Windows, Linux and Mac
INDICATIONS	Type	LCD + keypad
	Values	Input and output voltage / % load / % battery / backup
	Levels	Connected load / overload / battery / low battery
	Alarm	Battery / low battery / overload / failure
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
GENERAL	Operating temperature	0º C ÷ 40º C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl
	Acoustic noise at 1 metre	<40 dB
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2(C2)
	Operation	EN 62040-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Power degradation of 20%

Information subject to change without notice.

SPS ADVANCE RT2

Line-interactive sine-wave UPS 800 VA to 3000 VA



SPS ADVANCE RT2: Effective protection for entry-level servers and IT equipment

Salicru's **SPS ADVANCE RT2** series is a range of UPS featuring line-interactive technology with sine-wave output voltage and convertible tower/rack format, the height being only 2U for all power ratings. In addition, its output power factor of 0.9 and compatibility with APFC (active power factor correction) type loads make it the best option for any type of load that requires protection.

In terms of communications, it features an RS-232/USB interface (compatible with HID protocol) and a smart slot that can optionally hold an SNMP card, MODBUS or potential-free contacts; also available are software packages for local or virtual monitoring and management of protected devices.

And other outstanding features include: solutions for applications with long backup (by means of equipment with extra chargers and additional battery modules), swivel mount display and adapters (pedestal and lugs) for placing in tower or rack formats and programmable outputs (critical/non-critical loads) to extend the available backup.

The power range for the **SPS ADVANCE RT2** series is: 800, 1,100, 1,500, 2,000 and 3,000 VA.

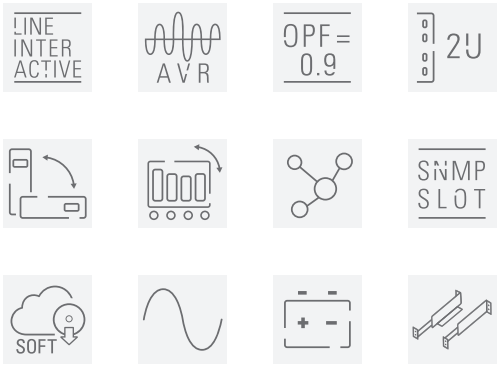
Applications: Flexibility and versatility in the protection of IT environments

The features of the **SPS ADVANCE RT2** series make it a versatile solution for protecting a wide range of IT equipment such as basic servers, routers, switches, hubs and point-of-sale with high power density requirements and/or rack installation of servers/ communications.



Performances

· Line-interactive technology with sine-wave output.
· Permanent AVR stabilisation.
· Output power factor PF=0.9.
· Control panel with swivel mount LCD display and keypad.
· Convertible tower/rack format (2U).
· Includes pedestal (pedestal mount) and lugs (rack mount).
· Backup extensions available for all power ratings.
· UPS models with extra charger for backup extensions.
· RS-232/USB-HID interface.
· Downloadable monitoring software for Windows, Linux and Mac.
· Smart slot for SNMP/potential-free contacts/MODBUS.
· ADSL/fax/modem protection.
· EPO – emergency power off.
· Programmable outputs for critical/non-critical loads.
· Manual and automatic battery test.
· Smart battery charger to shorten average recharging times.
· Battery recharging with device turned off.
· Rack rails for 400~1000 mm deep cabinets included.



Display

1. Configuration values, fault codes and remaining backup.
2. Level of battery available.
3. Level of load connected.
4. Input values (current, voltage and frequency).
5. Output and battery values (current, voltage and frequency).
6. Operating mode.



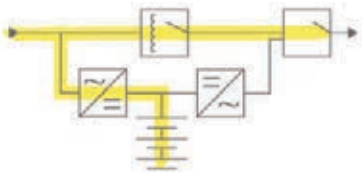
Communications

· USB interface with HID protocol: Parameter configuration, UPS control and computer shutdown/hibernation through the USB port. Available for Windows, Linux and Mac.
· UPS management and monitoring software for closing files/applications for Windows, Linux, Unix and Mac. Free and downloadable from www.salicru.com.
· Smart slot for the connection of SNMP environment integration cards and signal cards via potential-free contacts or Modbus protocol.

Mac Linux Windows

Line-interactive technology

Ideal for office environments. It combines Off-line technology with an internal voltage stabiliser for better compensation of the voltage fluctuations and to avoid a greater use of the batteries and so prolong their life time.





Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SPS 800 ADV RT2	6A0CA000001	800 / 720	8 × IEC C13	410 × 438 × 88	12.9
SPS 1100 ADV RT2	6A0CA000002	1100 / 990	8 × IEC C13	410 × 438 × 88	13.4
SPS 1500 ADV RT2	6A0CA000003	1500 / 1350	8 × IEC C13	510 × 438 × 88	19.5
SPS 2000 ADV RT2	6A0CA000004	2000 / 1800	8 × IEC C13	510 × 438 × 88	21.5
SPS 3000 ADV RT2	6A0CA000005	3000 / 2700	8 × IEC C13 + 1 × IEC C19	630 × 438 × 88	29.3

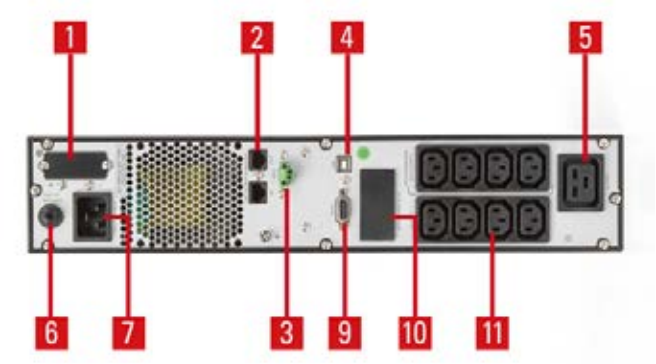
Frontal protuberance, from the fixing plane of the ears on the rack cabinet: 35mm. This distance is not included in the "Depth" total dimension.
Dimensions and weights for devices with standard backup

Dimensions



SPS 800÷3000 ADV RT2

Connections



SPS 800÷3000 ADV RT2

1. Connection for battery module (only in models with extra charger).
2. ADSL/fax/modem transient protector.
3. Emergency stop (EPO).
4. USB interface.
5. Socket IEC C19 (only for 3000 VA model).
6. Resettable thermal cutoff (fuse for 800 and 1100 VA models).
7. Plug (IEC C14 for 800, 1100 and 1500 VA models; IEC C20 for 2000 and 3000 VA models).
8. Fan.
9. RS-232 interface.
10. Smart slot for SNMP/potential-free contacts/ MODBUS.
11. Sockets (8 x IEC C13), programmable critical (x4) / non-critical (x4).

Technical specifications

MODEL		SPS ADVANCE RT2
TECHNOLOGY		Line-interactive with sine-wave output
FORMAT		Convertible tower/rack (2U)
INPUT	Rated voltage	208 / 220 / 230 / 240 V
	Voltage range 100% load	170 ÷ 280 V
	Stabiliser	AVR (Buck & Boost)
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	±5 Hz
	Protection	Fuse (800/1100) or resettable thermal cutoff (1500/2000/3000)
OUTPUT	Power factor	0.9
	Rated voltage	208 / 220 / 230 / 240 V
	Voltage accuracy (battery mode)	±1.5%
	Total harmonic distortion (THDv)	< 2% linear load / < 5% non-linear load
	Waveform (battery mode)	Pure sine wave
	Frequency	50/60 Hz (same as input)
	Frequency accuracy (battery mode)	±0.1Hz
	Admissible overloads in battery mode	< 120% off at 1 min / < 150% off at 10 s
	Admissible overloads in-line mode	< 120% off at 5 min / < 150% off at 10 s / >150 %: 1 s
	Programmable sockets	Yes, for critical / non-critical loads (4/4)
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	4 hours to 90%
	Battery test	Automatic on every start + one × week
CHARGER	Temperature voltage compensation	Yes
COMMUNICATION	Ports	RS-232/USB-HID
	Intelligent slot	Slot for SNMP/potential-free contacts/ MODBUS
	Monitoring software	For Windows, Linux and Mac
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
	ADSL/fax/modem transient protector	Yes
	Green-function	Yes, automatic stop in battery mode with load <5%
	Smart fan speed	Yes, smart control of fan speed
	Site wiring fault	Yes, error detection of phase-neutral rotation and/or absence of earth
GENERAL	Operating temperature	0° C ÷ 40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)
	Acoustic noise at 1 metre	< 45dB
STANDARDS	Safety	EN IEC 62040-1
	Electromagnetic compatibility (EMC)	EN IEC 62040-2 (C2)
	Operation	EN IEC 62040-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.

SLC TWIN PRO2

On-line double-conversion UPS 700 VA to 3000 VA



SLC TWIN PRO2: Advanced on-line protection for sensitive and critical loads

Salicru's **SLC TWIN PRO2** series is a UPS range in a tower format equipped with on-line double-conversion technology and the latest features to make it an advanced protection system for sensitive and critical loads. High output power factor (PF=0.9) to ensure availability to all types of loads.

Full control through status information via LCD display and keypad. And extensive monitoring and communication options via the built-in USB HID interface, an intelligent slot for SNMP cards or relays and a wide range of software packages available – free monitoring version downloadable for Windows, Linux, Unix or Mac and packages available for multi servers or virtualised systems. For facilities that require more back-up time, there is a possibility of backup extensions using UPSs with extra charger and additional battery modules. Also notable is the possibility of Eco-mode operation to improve the efficiency of the device, EPO (emergency power off) functions, operation as a frequency converter and built-in battery test.

Salicru's **SLC TWIN PRO2** range is available in power ratings of 700, 1000, 1500, 2000 and 3000 VA.

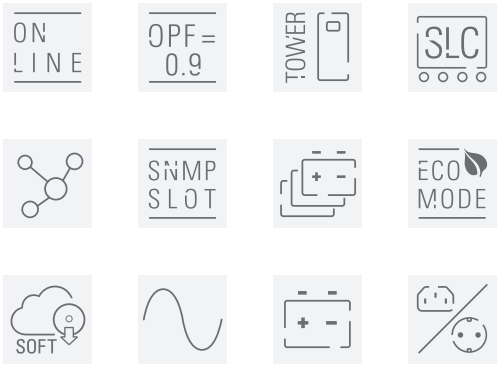
Applications: High-performance features for single-phase environments of up to 3 kVA

Power supply failures in IT systems can cause losses as a result of downtime and the time taken to restore the system to normal operation, and damage to network hardware. Many other disturbances (micro power outages, voltage fluctuations, frequency variations, harmonics, transients, etc.) can also cause IT environments to malfunction.



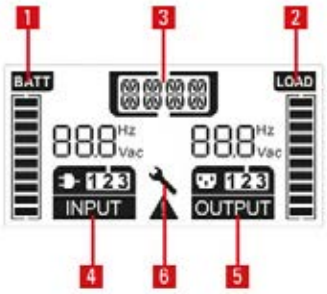
Performances

- On-line double-conversion technology.
- Output power factor PF=0.9.
- Control panel with LCD screen and keypad.
- Tower format.
- Backup extensions available for all power ratings.
- UPS models with extra charger for backup extensions.
- USB HID interface for all models as standard.
- Downloadable monitoring software for Windows, Linux, Unix and Mac.
- Intelligent slot for SNMP/relays.
- Eco-mode operation.
- Automatic frequency detector.
- Frequency conversion function.
- EPO – emergency power off.
- Schuko or IEC sockets available.
- Manual and/or automatic programmable battery test.
- Smart battery charger to shorten average recharging times.
- Battery recharging with device turned off.
- SLC Greenergy solution.



Display

1. Level of battery available.
2. Level of load connected.
3. Operation/alarm/fault status.
4. Input voltage and frequency.
5. Output voltage and frequency.
6. Settings mode.



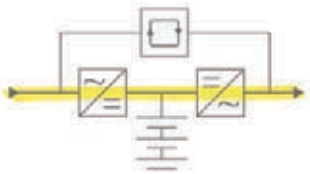
Communications

- **USBHID UPS**: Enables control, parameter configuration and computer shutdown/ hibernation via the USB port. Available with Windows, Linux for Mac.
- UPS monitoring and management software for closing files/applications in Windows, Linux, Unix and Mac environments. Free and downloadable from www.salicru.com.
- Intelligent slot for connecting SNMP or optocoupler cards.

Mac Linux Windows

Online double-conversion

Maximum reliability, the loads are fed from the UPS output by a quality voltage isolated from possible fluctuations thanks to the unit's internal double conversion (AC-DC DC-AC).





Range

MODEL SCHUKO	CODE	POWER (VA / W)	NO. OF SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-700-TWIN PRO2	699CA000001	700 / 630	3	356 × 144 × 228	9.2
SLC-1000-TWIN PRO2	699CA000003	1000 / 900	3	356 × 144 × 228	10.2
SLC-1500-TWIN PRO2	699CA000005	1500 / 1350	4	399 × 190 × 327	17.4
SLC-2000-TWIN PRO2	699CA000007	2000 / 1800	4	399 × 190 × 327	18.4
SLC-3000-TWIN PRO2	699CA000009	3000 / 2700	4	399 × 190 × 327	22.7

MODEL IEC	CODE	POWER (VA / W)	NO. OF SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-700-TWIN PRO2 IEC	699CA000011	700 / 630	4xC13	356 × 144 × 228	9.2
SLC-1000-TWIN PRO2 IEC	699CA000013	1000 / 900	4xC13	356 × 144 × 228	10.2
SLC-1500-TWIN PRO2 IEC	699CA000015	1500 / 1350	4xC13	399 × 190 × 327	17.4
SLC-2000-TWIN PRO2 IEC	699CA000017	2000 / 1800	4xC13	399 × 190 × 327	18.4
SLC-3000-TWIN PRO2 IEC	699CA000019	3000 / 2700	4xC13 + 1xC19	399 × 190 × 327	22.7

Dimensions and weights for devices with standard backup

Dimensions

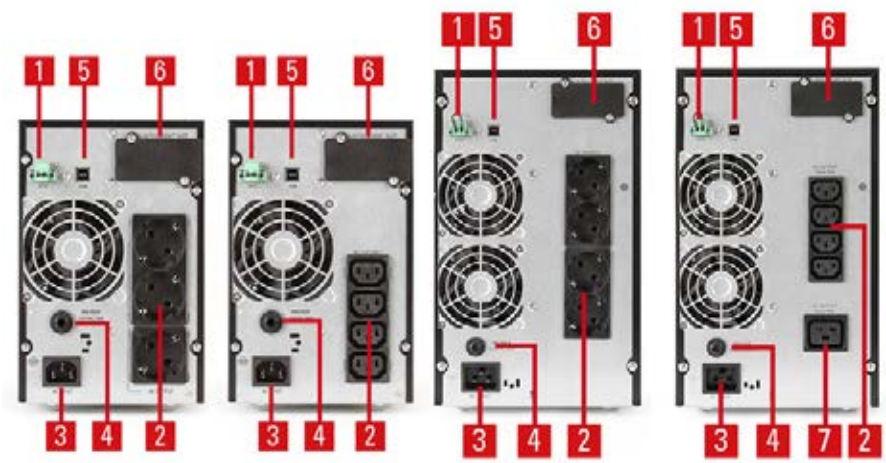


SLC 700/1000 TWIN PRO2 (IEC)



SLC 1500÷3000 TWIN PRO2 (IEC)

Connections



SLC 700/1000 TWIN PRO2
SLC 700/1000 TWIN PRO2 IEC

SLC 1500÷3000 TWIN PRO2
SLC 1500÷3000 TWIN PRO2 IEC

1. Emergency stop (EPO).
2. Socket AC output (SCHUKO / IEC).
3. Socket AC input.
4. Thermal rearmable input.
5. USB HiD interface.
6. Intelligent slot for SNMP/relays.
7. Socket AC output (SLC-3000-TWIN PRO2 IEC model only).

Technical specifications

MODEL		SLC TWIN PRO2
TECHNOLOGY		On-line double-conversion
FORMAT		Tower
INPUT	Rated voltage	220 / 230 / 240 V
	Voltage range 100% load	176 ÷ 300 V
	Voltage range 40% load	100 ÷ 300 V
	Rated frequency	50 / 60 Hz
	Frequency range	±10%
	Power factor	≥0.99
	Protection	Resettable circuit breaker
OUTPUT	Power factor	0.9
	Waveform	Pure sine wave
	Rated voltage	220 / 230 / 240 V
	Voltage accuracy	±1%
	Total harmonic distortion (THDv)	<2%
	Synchronised frequency	±10%
	Free running frequency	±0.05 Hz
	Synchronous speed	1 Hz/s
	On-line performance	>89%÷92%
	Eco-mode performance	>98%
	Admissible overloads in battery mode	105% constant / 130% for 10 s / 150% for 1 s
	Admissible overloads in bypass mode	130% constant / 180% for 60 s
	Admissible overloads in-line mode	105% constant / 130% for 60 s / 150% for 10 s / >150% for 300ms
	Available socket formats	Schuko (DIN) o IEC
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	4 hours to 90%
	Battery test	Manual and/or automatic programmable
COMMUNICATION	Ports	USB HID
	Intelligent slot	Slot for SNMP/relays
	Monitoring software	For Windows, Linux and Mac
OPERATING MODES	On-line double-conversion	Yes
	Eco-mode	Yes
	Frequency converter (CVCF)	Yes (1)
GENERAL	Operating temperature	0° C ÷ 40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)
	Acoustic noise at 1 metre	≤49 dB (100% load) / ≤41 dB (60% load)
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) up to 60% of the load

Information subject to change without notice.

SLC TWIN PRO2

On-line double-conversion UPS 4 to 20 kVA



SLC TWIN PRO2: Enhanced protection for mid-range systems with single-phase power supply

Salicru's **SLC TWIN PRO2** series UPS systems feature on-line double conversion technology, currently the most advanced for the protection of critical systems as it provides a fully stabilised and filtered sinusoidal supply voltage. The systems come in a tower format and are available in power ratings of 4, 5, 6, 8, 10, 15 and 20 kVA.

The Salicru **SLC TWIN PRO2**'s output voltage is always single-phase, featuring a single-phase input of 4 to 20 kVA and a three-phase input of 8 to 20 kVA. All devices with single-phase input provide a unitary output power factor [1], the most optimum for systems and environments with high energy needs. Adaptability is another important feature thanks to the numerous operating modes available: On-line, Batteries, Eco-mode, Bypass, Frequency converter and Parallel redundant.

The possibilities of control and monitoring are varied: on the one hand, an LCD display + keypad for local operation of the device, and, on the other, various communication options (USB HID and RS-232 interfaces, and slot for SNMP, RS-485 and AS-400 cards) that enable the UPS to be integrated into standard or virtualised platforms for management, incident notification and remote maintenance.

(1) Except 15 and 20 kVA I / I models

Applications: Maximum continuity protection for sensitive and critical systems

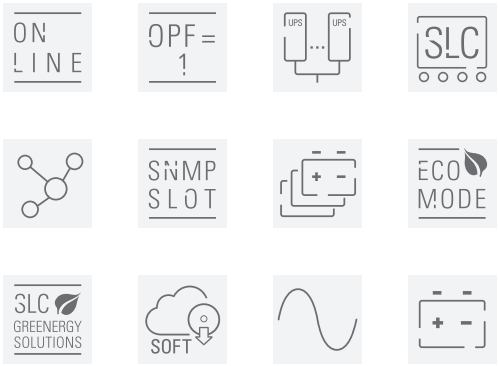
Salicru's **SLC TWIN PRO2** series is the best option for providing a secure power supply to ERP systems, Business Intelligence, CRM solutions, intranets/extranets and corporate networks in the event of a wide range of possible disturbances (micro power outages, voltage fluctuations, frequency variations, harmonics, transients, etc.), which can cause irreparable damage or incur high costs in all of these critical systems.



Performances

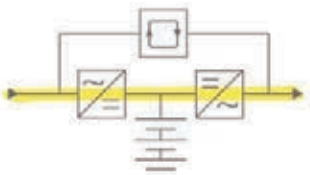
- On-line double conversion and DSP control technology.
- Output power factor PF=1[1].
- Compact tower format for space saving.
- Active power factor corrector for all input phases.
- Multiple operating modes for better adaptability.
- Equipped for parallel operation as standard, up to 3 devices.
- USB and RS-232 interface for all models as standard.
- Monitoring software for Windows, Linux, Unix and Mac (downloadable).
- Intelligent slot for SNMP/RS-485/optocoupler cards.
- Eco-mode operation for increased efficiency.
- Backup extensions available for all power ratings.
- Frequency conversion function.
- EPO - emergency power off.
- Manual and/or automatic programmable battery test.
- SLC Greenergy solution.

(1) PF=0.9 for devices with mono-phase input 15 and 20 kVA I/I, three-phase input SLC TWIN/3 PRO2 models

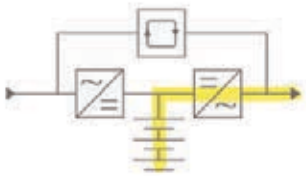


Operating modes

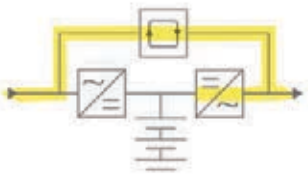
On-line double-conversion
Double voltage conversion (AC/DC + DC/AC), providing the best degree of safety to loads.



Batteries
In the event of power failure, the loads continue to be powered by means of batteries.

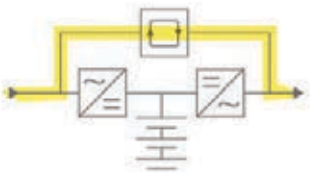


Eco-mode
Increased efficiency up to 99%, with immediate availability of full power.

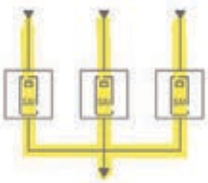




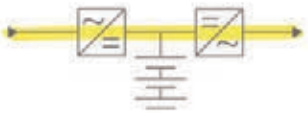
Bypass
In the event of any eventuality (incident, overload, etc.), the loads continue to be powered by the input voltage.



Parallel redundant
Increased safety (N+1) or capacity, with configurations of up to 3 devices.



Frequency converter
Adaptation of the output frequency to the needs of the load (50/60 Hz or 60/50 Hz).



Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)	INPUT /OUTPUT
SLC-4000-TWIN PRO2	699CB000001	4000 / 4000	592 × 250 × 576	81	I / I
SLC-5000-TWIN PRO2	699CB000002	5000 / 5000	592 × 250 × 576	82	I / I
SLC-6000-TWIN PRO2	699CB000003	6000 / 6000	592 × 250 × 576	83	I / I
SLC-8000-TWIN PRO2	699CB000004	8000 / 8000	592 × 250 × 576	84	I / I
SLC-8000-TWIN/3 PRO2	699CC000001	8000 / 7200	592 × 250 × 576	84	III / I
SLC-10000-TWIN PRO2	699CB000005	10000 / 10000	592 × 250 × 576	85	I / I
SLC-10000-TWIN/3 PRO2	699CC000002	10000 / 9000	592 × 250 × 576	85	III / I
SLC-15000-TWIN PRO2	699CD000001	15000 / 13500	815 × 250 × 826	164	I / I
SLC-15000-TWIN/3 PRO2	699CC000003	15000 / 13500	815 × 250 × 826	164	III / I
SLC-20000-TWIN PRO2	699CD000002	20000 / 18000	815 × 250 × 826	166	I / I
SLC-20000-TWIN/3 PRO2	699CC000004	20000 / 18000	815 × 250 × 826	166	III / I

Dimensions and weights for devices with standard backup with 230 V input voltage or 3 x 400 V, 230 V output voltage.

Dimensions



SLC 4000÷10000 TWIN PRO2
SLC 8000/10000 TWIN/3 PRO2



SLC 15000/20000 TWIN PRO2
SLC 15000/20000 TWIN/3 PRO2

Connections



SLC 4000÷10000 TWIN PRO2
SLC 8000/10000 TWIN/3 PRO2



SLC 15000/20000 TWIN PRO2
SLC 15000/20000 TWIN/3 PRO2

1. USB interface.
2. RS-232 interface.
3. Emergency stop (EPO).
4. Intelligent slot for SNMP / AS400 / RS485-Modbus.
5. Manual Bypass.
6. Input protector.
7. Terminal cover.
8. Thermal rearmable input.
9. Socket IEC output.
10. Parallel ports.
11. Earth connection.

Technical specifications

MODEL		SLC TWIN PRO2 4-10 kVA	SLC TWIN/3 PRO2 8-20 kVA	SLC TWIN PRO2 15-20 kVA
TECHNOLOGY		On-line, double conversion, PFC with double DC bus		
FORMAT		Tower		
INPUT	Rated voltage	208 / 220 / 230 / 240 V (1)	3 × 380 / 400 / 415 V (3F +N)	208 / 220 / 230 / 240 V (1)
	Voltage range	110 ÷ 276 V (2)	3 × 190 ÷ 478+N (2)	110 ÷ 276 V (2)
	Rated frequency	50 / 60 Hz		
	Frequency range	±10%		
	Total harmonic distortion (THDi)	<4%	<5%	
	Power factor	≥0.99		
OUTPUT	Power factor	1	0.9	
	Rated voltage	208 / 220 / 230 / 240 V (1)		
	Voltage accuracy	±1%		
	Total harmonic distortion (THDv)	≤1% linear load; ≤4% non-linear load	≤2% linear load; ≤5% non-linear load	
	Synchronised frequency	±4 Hz		
	Free running frequency	±0.1 Hz	±0.05 Hz	
	Total performance in On-line mode	93% ÷ 94%	88% ÷ 90%	
	Admissible overloads	Up to 110% for 10 min; 130% for 1 min		
	Crest factor	3 a 1		
	Parallel	Yes, up to 3 units(3)		
BYPASS	Type	Hybrid		
	Transfer time	Nil		
MANUAL BYPASS	Type	No breaks		
BATTERY	Protection	Against power surges, undervoltages and alternating current components		
	Battery type	Pb-Ca sealed, AGM, maintenance-free		
	Charge type	I/U (constant current/constant voltage)		
	Recharge time	7 ÷ 9 hours to 90%	9 hours to 90%	
CHARGER	Temperature voltage compensation	Yes		
COMMUNICATION	Ports	USB, RS-232 and relay		
	Intelligent slot	Yes, ready for SNMP / AS400 / RS485-Modbus		
	Monitoring software	Downloadable for Windows, Unix, Linux and Mac		
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes		
OPERATING MODES	Eco-mode	Yes		
	Frequency converter (CVCF)	Yes (4)	Yes	Yes(5)
GENERAL	Operating temperature	0° C ÷ 40° C		
	Relative humidity	Up to 95%, non-condensing		
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)		
	Acoustic noise at 1 metre	<58 dB ÷ <60 dB		
STANDARDS	Safety	EN-IEC 62040-1		
	Electromagnetic compatibility (EMC)	EN 62040-2 (C3)		
	Operation	VFI-SS-11 (EN-62040-3)		
	Quality and environmental management	ISO 9001, ISO 14001, ISO 45001		

(1) Power reduction to 90% for 208 V input
(2) With 50% load
(3) Power reduction to 90%
(4) Power reduction to 60%
(5) Power reduction to 40%

Information subject to change without notice.

SLC TWIN PRO3 4-10 kVA

On-line double conversion IoT UPS from 4 to 10 kVA with PF=1



SLC TWIN PRO3 4-10 KVA: Robustness, energy efficiency and extended connectivity: the best combination to protect your productive environment

Salicru's **SLC TWIN PRO3** series of uninterruptible power supplies (UPSs) is the successor to the prestigious **SLC TWIN PRO2** family, offering improved functionality and representing a step forward in terms of technology. The range starts at 4 kVA and includes 5, 6, 8 and 10 kVA models. There are also specific B1 versions for extended backup, available in 6 and 10 kVA power ratings.

The power factor of 1, increased energy efficiency and multiple operating modes give the **SLC TWIN PRO3** a high level of added value in technical terms.

It is the fourth incarnation of the **SLC TWIN** series and represents a consolidation of the on-line single-phase double conversion UPSs we have been offering to the market for over 12 years. This latest edition maintains the series' characteristic robustness while adding cutting-edge technology in the form of complete connectivity that will meet the technological expectations of even the most demanding users.

Its versatility in terms of communication deserves particular mention. The smart slot is joined by direct connections to the native Ethernet, USB and RS-232 ports or a Wi-Fi dongle. This broad spectrum of connectivity is complemented by the NIMBUS app and website access, which offer multiple options for monitoring and interacting with the connected devices, thereby enabling simultaneous viewing of all of the connected Salicru devices (even if they are from different series).

Applications: Critical and sensitive loads that require close supervision

Salicru's **SLC TWIN PRO3** series is the best option for ensuring continuity with constant and precise monitoring. Critical environments that maintain highly productive structures, such as ERP systems, Business Intelligence (BI), CRM solutions, networks, etc. need to be backed by the kind of energy security provided by the **SLC TWIN PRO3** series, which also protects them against frequency and voltage variations and other types of disturbances that can affect the network.



Performances

· On-line double conversion and DSP technology.
· Output power factor PF=1.
· Tower format with a reduced footprint to save space.
· Eco-mode operation for increased efficiency.
· Up to 3 devices can be connected in parallel (optional).
· Backup extensions available.
· Automatic detection of external battery modules via RJ-45.
· Frequency converter function (with and without batteries).
· Programmable automatic and manual battery test.
· Choice of 10 languages.
· Native Ethernet port for NIMBUS IoT, USB and RS-232 interfaces as standard on all models.
· Monitoring software for Windows, Linux, Unix and Mac (downloadable).
· Smart slot for SNMP/RS-485/MODBUS cards.



Flexibility at the user's fingertips

The **SLC TWIN PRO3** series gives users the option of configuring the device as a frequency converter (annulling the no-battery alarm), while also enabling full configuration of the charger and battery voltage as well as operating as an output transformer. Users can even take advantage of this adaptability after the device has been installed, thereby enabling them to reconfigure its functionality when needed.

Increased battery life expectancy

Beyond the quality of their electronic components, the success of our uninterrupted protection and supply systems lies in the intelligent and optimised use of the charge and discharge cycles of the energy storage units, which can result in an increased battery life expectancy of up to 50% under optimum operating conditions.

Unlike other UPSs that subject their batteries to short and frequent charges, the **SLC TWIN PRO3** series is able to optimise battery use through "rest periods" in which the battery does not receive any current at all, provided it has enough charge to guarantee the provision of backup.

Vigilant protection and connectivity

The inclusion of an Ethernet port enables the **SLC TWIN PRO3** series to be integrated into an IoT environment. Through the cloud, our **NIMBUS** app and the website, developed wholly within SALICRU's Connected Software department, users can monitor the status of their devices in full, receive information and alarms, carry out remote battery tests, and much more.

The immediacy offered by the system's connectivity directly ensures the continuity of the connected loads, and consequently the continuity of the productive activities with them.

In terms of hardware, the over-voltage cut-off device (OVCD), fan-block detection system, overheating sensor, overload alarm and external-battery detection system ensure constant automated monitoring of the overall system.

NIMBUS

Download on the App Store

Available on the Google Play



Options

· NIMBUS SNMP card
· NIMBUS AS400 card
· NIMBUS RS-485 MODBUS card
· Parallel kit
· Additional IEC-type output cables
· Warranty extension
· Isolation transformers

salicru

Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-4000-TWIN PRO3	6B5AB000001	4000/4000	492 × 225 × 589	51
SLC-5000-TWIN PRO3	6B5AB000002	5000/5000	492 × 225 × 589	52
SLC-6000-TWIN PRO3	6B5AB000003	6000/6000	492 × 225 × 589	53
SLC-8000-TWIN PRO3	6B5AB000004	8000/8000	492 × 225 × 589	58
SLC-10000-TWIN PRO3	6B5AB000005	10000/10000	492 × 225 × 589	60
SLC-6000-TWIN PRO3 B1	6B5AB000006	6000/6000	492 x 225 x 348	13,4
SLC-10000-TWIN PRO3 B1	6B5AB000007	10000/10000	492 x 225 x 348	15,7
SLC 10000 TWIN PRO3 DUAL	6B5AF000001	10000/10000	492 × 225 × 589	59.5
SLC 10000 TWIN PRO3 DUAL B1	6B5AF000002	10000/10000	492 × 225 × 589	22,7

Dimensions and weights for devices with standard backup. Please visit www.salicru.com for extended backup with additional EBM modules.

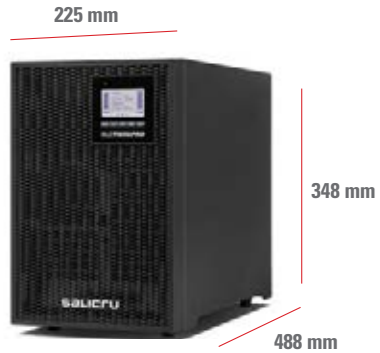
Dimensions



SLC 4000÷10000 TWIN PRO3/PRO3 DUAL



EBM - SLC TWIN PRO3/PRO3 DUAL

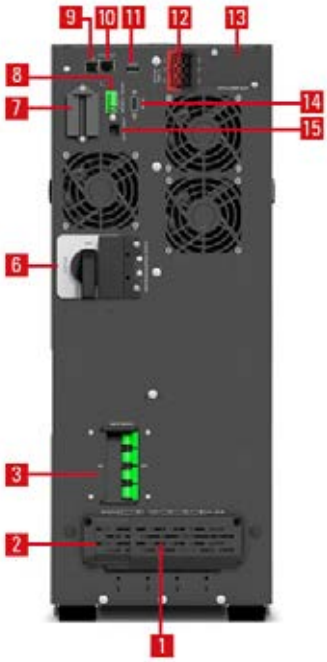


SLC 6000÷10000 TWIN PRO3 B1

Connections



SLC 4000÷10000 TWIN PRO3



SLC 10000 TWIN PRO3 DUAL

1. Input/output connection terminals.
2. Earth cable connection.
3. Input circuit breaker.
4. Auxiliary IEC C19 output.
5. Auxiliary IEC C13 outputs.
6. Manual bypass.
7. Parallel port.
8. Digital E/S and emergency power-off (EPO).
9. USB interface.
10. Ethernet port for CLOUD.
11. HDMI port for NIMBUS dongle.
12. Battery module connection.
13. Smart slot for SNMP/AS400/RS-485-Modbus.
14. RS-232 interface.
15. Battery module communication port.

Technical specifications

MODEL		SLC TWIN PRO3 4-10 kVA	SLC 10000 TWIN PRO3 DUAL
TECHNOLOGY		On-line double-conversion	
FORMAT		Tower	
CONFIGURATION		1:1	3:1 / 1:1
INPUT	Rated voltage	220/230/240 V	220/230/240 V o 3 x 380/400/415 V + N
	Voltage range	110 ÷ 276 V(1)	
	Rated frequency	50 / 60 Hz (auto-detection)	
	Frequency range	50 ±5 Hz/60 ±6 Hz	40 ÷ 70 Hz
	Total harmonic distortion (THDi)	<3 % linear load / <5 % non-linear load	
	Power factor	>99	≥0,95 with three-phase input ≥0,99 with single-phase input
OUTPUT	Power factor	1	
	Rated voltage	220/230/240 V	
	Voltage accuracy	±1 %	
	Total harmonic distortion (THDv)	< 1% linear load / < 5% non-linear load	
	Synchronised frequency	50 ±5 Hz/60 ±6 Hz	
	Eco-mode performance	98 %	
	Total performance in On-line mode	95 %	
	Admissible overloads in battery mode	105 ÷ 125 % for 1 min/125 ÷150 % for 30 s/>150 % for 500 ms	
	Admissible overloads in bypass mode	125 ÷150 % for 30 s/ >150 % for 500 ms	125 ÷150 % for 1 min / >150 % for 500 ms
	Admissible overloads in-line mode	105 ÷ 125 % for 10 min/125 ÷150 % for 30 s/>150 % for 500 ms	
	Parallel	Yes, up to 3 units	
BATTERY	Protection	Against overvoltages, undervoltages and overheating	
	Battery type	Pb-Ca sealed, AGM, maintenance-free	
	Charge type	Smart charge with 3 modes	
	Recharge time	3 hours to 90%	
	Maximum no. of EBMs	6	
CHARGER	Temperature voltage compensation	Yes	
	Charging current	Adjustable 1 ÷ 4 A (2 ÷ 12A for B1 devices)	Adjustable 2 ÷ 12 A
COMMUNICATION	Ports	USB-HID/RS-232/RJ-45/HDMI	
	Intelligent slot	For SNMP/AS400/Modbus	
	Monitoring software	Software for Windows, Linux and Mac/app for iOS and Android/web portal	
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes	
	Emergency stop (EPO)	Yes	
OPERATING MODES	Eco-mode	Yes	
	Frequency converter (CVCF)	Yes(2), operates with or without batteries	
GENERAL	Operating temperature	0º C ÷ +50º C(3)	
	Relative humidity	Up to 95%, non-condensing	
	Maxium operating altitude	3.000 masl(4)	
	Acoustic noise at 1 metre	<55 dB ÷ <60 dB at full load/<50 dB ÷ <55 dB at 75% load	
STANDARDS	Safety	EN IEC 62040-1	
	Electromagnetic compatibility (EMC)	EN 62040-2 (C3)	
	Operation	VFI-SS-11 (EN 62040-3)	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) 110 ÷ 160 V with linear derating of load at 50%.
(2) Power derating of 60% in frequency converter mode.
(3) Power derating of 50% from 40°C to 50°C.
(4) Power derating of 1% for each additional 100°m over 1000 MASL.

Information subject to change without notice.

SLC TWIN PRO3 MULTI

IoT on-line double-conversion UPS, 10–20 kVA, PF = 1



SLC TWIN PRO3 MULTI 10-20 KVA: New generation of power and connectivity

Salicru's **SLC TWIN PRO3 MULTI** Uninterruptible Power Supply (UPS) series represents the fourth iteration of SLC TWIN, strengthening our portfolio of single-phase on-line double-conversion UPSs that have been on the market for over 12 years. It preserves the range's renowned reliability while adding first-class technology through comprehensive connectivity that matches the sophistication required for advanced management of critical infrastructures.

Available in 10, 15 and 20 kVA ratings, it delivers a power factor (PF) of 1, high energy efficiency and multiple operating modes, ensuring top performance in sensitive production environments.

A key strength of the range is its flexible input/output configuration (3:3, 3:1 and 1:1) via busbars, providing superior versatility and greater protection by allowing two separate inputs in every option.

Its communications versatility stands out with an intelligent slot, direct Ethernet, USB and RS-232 connections and compatibility with the NIMBUS App and web access, enabling real-time monitoring of multiple Salicru units, even across different series.

Applications: Mission-critical processes demanding complete control

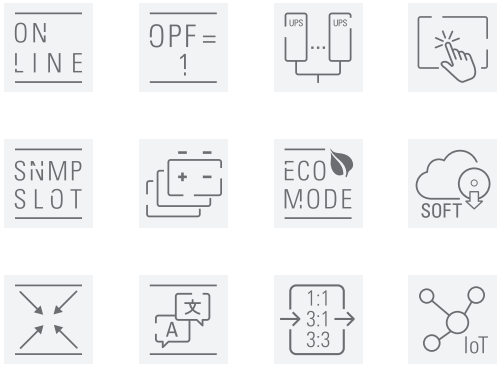
The **SLC TWIN PRO3 MULTI** series ensures operational continuity where monitoring must be constant and highly precise. High-productivity solutions such as ERP, Business Intelligence, CRM or corporate networks require a safe and stable power supply.

SLC TWIN PRO3 MULTI protects against frequency variations, voltage fluctuations and multiple disturbances on the grid, providing top-tier power back-up.



Performances

· On-line double-conversion technology with DSP control.
· Output power factor PF = 1.
· Flexible input/output supply configurations (3:3, 3:1, 1:1).
· Supports dual-source configuration with two independent inputs.
· Compact tower footprint for space savings.
· Control panel with touchscreen display.
· Parallel connection of up to 3 units (optional).
· Extended autonomy options available.
· Automatic detection of external battery module via RJ-45.
· Frequency-converter function, with and without batteries.
· Battery test, manual and programmable automatic.
· 9 selectable languages.
· Native Ethernet port for NIMBUS IoT, plus USB and RS-232 interfaces fitted as standard on all models.
· Monitoring software for Windows, Linux, Unix and Mac (downloadable).
· Intelligent slot for SNMP/RS485/MODBUS cards.
· Compatibility with inlet air filters.
· Tropicalisation included.
· Modular design with reduced MTTR and optional independent bypass input.



Touchscreen display

The series **SLC TWIN PRO3 MULTI** incorporates a colour touchscreen control panel, a key element in the advanced management of a modern UPS. Its intuitive design enables immediate, accurate visualisation, highlighting the most relevant information at the centre of the screen.





Flexible input/output configuration

By allowing multiple configurations, the unit achieves superior versatility; using busbars, the following arrangements are available, and two different inputs can be used in all of them for added protection:

• **3:3 mode:** three-phase input and output – ideal for data centres and high load-density systems.

3:1 mode: three-phase input and single-phase output – suitable for applications focusing protection on critical single-phase loads, reducing imbalances and simplifying installation.

1:1 mode: single-phase input and output – intended for environments with intermediate power and specific local back-up needs, ensuring autonomy.

Eco-mode and Eco-mode+

Optimisation also reaches another level: the **SLC TWIN PRO3 MULTI** adapts to different electrical environments and critical loads, improving energy efficiency without compromising protection.

It includes Eco-mode, delivering highly efficient operation by reducing losses under normal load, and Eco-mode+, a more advanced version that combines maximum efficiency with continuous monitoring to ensure continuity even with variable loads.

These functions provide significant energy savings while maintaining reliability and stability of critical systems.

NIMBUS

Download on the App Store

Available on the Google Play

Options

· NIMBUS SNMP card
· NIMBUS AS400 card
· NIMBUS RS-485 MODBUS card
· Paralleling kit
· Cable gland kit
· Dust filters

Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-10000-TWIN PRO3 MULTI	6B5AG000001	10000/10000	699 x 300 x 805	96
SLC-10000-TWIN PRO3 MULTI B1	6B5AG000002	10000/10000	699 x 300 x 805	52,9
SLC-15000-TWIN PRO3 MULTI	6B5AG000003	15000/15000	699 x 300 x 805	129,4
SLC-15000-TWIN PRO3 MULTI B1	6B5AG000004	15000/15000	699 x 300 x 805	54,2
SLC-20000-TWIN PRO3 MULTI	6B5AG000005	20000/20000	699 x 300 x 805	139
SLC-20000-TWIN PRO3 MULTI B1	6B5AG000006	20000/20000	699 x 300 x 805	54,2

Dimensions and weights for equipment with standard autonomy. Please consult the website www.salicru.com for extended autonomy with additional EBM modules.

Dimensions

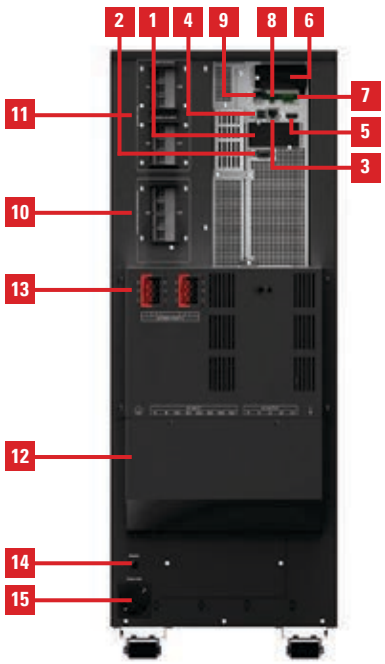


SLC 10000÷20000 TWIN PRO3 MULTI
SLC 10000÷20000 TWIN PRO3 MULTI B1



EBM - SLC TWIN PRO3 MULTI

Connections



SLC 10000÷20000 TWIN PRO3 MULTI

1. Intelligent slot
2. RS-232 interface
3. Ethernet port (RJ-45, for the IoT function)
4. USB interface
5. Wireless (HDMI, for the IoT function)
6. Parallel port (factory option; default: no)
7. Dry contacts (DRY in/out)
8. EPO (Emergency Power Off)
9. RJ-45 (for EBM auto-detection)
10. MBP switch (Maintenance Bypass Module)
11. Input and bypass switches
12. Input/output terminals
13. External battery connector
14. Input protection thermal fuse
15. Schuko outlet

Technical specifications

MODEL		SLC TWIN PRO3 10 kVA MULTI	SLC TWIN PRO3 15 kVA MULTI	SLC TWIN PRO3 20 kVA MULTI
TECHNOLOGY		On-line double-conversion		
FORMAT		Tower		
CONFIGURATION		3:3 / 3:1 / 1:1		
INPUT	Rated voltage	220/230/240 V or 3 x 380/400/415 V + N		
	Voltage range	110 ÷ 300 V(1)		
	Rated frequency	50/60 Hz (auto-detection)		
	Frequency range	40 ÷ 70 Hz		
	Total harmonic distortion (THDi)	<3 % linear load / <5 % non-linear load		
	Power factor	>0,99		
OUTPUT	Power factor	1		
	Rated voltage	220/230/240 V or 3 x 380/400/415 V + N		
	Voltage accuracy	±1 %		
	Total harmonic distortion (THDv)	< 1% linear load / < 5% non-linear load		
	Synchronised frequency	50 ±5 Hz/60 ±6 Hz		
	Eco-mode performance	98 %	98,8 %	99%
	Total performance in On-line mode	95 %	96 %	
	Admissible overloads in battery mode	105 ÷ 125 % for 1 min/125 ÷150 % for 30 s/>150 % for 500 ms		
	Admissible overloads in bypass mode	125 ÷150 % for 1 min / >150 % for 500 ms		
	Admissible overloads in-line mode	105 ÷ 125 % for 10 min/125 ÷150 % for 1 min / >150 % for 500 ms		
	Parallel	Yes, up to 3 units (optional)		
BATTERY	Protection	Against overvoltages, undervoltages and overheating		
	Battery type	Pb-Ca sealed, AGM, maintenance-free		
	Charge type	Smart charge with 3 modes		
	Recharge time	3 hours to 90%		
	Maximum no. of EBMs	3	6	
CHARGER	Temperature voltage compensation	Yes		
	Charging current	Adjustable 2 ÷ 13 A		
COMMUNICATION	Ports	USB-HID/RS-232/RJ-45/HDMI		
	Intelligent slot	for SNMP/AS400/Modbus		
	Monitoring software	Software for Windows, Linux and Mac/app for iOS and Android/web portal		
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes		
	Emergency stop (EPO)	Yes		
OPERATING MODES	Eco-mode	Yes		
	Eco-mode+	Yes		
	Frequency converter (CVCF)	Yes(2), operates with or without batteries		
GENERAL	Operating temperature	0º C ÷ +50º C		
	Relative humidity	Up to 95%, non-condensing		
	Maxium operating altitude	4.000 masl(3)		
	Acoustic noise at 1 metre	<55 dB ÷ <60 dB at full load/<50 dB ÷ <55 dB at 75% load		
STANDARDS	Safety	EN 62040-1		
	Electromagnetic compatibility (EMC)	EN 62040-2 (C3)		
	Operation	VFI-SS-111 (EN 62040-3)		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

(1) 110–160 V with linear load reduction to 50%.
(2) 40% reduction in rated power (only in 1:1 configuration).
(3) 1% power reduction for every additional 100 metres above 1,000 masl.

Information subject to change without notice.

SLC TWIN RT2

On-line double-conversion tower/rack UPS from 700 VA to 3000 VA with PF=1



SLC TWIN RT2: High-performance On-line security for priority systems

Salicru's **SLC TWIN RT2** UPS range is a highly advanced continuity solution for the electrical protection of critical systems. It combines the most reliable double-conversion technology (AC/DC-DC/AC) on the market and boasts a unity output power factor (VA=W) to enable it to power systems with high energy requirements, while offering high operating efficiency.

The range of power ratings from 700 VA(W) to 3,000 VA(W), it comes in a 2U, convertible to tower format, with a swivel mount LCD display, according to the needs of the facility. Also available are solutions with an extra charger and additional battery modules for applications that require greater backup.

In terms of communications, it features an RS-232/USB interface compatible with HID protocol and a smart slot that can optionally hold an SNMP card, MODBUS or potential free contacts; also available are software packages for local or virtual monitoring and management of protected devices. Other outstanding features include: 50/60 or 60/50 Hz frequency converter, emergency stop (EPO), and programmable outputs for critical/non-critical loads.

Applications: Continuous protection for critical systems

Salicru's **SLC TWIN RT2** series offers, in a compact format, all of the necessary features for the protection of applications that require a high level of security in the event of any type of electrical disturbance, such as IT servers, voice and data networks, CAD/ CAM, document management, unified communications (UC) and video streaming.



Performances

· On-line double-conversion technology.
· Output power factor PF=1.
· Convertible tower/rack format.
· Control panel with swivel mount LCD display and keypad.
· Includes pedestal (pedestal mount) and lugs (rack mount).
· Backup extensions available for all power ratings.
· UPS models with extra charger for backup extensions.
· RS-232 and USB-HID communication interfaces.
· Downloadable monitoring software for Windows, Linux and Mac.
· Smart slot for SNMP/potential-free contacts/MODBUS.
· ADSL/fax/modem line protection.
· Eco-mode operation.
· Programmable outputs for critical/non-critical loads.
· Frequency conversion function.
· SLC Greenergy solution.



Display

The backlit LCD panel with elegant white LED light displays all of the information regarding the UPS system's status, such as operating mode, charging status and battery levels, alerts, etc. The **SLC TWIN RT2** also boasts an audible alarm, to make sure users are kept well-informed at all times.

Maximum performance in Eco mode

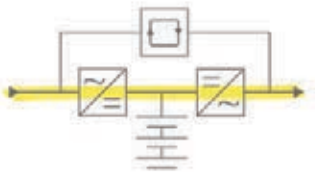
With performance of up to 99%, a significant energy saving can be achieved without reducing reliability and security in the protection of critical loads.

Higher power density

With a unity output power factor, maximum power in watts (W) is delivered, thereby optimising the always limited space in racks or server rooms.

Online double-conversion

Maximum reliability, the loads are fed from the UPS output by a quality voltage isolated from possible fluctuations thanks to the unit's internal double conversion (AC-DC DC-AC).





Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-700-TWIN RT2	698CA000001	700 / 700	8 × IEC C13	405 × 438 × 88	14.1
SLC-1000-TWIN RT2	698CA000002	1000 / 1000	8 × IEC C13	405 × 438 × 88	14.1
SLC-1500-TWIN RT2	698CA000003	1500 / 1500	8 × IEC C13	405 × 438 × 88	15.5
SLC-2000-TWIN RT2	698CA000004	2000 / 2000	8 × IEC C13	490 × 438 × 88	19.5
SLC-3000-TWIN RT2	698CA000005	3000 / 3000	8 × IEC C13 + 1 × IEC C19	605 × 438 × 88	27.5

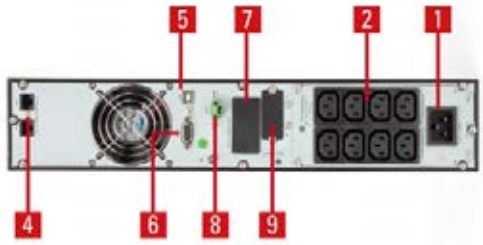
Frontal protuberance, from the fixing plane of the ears on the rack cabinet: 35mm. This distance is not included in the "Depth" total dimension.
Dimensions and weights for devices with standard backup.

Dimensions

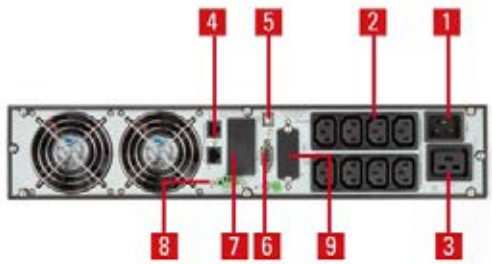


SLC 700÷3000 TWIN RT2

Connections



SLC 700÷2000 TWIN RT2



SLC 3000 TWIN RT2

1. Plug (IEC C14 for 700, 1000 and 1500 VA models; IEC C20 for 2000 and 3000 VA models).
2. Sockets (8 x IEC C13), programmable critical (x4) / non-critical (x4).
3. Socket IEC C19 (only for 3000 VA model).
4. ADSL/fax/modem transient protector.
5. USB interface.
6. RS-232 interface.
7. Smart slot for SNMP/potential-free contacts/ MODBUS.
8. Emergency stop (EPO).
9. Connection for battery module (only in models with extra charger).

Technical specifications

MODEL		SLC TWIN RT2 0.7-3 kVA
TECHNOLOGY		On-line double-conversion
FORMAT		Convertible tower/rack
INPUT	Rated voltage	200 / 208 / 220 / 230 / 240 V (1)
	Voltage range	110 ÷ 300 V up to 60% load
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	±10 Hz
	Total harmonic distortion (THDi)	≤5%
OUTPUT	Power factor	1
	Rated voltage	200 / 208 / 220 / 230 / 240 V (1)
	Voltage accuracy	±1%
	Total harmonic distortion (THDv)	< 2% linear load / < 4% non-linear load
	Synchronised frequency	±3 Hz
	Free running frequency	±0.1 Hz
	On-line performance	≥89 ÷ 91%
	Eco-mode performance	≥95 ÷ 97%
	Admissible overloads	< 130% for 5 min / < 140% for 30 s / <150 % for 1.5 s / 150 % for 100 ms
	Programmable sockets	Yes, for critical / non-critical loads (4/4)
BYPASS	Rated voltage	200 / 208 / 220 / 230 / 240 V (1)
	Frequency range	50/60Hz ±10 Hz
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	3 hours to 95%
CHARGER	Temperature voltage compensation	Yes
COMMUNICATION	Ports	USB-HID / RS-232
	Intelligent slot	Slot for SNMP/potential-free contacts/ MODBUS
	Monitoring software	For Windows, Linux and Mac
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
	ADSL/fax/modem transient protector	Yes
OPERATING MODES	Frequency converter (CVCF)	Yes (2)
GENERAL	Operating temperature	0° C ÷ 55° C(3)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)
	Acoustic noise at 1 metre	<50 ÷ 55 dB
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2(C2)
	Operation	VFI-SS-11 (EN-62040-3)
	Quality and environmental management	ISO 9001, ISO 14001, ISO 45001

(1) 80% power reduction for 200 or 208 V devices
(2) 78% power reduction
(3) 4% power derating per each degree over 40°C

Information subject to change without notice.

SLC TWIN RT2

On-line double-conversion tower/rack UPS from 4 kVA to 10 kVA with PF=1



SLC TWIN RT2: High reliability in critical server environments

Salicru's **SLC TWIN RT2** series models are uninterruptible power supplies with unrivalled electrical protection features for critical server environments. Their dual tower/rack format offers physical adaptability to any site and, together with the built-in PDU strip, provides maximum ease of connection of the loads to be protected. In addition, their unity output power factor (VA=W) increases the power density delivered and reduces the space required for the installation of the UPS.

The LCD screen is swivel-mounted according to the mounting format chosen for ease of handling. In terms of serial communications, they feature USB, RS-232 and relay interfaces, as well as a smart slot to optionally accommodate an SNMP card, MODBUS or potential-free contacts; also available are software packages for local or virtual monitoring and management of the protected devices.

For applications that require extended backup, additional battery modules and/or solutions with extra charger can be installed. And for applications that require redundant protection or increase the need for power, there is the option of connecting up to 3 devices in parallel.

Applications: Guaranteed operability for IT environments

Numerous environments can be protected by Salicru's **SLC TWIN RT2** series UPSs, such as virtualised or non-virtualised server systems, voice and data networks, ERP systems, CRM solutions, document management, etc., all of whose operability depends on the reliability of the electrical supply that powers them.



salicru SMART SOLUTIONS

Performances

· On-line double-conversion technology.
· Output power factor PF=1.(1)
· Convertible tower/rack format.
· Control panel with swivel mount LCD display and keypad.
· Includes pedestal (pedestal mount) and lugs (rack mount).
· Backup extensions available for all power ratings.
· UPS models with extra charger for backup extensions.
· RS-232, USB and relay communication interfaces.
· Downloadable monitoring software for Windows, Linux and Mac.
· Smart slot for SNMP/potential-free contacts/MODBUS.
· Eco-mode operation.
· Parallelable up to 3 units.
· PDU strip for distribution of output loads.
· Frequency conversion function.
· SLC Greenergy solution.

(1) Except for backup extensions.



Maximum performance in Eco mode

With performance of up to 99%, a significant energy saving can be achieved without reducing reliability and security in the protection of critical loads.

Higher power density

With a unity output power factor, maximum power in watts (W) is delivered, thereby optimising the always limited space in racks or server rooms.

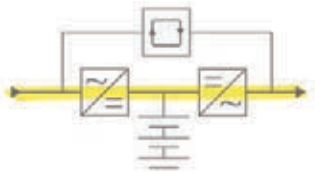
Easy to install

Convertible tower/rack thanks to the accessories included (rack handles, tower pedestal), swivel mount display. Intuitive LCD for operation and configuration, with optical and audible warning devices.



Online double-conversion

Provides the highest level of security and reliability for protected critical loads, owing to the double conversion between the input and output and from AC to DC and DC to AC, thereby supplying a pure, stable, clean sine-wave voltage at the output, without any outages.



Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
KIT SLC-4000-TWIN RT2	698RQ000002	4000 / 4000	Terminals + PDU	705 × 438 × 176	63
KIT SLC-5000-TWIN RT2	698RQ000003	5000 / 5000	Terminals + PDU	705 × 438 × 176	63
KIT SLC-6000-TWIN RT2	698RQ000004	6000 / 6000	Terminals + PDU	705 × 438 × 176	63
KIT SLC-8000-TWIN RT2	698RQ000005	8000 / 8000	Terminals + PDU	705 × 438 × 176	74
KIT SLC-10000-TWIN RT2	698RQ000006	10000 / 10000	Terminals + PDU	705 × 438 × 176	74

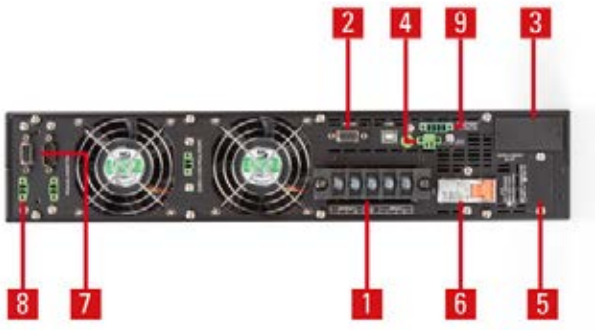
Frontal protuberance, from the fixing plane of the ears on the rack cabinet: 35mm. This distance is not included in the "Depth" total dimension.
Dimensions and weights for devices with standard backup.

Dimensions



SLC 4000÷10000 TWIN RT2

Connections



SLC 4000÷10000 TWIN RT2

1. Input/output terminals.
2. RS-232 interface.
3. Smart slot for SNMP/potential-free contacts/ MODBUS.
4. Emergency stop (EPO).
5. Connection for battery module (only in models with extra charger).
6. Input circuit breaker.
7. Parallel port.
8. Current distribution port.
9. Digital input/output.

Technical specifications

MODEL		SLC TWIN RT2 4-10 kVA
TECHNOLOGY		On-line double-conversion
FORMAT		Convertible tower/rack
INPUT	Rated voltage	208 / 220 / 230 / 240 V (1)
	Voltage range	110 ÷ 300 V up to 50% load
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	±4 Hz
	Total harmonic distortion (THDi)	≤4%
OUTPUT	Power factor	1 (2)
	Rated voltage	208 / 220 / 230 / 240 V(1)
	Voltage accuracy (battery mode)	±1%
	Total harmonic distortion (THDv) Linerar load	<1%
	Total harmonic distortion (THDv) Non linear load	<4%
	Synchronised frequency	±4 Hz
	Free running frequency	±0.1 Hz
	On-line performance	≥93 ÷ 94%
	Eco-mode performance	≥99%
	Admissible overloads	< 110% for 10 min / < 130% for 1 min / > 130 % for 1 s
	Programmable sockets	Not applicable
	Parallel	Yes, up to 3 units(3)
STATIC BYPASS	Voltage (V)	208 / 220 / 230 / 240 V (1)
	Frequency range	50/60 Hz ±4 Hz
BATTERY	Protection	Against power surges, undervoltages and alternating current components
	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	I/U (constant current/constant voltage)
	Recharge time	7 ÷ 9 hours to 90%
CHARGER	Temperature voltage compensation	Yes
COMMUNICATION	Ports	USB / RS-232 / relay
	Intelligent slot	Smart slot for SNMP / potential-free contacts / MODBUS
	Monitoring software	Yes, for Windows, Linux and Mac
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
OPERATING MODES	Frequency converter (CVCF)	Yes(4)
GENERAL	Operating temperature	0° C ÷ +40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)
	Acoustic noise at 1 metre	<58-60 dB
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2(C3)
	Operation	VFI-SS-11 (EN-62040-3)
	Quality and environmental management	ISO 9001, ISO 14001, ISO 45001

(1) 90% power reduction for 208 V devices
(2) Except for devices with extended backup
(3) 90% power reduction
(4) 60% power reduction

Information subject to change without notice.

SLC TWIN RT3 1-3 kVA

On-line double conversion tower/rack IoT UPS from 1000 VA to 3000 VA with PF=1



SLC TWIN RT3 1-3 KVA: High performance on-line security

The **SLC TWIN RT3** series, rated from 1000 VA to 3000 VA, represents the perfect balance of features and performance: efficient operation as a double conversion UPS, optimised battery charging system, power density, high levels of connectivity (and the consequent immediacy of information), the flexibility offered by the multi-function output sockets (identified by colour), the automatic detection system for external battery modules, the beauty of its floating-prism design with high-quality finishes... in short, Salicru has gone the extra mile, in view of the critical nature of the systems this series is designed to protect.

As has become common practice for **SLC TWIN RT** devices, they come in a 2U rack format (easily converted to tower format) with adjustable display and keypad, ensuring easy adaptation to the needs of the installation.

The system's extended backup requirements are amply met, thanks to the additional battery modules and the devices equipped with an improved 8A charger. Notably, the charger offers a "rest" mode during which no current is sent to the batteries, thereby reducing stress and extending the unit's useful life.

Applications: Protection for priority systems in a compact format

Salicru's **SLC TWIN RT3** series offers a high level of security in the event of any type of electrical disturbance, while guaranteeing continuity of operation for IT servers, voice and data networks, CAD/CAM, document management, unified communications (UC) and video streaming.



Performances

· On-line double conversion technology.
· Output power factor PF=1.
· 2U convertible tower/rack format.
· Control panel with adjustable keypad and dot matrix display.
· Backup extensions available.
· Automatic detection of external battery modules via RJ-45.
· Eco-mode operation for increased efficiency.
· Programmable outputs for critical/non-critical loads.
· Optimised charger designed to extend battery life.
· Frequency converter function (with and without batteries).
· Choice of 10 languages.
· Native Ethernet port, USB and RS-232 interfaces as standard on all models.
· Rack rails for 400~1000 mm deep cabinets included.
· Monitoring software for Windows, Linux, Unix and Mac (downloadable).
· Smart slot for SNMP/AS400/MODBUS.



Advanced internal temperature management

The **SLC TWIN RT3** devices rated 1500 VA and over are equipped with two sets of variable-speed fans, in order to optimise thermal conditions inside the device. The front set acts as a pump, while the rear set extracts the air immediately.The resultant improvement in thermal conditions has a positive impact on the lifespan of the components, while creating a suitable working environment that enables the device to operate at full performance.

Multi-function rotating display

When you first use the device display, it will guide you through the initial configuration process.Once it is working, the display will alternate between three information screens. The dot matrix technology enables the information to be displayed clearly and without altering its layout. The alarm and status icons, as well as the numerical values, are displayed in large format in the centre of the screen.





Options

· Rackable external bypass
· NIMBUS SNMP card
· NIMBUS AS400 card
· NIMBUS RS-485 MODBUS card
· Additional IEC-type output cables
· Warranty extension
· PDU (power distribution unit)

Internet of Things

All of the models in the **SLC TWIN RT3** range come with a native Ethernet port as standard. This series of UPSs can be integrated into the IoT environment and managed through the cloud, our **NIMBUS** app and the web portal. This offers a wide range of benefits from both an operational perspective (optimisation, prevention, analysis, maintenance) and in terms of reliability (early fault detection, remote alarm management, records of operation, etc.).

NIMBUS

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Available on the Google Play

Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-1000-TWIN RT3	6B4AA000001	1000/1000	8 × IEC C13	445 × 438 × 86	14.0
SLC-1500-TWIN RT3	6B4AA000002	1500/1500	8 × IEC C13	445 × 438 × 86	15.6
SLC-2000-TWIN RT3	6B4AA000003	2000/2000	8 × IEC C13	600 × 438 × 86	22.9
SLC-3000-TWIN RT3	6B4AA000004	3000/3000	8 × IEC C13 + 1 × IEC C19	600 × 438 × 86	25.5

Front protrusion from the mounting surface in the rack cabinet: 35 mm. This distance is not included in the dimensions quoted for "depth".
Dimensions and weights for devices with standard backup. Please visit www.salicru.com for extended backup with additional EBM modules.
Height in rack units of the listed equipment: 2U.

Dimensions

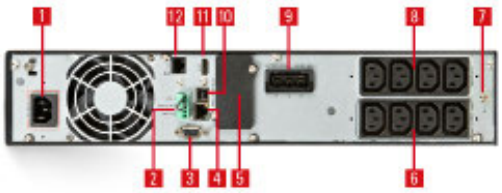


SLC 1000÷3000 TWIN RT3

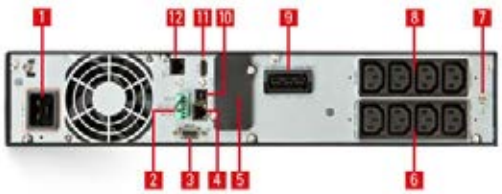


EBM - SLC TWIN RT3

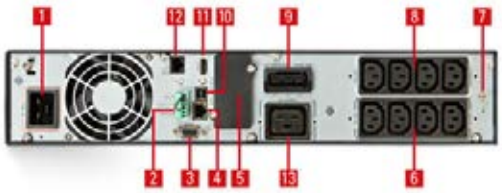
Connections



SLC 1000÷1500 TWIN RT3



SLC 2000 TWIN RT3



SLC 3000 TWIN RT3

1. Inlet (IEC C14 for 1000 and 1500 VA models; IEC C20 for 2000 and 3000 VA models).
2. Digital E/S and emergency power-off (EPO).
3. RS-232 interface.
4. Ethernet port for NIMBUS CLOUD.
5. Smart slot for SNMP/potential-free contacts/MODBUS.
6. Output sockets for non-critical loads (x4).
7. Earth cable connection.
8. Output sockets for critical loads (x4).
9. Battery module connection.
10. USB interface.
11. HDMI port for NIMBUS dongle.
12. Battery module communication port.
13. IEC C19 output socket (3000 VA model only).

Technical specifications

MODEL		SLC TWIN RT3 1-3 kVA
TECHNOLOGY		On-line double-conversion
FORMAT		Convertible tower/rack with rotating display
INPUT	Rated voltage	200/208/220/230/240 V
	Voltage range	110 ÷ 300 V(1)
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	50 ±5 Hz/60 ±6 Hz
	Total harmonic distortion (THDi)	<5 %
	Power factor	≥0.99
OUTPUT	Power factor	1
	Rated voltage	200/208/220/230/240 V(2)
	Voltage accuracy	±1%
	Total harmonic distortion (THDv)	<1 % linear load / <5 % non-linear load
	Synchronised frequency	50 ±5 Hz/60 ±6 Hz
	On-line performance	≥89 ÷ 93 %
	Eco-mode performance	≥96 ÷ 97 %
	Admissible overloads in battery mode	105 ÷ 125 % for 2 min/125 ÷150 % for 10 s/>150 % for 500 ms
	Admissible overloads in bypass mode	105 ÷ 125 % for 10 min/125 ÷150 % for 5 min/>150 % for 500 ms
	Admissible overloads in-line mode	105 ÷ 125 % for 5 min/125 ÷150 % for 30 s/>150 % for 500 ms
	Programmable sockets	Yes, for critical/non-critical loads (4/4)(3)
BATTERY	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	Smart charge with 3 modes
	Recharge time	3 hours to 90%
	Maximum no. of EBMs	4
CHARGER	Temperature voltage compensation	Yes
	Charging current	1.5 A (8 A for B1 devices)
COMMUNICATION	Ports	USB-HID/RS-232/RJ-45/HDMI for dongle wifi
	Intelligent slot	For SNMP/AS400/MODBUS
	Monitoring software	Software for Windows, Linux and Mac/app for iOS and Android/web portal
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
OPERATING MODES	Eco-mode	Yes
	Frequency converter (CVCF)	Yes(4), operates with or without batteries
GENERAL	Operating temperature	0° C ÷ +50° C(5)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	3.000 masl (6)
	Acoustic noise at 1 metre	<45 dB ÷ <50 dB at full load/<36 dB ÷ <46 dB at 70% load
STANDARDS	Safety	EN IEC 62040-1
	Electromagnetic compatibility (EMC)	EN IEC 62040-2(C2)
	Operation	VFI-SS-31 (EN 62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) 110 ÷ 160 V with linear derating of load at 50%
(2) Power derating at 80% for 200 V and 90% for 208 V
(3) The 3 kVA model has an additional fifth non-programmable IEC C19 output
(4) Power derating at 60%
(5) Power derating of 4% for each degree >40°C
(6) Power derating of 1% for each additional 100°m over 1000 MASL

Information subject to change without notice.

SLC TWIN RT3 4-10 kVA

On-line double conversion tower/rack IoT UPS from 4 kVA to 10 kVA with PF=1



SLC TWIN RT3 4-10 KVA: Efficiency and reliability for the protection of critical data

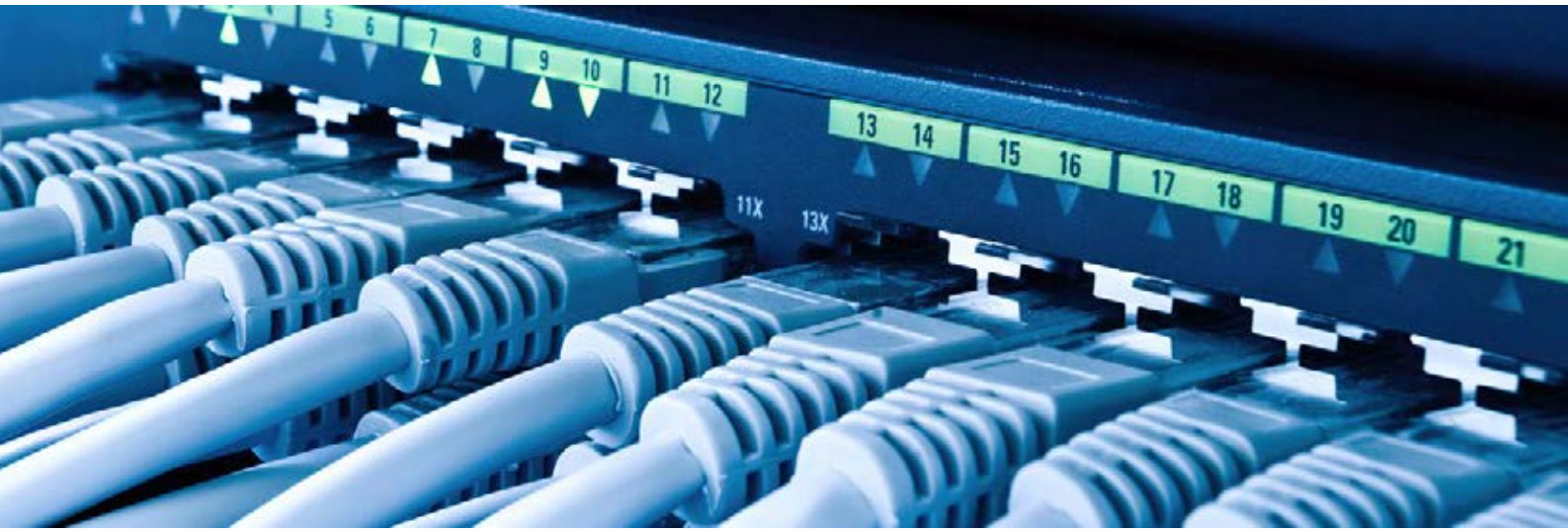
Salicru's **SLC TWIN RT3** series of uninterruptible power supplies (UPS) ranges from 4 to 10 kVA and offers excellent electrical protection performance for critical server environments. Although the devices are designed to be incorporated into rack cabinets, they include all of the accessories and can be adapted for use in tower format. The models with a rating of 4 kVA and over include a power strip that can be rack-mounted or attached to the body of the UPS if the vertical format is chosen. This strip (also known as a power distribution unit or PDU) maximises the device's electrical connectivity and enables the rapid connection/disconnection of the loads that are to be protected.

Users interact directly with the device via a dot matrix display that highlights important information by placing it in the centre of the screen, unlike traditional LCD screens.

Reliability, power density and immediacy of information are three of the key features that define the **SLC TWIN RT3** series, as they make the biggest contribution to satisfying the demands of today's users.

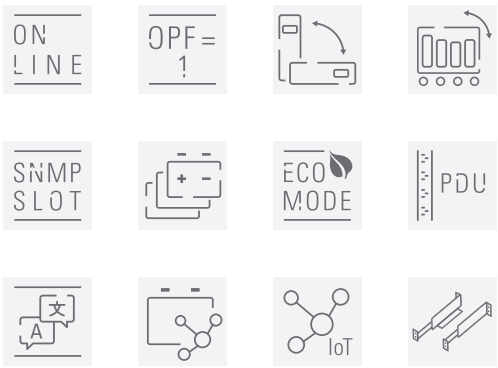
Applications: Reliability for IT environments

The perfect mode for ensuring productivity in data management. The **SLC TWIN RT3** series provides reliable continuity of operation for IT systems, offering protection for server environments, voice and data networks, ERP systems, CRM solutions, document management, and more.



Performances

· On-line double conversion technology.
· Output power factor PF=1.
· Convertible tower/rack format.
· Control panel with adjustable keypad and dot matrix display.
· Backup extensions available.
· Automatic detection of external battery modules via RJ-45.
· Eco-mode operation for increased efficiency.
· Parallel operation for up to 3 units (optional).
· PDU strip included for distribution of output loads.
· 2x 10 A IEC auxiliary outputs.
· Frequency converter function (with and without batteries).
· Choice of 10 languages.
· Native Ethernet port, USB and RS-232 interfaces as standard on all models.
· Monitoring software for Windows, Linux, Unix and Mac (downloadable).
· Rack rails for 400~1000 mm deep cabinets included.
· Smart slot for SNMP/AS400/MODBUS.



Objective: battery conservation

Our devices boast an innovative new system that optimises battery charging. With the aim of extending and ensuring a productive life for the accumulators, and in contrast to most other devices (which subject them to constant charging), the **SLC TWIN RT3** has a "rest period" function during which the batteries will only receive charging current at certain intervals and under specific status conditions.

The connectors for additional battery modules include an RJ45 communication port that is in constant communication with the UPS in order to verify the correct status of the energy storage system.



Options

· Rackable external bypass.
· NIMBUS SNMP card.
· NIMBUS AS400 card.
· NIMBUS RS-485 MODBUS card.
· Parallel kit.
· Additional IEC-type output cables.
· Warranty extension.

Vigilant protection and connectivity

The inclusion of an Ethernet port enables the **SLC TWIN RT3** series to be integrated into an IoT environment. Through the cloud, our NIMBUS app and the website, developed wholly within SALICRU's Connected Software department, users can monitor the status of their devices in full, receive information and alarms, carry out remote battery tests, and much more.

The immediacy offered by the system's connectivity directly ensures the continuity of the connected loads, and consequently the continuity of the productive activities associated with them.

In terms of hardware, the over-voltage cut-off device (OVCD), fan-block detection system, overheating sensor, overload alarm and external-battery detection system ensure constant automated monitoring of the overall system.

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Improved length

In many cases, the depth of 19" rack-type cabinets is a significant factor. Consequently, when designing the **SLC TWIN RT3** range we made sure to reduce its dimensions along the Z axis, while continuing to maintain a front height of 2U x 19" for our UPSs. The result is a range that offers high power density in a format that is just 600 mm deep. The corresponding batteries are supplied in a 3U format whose depth has also been reduced.



Multiple output options

The **SLC TWIN RT3** series boasts a variety of options for connecting loads. The devices rated 4 kVA and over provide not only two IEC C13 quick-connection outputs and an input/output terminal block, but also a rackable strip with eight additional outputs (6x IEC C13 + 2x IEC C19). The strip comes with safety clips to enable secure fastening of the electrical connectors, and can also be mounted on the side of the UPS using the accessories provided.

Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-4000-TWIN RT3	6B4AC000001	4000/4000	Terminals + PDU	592 × 438 × 220	55.6
SLC-5000-TWIN RT3	6B4AC000002	5000/5000	Terminals + PDU	592 × 438 × 220	55.6
SLC-6000-TWIN RT3	6B4AC000003	6000/6000	Terminals + PDU	592 × 438 × 220	55.6
SLC-8000-TWIN RT3	6B4AC000004	8000/8000	Terminals + PDU	592 × 438 × 220	64.5
SLC-10000-TWIN RT3	6B4AC000005	10000/10000	Terminals + PDU	592 × 438 × 220	64.5

Front protrusion from the mounting surface in the rack cabinet: 35 mm. This distance is not included in the dimensions quoted for "depth".
Dimensions and weights for devices consisting of two modules with standard backup. Please visit www.salicru.com for extended backup with additional EBM modules.
Height in rack units of the listed equipment: 2U (device) + 3U (battery cabinet).

Dimensions

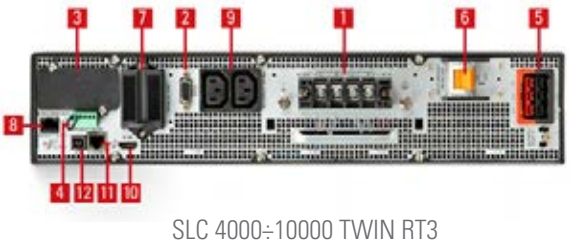


SLC 4000÷10000 TWIN RT3

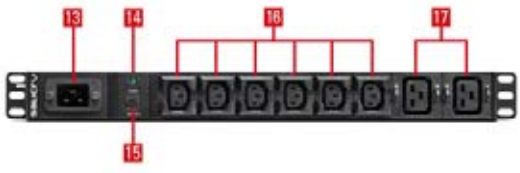


EBM - SLC TWIN RT3

Connections



SLC 4000÷10000 TWIN RT3



PDU

1. Input, output and earth terminals.
2. RS-232 interface.
3. Smart slot for SNMP/potential-free contacts/MODBUS.
4. Digital E/S and emergency power-off (EPO).
5. Battery module connection.
6. Input circuit breaker.
7. Parallel port.
8. Battery module communication port.
9. Auxiliary IEC outputs.
10. HDMI port.
11. Ethernet port for NIMBUS.
12. USB port.
13. C20 input to supply the PDU.
14. Pilot light.
15. Protection reset.
16. C13 outputs.
17. C19 outputs.

Technical specifications

MODEL		SLC TWIN RT3 4-10 kVA
TECHNOLOGY		On-line double-conversion
FORMAT		Convertible tower/rack with rotating display
INPUT	Rated voltage	220/230/240 V
	Voltage range	110 ÷ 276 V(1)
	Rated frequency	50 / 60 Hz (auto-detection)
	Frequency range	50 ±5 Hz/60 ±6 Hz
	Total harmonic distortion (THDi)	<3 % linear load / <5 % non-linear load
	Power factor	≥0.99
OUTPUT	Power factor	1
	Rated voltage	220/230/240 V
	Voltage accuracy	±1%
	Total harmonic distortion (THDv)	< 1% linear load / < 5% non-linear load
	Synchronised frequency	50 ±5 Hz/60 ±6 Hz
	On-line performance	95%
	Eco-mode performance	98%
	Admissible overloads in battery mode	105 ÷ 125 % for 1 min/125 ÷150 % for 30 s/>150 % for 500 ms
	Admissible overloads in bypass mode	105 ÷ 125 % for 30 s/>150 % for 5 min/>150 % for 500 ms
	Admissible overloads in-line mode	105 ÷ 125 % for 10 min/125 ÷150 % for 30 s/>150 % for 500 ms
	Parallel	Yes, up to 3 units
MANUAL BYPASS	Type	External smart manual bypass module with groups of programmable outputs (optional)
BATTERY	Protection	Against power surges, undervoltages and alternating current components
	Battery type	Pb-Ca sealed, AGM, maintenance-free
	Charge type	Smart charge with 3 modes
	Recharge time	3 hours to 90%
	Maximum no. of EBMs	6
CHARGER	Temperature voltage compensation	Yes
	Charging current	Adjustable 0 ÷ 4 A (0 ÷ 12 A for B1 devices)
COMMUNICATION	Ports	USB-HID/RS-232/RJ-45/HDMI
	Intelligent slot	Smart slot for SNMP / potential-free contacts / MODBUS
	Monitoring software	Software for Windows, Linux and Mac/app for iOS and Android/web portal
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes
	Emergency stop (EPO)	Yes
OPERATING MODES	Eco-mode	Yes
	Frequency converter (CVCF)	Yes(2), operates with or without batteries
GENERAL	Operating temperature	0° C ÷ +50° C(3)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	3.000 masl(4)
	Acoustic noise at 1 metre	<55 dB ÷ <60 dB at full load/<50 dB ÷ <55 dB at 75% load
STANDARDS	Safety	EN IEC 62040-1
	Electromagnetic compatibility (EMC)	EN 62040-2 (C3)
	Operation	VFI-SS-11 (EN 62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) 110 ÷ 160 V with linear derating of load at 50%.
(2) Power derating of 60% in frequency converter mode.
(3) Power derating of 50% from 40°C to 50°C.
(4) Power derating of 1% for each additional 100°m over 1000 MASL.

Information subject to change without notice.

SLC TWIN RT3 MULTI

On-line double conversion tower/rack IoT UPS from 10 kVA to 20 kVA with FP=1



SLC TWIN RT3 MULTI 10-20 KVA: Advanced electrical protection with maximum efficiency and reliability

Salicru's **SLC TWIN RT3 MULTI** series offers 10–20 kVA UPSs designed to safeguard power in critical server and data environments.

Based on on line double conversion technology with DSP control, they ensure immaculate power quality. Although conceived for integration in rack cabinets, they include all accessories required for tower installation. The base units are supplied without batteries, enabling efficient protection and flexible autonomy via additional modules.

A key strength of the range is its flexible input/output configuration (3:3, 3:1 and 1:1) via busbars, providing superior versatility and greater protection by allowing two separate inputs in all options. The interactive touchscreen panel places key information at the centre of the display, overcoming the limitations of traditional LCDs.

Reliability, power density and immediacy of information have been three of the key elements in defining the **SLC TWIN RT3 MULTI** series, meeting the current demands of the most exacting users.

Applications: Essential systems for IT environments

When productivity depends on power, **SLC TWIN RT3 MULTI** is the right choice. Designed for environments where every second counts, it guarantees a stable supply with real time monitoring.

From ERP and BI platforms to CRM solutions and enterprise networks, the system protects against outages, voltage sags and disturbances, ensuring uninterrupted continuity.



Performances

· On line double conversion technology with DSP control.
· Output power factor PF = 1.
· Flexible input/output supply configurations (3:3, 3:1, 1:1).
· Supports dual source configuration with two independent inputs.
· Control panel with touchscreen display.
· Convertible Tower/Rack form factor.
· Parallel connection of up to 3 units (optional).
· Extended autonomy options available.
· Automatic detection of external battery module via RJ 45.
· Frequency converter function, with and without batteries.
· Battery test, manual and programmable automatic.
· 9 selectable languages.
· Native Ethernet port for NIMBUS IoT, plus USB and RS 232 interfaces as standard on all models.
· Monitoring software for Windows, Linux, Unix and Mac (downloadable).
· Intelligent slot for SNMP/RS485/MODBUS cards.
· Compatibility with inlet air filters.
· Tropicalisation included.
· Modular design with reduced MTTR and optional independent bypass input.



Rotatable multifunction touchscreen display



The **SLC TWIN RT3 MULTI** features a rotatable display for optimal visibility thanks to its adjustable orientation in both rack and tower installations.

It also includes a colour touchscreen with helpful visual animations – key elements for the advanced management of a modern UPS. The intuitive design enables immediate viewing, with numerous settings configurable directly from the screen (voltage, frequency, load, battery status and alarms).

The multifunction capability provides quick access to different configurations and control options, making operation more versatile and efficient.

Flexible input/output configuration

Using busbars, the following arrangements are available; two different inputs can be used in all of them for added protection:

- **3:3 mode:** three phase input and output – ideal for data centres and high load density systems.
- **3:1 mode:** three phase input and single phase output – suitable for applications focusing protection on critical single phase loads, reducing imbalances and simplifying installa-tion.
- **1:1 mode:** single phase input and output – intended for environments with intermediate power and specific local back up needs, ensuring autonomy.

Eco-mode and Eco-mode +

Optimisation reaches another level with SLC TWIN RT3 MULTI, adapting to different electrical environments and critical loads while improving energy efficiency without compromising protection.

It includes Eco mode, which reduces losses under normal load conditions, and Eco mode+, a more advanced version combining maximum efficiency with continuous monitoring to ensure operational continuity even with variable loads.

These functions deliver significant energy savings while maintaining the reliability and stability of critical systems.

NIMBUS

Download on the App Store

Available on the Google Play

Options

· NIMBUS SNMP card
· NIMBUS AS400 card
· NIMBUS RS 485 MODBUS card
· Cable gland kit
· Dust filters

Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-10000-TWIN RT3 MULTI B0	6B4AG000001	10000/10000	592 × 438 × 129	23,8
SLC-15000-TWIN RT3 MULTI B0	6B4AG000002	15000/15000	592 × 438 × 129	24,8
SLC-20000-TWIN RT3 MULTI B0	6B4AG000003	20000/20000	592 × 438 × 129	24,8

Dimensions

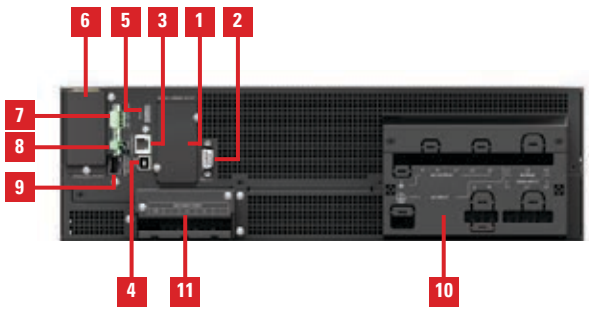


SLC 10000÷20000 TWIN RT3 MULTI B0



EBM - SLC TWIN RT3 MULTI

Connections



SLC 10000÷20000 TWIN RT3 MULTI B0

1. Intelligent SNMP slot
2. RS 232 interface
3. Ethernet port (RJ 45, for the IoT function)
4. USB interface
5. Wireless (HDMI, for the IoT function)
6. Parallel port (factory option; default: no)
7. Dry contacts (DRY in/out)
8. EPO (Emergency Power Off)
9. RJ 45 (for EBM auto detection)
10. Input/output terminals
11. External battery terminals

Technical specifications

MODEL		SLC 10000 TWIN RT3 MULTI B0	SLC 15000 TWIN RT3 MULTI B0	SLC 20000 TWIN RT3 MULTI B0
TECHNOLOGY		On-line double-conversion		
FORMAT		Convertible tower/rack with rotating display		
CONFIGURATION		3:3 / 3:1 / 1:1		
INPUT	Rated voltage	220/230/240 V or 3 x 380/400/415 V + N		
	Voltage range	110 ÷ 300 V(1)		
	Rated frequency	50/60 Hz (auto-detection)		
	Frequency range	40 ÷ 70 Hz		
	Total harmonic distortion (THDi)	<3 % linear load ; <5 % non-linear load		
	Power factor	>0,99		
OUTPUT	Power factor	1		
	Rated voltage	220/230/240 V or 3 x 380/400/415 V + N		
	Voltage accuracy	±1%		
	Total harmonic distortion (THDv)	<1 % linear load; <5 % non-linear load		
	Synchronised frequency	50 ±5 Hz/60 ±6 Hz		
	Eco-mode performance	98 %	98,8 %	99%
	Total performance in On-line mode	95 %	96 %	
	Admissible overloads in battery mode	105 ÷ 125 % for 1 min/125 ÷150 % for 30 s/>150 % for 500 ms		
	Admissible overloads in bypass mode	125 ÷150 % for 1 min / >150 % for 500 ms		
	Admissible overloads in-line mode	105 ÷ 125 % for 10 min/125 ÷150 % for 1 min / >150 % for 500 ms		
	Parallel	Yes, up to 3 units (optional)		
MANUAL BYPASS	Type	External intelligent manual bypass module with programmable output groups (optional)		
BATTERY	Protection	Against overvoltages, undervoltages and overheating		
	Battery type	Pb-Ca sealed, AGM, maintenance-free		
	Charge type	Smart charge with 3 modes		
	Recharge time	3 hours to 90%		
	Maximum no. of EBMs	6(2)		
CHARGER	Temperature voltage compensation	Yes		
	Charging current	Adjustable 2 ÷ 13 A		
COMMUNICATION	Ports	USB-HID/RS-232/RJ-45/HDMI		
	Intelligent slot	for SNMP/AS400/Modbus		
	Monitoring software	Software for Windows, Linux and Mac/app for iOS and Android/web portal		
OTHER FUNCTIONS	Cold start (start-up from batteries)	Yes		
	Emergency stop (EPO)	Yes		
OPERATING MODES	Eco-mode	Yes		
	Eco-mode+	Yes		
	Frequency converter (CVCF)	Yes(3), operates with or without batteries		
GENERAL	Operating temperature	0º C ÷ +50º C		
	Relative humidity	Up to 95%, non-condensing		
	Maxium operating altitude	4.000 masl(4)		
	Acoustic noise at 1 metre	<55 dB ÷ <60 dB at full load/<50 dB ÷ <55 dB at 75% load		
STANDARDS	Safety	EN 62040-1		
	Electromagnetic compatibility (EMC)	EN 62040-2 (C3)		
	Operation	VFI-SS-111 (EN 62040-3)		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

(1) 110–160 V with linear load reduction to 50%.
(2) EBM modules for 15–20 k power ratings must always be installed in pairs.
(3) 40% reduction in rated power (only in 1:1 configuration).
(4) 1% power reduction for every additional 100 metres above 1,000 masl.

Information subject to change without notice.

SLC TWIN RT3 LION 1-3 kVA

IoT On-line double conversion Tower/Rack UPS from 1,000¸VA to 3,000¸VA with lithium-ion batteries



SLC TWIN RT3 LION 1-3¸KVA: Uninterrupted power with the latest battery technology

The **SLC TWIN RT3 LION** series from **Salicru** offers the perfect combination of reliability, efficiency and advanced technology in the field of Uninterruptible Power Supply (UPS) systems with a PF=1. With a flexible design that allows for tower or rack installation, the models in this range are suitable for any environment, guaranteeing maximum protection for critical equipment.

The incorporation of lithium-ion batteries represents a qualitative advance over traditional lead-acid (VRLA) batteries, offering a longer service life, increased safety, and recharge times that are up to four times faster. In addition, consumption is optimised and maintenance is reduced.

With power ratings ranging from 1,000 VA to 3,000 VA, this series stands out for its operational efficiency, native IoT capabilities for intelligent management, advanced connectivity, and optimised autonomy.

Applications: An advanced energy solution for critical and compact equipment

The **SLC TWIN RT3 LION** UPS is ideal for any sector where power continuity is key, especially those requiring high availability, continuity and reliable backup.

It can be used in various settings and industries, including data centres, IT infrastructure, industry, healthcare, offices and audiovisual media. It offers protection against power outages, thereby preventing data loss, equipment damage and keeping systems running in critical environments.



Features

· On-line double conversion technology
· Output power factor = 1
· Pure sine wave
· Native ethernet interface
· Operation in Eco Mode
· Intelligent slot for SNMP and relays
· Management Software
· Orientable control panel
· RoHS compliant
· Convertible Tower/Rack format
· Lithium-Ion Batteries
· Rack guides included
· Tropicalized included



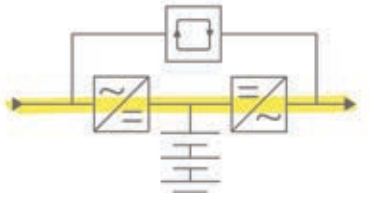
Multi-function rotatable display

The rotatable display adapts easily to the type of installation, whether tower or rack format. It can be angled for comfortable viewing, regardless of the position of the device.



On-line double conversion

On-line double conversion technology offers maximum protection for critical equipment. These systems constantly transform alternating current into direct current and then back into alternating current, generating a perfect sine wave with a power factor of 1 (PF=1). This process guarantees a completely stable power supply, free from fluctuations and interruptions, protecting your most sensitive equipment at all times.



Benefits of lithium-ion batteries v VRLA (valve-regulated lead-acid)

· **Premium protection** – The very best operational and economic efficiency for your critical equipment.
· **Superior backup** – Greater backup capacity in the same physical space.
· **Extreme durability** – Between 5 and 10 times more discharge cycles than conventional solutions.
· **Intuitive installation** – Plug & play design for instant startup.
· **Long useful life** – Up to 3 times more longevity than standard systems.
· **Maintenance free** – Continuous operation without the need for intervention thanks to the BMS.
· **Ultra-fast charging** – 4 times faster than traditional technologies.
· **Smart management (integrated BMS)** – Guaranteed security and efficiency.
· **Certified robustness** – Optimal performance even in harsh cold weather conditions.
· **Guaranteed savings** – Lower total cost of ownership (TCO) and optimised return on investment over 10 years.

High efficiency

Service continuity guaranteed with intelligent BMS modules

UPS systems with lithium batteries and individual per-module BMS offer essential advantages for operational continuity:

1. **Flexibility without interruptions**: The batteries can be replaced without shutting down the equipment, making them ideal for critical environments.
2. **Robust and versatile**: The lithium technology ensures durability and resistance without affecting performance.
3. **Less maintenance**: Fewer interventions and lower operating costs, supporting business continuity.

In short, a UPS with lithium batteries and intelligent management enhances energy efficiency and fortifies IT infrastructure, offering increased autonomy and operational security.

Range

MODEL	CODE	POWER (VA / W)	NO. OF OUTPUT SOCKETS	DIMENSIONS (D x W x H mm)	WEIGHT (kg)
SLC-1000-TWIN RT3 LION	6B4LA000001	1000 / 1000	8 x IEC C13	445 × 438 × 85.5	15,1
SLC-1500-TWIN RT3 LION	6B4LA000002	1500 / 1500	8 x IEC C13	445 × 438 × 85.5	15,1
SLC-2000-TWIN RT3 LION	6B4LA000003	2000 / 2000	8 x IEC C13	600 × 438 × 85.5	21,3
SLC-3000-TWIN RT3 LION	6B4LA000004	3000 / 3000	8 x IEC C13 + 1 x IEC C16	600 × 438 × 85.5	21,3

Dimensions

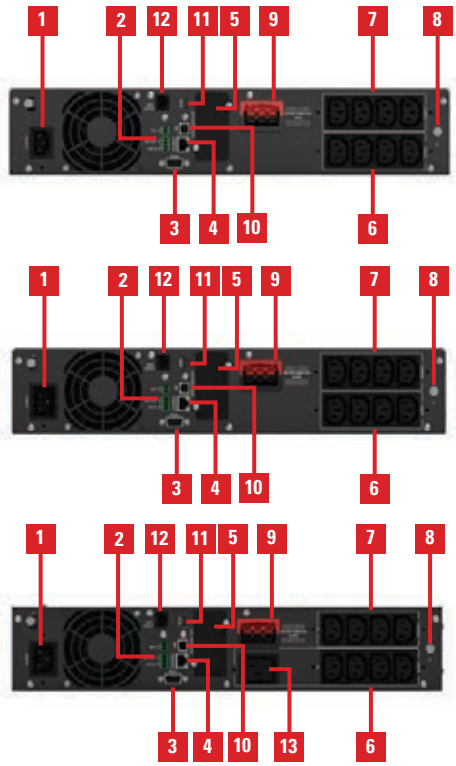


SLC 1000÷3000 TWIN RT3 LION



EBM - SLC TWIN RT3 LION

Connections



1. Plug (IEC C14 for 1,000 and 1,500 VA models; IEC C20 for 2,000 and 3,000 VA models).
2. Digital I/O and emergency power-off (EPO)
3. RS-232 interface.
4. Ethernet port for NIMBUS CLOUD.
5. Smart slot for SNMP/potential-free contacts/MODBUS.
6. Output sockets for critical loads (x4 IEC 13).
7. Output sockets for non-critical loads (x4 IEC 13).
8. Earth cable connection.
9. Battery module connection.
10. USB interface.
11. HDMI port for NIMBUS dongle.
12. Battery module communication port.
13. IEC C19 output socket (3,000 VA model only).

Technical specifications

MODEL		SLC-1000-TWIN RT3 LION	SLC-1500-TWIN RT3 LION	SLC-2000-TWIN RT3 LION	SLC-3000-TWIN RT3 LION
TECHNOLOGY		On-line double conversion			
FORMAT		Convertible tower/rack with rotatable display			
INPUT	Rated voltage	230 V			
	Voltage range	110 ÷ 300 V			
	Rated frequency	50/60 Hz (auto-detection)			
	Frequency range	±5Hz (50Hz) / ±6Hz (60Hz)			
	Total harmonic distortion (THDi)	<5%			
OUTPUT	Power factor	1			
	Rated voltage	200 / 208 / 220 / 230 / 240 V			
	Voltage accuracy (battery mode)	±1%			
	Total harmonic distortion (THDv)	<1% linear load / <5% non-linear load			
	Synchronised frequency	45~55 Hz/54~66 Hz			
	On-line performance	89%		93%	
	Eco-mode performance	96%	97%		
	Permissible overloads Battery mode	<105% continuous / <125% for 2 min / <150% for 10 s / >150% for 500 ms			
	Permissible overloads Bypass mode	<110% continuous / <125% for 10 min / <150% for 5 min / >150% for 500 ms			
	Permissible overloads On-line mode	<105% continuous / <125% for 1 min / <150% for 10 s / >150% for 500 ms			
	Programmable sockets	Yes, for critical / non-critical loads (4/4)			
BATTERY	Battery type	LiFePO4			
	Recharge time	4.6 hours to 90%			
	Maximum no. of EBM	6			
CHARGER	Charging current	1.5 A			
COMMUNICATION	Ports	USB-HID / RS-232			
	Smart slot	for SNMP/Voltage-free contact/MODBUS			
	Monitoring software	WINPOWER			
OTHER FUNCTIONS	Cold-start (start-up from batteries)	Yes			
	Emergency power off (EPO)	Yes			
OPERATING MODES	Eco-mode	Yes			
	Frequency converter (CVCF)	Yes			
GENERAL	Operating temperature	0 - 40°C			
	Relative humidity	0 - 95%			
	Maximum operating altitude	1,000 metres above sea level (power reduction up to 3,000 metres)			
	Acoustic noise at 1 metre	45 dB		50 dB	
STANDARDS	Safety	EN IEC 62040-1			
	Electromagnetic compatibility (EMC)	IEC/EN IEC 62040-2 C2			
	Operation	VFI-SS-313 (EN IEC 62040-3)			
	Corporate certifications	ISO 9001, ISO 14001, ISO 45001			

Information subject to change without notice.

SLC CUBE4

On-line double-conversion three-phase UPS from 7.5 to 80 kVA



SLC CUBE4: The most advanced continuity protection on the market

Salicru's **SLC CUBE4** Uninterruptible Power Supplies (UPS) are the most cutting-edge security solution for all critical systems and sensitive loads. They have a Nimbus cloud connection as optional for equipment monitoring and remote management options, incident notification, equipment health monitoring and preventive maintenance.

With three-level on-line technology and quad-core DSP control, they are three-phase input/output systems that offer a range of first-class features, including unity power factor (kVA=kW), very low input distortion (THDi <3%) and performance in excess of 96% in On-line Mode and 99% in Eco Mode. They also boast parallel growth capacity or unlimited redundant security(1).

Across the entire range, the batteries are included in the same cabinet, meaning the floor area occupied is reduced by up to 40%. They are compatible with all types of battery (including lithium-ion) and incorporate the Batt-Watch battery care system to maximise battery life and availability.

(1) For models up to 20 kVA. Maximum of four devices in parallel.

Applications: Maximum quality in protection

The protection offered by Salicru's **SLC CUBE4** UPS will optimise the security performance of medium-power edge computing solutions with virtualised environments, along with all of the associated critical processes: not only for IT applications, but also for industrial processes, telecommunications and infrastructure.



salicru SMART SOLUTIONS

Performances

- On-line double conversion technology with three-level topology.
- State-of-the-art quad-core DSP control.
- Output power factor 1 (kVA=kW).
- Input power factor >0.99.
- Input current distortion rate (THDi) <3%.
- Nimbus IoT (optional) connection for monitoring, through the free NIMBUS App and the web portal .
- High energy efficiency (over 96% in On-line mode and up to 99% in Eco mode).
- Unlimited parallel system[1] for redundancy or capacity purposes.
- Single/single and three/single configurations only for up to 20 kVA.
- Batt-Watch battery care and management system.
- Batteries included on standard models throughout the range.
- Compatible with all battery types, including lithium-ion.
- Compatible with power generators.
- 5" touch screen for all models.
- USB, RS-232 and RS-485 interfaces, plus relays.
- Wide range of options available.
- SLC Greenergy solution.

(1) For models up to 20 kVA. Maximum of four devices in parallel.





Continuous surveillance

By integrating the equipment as feature of Salicru's Nimbus-cloud (optional), it is permanently monitored and provides a continuous analysis of the level of protection provided.



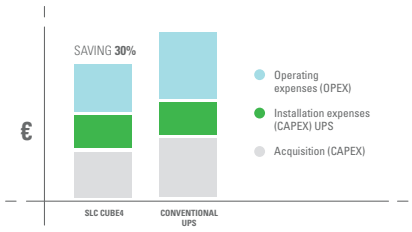
Remote maintenance

There are multiple remote maintenance options through the Nimbus Services connections, both in modalities and response, allowing immediate actions in case of incidents or advances on anomalous situations.



Very low TCO

The total cost of ownership (TCO) for an SLC CUBE4 has been carefully calculated in order to obtain a very low investment ratio over the operational lifetime of the UPS, leading to a saving of 30%.



Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-7,5-CUBE4	6B3AA000001	7.500 / 7.500	689 × 250 × 827	88
SLC-10-CUBE4	6B3AA000002	10.000 / 10.000	689 × 250 × 827	98
SLC-15-CUBE4	6B3AA000003	15.000 / 15.000	689 × 250 × 827	118
SLC-20-CUBE4	6B3AA000004	20.000 / 20.000	689 × 250 × 827	132
SLC-30-CUBE4	6B3AC000001	30.000 / 30.000	910 × 380 × 1045	229
SLC-40-CUBE4	6B3AC000003	40.000 / 40.000	910 × 380 × 1045	334
SLC-50-CUBE4	6B3AD000002	50.000 / 50.000	920 × 560 × 1655	450
SLC-60-CUBE4	6B3AD000003	60.000 / 60.000	920 × 560 × 1655	450
SLC-80-CUBE4	6B3AD000001	80.000 / 80.000	920 × 560 × 1655	540

Nomenclature, dimensions and weights for devices with input voltage of 3 x 400 V, output voltage of 3 x 400 V and standard backup.
This code corresponds olny to the UPS module. Consult code for battery module.

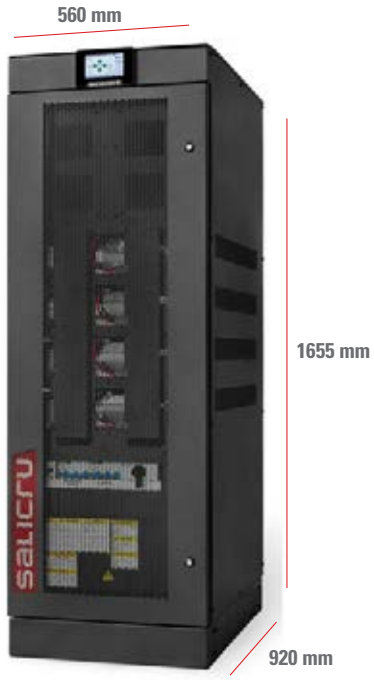
Dimensions



SLC-7.5÷20-CUBE4



SLC-30÷40-CUBE4



SLC-50÷80-CUBE4

Connections


SLC-7.5÷20-CUBE4


SLC-30÷40-CUBE4


SLC-50÷80-CUBE4

1. Intelligent slot for nimbus cloud (optional)
2. Free communications slot
3. Parallel port
4. USB interface
5. RS-232/(485) interface
6. Digital Inputs
7. Relay indicators
8. Input circuit breaker/disconnector
9. Output circuit breaker
10. Manual bypass circuit breaker
11. Bypass circuit breaker
12. Battery disconnector
13. Connections cover
14. Inlet, outlet, bypass and earth connections

Technical specifications

MODEL		SLC CUBE4
TECHNOLOGY		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Voltage range	7.5÷20 kVA: 110÷300 V (F-N) / 30÷80 kVA: 115÷265 V (F-N)
	Rated frequency	50 / 60 Hz
	Frequency range	7,5 ÷ 20kVA: 40 ÷ 70Hz (2) / 30 ÷ 80kVA: 45 ÷ 65Hz
	Total harmonic distortion (THDi)	7,5÷20 kVA: <4% / 30÷80 kVA: <3%
	Power factor	7.5÷20 kVA: ≥0.99 / 30÷80 kVA: 1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Power factor	1
	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Dynamic accuracy	±10%
	Static accuracy	7,5÷20 kVA: ±1% / 30÷80 kVA: ±0,5%
	Synchronised frequency	50/60 Hz ±5 Hz (selectable)
	Free running frequency	50/60 Hz ±0,5%
	Frequency	50 / 60 Hz
	Total performance in On-line mode	>96%
	Performance in Smart Eco-mode	7,5÷20 kVA: 98% / 30÷80 kVA: 98,7%
	Admissible overloads	7.5 ÷ 20 kVA: 110% 60 min / 110~125% 10 min / 125~150% 60 s / >150% 1 s 30 ÷ 80 kVA: 125% 10 min / 125~135% 5 min / 135~150% 60 s / >150% immediate
	Crest factor	3:1
MANUAL BYPASS	Type	Uninterrupted
STATIC BYPASS	Type and activation criteria	Solid state
	Transfer times in Smart Eco-mode (ms)	<10 ms
	Transfer to bypass	Immediate, for overloads exceeding 150%
	Retransfer	Automatic, after alarm deactivation
BATTERY	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	7,5 ÷ 20 kVA: 1xRS232 + 1xUSB / 30 ÷ 80 kVA: 1xRS232/485 + 1xUSB
	Relay interface	7.5÷20 kVA: 6 relays / 30÷80 kVA: 4 relays (programmable)
	Intelligent slot	NIMBUS, SNMP, RS232, RS485, USB, AS400 or remote battery temperature(3)
	Backlit LCD display	5" colour touch screen
GENERAL	Operating temperature	0° C ÷ +40° C (4)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (5)
	Acoustic noise at 1 metre	7,5÷20 kVA: <59 dB / 30÷40 kVA: <54 dB / 60÷80 kVA: <61,5 dB
STANDARDS	Safety	IEC/EN 62040-1
	Electromagnetic compatibility (EMC)	IEC/EN 62040-2 C3
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) 1/1 options with power derating and 3/1 (under request)
(2) According to the selected operating mode
(3) For models 7,5-20 kVA = 1 Slot / For models 30-80 kVA = 2 Slots
(4) Up to 55°C with power derating
(5) Power degradation for temperature altitudes, up to a maximum of 5,000 masl

Information subject to change without notice.

SLC CUBE4 R

Rackmount Uninterruptible Power Supply Systems from 7.5 to 20 kVA



SLC CUBE4 R: Outstanding performance in rackmount devices

The **SLC CUBE4 R** series offers excellent robustness and exceptional features throughout its range. In 19" format, these small three-phase on-line double conversion units can be easily integrated into complete rack cabinet solutions such as a small server, taking advantage of the footprint of the cabinet itself and avoiding the use of additional surface area for the UPS and its battery cabinets.

With its unique technological architecture, it achieves high performance in both On-line and Eco-mode operation, the latter with an efficiency of over 98%. The **SLC CUBE4 R**, available in power ratings from 7.5 to 20kVA, with an FP=1 output power factor, allows for the parallel connection of up to 4 units, offering the possibility of designing an optimal and economical redundant system.

Ample versatility in terms of communications is another of its noteworthy features. The NIMBUS card (optional) designed entirely at Salicru, places the **SLC CUBE4 R** within the IoT environment. Prior to activation, the user can connect via the app or the web portal and manage certain aspects of the device remotely.

Applications: Minimum space - maximum performance

Medium-power edge-computing solutions with virtualised environments and all the associated critical processes. Space-saving installations and integration in 19" rack cabinets.



Performances

- On-line double conversion technology with three-level topology.
- Output power factor 1 (kVA=kW).
- Input power factor >0.99, from 10% load.
- Input current distortion rate (THDi) <4%.
- Nimbus IoT connection as optional for monitoring via the NIMBUS APP and web portal.
- High energy efficiency, over 95% in On-line mode and up to 99% in Eco mode.
- Parallel system of up to 4 units.
- Single/single and three/single configurations.
- Batt-Watch battery care and management system.
- Compatible with all battery types, including lithium-ion.
- Compatibility with power generators.
- 5" touch screen for all models.
- USB, RS-232 and RS-485 interfaces, plus relays.
- Wide range of options available.
- SLC Greenergy solution.



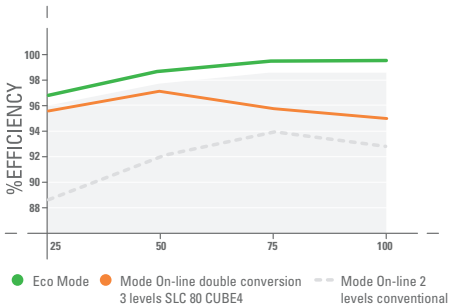
Continuous surveillance

By integrating the equipment as feature of Salicru's Nimbus-cloud (optional), it is permanently monitored and provides a continuous analysis of the level of protection provided.



Three-level topology with DSP control

Three-level switching, which is based on switching the IGBTs in half-cycles (positive and negative), controlled by floating point DSP with exclusive cores for the rectifier and inverter, provides maximum performance in double conversion.Lowers cooling costs and increases energy efficiency by more than 96% from a 25% charge, thereby improving TCO by reducing OpEx.



Touch screen

An attractive 5" touch screen display provides the ideal medium for a complete and fully intuitive user interface based on the format of the SLC CUBE4 range.



Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-7,5-CUBE4 R	6B3AF000001	7500 / 7500	685 × 438 × 312	80
SLC-10-CUBE4 R	6B3AF000002	10000 / 10000	685 × 438 × 312	80
SLC-15-CUBE4 R	6B3AF000003	15000 / 15000	685 × 438 × 446	134
SLC-20-CUBE4 R	6B3AF000004	20000 / 20000	685 × 438 × 446	136

Nomenclature, dimensions and weights for devices with input voltage of 3 x 400 V, output voltage of 3 x 400 V and standard backup.
Protrusion from the side surfaces of the main body of the UPS (elements for mounting and handling the device): 23 mm per side. This distance is not included in the dimensions quoted for "Width".
Front protrusion from the mounting surface to the rack cabinet: 46 mm. This distance is not included in the dimensions quoted for "Depth".

Dimensions

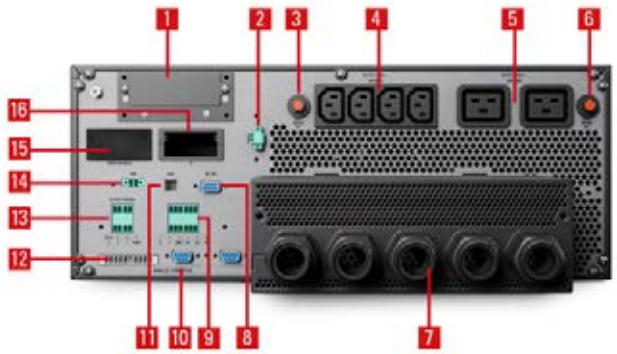


SLC-7,5/10-CUBE4 R



SLC-15/20-CUBE4 R

Connections



SLC-7,5÷20-CUBE4 R

1. Battery terminals.
2. Signals port BPME.
3. Sockets thermal protection IEC C13.
4. Output sockets IEC C13.
5. Output sockets IEC C19.
6. Sockets thermal protection IEC C19.
7. Inlet, outlet, bypass and earth connections.
8. RS-232 interface.
9. Input digital port.
10. Parallel signals port.
11. USB interface.
12. Parallel current port.
13. Potential-free contacts.
14. Emergency stop (EPO).
15. Intelligent slot for nimbus cloud (optional).
16. Free communications slot.

Technical specifications

MODEL		SLC CUBE4 R
TECHNOLOGY		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Voltage range	110 ÷ 300V (F-N)
	Rated frequency	50 / 60 Hz
	Frequency range	7,5 ÷ 20kVA: 40 ÷ 70Hz (2) / 30 ÷ 80kVA: 45 ÷ 65Hz
	Total harmonic distortion (THDi)	<4%
	Power factor	1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Power factor	1
	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Dynamic accuracy	±10%
	Static accuracy	±1%
	Synchronised frequency	50/60 Hz ±5 Hz (selectable)
	Free running frequency	50/60 Hz ±0,05%
	Frequency	50 / 60 Hz
	Total performance in On-line mode	>95%
	Performance in Smart Eco-mode	98%
	Admissible overloads	110% for 60 min / 110~125 % for 10 min / 110~125 % for 60 s / >150% for 1 s
	Crest factor	3:1
MANUAL BYPASS	Type	Uninterrupted
STATIC BYPASS	Type and activation criteria	Solid state
	Transfer times in Smart Eco-mode (ms)	<10 ms
	Transfer to bypass	Immediate, for overloads exceeding 150%
	Retransfer	Automatic, after alarm deactivation
BATTERY	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	1xRS232 + 1xUSB
	Relay interface	6 relays
	Intelligent slot	2 Slots: SNMP, NIMBUS, RS232, RS485, USB, AS400
	Backlit LCD display	5" colour touch screen
GENERAL	Operating temperature	0° C ÷ +40° C (3)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (4)
	Acoustic noise at 1 metre	<59dB
STANDARDS	Safety	IEC/EN 62040-1
	Electromagnetic compatibility (EMC)	IEC/EN 62040-2 C3
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) 1/1 options with power derating and 3/1 (under request)
(2) According to the selected operating mode
(3) Up to 55°C with power derating
(4) Power degradation for temperature altitudes, up to a maximum of 5,000 masl

Information subject to change without notice.

SLC CUBE3+

Uninterruptible power supply system from 7.5 to 200 kVA

SLC CUBE3+: Energy efficiency with superior electrical protection

Salicru's **SLC CUBE3+** series is a UPS range featuring high-performance, On-line double conversion (VFI) technology that provides a reliable, high-quality power supply and, at the same time, achieves significant energy and financial savings in terms of installation and operating costs.

Particularly noteworthy is the unit's input power factor (PF=1) and its extremely low distortion rate (THDi even lower than 1.5%), which help to reduce installation and operating costs, and contribute to improving the quality of the electrical grid.

The output power factor (PF=0.9) also stands out, providing optimum electrical protection for computer systems and low harmonic output distortion (THDv even lower than 0.5%), enabling it to protect any type of load (inductive, resistive, capacitive or mixed). In addition, the performance achieved (up to 95% in On-line mode and 98.4% in Smart Eco-mode) produces significant energy consumption savings and reduces air conditioning needs.

For a full optimum solution, the **SLC CUBE3+** provides maximum adaptability (even with the standard model), the possibility of parallel redundant expansion and extensive communication options. Finally, also worth noting is the unit's lightweight design and reduced dimensions, enabling it to be easily installed and ensuring that footprint is minimal.



Applications: Designed to protect any type of environment

High-end design features plus great flexibility capacity (options, power upgrading, communications...) make **SLC CUBE3+** series the best option to protect and secure a wide range of environments: data-centres, hosting, housing, IT-networks, server farms, voice and data networks...



salicru SMART SOLUTIONS

Performances

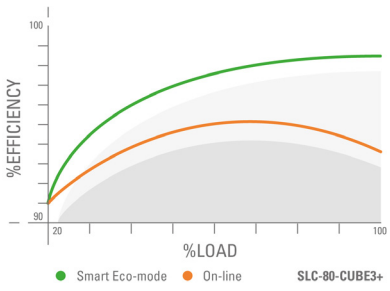
· On-line double conversion (VFI) technology with DSP control.
· Input power factor 1, for better performance.
· Very low input current harmonic distortion (THDi as low as <1.5%).
· Total flexibility in input/output voltage. (1)
· Designed to withstand any type of load.
· Batt-Watch function for monitoring and battery care.
· High output power factor (PF=0.9)(2).
· Very low output voltage distortion rate (THDv even lower than 0.5%).
· On-line mode efficiency of up to 95%.
· Smart Eco-mode efficiency of up to 98.4%.
· Touch screen 7" color. (3)
· Very compact design with minimal footprint.
· Can be integrated into the most advanced IT environments.
· Parallel redundant configuration (N+1) for critical installations. (4)
· Built with 80% recyclable materials.
· SLC Greenergy solution.

(1) Single/single, single/three and three/single configurations up to 100 kVA
(2) Only for three-phase input / output models. PF = 0.8 for other configurations
(3) According to model
(4) Up to 4 units.



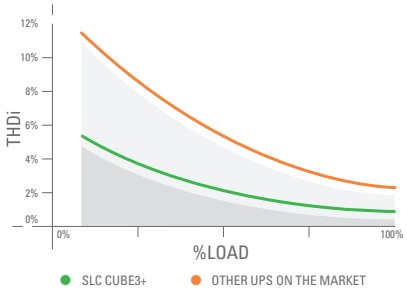
High efficiency

High performance in On-line and Smart Eco-mode operation.



Low harmonic distortion

The lowest harmonic distortion in the market.





Technical support and service

· Pre and post-sales advice.
· Start-up.
· Telephone technical support.
· Preventative/corrective intervention.
· Maintenance contracts.
· Remote maintenance contracts.
· Training courses.

Options

· Nimbus/Ethernet/SNMP adapter.
· Monitoring, management and shutdown software.
· 1 x additional RS-232/485 serial port.
· Extended backup times.
· Common battery set for parallel systems.
· BACS II, battery monitoring, regulation and alarms.
· Dual-level charger for NiCd batteries.
· Separate bypass line.
· Touch screen 7" color.(2)
· Single/single, single/three and three/single configurations.(1)
· External manual bypass.
· Temperature and humidity sensors.
· Frequency converter function.
· Backfeed protection.
· Isolation transformer and autotransformer.
· Parallel installation cable.
· Nimbus AS-400 extended relay card.
· Earthquake-proof feet.
· Other levels of protection.
· Batteries in rack.

(1) Up to 100 kVA
(2) Up to 60 kVA

Range

MODEL	CODE	POWER (VA / W)	Nº CABINETS (UPS + BAT)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)	BAT DIMENSIONS (D × W × H mm)	BAT WEIGHT (Kg)
SLC-7,5-CUBE3+	681LA000339	7500 / 6750	1 + 0	770 × 450 × 1100	203	-	-
SLC-10-CUBE3+	681LA000340	10000 / 9000	1 + 0	770 × 450 × 1100	203	-	-
SLC-15-CUBE3+	681LA000341	15000 / 13500	1 + 0	770 × 450 × 1100	205	-	-
SLC-20-CUBE3+	681LA000342	20000 / 18000	1 + 0	770 × 450 × 1100	254	-	-
SLC-30-CUBE3+	681LB000006	30000 / 27000	1 + 0	770 × 450 × 1100	305	-	-
SLC-40-CUBE3+	681LB000137	40000 / 36000	1 + 0	770 × 450 × 1100	403	-	-
SLC-50-CUBE3+	681LC000001	50000 / 45000	1 + 1	770 × 450 × 1100	185	775 × 450 × 1100	295
SLC-60-CUBE3+	681LC000002	60000 / 54000	1 + 1	770 × 450 × 1100	185	775 × 450 × 1100	523
SLC-80-CUBE3+	681TD000001	80000 / 72000	1 + 1	880 × 590 × 1320	265	1050 × 650 × 1325	624
SLC-100-CUBE3+	681TD000002	100000 / 90000	1 + 1	880 × 590 × 1320	290	1050 × 650 × 1325	624
SLC-120-CUBE3+	681TD000003	120000 / 108000	1 + 1	880 × 590 × 1320	290	1050 × 650 × 1325	750
SLC-160-CUBE3+	681TE000001	160000 / 140000	1 + 1	850 × 900 × 1900	540	850 × 1305 × 1905	1595
SLC-200-CUBE3+	681TE000002	200000 / 180000	1 + 1	850 × 900 × 1900	550	850 × 1305 × 1905	1918

Nomenclature, dimensions and weights for units with input voltage 3 x 400 V, output voltage 3 x 400 V and standard backup time.
This code corresponds olny to the UPS module. Consult code for battery module.

Dimensions



SLC-7,5÷60-CUBE3+

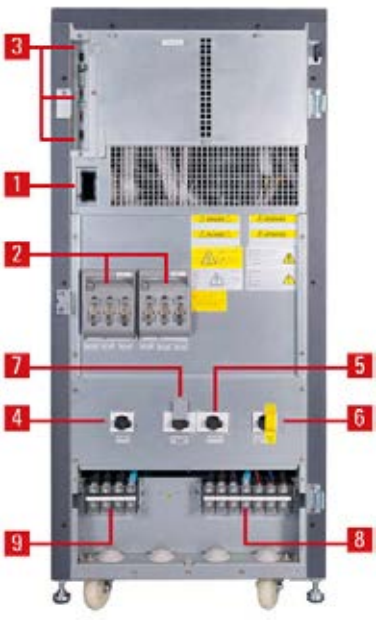


SLC-80÷120-CUBE3+



SLC-160/200-CUBE3+

Connections



SLC-7,5÷200-CUBE3+

1. Slot for card (option).
2. Internal protection fuses. 80 kVA equipments only.
3. Communication interfaces.
4. Circuit breaker switch / Input switch.
5. Output switch.
6. Fuse holder / switch power.
7. Manual bypass.
8. Output terminals.
9. Input and output terminals.

Technical specifications

MODEL		SLC CUBE3+
TECHNOLOGY		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Single-phase 220 / 230 / 240 V(1) / Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3P + N)
	Voltage range	+15% / -20% (configurable)
	Rated frequency	50 / 60 Hz
	Total harmonic distortion (THDi)	100% load: <1.5% / 50% load: <2.5% / 10% load: <6.0%
	Power factor	1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Power factor	0.9(2)
	Rated voltage	Single-phase 220 / 230 / 240 V(1) / Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3P + N)
	Dynamic accuracy	± 2% dynamic
	Static accuracy	± 1% steady
	Response time accuracy	20 ms for load steps 0% ÷ 100% and voltage drop up to -5%
	Total harmonic distortion (THDv)	<0.5% linear load / <1.5% (EN-62040-3)non-linear load
	Synchronised frequency	50/60 Hz ±5 Hz (selectable)
	Free running frequency	50/60 Hz ±0,05%
	Synchronous speed	From 1 Hz/s to 10 Hz/s (programmable)
	Total performance in On-line mode	7.5÷60 kVA: 92.0%÷93.0% / 80÷200 kVA: 94.0%÷95.0%
	Performance in Smart Eco-mode	Up to 98.4%
	Admissible overloads	125% for 10 min / 150% for 60 s / >150% for 20ms
	Crest factor	>3:1
MANUAL BYPASS	Type	No breaks
STATIC BYPASS	Type and activation criteria	Solid state, controlled by microprocessor
	Transfer times in Smart Eco-mode (ms)	4 ms (typical)
	Transfer times in On-line	Nil
	Transfer to bypass	Immediate, for overloads exceeding 150%
	Retransfer	Automatic, after alarm deactivation
BATTERY	Battery type	Lead acid, sealed, maintenance free
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	1 × RS232/RS485 + 1xUSB,with Modbus protocol
	Relay interface	4 × AC failure, bypass, low battery and general
	Intelligent slot	1, for SNMP
	Display from 80 kVA	Touch screen 7" color
	Display up to 60 kVA	LCD display, LEDs and keyboard
GENERAL	Operating temperature	0° C ÷ +40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (3)
	Acoustic noise at 1 metre	<52 dB(A)(4)
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN-62040-2
	Operation	VFI-SS-11 (EN-62040-3)
	Seismic (Optional)	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Up to 60 kVA.
(2) Only for three-phase input / output models. FP = 0.8 for other configurations.
(3) Power derating for higher altitudes up to 5000 masl.
(4) <65 dB(A) for 80 to 120 kVA models / <70 dB(A) for 160 to 200 kVA models.

Information subject to change without notice.

SLC X-PERT

Uninterruptible power supplies 80 to 400 kVA



SLC X-PERT: High critical power facilities protected by high functionalities

Salicru's **SLC X-PERT** series consists of three-phase UPSs that combine very low total cost of ownership (TCO) with very high efficiency and compact design, providing high-quality uninterruptible power for all critical applications. The technology incorporated offers one of the highest efficiencies on the market in VFI mode and 100% of expected battery life.

The **SLC X-PERT** series maximises the use of the surface occupied thanks to its high power density design. Models from 200 kVA have complete front access, precluding the need for side or rear space, making them easy to maintain and installable side by side, back to back or against a wall. The common battery option further enhances the ability of the **SLC X-PERT** series to deliver low footprint solutions, freeing space for other equipment.

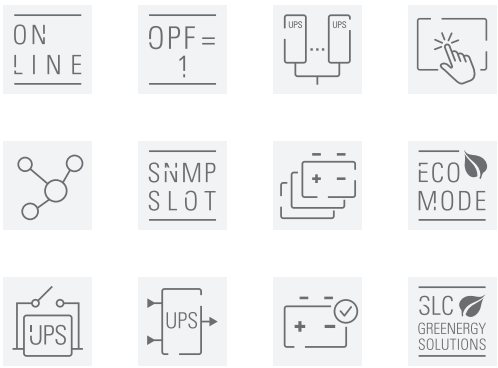
Applications: Guaranteed energy for all environments

Data centres: Ensures the functionality of environments and prevents losses caused by net failures.
IT-Networks: Prevent costs due to service interruptions or loss of information.
Financial services: Maintains online operability of financial transactions and operations.
Industrial processes: Protects productivity in electrically complicated environments.
Telecommunications: Prevents supply failures that can suspend communication between subscribers.
Infrastructures: Safeguards the instruments/equipment and ensures the proper management of the systems.



Performances

- On-line, double-conversion and DSP control technology.
- Output power factor 1 (VA=W).
- Input current distortion rate (THDi) <3%.
- Double input connection to increase availability.
- Input power factor >0.99.
- High energy efficiency, between 95% and 96% in normal mode and up to 97% in high-efficiency mode.
- No transformer in the inverter, compact design and less weight.
- Parallel system for redundancy or capacity purposes.
- Monitoring and care of batteries with Batt-Watch and longer life in high-efficiency mode.
- Compatible with power generators.
- 10" touch screen for all models.
- Selectable on-line/eco-mode operation.
- Calculation of the backup available in the event of lengthy power cuts.
- Extended life for consumables.
- Wide range of options available.
- SLC Greenergy solution.



High-efficiency mode

High-efficiency operating mode disconnects the DC bus battery when it is fully charged, enabling the DC voltage to be lowered to achieve performance of up to 97% working in on-line mode and in turn protecting and extending the life of the batteries.



Parallel systems featuring UPSs with different powers

For cases in which there is only one UPS and, due to expansion needs, it is necessary to install another device in parallel, the **SLC X-PERT** series enables two devices with different powers to parallel each other in parallel systems of 2 units. For example, a power of 125 kVA with a 100 kVA device.

Technical support and service

- Pre- and after-sales service.
- Commissioning.
- Telephone technical support.
- Preventative/corrective intervention.
- Maintenance contracts.
- Remote maintenance contracts.
- Training courses.

Options

- Parallel/redundant kit.
- Extended backup times.
- Common rectifier/bypass input.
- SNMP adapter.
- NIMBUS adapter for remote management.
- External output voltage synchronism.
- Backfeed protection.
- Transformer.
- Battery temperature sensor.
- Top cable entry.
- External maintenance bypass.
- Modbus protocol.

Heat loss

MODEL	HEAT LOSS 100% LOAD	COOLING
SLC-80-XPERT	4.20 kW	1000 m^3 /h
SLC-100-XPERT	5.30 kW	1200 m^3 /h
SLC-125-XPERT	6.60 kW	1200 m^3 /h
SLC-160-XPERT	8.40 kW	1500 m^3 /h
SLC-200-XPERT	9.40 kW	1800 m^3 /h
SLC-250-XPERT	11.80 kW	2200 m^3 /h
SLC-300-XPERT	14.10 kW	2300 m^3 /h
SLC-400-XPERT	17.50 kW	4500 m^3 /h

Range

MODEL	CODE	POWER (VA / W)	Nº CABINETS (UPS + BAT)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)	BAT DIMENSIONS (D × W × H mm)	BAT WEIGHT (Kg)
SLC-80-XPERT	695KA000023	80000/80000	1+0	940 × 560 × 1500	300	-	-
SLC-100-XPERT	695KA000012	100000/100000	1+1	940 × 560 × 1800	320	855 × 1305 × 1905	829
SLC-125-XPERT	695KA000013	125000/125000	1+1	940 × 560 × 1800	360	855 × 1305 × 1905	829
SLC-160-XPERT	695KA000014	160000/160000	1+1	940 × 560 × 1800	380	855 × 1305 × 1905	1550
SLC-200-XPERT	695KA000006	200000/200000	1+1	970 × 880 × 1978	720	855 × 1305 × 1905	1862

Batteries located in cabinets.
Nomenclature, dimensions and weights for devices with input voltage 3 x 400 V, output voltage 3 x 400 V and standard backup.
This code corresponds olny to the UPS module. Consult code for battery module.

MODEL	CODE	POWER (VA / W)	Nº CABINETS (UPS + BAT)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)	BAT DIMENSIONS (D × W × H mm)	BAT WEIGHT (Kg)
SLC-250-XPERT	695KA000007	250000/250000	1+1	970 × 880 × 1978	850	695 × 2500 × 2285	2171
SLC-300-XPERT	695KA000008	300000/300000	1+1	970 × 880 × 1978	930	695 × 2500 × 2285	2879
SLC-400-XPERT	695KA000009	400000/400000	1+1	970 × 1430 × 1978	1000	695 × 2500 × 2285	3414

Batteries located in banks.
Nomenclature, dimensions and weights for devices with input voltage 3 x 400 V, output voltage 3 x 400 V and standard backup.
This code corresponds olny to the UPS module. Consult code for battery module.

Dimensions



SLC-80÷160-XPERT



SLC-200÷300-XPERT



SLC-400-XPERT

Technical specifications

MODEL		SLC X-PERT
TECHNOLOGY		On-line, double-conversion, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 V / 3 × 400 V / 3 × 415 V (3P+N)
	Voltage range	+15% / -20% (@ 3 × 400 V)
	Rated frequency	50 / 60 Hz (45-65 Hz)
	Frequency range	±10%
	Total harmonic distortion (THDi)	<3%
	Power factor	>0.99
OUTPUT	Power factor	1
	Rated voltage	Three-phase 3 × 380 V / 3 × 400 V / 3 × 415 V (3P+N)
	Total harmonic distortion (THDv) Non linear load	<5%
	Synchronised frequency	±2 Hz
	Frequency	50 / 60 Hz
	High-efficiency performance	Up to 97%
	Eco-mode performance	≥98%
	Admissible overloads	125% for 10 min / 150% for 1 min
	Crest factor	3 a 1
STATIC BYPASS	Type and activation criteria	Solid state, microprocessor controlled
	Voltage (V)	Three-phase 3 × 380 V / 3 × 400 V / 3 × 415 V (3P+N)
	Transfer time	Nil
	Transfer to bypass	Immediate, for overloads exceeding 150%
	Retransfer	Automatic after alarm discontinuation
	Frequency range	±10% (selectable)
	Voltage range	±10% (selectable)
	Input	Independent
	Frequency	50 / 60 Hz
	Admissible overloads	1000% for 1 cycle
BATTERY	Battery type	Lead acid, sealed, maintenance free(1)
	Charge type	Type of charge IU (DIN 41773)
COMMUNICATION	Ports	RS-232, USB
	Backlit LCD display	10" touch screen
GENERAL	Operating temperature	0 ÷ +40°C
	Relative humidity	95% non-condensing
	Maxium operating altitude	2400 m.a.s.l.(2)
	Acoustic noise at 1 metre	<60dB up to 160kVA; <65dB up to 300kVA; <72dB for 400kVA
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN-62040-2
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Ni-Cd, Li-Ion and other types of battery available on request.
(2) Power degradation up to 5,000 masl.

Information subject to change without notice.

SLC X-TRA

Uninterruptible Power Supplies from 100 to 800 kVA



SLC X-TRA: High performance protection for major critical applications

The **SLC X-TRA** series is one of the most reliable, high-performance three-phase Uninterruptible Power Supply system (UPS) on the market, and provides protection and quality energy for a wide range of applications. Based on the Voltage and Frequency Independent (VFI) mode of operation, it has been developed using double conversion IGBT technology with DSP control, which gives considerable savings in the costs of operation and installation while it offers maximum protection for the connected loads.

This series has been conceived to offer the best guarantees in meeting customers' requirements and needs and has been designed in full respect of the most demanding environmental regulations.

The **SLC X-TRA** series features power range from 100 to 800 kVA in a very compact format for easier installation. Plus, the reliability of the system can be increased with the installation of several redundant units or it can grow in parallel based on the needs of the installation.

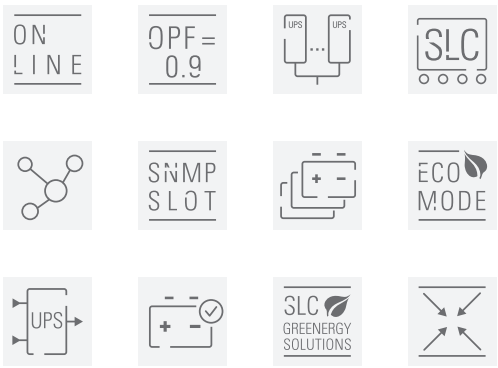
Applications: Guaranteed energy for all environments

Data centres: Ensures the functionality of environments and prevents losses caused by net failures.
IT-Networks: Prevent costs due to service interruptions or loss of information.
Financial services: Maintains online operability of financial transactions and operations.
Industrial processes: Protects productivity in electrically complicated environments.
Telecommunications: Prevents supply failures that can suspend communication between subscribers.
Infrastructures: Safeguards the instruments/equipment and ensures the proper management of the systems



Performances

· On-line, double conversion, DSP control.
· Double input connection to increase the availability.
· Input power factor >0.99.
· Total harmonic distortion of input current (THDi) < 3%.
· Efficiency between 95% and 96%.
· Zig-zag transformer on the output inverter.
· Parallel for redundancy or increase the power capacity.
· Compatible with generating sets.
· Inverter manual operation/Smart Eco-mode.
· Prepared to bear computer loads with FP <0.9.
· Batt-Watch battery monitoring and care.
· Calculates available back-up time in a long-term failure.
· Compact format to save on installation space.
· Easy installation, operation and maintenance.
· A wide range of control and monitoring options.
· Large variety of options available.
· SLC Greenergy solution.



Options

· Parallel/redundant kit.
· Extended autonomies.
· NiCd Batteries.
· BACS II.
· MODBUS protocol + RS-485 interface.
· Platform for remote telemanagement.
· Ethernet / SNMP adapter or GPRS modem.
· Monitoring, management and shutdown software.
· Common input connection.
· Top cable input.
· External manual bypass.

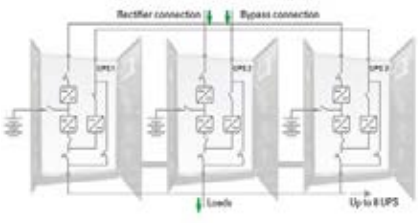


Technical support and service

· Advisory service before and after the sale.
· Start up.
· Telephone technical support.
· Preventive/corrective interventions.
· Maintenance contracts.
· Telemaintenance contracts.
· Training courses.

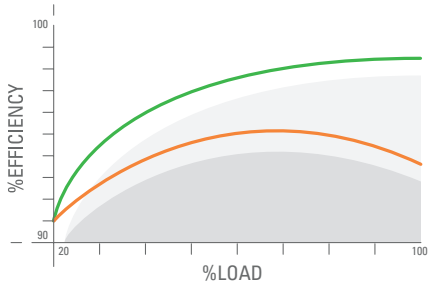
Parallel growth

The parallel UPS can be configured to achieve redundancy or increase the power capacity of the system. Parallel control is fully digital and works for active as well as reactive power in each phase, achieving an exact load distribution between the UPS units in transitory conditionsrs, y compris dans des conditions transitoires.



High efficiency

High performance both On-line mode (between 95% and 96%) and Smart Eco-mode (>98%), reducing operating costs, implementation costs (no need to oversize the wiring), air conditioning costs (without increasing cooling requirements) and working costs (saving energy consumed).



Range

MODEL	CODE	POWER (VA / W)	Nº CABINETS (UPS + BAT)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)	BAT DIMENSIONS (D × W × H mm)	BAT WEIGHT (Kg)
SLC-100-XTRA	695AA000002	100000 / 90000	1 + 1	825 × 815 × 1670	630	855 × 1305 × 1905	875
SLC-125-XTRA	695AA000003	125000 / 112500	1 + 1	825 × 815 × 1670	662	855 × 1305 × 1905	1370
SLC-160-XTRA	695AA000004	160000 / 144000	1 + 1	825 × 815 × 1670	720	855 × 1305 × 1905	1370
SLC-200-XTRA	695AA000005	200000 / 180000	1 + 1	855 × 1220 × 1905	870	855 × 1305 × 1905	1550
SLC-250-XTRA	695AA000006	250000 / 225000	1 + 1	855 × 1220 × 1905	1020	855 × 1305 × 1905	1800
SLC-300-XTRA	695AA000007	300000 / 270000	1 + 2	855 × 1220 × 1905	1200	855 × 1305 × 1905	1370
SLC-400-XTRA	695AB000001	400000 / 360000	1 + 2	950 × 1990 × 1920	1820	855 × 1305 × 1905	1800
SLC-500-XTRA	695AB000002	500000 / 450000	1 + 2	950 × 2440 × 2020	2220	855 × 1305 × 1905	1800
SLC-600-XTRA	695AB000003	600000 / 540000	1 + 2	950 × 2440 × 2020	2400	855 × 1305 × 1905	2125
SLC-800-XTRA	695AB000004	800000 / 720000	1 + 3	950 × 3640 × 1920	3600	855 × 1305 × 1905	1925

Nomenclature, dimensions and weights for units with input voltage 3 x 400 V, output voltage 3 x 400 V and standard backup time.
This code corresponds olny to the UPS module. Consult code for battery module.

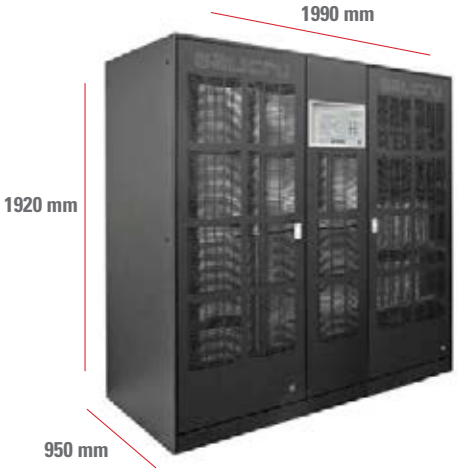
Dimensions



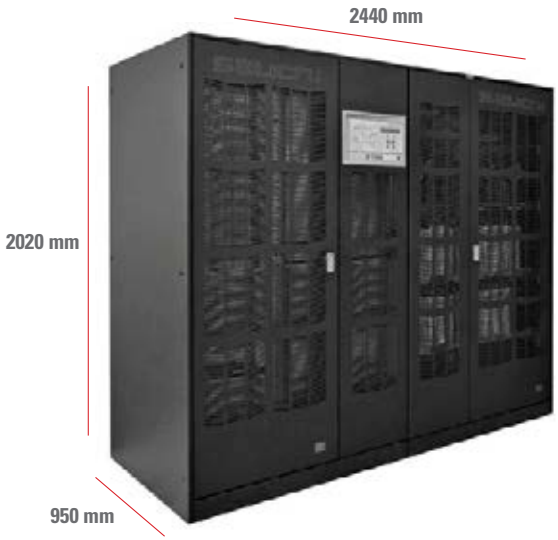
SLC-100÷160-XTRA



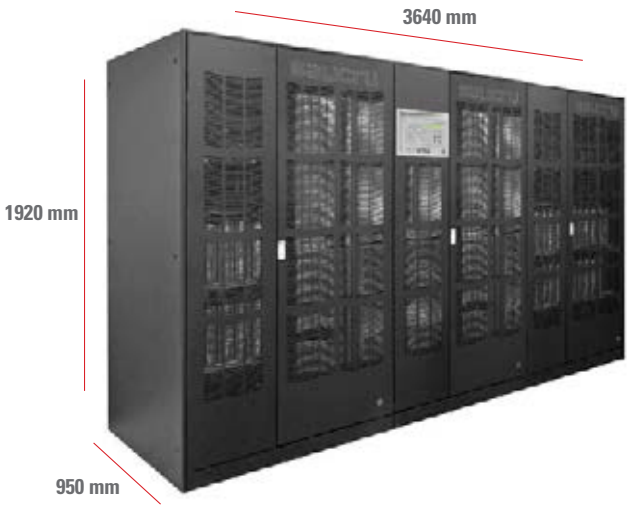
SLC-200÷300-XTRA



SLC-400-XTRA



SLC-500/600-XTRA



SLC-800-XTRA

Technical specifications

MODEL		SLC X-TRA
TECHNOLOGY		On-line, double conversion, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 V / 3 × 400 V / 3 × 415 V (3Ph+N)
	Voltage range	+15% / -20% (@ 3 × 400 V)
	Rated frequency	50 / 60 Hz (45-65 Hz)
	Total harmonic distortion (THDi)	<3%
	Power factor	>0.99
OUTPUT	Rated voltage	Three-phase 3 × 380 V / 3 × 400 V / 3 × 415 V (3Ph+N)
	Accuracy	±1% Steady state; ±5% Dynamic state (100% unbalanced) < 20 ms recovery time
	Total harmonic distortion (THDv) Linerar load	<1%
	Total harmonic distortion (THDv) Non linear load	<5%
	Frequency	50 / 60 Hz
	On-line performance	95% - 96%
	Eco-mode performance	>98%
	Admissible overloads	125% for 10 min. / 150% for 1 min / 200% for 10 s />200% for 100ms
MANUAL BYPASS	Type	Without interruption
	100–300 kVA	Seriell
STATIC BYPASS	Type and activation criteria	Solid state, control by microprocessor
	Voltage (V)	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3Ph + N)
	Transfer time	Nil
	Transfer to bypass	Immediate for overloads of over 150%
	Retransfer	Automatic after alarm disappearance
	Input	Independent
	Frequency	50 / 60 Hz
	Admissible overloads	1000% for 1 cycle
RECTIFIER	Structure	Three-phase IGBT complete wave, soft start and PFC
	Protection	Against transitory overvoltages
BATTERY	Battery type	Lead acid, sealed, maintenance free(1)
	Recharge time	4 hours, @ 80% of capacity
	Charging voltage regulation	Batt-Watch
	Battery test	Manual + Automatic
COMMUNICATION	Ports	RS-232, USB, Emergency Power Off (EPO), Port for monitoring battery switch
	Backlit LCD display	LCD + LED block diagram
GENERAL	Operating temperature	0º C ÷ +40º C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	< 2,400 m.s.n.m.
	Acoustic noise at 1 metre	< 60 dB
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN-62040-2
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Ni-Cd under request.

Information subject to change without notice.

SLC ADAPT2

On-line double-conversion modular rack UPS with modules 10 and 15 kVA

SLC ADAPT2: Modularity, optimisation and efficiency in electrical safety for data centres

Salicru's **SLC ADAPT2** series UPSs are on-line double-conversion modular solutions for superior electrical protection, featuring DSP control and three-level IGBT technology.

Modularity: The range of modules available -10 and 15 kW- together with the different configurable systems -2, 3, 4 and 6 modules per system- enables adaptation to any environment, with the option of paralleling systems to achieve greater protection or increased power. Preventative diagnosis and frontal extraction of the modules drastically reduces intervention times (MTTR) and increases the availability of the system.

Optimisation: High power density, modules occupying only 2U of height require less space in data centres and reduce installation and working costs (TCO). Moreover, expenditure can be optimised by simply adding new modules in line with the pace of growth of the data centre.

Efficiency: The modules with a unity output power factor (kVA = kW) operate with an efficiency up to 96% (depending on model) and a very flat performance curve for all working modes, resulting in less exertion when cooling and significant energy savings. They also feature various operating modes (Eco-mode, Hibernation, Smart-Efficiency, etc.), which further increase the performance and efficiency of the system.



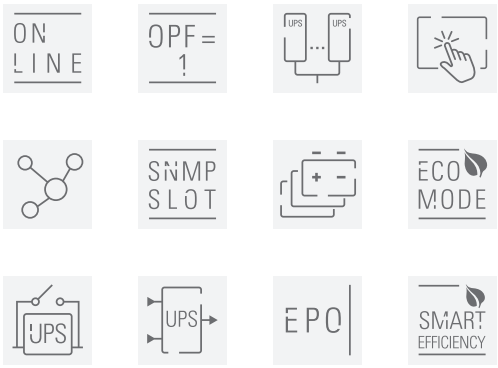
Applications: Scalable protection for better adaptation to growing needs

Salicru's **SLC ADAPT2** series modular solutions ensure reliability, quality and continuity and provide improved protection for small and medium-power data centres, both modular and virtualised, as well as IT infrastructures and applications for associated critical processes, avoiding the enormous costs resulting from interruptions in the operation of data centres.



Performances

- Modular on-line double-conversion UPS solutions.
- Output power factor PF=1 (kVA=kW).
- High power density with 10 and 15 kVA modules occupying only 2U of height.
- Maximum flexibility with 2, 3, 4 and 6 module systems.
- Parallel growth, up to 450 kVA.
- Hot-pluggable and swappable plug & play modules.
- Input power factor >0.99.
- Flexible configurations 1/1, 1/3, 3/1 and 3/3.(1)
- Standard Nimbus IoT connection for monitoring, optional.
- 7" LCD colour touchscreen, LEDs an keypad.
- Up to 96% efficiency of modules in Online mode (depending on model).
- Eco-mode operation for improved efficiency.
- Cold start function for start-up without mains, optional.
- Smart hibernation mode to extend the life of the modules.
- Smart charger of up to 20% of the power of the system.
- USB, RS-232, RS-485 and potential-free contact communication channels.
- SNMP/ Ethernet and relays, as options.
- Multi-platform management and monitoring software.



(1) For systems with 10 kW modules.

Display

- 7" colour touchscreen.
- Large touchpanel display that provides status information and useful records.



Built-in cabinet

Possibility of assembling the module systems in 1100/1600/2000 mm high cabinets with or without batteries included. Batteries can also be installed in additional cabinets.



Continuous surveillance

By integrating the equipment as feature of Salicru's Nimbus-cloud (optional), it is permanently monitored and provides a continuous analysis of the level of protection provided.



Remote maintenance

There are multiple remote maintenance options through the Nimbus Services connections, both in modalities and response, allowing immediate actions in case of incidents or advances on anomalous situations.





Range

MODULES	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC ADAPT2 10	694AB000008	10000 / 10000	590 × 436 × 85	15.3
SLC ADAPT2 15	694AB000009	15000 / 15000	590 × 436 × 85	15.5

SYSTEMS	CODE	NO. MODULES (#)	MAX. POWER PER SYSTEM (kVA)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-#/2 ADAPT2 30	694RA000221	1 to 2 × 10 kVA/1 to 2 × 15 kVA	20/30	612 × 485 × 309	57
SLC-#/4 ADAPT2 45	694RA000222	1 to 4 × 10 kVA/1 to 3 × 15 kVA	40/45	612 × 485 × 485	66
SLC-#/6 ADAPT2 90	694RA000223	1 to 6 × 10 kVA/1 to 6 × 15 kVA	60/90	751 × 485 × 1033	100

Nomenclature, dimensions and weights for devices with input voltage 3 x 400 V, output voltage 3 x 400 V.
Replace # with the number of system modules.
19'' rack format for 2, 3 and 4 slot systems.
Batteries located in additional cabinets.
The weight shown corresponds only to the system, without modules.

Dimensions



SLC ADAPT2 10
SLC ADAPT2 15



SLC-#/2 ADAPT2 30



SLC-#/4 ADAPT2 45



SLC-#/6 ADAPT2 90

Technical specifications

MODEL		SLC ADAPT2	
Module power (VA/W)		10000 / 10000	15000 / 15000
TECHNOLOGY		On-line double-conversion, HF, DSP control	
INPUT	Rated single phase voltage	220 / 230 / 240 V	Not available
	Rated three-phase voltage (3P + N + E)	3 × 380 / 400 / 415 V	
	Voltage range	-40% +25% (Depending on charge)(1)	
	Frequency range	40 - 70 Hz	
	Total harmonic distortion (THDi)	≤3%	
	Power factor	>0.99	
OUTPUT	Power factor	1	
	Single phase rated voltage	220 / 230 / 240 V	Not available
	Rated three-phase voltage (3P + N + E)	3 × 380 / 400 / 415 V	
	Static accuracy	±1%	
	Total harmonic distortion (THDv)	≤1% linear load; ≤5% non-linear load	
	Frequency	50 / 60 Hz	
	Module performance (On-line)	96%(2)	
	Performance in Smart Eco-mode	99%	
	Admissible overloads	≤110% for 1 hour / ≤125% for 10 min / ≤150% for 1 min	
	Crest factor	3:1	
MANUAL BYPASS	Type	Uninterrupted (optional)(3)	
STATIC BYPASS	Type	Static thyristor	
	Transfer time	0 ms	
	Admissible overloads	≤110% constant / ≤130% for 1 hour / ≤150% for 1 minute / ≥150% for 5 seconds	
BATTERY	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion	
	Charger bus voltage	Configurable between +/-192 and +/-264 Vdc	
	Charger maximum power (W)	20% of total system power	
COMMUNICATION	Display	7" touchscreen and LEDs	
	Ports	USB, RS-232, RS-485 and relays	
	Intelligent slot	1 × Nimbus SNMP / 1 × Nimbus extended relays	
GENERAL	Operating temperature	0° C ÷ +55° C(4)	
	Relative humidity	Up to 95%, non-condensing	
	Maxium operating altitude	2,400 masl(5)	
	Acoustic noise at 1 metre	<54 dB(A) (According to number of modules)	
SYSTEMS	Maximum no. modules per system	2, 4, or 6	2, 3, or 6
	Maximum power per system	20, 40, 60 kVA	30, 45, 90 kVA
	Maximum no. modules systems	30	
	Maximum power per parallel system	300 kVA	450 kVA
STANDARDS	Safety	EN IEC 62040-1	
	Railway	EN 50121-4 / EN50121-5	
	Electromagnetic compatibility (EMC)	EN IEC 62040-2	
	Operation	VFI-SS-11 (EN 62040-3)	
	Seismic	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) Linear % load derating from -20% to -40%.
(2) Depending on model.
(3) Not included in subracks. Excellent for cabinet systems.
(4) Power derating for higher altitudes up to +40°C.
(5) Power degradation for higher altitudes, up to a maximum of 5,000 masl.

Information subject to change without notice.

SLC ADAPT2

Modular On-line double conversion UPS with modules 25 and 50 kVA



SLC ADAPT2: Flexibility, availability and reliability in superior electrical protection

Salicru's **SLC ADAPT2** series consists of modular On-line double conversion uninterruptible power supply (UPS) solutions with DSP control and three-level IGBT inverter technology.

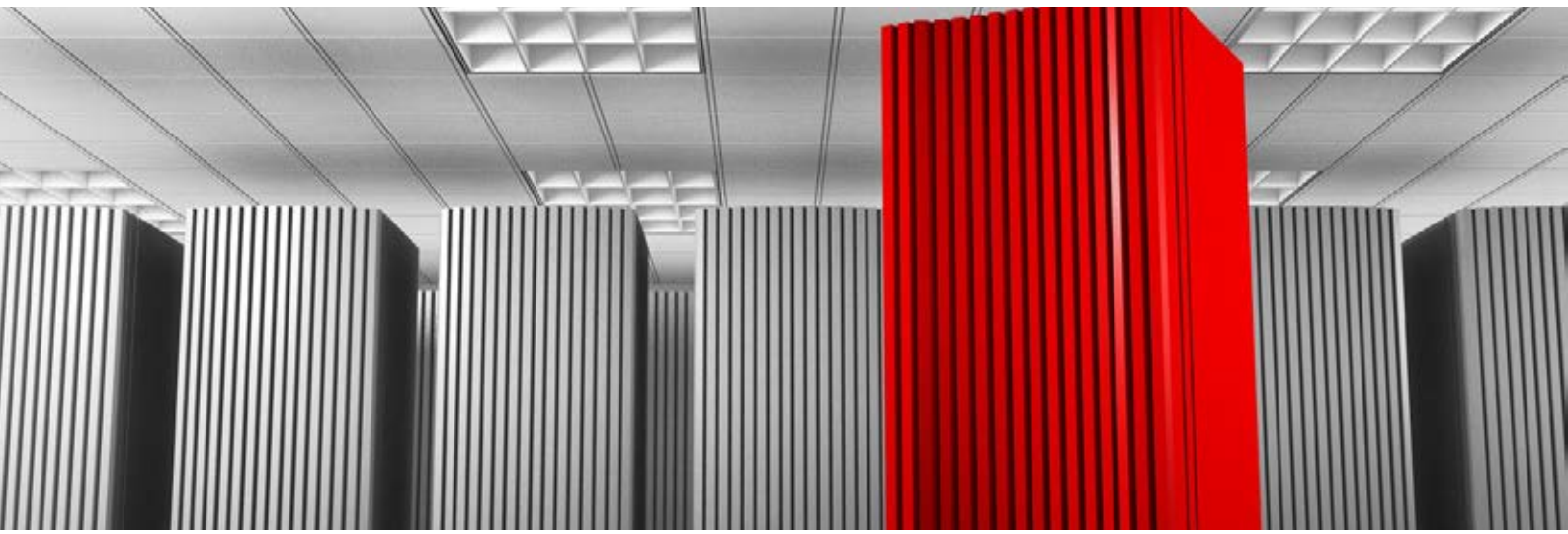
Flexibility: It enables solutions to be configured from 25 kVA to 1500 kVA, thanks to the range of modules available (25 and 50 kVA), different configurable systems (8, 10 or 12 modules) and the parallel/redundant option of up to three 500 kVA systems. It also provides increased protection as needs grow - pay as you grow - thereby improving total cost of ownership (TCO).

Availability: Its hot-swap modules can be added or replaced during operation, thereby improving mean time to repair (MTTR) and reducing maintenance costs. In addition, the system's remote management, which can be integrated into any platform, also facilitates operation. And the extensive back-up options available, along with intelligent battery charging, ensure continuous operation of the protected critical loads.

Reliability: Its DSP control, based on three-level PWM technology, improves response effectiveness and, along with shared load redundancy, significantly extends the mean time between failures (MTBF).

Applications: Redundant protection for critical applications

Data centres with all capacities, IT infrastructures, modular and virtualised data centres and applications for critical processes are some of the services that require high-level electrical protection to ensure reliable, continuous and high-quality operation, such as that provided by Salicru's **SLC ADAPT2** series systems.



Performances

- On-line double conversion technology with modular architecture.
- 25 and 50 kVA modules with DSP control and three-level PWM technology.
- 8, 10 or 12-module systems (up to 600 kVA per system).
- Possibility of parallel/redundant operation up to 1500 kVA.
- Hot-pluggable and swappable plug & play modules.
- Input power factor >0.99.
- Input current distortion (THDi) <3%.
- Three-phase input / output voltages.(1)
- Output power factor = 1 (kVA = kW).
- Control and management by means of LCD display, LEDs and keypad.
- Up to 96,5% efficiency of modules in Online mode (depending on model).
- 99% performance in Eco-mode operation.
- USB, RS-232, RS-485 and potential-free contact communication channels.
- Smart slots for extended relays and SNMP/Nimbus.
- Smart-efficiency mode to optimize system performance.
- Improved return on investment (ROI).
- Compact design to save space in server rooms.
- SLC Greenergy solution.

(1) 1/1, 1/3 and 3/1 options with power derating (under request).



Display

Display consisting of operation keys, status LEDs and touch screen detailing all functions, measurements and alarms.



Connections



Options

- Extended relays and SNMP/Nimbus adapter.
- Extended back-up times.
- Kit for parallel systems (Included in systems with 25 kW modules).
- Frequency converter operation.

Technical support and service

- Pre-sales and after-sales advice.
- Start-up. (1)
- Technical support by telephone.
- Preventive/corrective services.
- Maintenance contracts. (1)
- Training courses.

(1) Ask for local conditions

1. Manual bypass.
2. Start-up from batteries (Cold Start).
3. LCD display.
4. Bypass module.
5. Dry contacts.
6. Extended relays and SNMP / Nimbus slot.
7. USB, RS-232 and RS-485 interfaces.
8. Power modules.

Range

MODULES	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC ADAPT2 25	694AB000010	25000 / 25000	677 × 436 × 85	18
SLC ADAPT2 50	694AB000020	50000 / 50000	700 × 510 × 178	45

SYSTEMS	CODE	NO. MODULES (#)	MODULE POWER (VA / W)	MAX. POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
SLC-#/8 ADAPT2 200	694RA000249	1 to 8	25000 / 25000	200000 / 200000	916 × 482 × 1550	178
SLC-#/12 ADAPT2 300	694RA000250	1 to 12	25000 / 25000	300000 / 300000	1100 × 650 × 2000	230
SLC-#/10 ADAPT2 500	694RA000251	1 to 10	50000 / 50000	500000 / 500000	1100 × 1300 × 2000	945
SLC-#/12 ADAPT 600	694OQ000125	1 to 12	50000 / 50000	600000 / 600000	1100 × 1300 × 2000	945

Nomenclature, dimensions and weights for devices with input voltage 3 x 400 V, output voltage 3 x 400 V.
Replace # with the number of system modules.
Batteries located in additional cabinets.
The weight shown corresponds only to the system, without modules.

Dimensions



SLC ADAPT2 25



SLC ADAPT2 50



SLC-#/8 ADAPT2 200



SLC-#/12 ADAPT2 300



SLC-#/10 ADAPT2 500
SLC-#/12 ADAPT 600

Technical specifications

MODEL		SLC ADAPT2	
Module power (VA/W)		25000 / 25000	50000 / 50000
TECHNOLOGY		On-line double conversion, three-level PWM, DSP control	
INPUT	Rated three-phase voltage (3P + N + E)	3 × 380 / 400 / 415 V(1)	
	Voltage range	-27% +25% (Depending on charge)(3)	-40% +25% (Depending on charge)(3)
	Rated frequency	50 / 60 Hz	
	Frequency range	40 - 70 Hz	
	Total harmonic distortion (THDi)	≤3%	
	Power factor	>0.99	
OUTPUT	Power factor	1	
	Rated three-phase voltage (3P + N + E)	3 × 380 / 400 / 415 V(1)	
	Accuracy	±1%	
	Total harmonic distortion (THDv)	≤1%	
	Frequency	50 / 60 Hz	
	Module performance (On-line)	96,5%(2)	
	Performance in Smart Eco-mode	99%	
	Admissible overloads	≤110% for 1 hour / ≤125% for 10 min / ≤150% for 1 min / ≥150% for 200 ms	
	Crest factor	3:1	
MANUAL BYPASS	Type	Uninterrupted	
STATIC BYPASS	Type	Static thyristor	
	Three-phase voltage (V)	3 × 380 / 400 / 415 (3P + N)	
	Admissible overloads	≤110% constant / ≤130% for 1 hour / ≤150% for 1 minute / ≥150% for 5 seconds	
BATTERY	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion	
	Charging voltage regulation	Batt-watch	
	Charger maximum power (W)	20% of total system power	
COMMUNICATION	Display	7”/10” touchscreen and LEDs	
	Ports	RS-232, RS-485, relays and USB	
	Intelligent slot	1 × Nimbus SNMP/1 × Nimbus extended relays	
GENERAL	Operating temperature	0º C ÷ +55º C(4)	
	Relative humidity	Up to 95%, non-condensing	
	Maxium operating altitude	2,400 masl(5)	
	Acoustic noise at 1 metre	<65 dB(A)	<72 dB(A)
SYSTEMS	Maximum no. modules per system	8 / 12	10 / 12
	Maximum power per system	200 / 300 kVA	500 / 600 kVA
	Maximum no. modules systems	30	
	Maximum power per parallel system	750 kVA	1500 kVA
STANDARDS	Safety	EN IEC 62040-1	
	Railway	EN 50121-4 / EN 50121-5	
	Electromagnetic compatibility (EMC)	EN IEC 62040-2	
	Operation	VFI SS-11 (EN 62040-3)	
	Seismic	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) 1/1, 1/3 and 3/1 options with power derating (under request).
(2) Depending on model.
(3) Linear % load derating: For 25 kVA from -20% to -27% and for 50 kVA from -20% to -40%.
(4) Power derating for higher altitudes up to +40ºC.
(5) Power degradation for temperature altitudes, up to a maximum of 5,000 masl.

Information subject to change without notice.

CF CUBE4

Frequency converter from 7.5 to 80 kVA



CF CUBE4: Maximum energy efficiency in advanced electrical protection

The **CF CUBE4** series from Salicru is a range of frequency converters featuring three-level online technology and a four-core DSP control system, designed to deliver a stable, high-quality power supply while achieving significant energy and financial savings both within the installation itself and in operational costs.

Regarding the input supply, they stand out for their power factor (PF > 0.99) and very low distortion —THDi < 3%—, parameters that effectively reduce operating and infrastructure expenses and help improve overall power network quality.

As for output performance, they offer a power factor of (PF = 1), ensuring ideal electrical protection for modern IT systems, together with minimal harmonic distortion (7.5–20 kVA: ≤ 2% linear load / < 4.0% non-linear load; 30–80 kVA: ≤ 1% linear load / < 4.0% non-linear load), allowing any type of load —inductive, resistive, capacitive, or mixed— to be supplied with complete reliability.

At the same time, their efficiency of up to 96%(1) provides a substantial reduction in energy consumption and cooling requirements. To deliver a comprehensive solution, the **CF CUBE4** series offers excellent adaptability thanks to its wide range of communication options. Finally, their optimised weight and dimensions simplify installation and allow for significant space savings.

Applications: Designed to protect any type of environment

The high electrical performance, together with its notable adaptability (options, voltage and frequency configurations, communications, etc.), positions the **CF CUBE4** series as the ideal solution to ensure compatibility, protection, and operational continuity for equipment designed to operate at frequencies different from the local grid. This solution is suitable for environments requiring reliable and safe operation, such as imported industrial machinery, test benches and laboratories, marine and port facilities, airport applications, critical infrastructures, technological integration centres, or any installation that needs to operate reliably between 50- and 60-Hz systems.



Performances

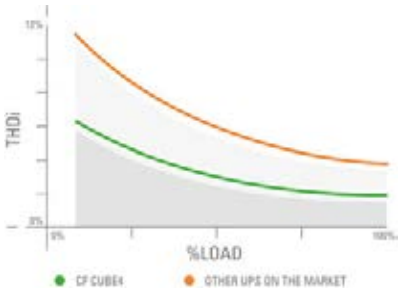
· On-line double-conversion technology with 3-level topology
· State-of-the-art 4-core DSP control
· Output power factor 1 (kVA = kW)
· Input power factor > 0,99
· Input current distortion (THDi) < 3%
· Optional Nimbus IoT connection for monitoring via the NIMBUS APP and web portal
· High energy efficiency, above 96% in On-line mode
· Unlimited parallel system [1] for redundancy or capacity
· Battery management and care with Batt-Watch, if required
· Option to install batteries
· Compatible with generator sets
· 5" touchscreen for all models
· USB, RS-232, RS-485 interfaces and relays
· Wide range of available options
· SLC Greenergy solution

(1) For models up to 20 kVA, maximum 4 units in parallel



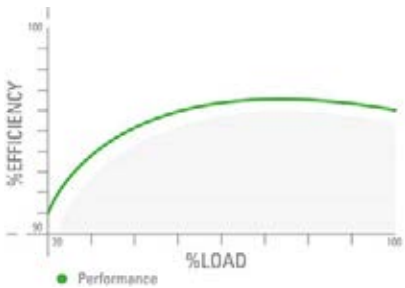
Low harmonic distortion

The **CF CUBE4** has inherited the exceptional performance of the **SLC CUBE4**, offering the same level of excellence and boasting the lowest THDi on the market. More harmonic distortion means increased current consumption and an even greater percentage of current loss in the conductors.



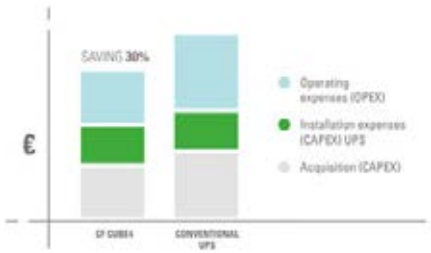
High efficiency

Another of the outstanding features of the **CF CUBE4** is its efficiency, which reaches truly exceptional levels from 50% load onwards. As energy efficiency is one of the most important factors in terms of caring for the environment, the **CF CUBE4** occupies a well-deserved position within our cross-cutting range of GREENERGY SOLUTIONS products.



Very low TCO

The total cost of ownership (TCO) for an **CF CUBE4** has been carefully calculated in order to obtain a very low investment ratio over the operational lifetime of the UPS, leading to a saving of 30%..



Range **CF CUBE4**

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CF-7,5-CUBE4 60/50HZ	6B3DB000004	7500 / 7500	689 × 250 × 827	48
CF-7,5-CUBE4 50/60HZ	6B3DB000005	7500 / 7500	689 × 250 × 827	48
CF-10-CUBE4 60/50HZ	6B3DB000002	10000 / 10000	689 × 250 × 827	50
CF-10-CUBE4 50/60HZ	6B3DB000006	10000 / 10000	689 × 250 × 827	50
CF-15-CUBE4 50/60HZ	6B3DB000007	15000 / 15000	689 × 250 × 827	55
CF-15-CUBE4 60/50HZ	6B3DB000008	15000 / 15000	689 × 250 × 827	55
CF-20-CUBE4 50/60HZ	6B3DB000003	20000 / 20000	689 × 250 × 827	60
CF-20-CUBE4 60/50HZ	6B3DB000009	20000 / 20000	689 × 250 × 827	60
CF-30-CUBE4 50/60HZ	6B3DB000010	30000 / 30000	910 × 380 × 1045	119
CF-30-CUBE4 60/50HZ	6B3DB000011	30000 / 30000	910 × 380 × 1045	119
CF-40-CUBE4 50/60HZ	6B3DB000012	40000 / 40000	910 × 380 × 1045	120
CF-40-CUBE4 60/50HZ	6B3DB000013	40000 / 40000	910 × 380 × 1045	120
CF-50-CUBE4 50/60HZ	6B3DB000014	50000 / 50000	920 × 560 × 1655	225
CF-50-CUBE4 60/50HZ	6B3DB000015	50000 / 50000	920 × 560 × 1655	225
CF-60-CUBE4 50/60HZ	6B3DB000016	60000 / 60000	920 × 560 × 1655	228
CF-60-CUBE4 60/50HZ	6B3DB000017	60000 / 60000	920 × 560 × 1655	228
CF-80-CUBE4 50/60HZ	6B3DB000018	80000 / 80000	920 × 560 × 1655	230
CF-80-CUBE4 60/50HZ	6B3DB000019	80000 / 80000	920 × 560 × 1655	230

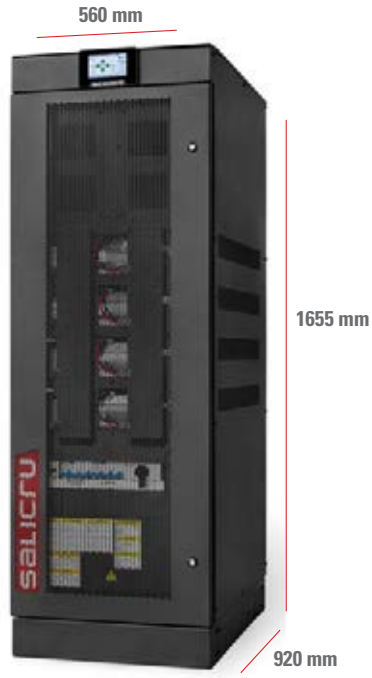
Dimensions



CF-7,5÷20-CUBE4



CF-30÷40-CUBE4



CF-50÷80-CUBE4

Technical specifications

MODEL		CF CUBE4
TECHNOLOGY		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Voltage range	7,5÷20 kVA: 110 ÷ 300 V (F-N) / 30÷80 kVA: 115 ÷ 265 V (F-N)(2)
	Rated frequency	50 / 60 Hz
	Total harmonic distortion (THDi)	7,5÷20 kVA: <4% / 30÷80 kVA: <3%
	Power factor	1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Rated voltage	Three-phase 3 x 380 / 3 x 400 / 3 x 415 V (3F + N)(1)
	Power factor	1
	Précision dynamique	±10%
	Static accuracy	7,5÷20 kVA: ±1% / 30÷80 kVA: ±0,5%
	Response time accuracy	20 ms for 0%÷100% load jumps and voltage drop up to 5%
	Total Harmonic Distortion (THDv)	7.5-20 kVA: ≤ 2% linear load / < 4.0% non-linear load according to EN62040-3 30-80 kVA: ≤ 1% linear load / < 4.0% non-linear load according to EN62040-3
	Frequency	50 / 60 Hz
	Total performance in On-line mode	>96%
	Admissible overloads	7,5 ÷ 20 kVA: 110% 60 min / 110~125% 10 min / 125~150% 60 s / >150% 1s 30 ÷ 80 kVA: 125% 10 min / 125~135% 5 min / 135~150% 60 s / >150% immediate
	Crest factor	3:1
BATTERY (Optional)	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	7,5 ÷ 20 kVA: 1xRS232 + 1xUSB / 30 ÷ 80 kVA: 1xRS232/485 + 1xUSB
	Relay interface	7.5÷20 kVA: 6 relays / 30÷80 kVA: 4 relays (programmable)
	Intelligent slot	NIMBUS, SNMP, RS232, RS485, USB, AS400 or remote battery temperature(3)
	LCD display	5" colour touch screen
GENERAL	Operating temperature	0° C ÷ +40° C (4)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2.400 m.s.n.m. (5)
	Acoustic noise at 1 metre	7,5÷20 kVA: <59 dB / 30÷40 kVA: <54 dB / 60÷80 kVA: <61,5 dB
STANDARDS	Safety	IEC/EN 62040-1
	Electromagnetic compatibility (EMC)	IEC/EN 62040-2 C3
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Options 1/1 with power degradation and 3/1 (consult)
(2) Power degradation for voltages below 176V
(3) For models 7.5-20 kVA = 1 Slot / For models 30-80 kVA = 2 Slots
(4) Up to 55°C with power degradation
(5) Power reduction for higher altitudes, up to a maximum of 5,000 m.a.s.l.

Information subject to change without notice.

CF CUBE3+

Frequency converter from 7.5 to 200 kVA



CF CUBE3+: Energy efficiency with superior electrical protection

Salicru's **CF CUBE3+** series is a Frequency Converters range featuring high-performance, On-line double conversion (VFI) technology that provides a reliable, high-quality power supply and, at the same time, achieves significant energy and financial savings in terms of installation and operating costs.

Particularly noteworthy is the unit's input power factor (PF=1) and its extremely low distortion rate (THDi even lower than 1%), which help to reduce installation and operating costs, and contribute to improving the quality of the electrical grid.

The output power factor (PF=0.9) also stands out, providing optimum electrical protection for computer systems and low harmonic output distortion (THDv even lower than 0.5%), enabling it to protect any type of load (inductive, resistive, capacitive or mixed). In addition, the performance achieved (up to 95%) produces significant energy consumption savings and reduces air conditioning needs.

For a full optimum solution, the **CF CUBE3+** provides maximum adaptability with extensive communication options. Finally, also worth noting is the unit's lightweight design and reduced dimensions, enabling it to be easily installed and ensuring that footprint is minimal.

Applications: Designed to protect any type of environment

High-end design features plus great flexibility capacity (options, communications,...) make **CF CUBE3+** series the best option to protect and secure a wide range of environments: data-centres, hosting, housing, IT-networks, server farms, voice and data networks,...



Performances

· On-line double conversion (VFI) technology with DSP control.
· Input power factor 1, for better performance.
· Very low input current harmonic distortion (THDi as low as <1%).
· Total flexibility in input/output voltage. (1)
· Designed to withstand any type of load.
· Batt-Watch function for monitoring and battery care if required.
· High output power factor (PF=0.9).
· Very low output voltage distortion rate (THDv even lower than 0.5%).
· Efficiency of up to 95%.
· Touch screen 7" color.(2)
· Very compact design with minimal footprint.
· Can be integrated into the most advanced IT environments
· Built with 80% recyclable materials.
· SLC Greenergy solution.

(1) Single/single, single/three and three/single configurations up to 60 kVA
(2) According to model



Technical support and service

· Pre and post-sales advice.
· Start-up.
· Telephone technical support.
· Preventative/corrective intervention.
· Maintenance contracts.
· Remote maintenance contracts.
· Training courses.

Options

· Ethernet/SNMP adapter.
· Adapter for remote management.
· Monitoring, management and shutdown software.
· 1 x additional RS-232/485 serial port.
· Extended backup times.
· BACS II, battery monitoring, regulation and alarms.
· Single/single, single/three and three/single configurations.(1)
· Touch screen 7" color.(1)
· External manual bypass.
· Temperature and humidity sensors.
· External display.

(1) Up to 60 kVA

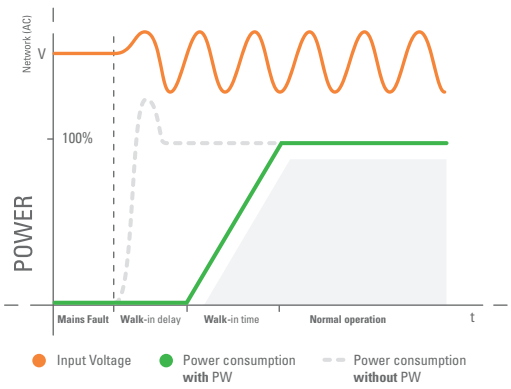


Range

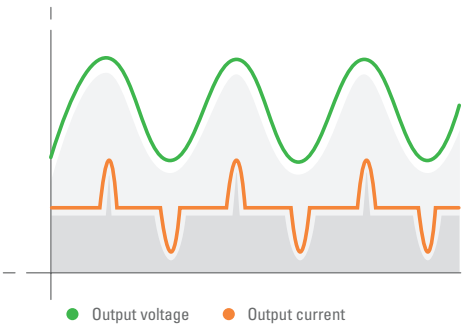
MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CF-7,5-CUBE3+	681LM000001	7500 / 6750	775 × 450 × 1100	100
CF-10-CUBE3+	681LM000003	10000 / 9000	775 × 450 × 1100	100
CF-15-CUBE3+	681LM000005	15000 / 13500	775 × 450 × 1100	102
CF-20-CUBE3+	681LM000008	20000 / 18000	775 × 450 × 1100	105
CF-30-CUBE3+	681LM000009	30000 / 27000	775 × 450 × 1100	150
CF-40-CUBE3+	681LM000011	40000 / 36000	775 × 450 × 1100	175
CF-50-CUBE3+	681LM000013	50000 / 45000	775 × 450 × 1100	185
CF-60-CUBE3+	681LM000015	60000 / 54000	775 × 450 × 1100	185
CF-80-CUBE3+	681TK000004	80000 / 72000	880 × 590 × 1325	265
CF-100-CUBE3+	681TK000001	100000 / 90000	880 × 590 × 1325	290
CF-120-CUBE3+	681TK000005	120000 / 108000	880 × 590 × 1325	290
CF-160-CUBE3+	681TK000006	160000 / 144000	850 × 900 × 1905	540
CF-200-CUBE3+	681TK000003	200000 / 180000	850 × 900 × 1905	550

Nomenclature, dimensions and weights for units with input voltage 3 x 400 V, output voltage 3 x 400 V and standard backup time.

Power walk-in

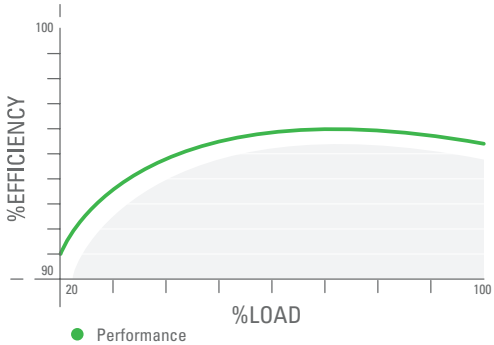


Excellent THDv output distortion



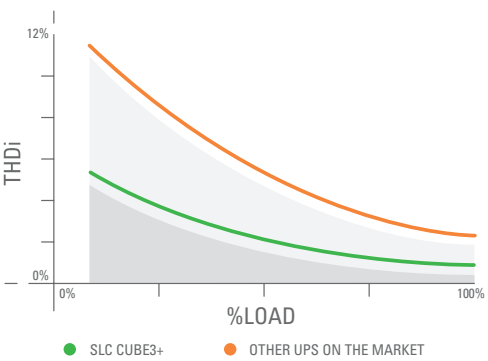
High efficiency

High performance.



Low harmonic distortion

The lowest harmonic distortion in the market.



Technical specifications

MODEL		CF CUBE3+
TECHNOLOGY		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Single-phase 120 / 127 / 220 / 230 / 240 V(1) / Three-phase 3 × 208 / 3 × 220 / 3 × 380 / 3 × 400 / 3 × 415 V (3P + N)(1)
	Voltage range	+15% / -20% (configurable)
	Rated frequency	50 / 60 Hz
	Total harmonic distortion (THDi)	100% load: <1.5% / 50% load: <2.5% / 10% load: <6.0%
	Power factor	1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Power factor	0.9
	Rated voltage	Single-phase 120 / 127 / 220 / 230 / 240 V(1) / Three-phase 3 × 208 / 3 × 220 / 3 × 380 / 3 × 400 / 3 × 415 V (3P + N)(1)
	Dynamic accuracy	± 2% dynamic
	Static accuracy	± 1% steady
	Response time accuracy	20 ms for load steps 0% ÷ 100% and voltage drop up to -5%
	Total harmonic distortion (THDv) Linerar load	<0.5%
	Total harmonic distortion (THDv) Non~linear load	<1.5% (EN-62040-3)
	Frequency	50/60 Hz ±0.05%
	Total performance in On-line mode	7.5÷60 kVA: 92.0%÷93.0% / 80÷200 kVA: 94.0%÷95.0%
	Admissible overloads	125% for 10 min / 150% for 60 s / >150% for 20ms
	Crest factor	>3:1
BATTERY	Battery type	Lead acid, sealed, maintenance free
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	1 × RS232/RS485 + 1xUSB,with Modbus protocol
	Relay interface	4 × AC failure, bypass, low battery and general
	Intelligent slot	1, for SNMP
	Monitoring software	For Windows, Linux and Mac
GENERAL	Operating temperature	0° C ÷ +40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 masl (3)
	Acoustic noise at 1 metre	52 dB(A)(2)
STANDARDS	Safety	EN-IEC 62040-1
	Electromagnetic compatibility (EMC)	EN-62040-2
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Single-phase 120 / 127 V available up to 30 kVA inclusive and three-phase 3 x 208 / 3 x 220 V available up to 100 kVA inclusive.
(2) <65 dB(A) for 80 to 120 kVA models / <70 dB(A) for 160 and 200 kVA models.
(3) Power derating for higher altitudes up to 5000 masl.

Information subject to change without notice.

SOFTWARE USB/RS-232

Management, monitoring and ordered closure

SOFTWARE USB/RS-232: UPS-PC communication

The main function that we require from an Uninterruptible Power Supply (UPS) to protect a computer, is that in case of any electrical problem, power cut, peak voltage or line drop, the UPS protects us and continues to supply power to our computer either from the batteries or by voltage regulation.

However, the autonomy of the batteries is limited in time, so our computer will shut down abruptly when battery storage capacity has run out. This autonomy will depend on the power of our UPS and the load that supports it, therefore, we need to shut down/suspend our computer correctly before this occurs. The complete discharge of the batteries can occur at 8 minutes or 2 hours depending on the load that supports the UPS or battery capacity that we have.



What do we have to do and how do we turn our computer off/suspend it before the batteries run out?

First, connect the USB cable between UPS and Computer. If our UPS has a USB UPSHID function, this will recognise the UPS as if our computer had a battery fully integrated with the operating system, enabling its power functions without requiring any type of software. Therefore, if we only need the computer to be shut down/suspended according to the power configuration of our operating system, this is the best choice.

However, if we want to have additional features, such as sending alerts via e-mail, having an event log, or recording measurements, adjusting UPS parameters, etc., software must be installed for our particular UPS model.



FEATURES	USB UPSHID	WINPOWER	VIEWPOWER	POWERMASTER
Graphic monitoring of the UPS status	–	●	●	●
Recording of events and measures	–	●	●	●
WEB application	–	●	●	●
Ordered closure/suspension of the UPS due to battery time	●	●	●	●
Ordered closure/suspension of the UPS due to remaining battery level %	●	●	●	●
Scheduled on/off of the UPS	–	●	●	●
Sending of alerts and notifications by e-mail (or SMS via GSM modem)	–	●	●	●
Network computers switched off (master/slave)	–	●	●	●
Multi-language	●	●	●	●
Support for virtual environments	–	●	●	●

(•) Included (–) Not included

Information subject to change without notice.

Software Winpower

Winpower is a powerful UPS monitoring software, which provides an easy-to-use graphical interface to monitor and control the UPS device. The software provides complete protection for the computer system during a power failure. With this software, users can monitor the status of the UPS in the same LAN. Any UPS can also perform controlled shutdown of other computers in the same LAN.

Series: SLC TWIN PRO2 / SLC TWIN PRO3 / SLC TWIN RT3/ SLC TWIN RT3 LION
Available operating systems: MAC / Windows / Linux / VMware / Citrix XenServer



WINPOWER

Software Viewpower

Viewpower is an advanced software for the administration and management of the UPS. It allows remote monitoring and remote administration of one to several UPS devices in a network environment, either LAN or internet. It also provides statistical information on events and measures. **Viewpower** is the solution for managing the controlled shutdown of our computer system and preventing the loss of data.

Series: SPS ONE / SPS SOHO+ / SPS ADVANCE RT2 / SLC CUBE3+ / SLC CUBE4 (≤20 KVA)
Available operating systems: MAC/Windows/Linux/VMware



VIEWPOWER

Powermaster

UPS monitoring software, **Powermaster** is ideal for IT professionals to supervise and manage their UPS. It provides an orderly and unattended shutdown of network computers connected to the UPS during a power failure. Power alert notifications can be sent by e-mail. This software allows users remote access (from any PC in the local network with a web browser).

Series: SPS HOME+ / SPS ADVANCE T / SPS ADVANCE R2
Available operating systems: MAC / Windows / Linux



POWERMASTER

USB UPSHID

This function is incorporated in the operating system and detects the UPS as an additional battery to our computer system, allowing management from the operating system's power menu. Allowing you to turn off the computer or hibernate it after x minutes if you are working in battery mode.

Series: SPS ONE / SPS SOHO+ / SPS HOME+ / SPS ADVANCE T / SPS ADVANCE RT2 / SLC TWIN RT3 / SLC TWIN PRO2 / SLC TWIN PRO3 / SLC TWIN RT3 LION / SPS ADVANCE R2
Available operating systems: MAC / Windows / Linux



USB UPSHID

ETHERNET/SNMP/NIMBUS CLOUD NETWORK CARDS

Ordered closure of servers / MQTT IOT

NIMBUS cloud / Ethernet / SNMP Network Cards: The best add-ons to protect your computer network

In case of any electrical problem - supply cut, voltage peak or line drop - the main function of an Uninterruptible Power Supply (UPS) is to protect the connected loads and continue supplying power to your computer network, either from the batteries or by voltage regulation. New IoT technologies, based on communications through MQTT channels, allow us to have a WEB application in the CLOUD so we can manage our equipment from anywhere with an Internet connection.



It is very important to monitor the UPS to see whether it is working properly at all times, so that it can notify us of its correct operation and/or manage the complete and ordered closure of our private computer network. This is why the installation of a local Ethernet Network card in the UPS or a NIMBUS Card is necessary, so that it can autonomously manage the different functions required by our computer network.

Salicru offers a complete range of Ethernet/SNMP/NIMBUS network cards to meet our customers' requirements.



Nimbus Ethernet Adapter / SNMP web adapter

Salicru's **NIMBUS** cards are designed and developed to offer different communication services to Salicru's customers. Its Linux Embedded operating system allows simultaneous management of 'Panel Web, Telemonitoring, SNMP, Modbus TCP and Server Shutdown' services.

It includes the following features:

- **Remote upgrade:** to manage new UPS models and additional services. (IoT connection required for all models)
- **Panel Web:** visualisation of the available measurements, variables and alarms using a block diagram.
- **Telemonitoring: Salicru's** cloud connection functionality.
- **SNMP:** compatibility with UPS in accordance with the RFC1628 standard, for monitoring via Nagios software, Zabbix, etc.
- **MODBUS TCP:** display of measurements, variables and alarms for connection to PLC or SCADA software.
- **Server shutdown:** sending shutdown orders, using RCCMD`(optional) software.



NIMBUS STANDARD



NIMBUS2 MINI

NIMBUS

Download on the App Store

Available on the Google Play

Ethernet Adapter / SNMP WEB Adapter

The functions incorporated in these cards will be able to satisfy the most demanding requirements of IT administrators. They are quick to configure, which facilitates your work, have extensive options for monitoring and personalisation of events, complete off/on options (wake on lan) of our physical or virtual server farm, SNMP (v2, v3) and MODBUS gateway (tcp), special mention in the field of security allowing the use of SSL through digital certificates belonging to the client.

They also allow the connection and management of temperature / humidity probes, SMS sending via a GSM modem, and management of voltage-free contacts.



ETHERNET ADAPTER STANDARD



ETHERNET ADAPTER MINI

Nimbus Cloud, remote monitoring system, with 24/7 availability

Modern companies run their systems 365 days a year, and therefore require total electrical protection. Salicru equipment featuring the **NIMBUS** remote monitoring service offers a perfect complement to the service of the most demanding customers.

The **NIMBUS** remote monitoring system is comprised of 3 systems: the Nimbus Card (Embedded Linux Systems) housed inside the Salicru equipment and connected to the Internet either via the customer's corporate network or optionally via 3G/4G router; the Nimbus Cloud, a system that collects, organises and distributes the sensors and alarms sent by the Salicru equipment; and Salicru's team of Technical Support Service engineers who offer a 24/7 service providing answers to any questions that the customer may have.

The Nimbus Card is based on the latest IoT technologies, featuring channel connection via MQTT and historical data collection via InfluxDB.



UNMS II: Unlimited Salicru's UPS management

Software for centralised monitoring of a large fleet of UPS installed in our company. The **UNMS II** is installed as a WEB service to facilitate monitoring and management. The **UNMS II** is a scalable software that has different licensing levels according to the equipment to be monitored, from the basic and free level, of 9 UPS devices, to installations of more than 2,500.



RCCMD: Remote shutdown application

Software agent for most physical/virtual operating systems. The different actions (shutdown, message, action) are executed by customisable scripts, after receiving the order from the Ethernet Adapter / SNMP WEB Adapter. Compatible with most operating systems, including virtual systems (vmware, citrix and hyperv).

Software licensed by a physical server to be managed. Each adapter includes a license. For more servers, additional licenses must be purchased. It offers the SSL security option.



DESCRIPTION	NIMBUS ETHERNET ADAPTER/ SNMP WEB ADAPTER	ETHERNET ADAPTER / SNMP WEB ADAPTER
Compatible with all series featuring Salicru slots	According to the lower compatibility list	Yes
Easy configuration assistant	Self configurable	Yes
Data visualisation	Graph, block diagram	Graph, block diagram
Connection to the Salicru Cloud (IoT – MQTT)	Yes, for all compatibles series (1)	No
Ordered shutdown of servers	Yes, due to power failure and low battery alarm via RCCMD (optional) Software, for most physical / virtual Operating Systems	Yes, event activation by RCCMD software for most physical / virtual operating systems
SMTP configuration	Yes	Configurable, enables encryption, port customisation
Email notifications	Automatic, non-customizable text / message	Automatic and/or allows for customisation of alerts to be sent, and at what time
SMS notifications	Yes (SMS sending via the cloud)	Yes (via optional modem)
Push notifications	Yes (Webserver)	No
Customisable events according to UPS values / measurements	No	Yes
SNMP compatibility	SNMP V2	SNMP V2 and V3
MIB file compatibility	RFC1628, and private MIBs	RFC1628, and private extensions
History of events and measurements	Events and measures in graphical table, exportable to excel for DC power-S	Customisable, viewing of text and graphs, allows export to Excel
API REST protocol	Yes	Yes
MODBUS protocol	TCP and RS232	TCP and RS232
BACnet protocol	No	Yes
IEC61850 protocol	Yes (DCS only)	No
LonWork, ProfiBus protocol	No	Yes, requires optional
Remote SysLog	No	Yes
Secure access	2 levels of access, Engineer, Guest, SSH secure access	Via Configurable Login and Password
Manageable relays option	No	Yes
Optional Temperature / Humidity Probe	No	Yes
Firmware Upgrade	Yes	Yes
Remote Firmware Upgrade	Yes (IoT connection required)	No

(1) Check for SLC TWIN PRO2 0-3 kVA models

COMPATIBILITY BY SERIES	MODEL	NIMBUS ETHERNET ADAPTER/ SNMP WEB ADAPTER	ETHERNET ADAPTER / SNMP WEB ADAPTER
SPS ADVANCE R / SPS ADVANCE T	MINI	●	●
SPS ADVANCE RT2	MINI	●	●
SLC TWIN PRO2	MINI	●	●
SLC TWIN PRO3	MINI	●	●
SLC TWIN RT3 LION	MINI	●	●
SLC TWIN RT3	MINI	●	●
SLC CUBE3+	STANDARD	●	●
SLC CUBE4	MINI	●	●
SLC X-PERT	STANDARD	●(1)	●
SLC X-TRA	STANDARD	●(1)	●
SLC ADAPT2	MINI	●	●
DC POWER S / DC POWER L	STANDARD	●	–
EMI3	STANDARD	●	–

● Compatible – No compatible

(1) Optional RS485 required

Information subject to change without notice.

SPS PDU

Power distribution unit



SPS PDU: Power supply to IT equipment on 19" rack

Salicru's power distribution units (SPS PDU) are designed to distribute power coming from an uninterruptible power supply (UPS), generator or the mains to multiple devices, such as network and server racks in data centres and computer rooms.

SPS PDU models incorporate an on/off switch with illumination and protective cover to prevent unwanted actions. The multi-position system allows the installation of fixing brackets in multiple combinations, both in depth (6 positions) and in inclination (5 positions). The entire range is in 1U 19" format and offers horizontal or vertical rack installation options.

Performances

- 1U - 19" aluminium profiles.
- Ease of installation and connection.
- Multiple depth positions (6 positions).
- Multiple inclination positions (90º / 45º / 0º / -45º / -90º).
- Illuminated on/off switch.
- Power supply at 250 V AC - 50/60 Hz.
- Schuko, UK, IEC and combined sockets available.
- On/off switch protective cover.
- Other configurations available on request.
- Vertical or horizontal installation.
- Connection quality and maximum socket safety.



Depth adaptation

Choice of up to 6 different installation depths to suit needs.



Inclination adaptation

Selection of different degrees of inclination to optimise the connection of the devices to be powered.



Switch protection

A removable cover protects the on/off switch from possible unwanted actions.



Range

MODEL	CODE	SOCKET INPUT TYPE	SOCKET OUTPUT TYPE	NO. OF OUTPUT SOCKETS
SPS 12F PDU C13/C14	680CA000002	C14	C13	12
SPS 8F PDU SCH/SCH	680CA000003	SCH	SCH	8
SPS 6F PDU UK/UK	680CA000004	UK	UK	6
SPS 3F+6F PDU UK+C13/C14	680CA000005	C14	UK + C13	3 + 6
SPS 4F+6F PDU SCH+C13/C14	680CA000006	C14	SCH + C13	4 + 6

Technical specifications

MODEL		SPS 12F PDU C13/C14	SPS 8F PDU SCH/SCH	SPS 6F PDU UK/UK	SPS 3F+6F PDU UK+C13/C14	SPS 4F+6F PDU SCH+C13/C14
Rated current (A)		10	16	13	10	
Rated voltage / frequency		100 / 250 V AC - 50 Hz / 60 Hz				
Socket input type		C14	SCH	UK	C14	
Socket type and quantity		C13 (12)	SCH (8)	UK (6)	UK (3) + C13 (6)	SCH (4) + C13 (6)
On/off switch		Yes				
Length of power cable		1.5				
Child protection in the sockets		Yes				
INDICATIONS	LED type	Yes				
GENERAL	Operating temperature	0º C ÷ 50º C				
	Storage temperature	-15º C ÷ 60º C				
	Relative humidity	Up to 95%, non-condensing				
	Maxium operating altitude	2,400 masl (power degradation up to 5,000 m)				
	Degree of protection	IP20				
	Installation	Fixing brackets in 3 positions 0º o ±45º				
STANDARDS	RoHS	Yes				
	Plugs, power strips and sockets	IEC 60884-1; UNE 20315-1-1; EN 60320-1; EN 60320-3		IEC 60884-1; BS 1363-1; BS 1363-2	IEC 60884-1; UNE 20315-1-1; EN 60320-1; EN 60320-3	
	Safety	IEC 60950 ; DIN EN 50525-2-11 ; IEC 61058-1:2002/A2:2008				
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001				
DIMENSIONS	Depth × Width × Height (mm)	51 × 443 × 44				
WEIGHT	Weight (kg)	0.8				

Information subject to change without notice.

BM-R

Maintenance bypass 16, 40 or 63 A



BM-R: Continuity of supply during maintenance operations

Salicru's **BM-R** series maintenance bypasses enable users to disconnect the Uninterrupted Power Supply (UPS) completely without interrupting the supply of power to the loads. They are essential for maintenance and repair work that, for reasons of safety, requires the elimination of any voltage present in the device. The **BM-R** series is available in current ratings of 16, 40 and 63 A, covering UPSs in the 0.7 to 10 kVA power range with single-phase input and output.

The BM-R 63 A+ boasts exceptional functionality and, in combination with the **SLC TWIN RT3** and **SLC TWIN PRO3** ranges, offers two groups of programmable outputs (combining IEC C13 and C19 formats) and automatic battery detection, along with supports incorporating a rotating device that allows the **BM-R** to be lowered 90° without the need for disassembly when carrying out system maintenance.

The 40 and 63 A models enable switching without passing through zero, thanks to an auxiliary contact that links them to the UPS (provided it has a digital signal port designed for this purpose) and allows them to turn the device on or not, as applicable.

Performances

- Maintenance bypass in rack/wall format.
- Enables loads to operate during UPS maintenance or replacement.
- Simple operation via switch.
- Manual UPS-mains and mains-UPS switching.
- Easy installation and connection.
- Suitable for single-phase devices from 0.7 to 10 kVA.
- Inputs and outputs via IEC sockets for 16 A and 63 A+ models.
- Inputs and outputs via terminals for 40 A, 63 A and 63 A+ models. (1)
- Option to transfer from UPS to bypass. (2)
- Switching without passing through zero. (3)
- 2 groups of programmable outputs. (4)

(1) For model 63 A+ also IEC outlets
(2) For the 40 A, 63 A and 63 A+ models
(3) Except the 16 A model
(4) 63 A+ model, only in combination with the SLC TWIN PRO3 and the SLC TWIN RT3

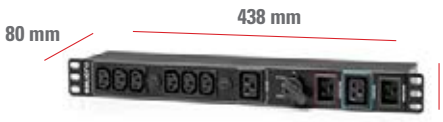


Technical specifications

MODEL		BM-R 16 A	BM-R 40 A	BM-R 63 A	BM-R 63 A+
FORMAT		19" rack / Wall / Attached to the device			
INPUT	Rated voltage	208 / 220 / 230 / 240 V			
	Rated frequency	50 / 60 Hz			
	Rated current (A)	16	40	63	
OUTPUT	Rated voltage	208 / 220 / 230 / 240 V			
	Rated current (A)	16	40	63	
	Rated frequency	50 / 60 Hz			
CONNECTIONS	Input	1 × IEC C20	Terminals		
	UPS input	1 × IEC C19	Terminals		
	Output	1 × IEC C19 + 6 × IEC C13	Terminals		Terminals + 2 × IEC C19 + 4 × IEC C13
	UPS output	1 × IEC C20	Terminals		
	Recommended cables	-	6 mm²	10 mm²	
GENERAL	Operating temperature	0ºC ÷ +45ºC			
	Relative humidity	Up to 95%, non-condensing			
	Maxium operating altitude	2,400 masl			
STANDARDS	Safety	EN-60950-1			
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001			
DIMENSIONS	Depth × Width × Height (mm)	80 × 438 × 50	123 × 438 × 86		80 × 440 × 85
WEIGHT	Weight (kg)	1.5	3		2.4
CODE		6B4OP000005	698OP000022	698OP000023	6B4OP000002

Information subject to change without notice.

Dimensions



BM-R 16A



BM-R 40/63A



BM-R 63 A+

Connections



BM-R 16A



BM-R 40/63A



BM-R 63 A+

1. IEC connections or output terminals .
2. Manual bypass.
3. Thermal rearmable.
4. Manual bypass signal auxiliary contact for signalling.
5. Socket output.
6. AC power supply IEC connector or input terminals.
7. AC input.
8. Input and output terminals AC.
9. Input circuit breaker switch (6 and 10 kVA models only).
10. Terminal strip to connect with the EBMS signal of the UPS.

SPS ATS

Automatic transfer system



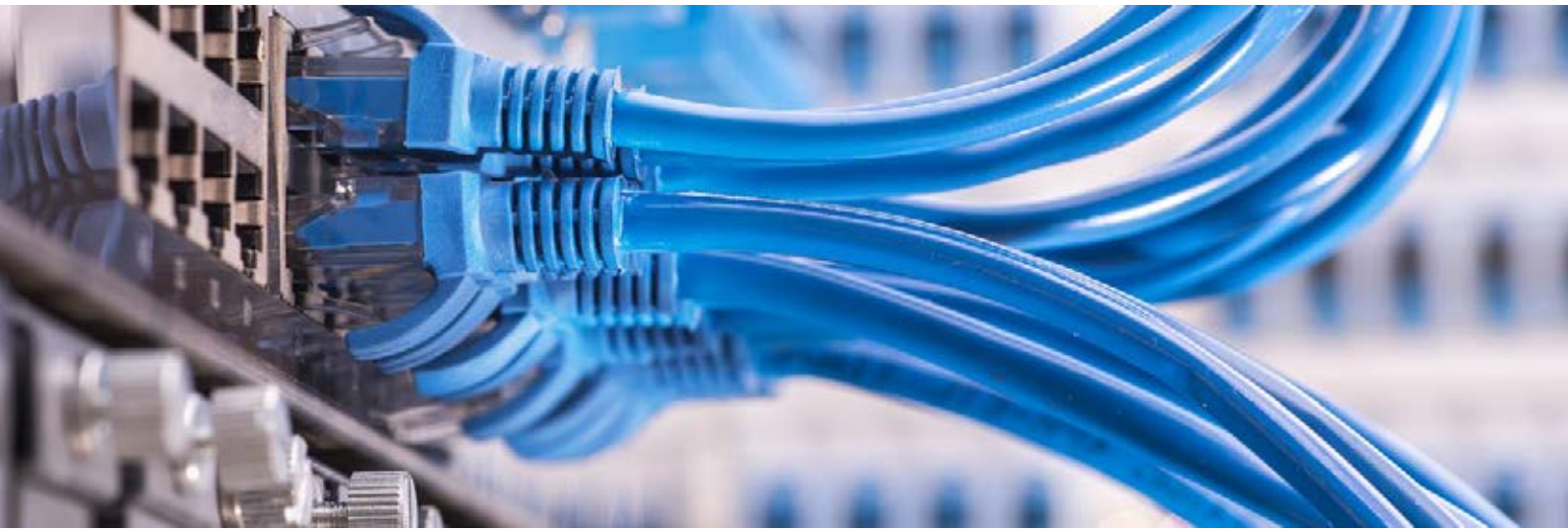
SPS ATS: An ideal solution for powering critical loads through two UPSs

Salicru's **SPS ATS** series is an automatic switch between two single-phase AC power lines which, starting from two sine-wave current power lines, supplies output voltage to the load(s). The switching can be automatic or manual. The LCD display and status LEDs continually report the status of the device, working mode and values of the main measurements.

It has extensive communication possibilities through integrated USB, RS-232 and potential-free contact interfaces, or optional inclusion on an SNMP platform. In addition, by means of the parameter-setting software available, parameters such as delays, overload levels, voltage and frequency ranges, line sensitivity, potential-free contacts, etc., can be set.

Performances

- Redundant energy system with two input sources.
- Manual or automatic switching between power lines.
- Extensive programming options for automatic switching.
- LCD display + LEDS for operation and control.
- IEC output connections.
- Easy installation on 19" rack.
- USB, RS-232 and potential-free contact interfaces.
- Parameter-setting and control software (for Windows OS).
- Smart slot for SNMP card.



Technical specifications

MODEL		SPS 16 ATS	SPS 32 ATS
INPUT	Rated voltage	200 / 208 / 220 / 230 / 240 V	
	Voltage range	150 ÷ 300 Vac	
	Rated frequency	50 / 60 Hz	
OUTPUT	Rated voltage	200 / 208 / 220 / 230 / 240 V	
	Rated current (A)	16 A	32 A
	Performance	>99%	
COMMUNICATION	Interface	RS-232, USB and potential-free contacts	
	Intelligent slot	For SNMP	
INDICATIONS	Information	Source A, source B, failure, overload, alarm, audible alarm silencer	
	Monitoring software	Yes, for Windows OS	
	Type	LCD + LEDs	
	Values	Voltage, current, frequency, % load, error code	
CONNECTIONS	Input	2 × IEC C20	Terminals
	Output	8x IEC C13 + 1x IEC C19	16x IEC C13 + 2x IEC C19
GENERAL	Operating temperature	0°C ÷ +40°C	
	Relative humidity	Up to 95%, non-condensing	
	Maxium operating altitude	2,400 masl	
STANDARDS	Safety	IEC-60950-1	
	Electromagnetic compatibility (EMC)	EN-55022; EN-55024	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	
DIMENSIONS	Depth × Width × Height (mm)	275 × 438 × 44	275 × 438 × 88
WEIGHT	Weight (kg)	4	6
CODE		658CB000001	658CB000002

It's recommended to keep a front distance of 35mm, parallel to the fixing plane of the ears on the rack cabinet. This distance is not included in the "Depth" total dimension.

Information subject to change without notice.

Dimensions

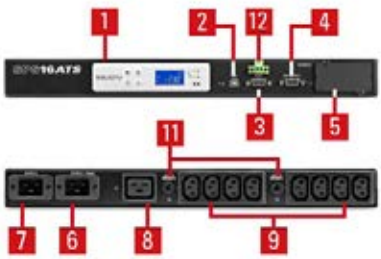


SPS 16 ATS

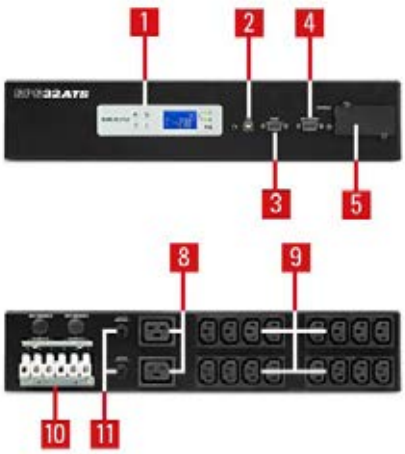


SPS 32 ATS

Connections



SPS 16 ATS



SPS 32 ATS

1. Control panel with swivel mount LCD display, keypad and LED.
2. USB interface.
3. RS-232 interface.
4. Interface to relays.
5. Intelligent slot.
6. IEC socket for A input.
7. IEC socket for B input.
8. Output IEC socket.
9. Group of 4 Output IEC socket.
10. Input terminals A/B.
11. Thermal rearmable output.
12. EPO.

UBT

Rechargeable AGM battery 4.5 Ah - 100 Ah / 12 V



UBT: Powerful and reliable back-up storage

Salicru's **UBT** series batteries are extremely powerful and compact rechargeable lead-lead dioxide energy accumulators particularly suitable for UPSs and other security systems that require reliable and high-quality energy back-up.

Salicru's **UBT** battery range includes 4.5 Ah, 7 Ah, 9 Ah, 12 Ah, 17 Ah, 24 Ah, 45 Ah, 55 Ah, 65 Ah, 90 Ah and 100 Ah models, all at 12 V.

The sulphuric acid electrolyte is absorbed by the separators and plates. And these in turn immobilised. They are designed using gas recombination technology which eliminates the need for the regular addition of water by controlling the evolution of hydrogen and oxygen during charging. The battery is completely sealed and watertight and therefore maintenance free, enabling it to be used in any position. If the battery is accidentally overcharged, resulting in the production of hydrogen and oxygen, a number of special one-way valves allow the gases to escape to avoid interior overpressure.

Applications:

Uninterruptible power supply systems (UPS), emergency lighting systems, signalling systems, communications and electrical equipment, broadcasting systems, lift automation panels, electronic cash registers, etc.



Performances

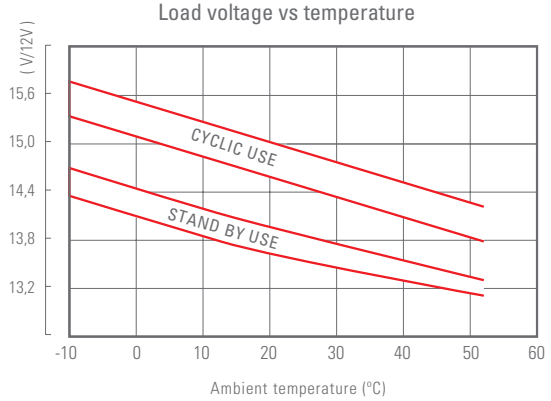
- AGM technology for efficient gas recombination of up to 99% and free of maintenance or adding water.
- 10/12 years of long life. (1)
- No restrictions for air transport, compliance with IATA/ICAO Special Provision A67.
- Can be mounted in any position.
- Lead designed by computer with calcium/tin alloy rack for high energy density.
- Long service life in both float and cyclic applications.
- Maintenance-free.
- Low self-discharge.

(1) Only for models ≥ 45Ah

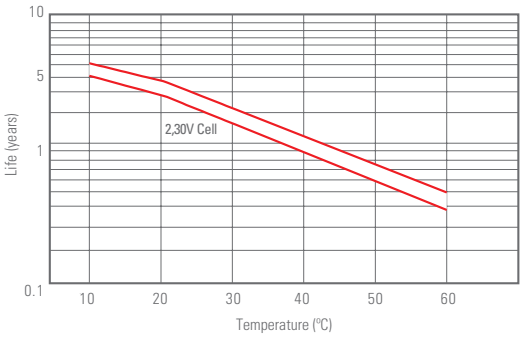


Behaviour charts

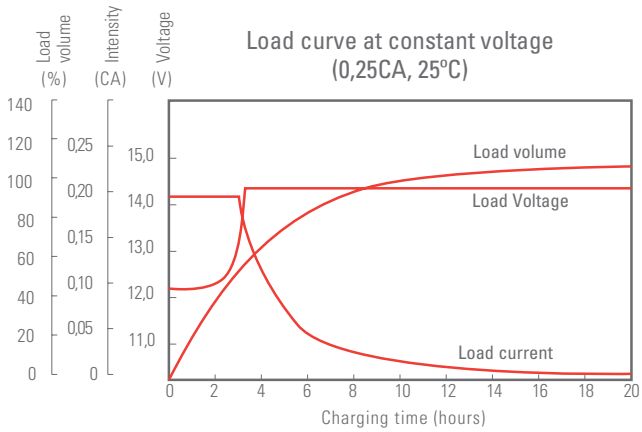
Load voltage vs temperature



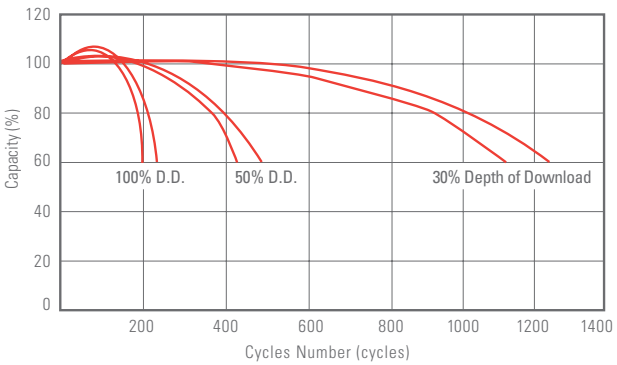
Temperature vs life design



Load curve at constant voltage (0,25CA, 25°C)



Cycles number vs load depth



Battery construction

COMPONENT	RAW MATERIAL
Positive plate	Lead dioxide
Negative plate	Lead
Container	ABS
Lid	ABS
Safety valve	Rubber
Terminal	Copper
Separator	AGM
Electrolyte	Sulphuric acid

Range

MODEL	RATED CAPACITY AT 25 °C				INTERNAL RESISTANCE	MAXIMUM DICHARGE CURRENT	DIMENSIONS (mm)			WEIGHT (Kg)
	20 HOURS	10 HOURS	5 HOURS	1 HOUR			DEPTH	WIDTH	HEIGHT	
UBT 12/4,5	4,5 Ah (0,23 A, 10,5 V)	4,2 Ah (0,42 A, 10,5 V)	3,85 Ah (0,77 A, 10,5 V)	2,7 Ah (2,95 A, 10,5 V)	≤30 mΩ	68 A (5s)	70 ±1	90 ±1	101 ±1	1,5
UBT 12/7	7,0 Ah (0,35 A, 10,5 V)	6,5 Ah (0,65 A, 10,5 V)	6 Ah (1,2 A, 10,5 V)	4,2 Ah (4,59 A, 9,6 V)	≤25 mΩ	105 A (5s)	65 ±1	151 ±1	94 ±1	2,1
UBT 12/9	9,0 Ah (0,45 A, 10,5 V)	8,4 Ah (0,84 A, 10,5 V)	7,7 Ah (1,54 A, 10,5 V)	5,4 Ah (5,9 A, 9,6 V)	≤19 mΩ	135 A (3s)	65 ±1	151 ±1	94 ±1	2,5
UBT 12/12	12 Ah (0,6 A, 10,5 V)	11 Ah (1,12 A, 10,5 V)	10,25 Ah (2,05 A, 10,5 V)	7,2 Ah (7,86 A, 9,6 V)	≤19 mΩ	180 A (5s)	98 ±1	151±1	95 ±1	3,4
UBT 12/17	17 Ah (0,85 A, 10,5 V)	16 Ah (1,59 A, 10,5 V)	14,55 Ah (2,91 A, 10,5 V)	10,5 Ah (11,1 A, 9,6 V)	≤17 mΩ	225 A (5s)	77 ±1	181 ±1	167 ±1	5
UBT 12/24	24 Ah (1,20 A, 10,5 V)	22 Ah (2,24 A, 10,5 V)	20,50 Ah (4,10 A, 10,5 V)	15 Ah (15,40 A, 9,6 V)	≤14 mΩ	360 A (5s)	166 ±2	175 ±2	125 ±2	7,4
UBT 12/45	47,80 Ah (2,39 A, 10,8 V)	45 Ah (4,50 A, 10,8 V)	38,40 Ah (7,68 A, 10,8 V)	25 Ah (25,00 A, 10,8 V)	≤7,5 mΩ	400 A (5s)	197 ±2	165 ±2	170 ±2	13,8
UBT 12/55	58,40 Ah (2,92 A, 10,8 V)	55 Ah (5,50 A, 10,8 V)	47 Ah (9,39 A, 10,8 V)	30,60 Ah (30,60 A, 10,8 V)	≤6,5 mΩ	550 A (5s)	230 ±2	138 ±2	211 ±2	17,3
UBT 12/65	69 Ah (3,45 A, 10,8 V)	65 Ah (6,50 A, 10,8 V)	55,50 Ah (9,39 A, 10,8 V)	36,20 Ah (36,20 A, 10,8 V)	≤6,5 mΩ	650 A (5s)	350 ±2	166 ±2	179 ±2	20,4
UBT 12/90	95,40 Ah (4,77 A, 10,8 V)	90 Ah (2,24 A, 10,8 V)	77 Ah (4,10 A, 10,8 V)	50,10 Ah (15,40 A, 10,8 V)	≤5 mΩ	800 A (5s)	306 ±2	169 ±2	211 ±2	27
UBT 12/100	106 Ah (5,30 A, 10,8 V)	100 Ah (10,00 A, 10,8 V)	85,50 Ah (17,10 A, 10,8 V)	55,60 Ah (55,60 A, 10,8 V)	≤4,5 mΩ	800 A (5s)	330 ±2	171 ±2	214 ±2	29,5

Résistance interne: Batterie entièrement chargée à 25°C



Technical specifications

MODEL		UBT
Nominal voltage (V)		12
Number of cells		6
Life Clasification		Long Life(1)
Self-discharge		3% (2)
Operating temperature range	Discharge	-15°C ÷ +50°C
	Charge	-10°C ÷ +50°C
	Storage	-20°C ÷ +50°C

(1) Only for models ≥ 45Ah
(2) Reduction of capacity per month at 20°C (average)

Information subject to change without notice.

Battery compatibility vs series

	UBT 12/4,5	UBT 12/7	UBT 12/9	UBT 12/12	UBT 12/17	UBT 12/24	UBT 12/45	UBT 12/55	UBT 12/65	UBT 12/90	UBT 12/100
SPS HOME+	-	●	●	-	-	-	-	-	-	-	-
SPS ONE	-	●	●	-	-	-	-	-	-	-	-
SPS SOHO+	-	●	●	-	-	-	-	-	-	-	-
SPS ADVANCE T	-	●	●	-	-	-	-	-	-	-	-
SPS ADVANCE RT2	-	●	●	-	-	-	-	-	-	-	-
SLC TWIN PRO2 0-3 kVA	-	●	●	●	-	-	-	-	-	-	-
SLC TWIN PRO3 4-20 kVA	-	●	●	-	-	-	-	-	-	-	-
SLC TWIN RT3 0-3 kVA	-	●	●	-	-	-	-	-	-	-	-
SLC TWIN RT3 4-20 kVA	-	●	●	-	-	-	-	-	-	-	-
SLC CUBE4	-	●	●	-	-	●	●	●	●	●	●
SLC CUBE3+	●	●	●	●	-	●	●	●	●	●	●
SLC ADAPT2	●	●	●	●	●	●	●	●	●	●	●
SLC X-PERT	-	-	-	-	-	●	●	●	●	●	●
SLC X-TRA	-	-	-	-	-	●	●	●	●	●	●

BACS

Battery analysis and care system

BACS: the 3rd generation of the battery management system

Monitoring, regulation and alarm system for lead-acid batteries. Ensuring full battery system operability, preventing unexpected or unnoticed faults caused by defective batteries, extending the lifetime of the batteries and helping to presence system reliabitily.

The 3rd generation of the Battery Analysis and Care System, **BACS**, is a network-integrated battery monitoring and management system. It regularly checks the internal resistance, temperature and voltage of each individual battery. It is also possible to adjust the charging voltage of each battery and manage environmental measurements (temperature, humidity, hydrogen gas content) and applications (UPS systems, rectifiers, DC systems, inverters and other devices). This ensures that the batteries always remain in optimum operating conditions. The system's ability to constantly monitor and individually control the charging voltages for each battery ensures battery availability at all times - making the so-called Achilles heel of UPS systems (or any other power device) a thing of the past.

BACS is suitable for all lead-based (AGM, gel, sealed and open lead-acid), nickel-based and lithium-ion batteries.

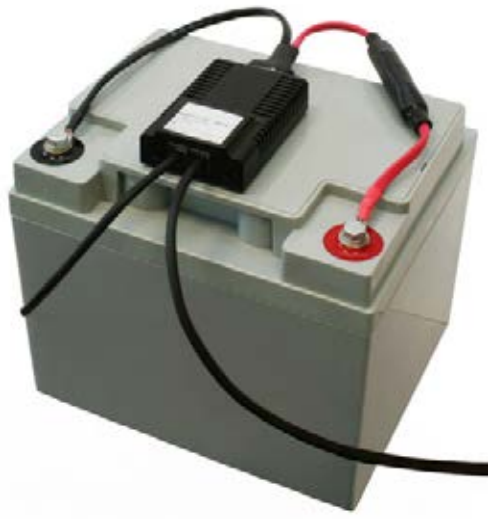


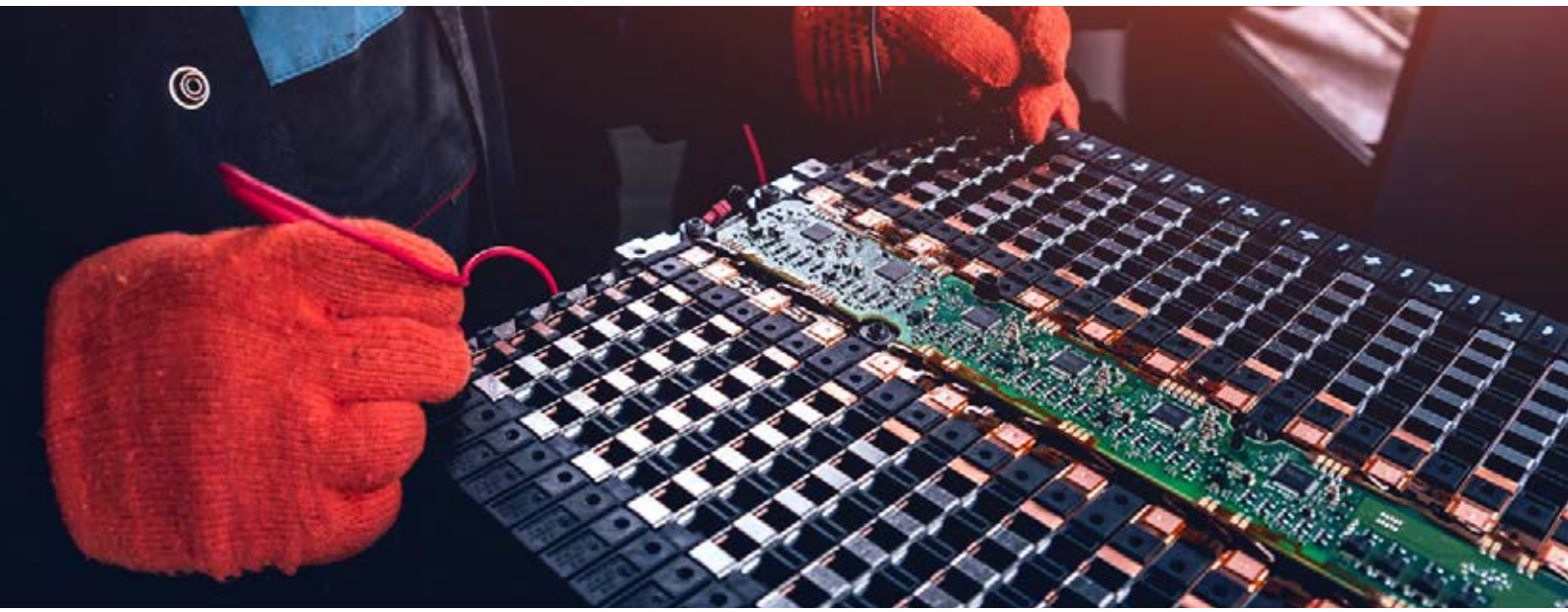
Monitoring software



Technology

· The system is designed to monitor and control batteries individually or in battery blocks, providing a symmetrical charging process.
· Individual voltage regulation: even distribution of the voltage supplied by the charger.
· Protection against any unexpected individual overcharging (gassing), drying out or full discharge of batteries.
· Sulphation problems are prevented through visualisation and communication of sulphation levels.
· Protection for nearby batteries against charging voltage faults in one battery.
· Through its equalising system, it ensures optimum capacity for battery systems throughout their lifetimes.
· Intensive and comprehensive analysis in one battery of the power supply system.
· Available for sealed lead batteries (2, 6, 12 and 16 V) and Ni-Cd, Ni-MH, lithium-ion batteries (1.2 to 3 V) with capacities ranging from 7 Ah to 5000 Ah.





Advantages

· Increased durability and battery pack capacity.
· Replacement of full battery packs as a precautionary measure is not necessary.
· Batteries can be used up until the end of their useful lives.
. Costly monitoring and maintenance routines are no longer required.
· Unexpected or unnoticed battery faults are avoided.
· Optimisation of battery capacity.
· Cheaper monitoring per battery.



Technical specifications

MODEL	WEBMANAGER
PROCESSOR AND MEMORY	32-Bit RISC processor, 32 MB storage / 64 MB RAM
POWER CONSUMPTION	At 24 V / 100 mA for BACS module +10 mA
INTERFACE	3 x RS-232 interfaces, including 1 for the battery bus 1 x RJ10 for the battery bus converter 1 battery bus converter included 1 x RJ45, 10/100 Mbit Ethernet connector
DIMENSIONS	Housing: 69 x 30 x 126 mm (L x W x H) Card: 60 x 20 x 130 mm (L x W x H) (slot format)
WEIGHT	Housing: 110 g Card: 90 g
TEMPERATURE	0-60°C, maximum humidity 90% non-condensing

MODEL	BATTERY MODULE
POWER CONSUMPTION	30 mA en modo normal < 8 mA en Modo Sleep (Rev 1.4) < 1 mA en Modo Sleep (Rev 1.6)
MEASUREMENT TOLERANCE	Internal resistance <10% Voltage <0.1% Temperature <5%
INTERFACES	2 x RJ10 for BACS battery bus Internal RS-232 interface 1 x button for addressing Temperature sensor -10 to 100°C Measurement value (depending on type) 1.3V - 16V LED display (green LED)
HOUSING	ABS housing (UL certified, cooling by non-flammable fins)
DIMENSIONS	80 x 55 x 27 mm (L x W x H)
WEIGHT	75 g
TEMPERATURE	0-60°C, maximum humidity 90% non-condensing
PROTECTION DEGREE	IP30

Webmanager

- **BACS** WEBMANAGER manages up to 330 BACS modules in 10 series/strings of batteries.
- Each battery is managed individually.
- The power supply voltage range is 9-30 V.
- It fully replaces the UPS' SNMP adapter.
- Simple DIN rail installation.
- Relay alarms for use in the network.



Battery modules

- Individual monitoring of batteries in a 7 to 5000 Ah range.
- Pb-Ca batteries: 2, 6, 12 and 16V.
- Ni-Cd, Ni-MH, Litium- Ion batteries: 1.2 to 3V.
- "Equalising" principle: even distribution of charging voltage across all batteries, up to 150 mA for each one.
- Efficient uniformity of voltage levels in batteries of up to 300 Ah.
- Minimal heat dissipation at the highest voltage regulation.



Technical specifications

MODELO	BUS CONVERTER 2 (standard)
CONSTRUCTION	Conversion and galvanic separation of the BACS battery bus to the WEBMANAGER
POWER CONSUMPTION	Wall wart 12 V/ 800 mA (default for up to 160 modules) Optional 12 V/ 1400 mA for up to 256 modules
INTERFACES	2 x RJ10 for BACS battery bus 1 x RJ12 for COM3 of the WEBMANAGER 1 x MiniDin8 interface/RS-232 for serial connection to PC For CONVERTER 3, an adapter is required (see below) 1 x DC connector for mains power supply

MODEL	BUS CONVERTER 3 (optional)
CONSTRUCTION	The same as CONVERTER 2, but with an additional LED display, acoustic alarm with acknowledge button and potential-free contacts (2-pole screw terminals for maximum 1 mm² cross section, 125 Vac, 60 Vdc and 1 A). Also included is a second RJ10 bus for the BACS battery bus (ring)
OPCIONAL	Adapter from mini-8 to RS-232 with 1.5 m mini-8 connection cable
HOUSING	Grey polystyrene housing
DIMENSIONS	Measurements: 91.5 x 67 x 25 mm (L x W x H)
WEIGHT	120 g
TEMPERATURE	0-60°C, maximum humidity 90% non-condensing

Information subject to change without notice.

Bus coupling

- Easy installation through rapid connection of bus cables with Velcro fastening.
- Cables with special crimping are not necessary.
- Pre-assembly of the measurement cables prior to the installation of the batteries.
- Easy and rapid reinstallation of modules.



Bus cable



Measurement cable

EQUINOX APP AND WEB PORTAL

Comprehensive 24-hour monitoring

EQUINOX2 offers the ability to monitor all operating parameters 24 hours a day (see optional features) through our **EQUINOX App**, available for iOS and Android, as well as through the Web Portal, both developed by our Connected Software Department.

A single user can view and manage multiple inverters or plants, while one plant can be monitored by several users. The application has been specifically designed with professional installers in mind, providing an easy, intuitive, and secure experience. This allows them to maintain control over authorised installations, access key information promptly, and offer more efficient and responsive maintenance and support services.

The monitoring kit supplied free of charge with our on-grid **EQUINOX2 S/SX** units enables users to check generation, consumption, and grid export data (in cases of compensation or surplus sale) during photovoltaic production hours, when the panels are supplying voltage. The system also offers the option of zero injection, thereby preventing surplus energy from being exported to the grid.

With regard to the **EQUINOX2 T** inverter, the data obtained with the standard kit is limited to generation. However, it can be expanded to provide full 24-hour monitoring through the use of the **SLC Energy Manager**.

Meanwhile, **EQUINOX2** hybrid units include 24-hour monitoring as standard, with records of generation, consumption, and export, as well as zero-injection functionality, without the need for additional devices.

Furthermore, for advanced projects or customised integrations, **EQUINOX2** can be connected to SCADA systems, either proprietary or via API, offering flexible integration with external platforms. The system's versatility is further enhanced by its compatibility with inverters from other brands, enabling centralised supervision of multiple devices within a single installation.

Overall, **EQUINOX2** and its advanced monitoring ecosystem provide a comprehensive solution for the efficient management of solar energy. Combining accessibility, security, and precision, it offers both users and installers a powerful and versatile tool for optimising the performance and efficiency of their photovoltaic systems.



EQUINOX APP UI

EQUINOX

https://equinox.salicru.com

Performances

- Real-time data consultation
- Historical data groups (by day, month, or year)
- Information on economic savings achieved
- Total CO_2 reduction achieved and its equivalent in trees planted
- Self-consumption quota (which gives us an idea of how well our solar installation is being used)
- Autarky quota (which indicates how independent our installation is from the grid)
- Installation management/visualization
- Simultaneous management of multiple installations (especially for installers)
- Integrations available via API and SCADA
- Compatibility with other brands of inverters

Facilitates maintenance and technical support

Installers and technical service personnel can access information in real-time, allowing them to efficiently diagnose and resolve incidents without unnecessary travel. This translates to significant time and cost savings for users.

Customisation options and regular updates

The **EQUINOX APP** and **web portal** allow users not only to monitor their system but also to configure the operating parameters according to their needs. Additionally, thanks to remote connectivity, the software automatically updates with the latest improvements and features without requiring manual intervention.

Total accessibility from any device

With the **EQUINOX APP** and **web portal**, users can access the status of their installation at any time, using a mobile phone, tablet, or computer. This enables continuous monitoring and ensures a swift response to any incidents.

Monthly reports on plant performance

This option allows you to generate automatic summaries of plant performance, facilitating efficiency analysis, incident detection, and energy saving monitoring over time.

Safety and control of discharge to the grid

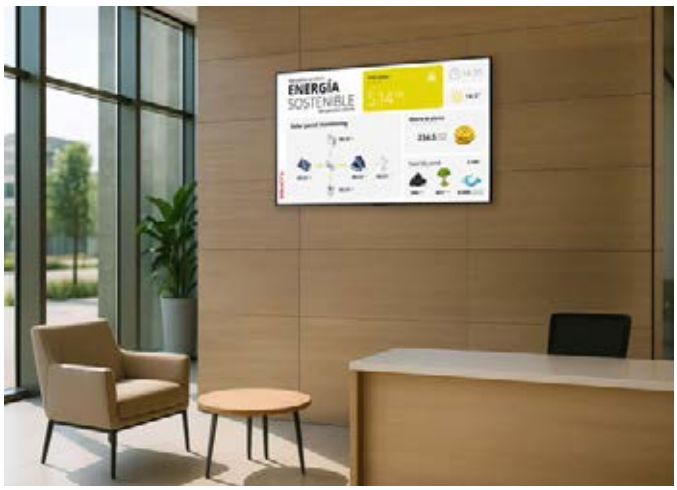
The ability to configure zero feed-in ensures that excess energy is not fed into the grid, complying with current regulations and allowing users to maximise their self-consumption without risk. Furthermore, with the addition of the **SLC Energy Manager**, the management possibilities expand even further, allowing for a more precise control of energy consumption, storage and distribution and further optimising the performance of the installation.

Early detection of incidents

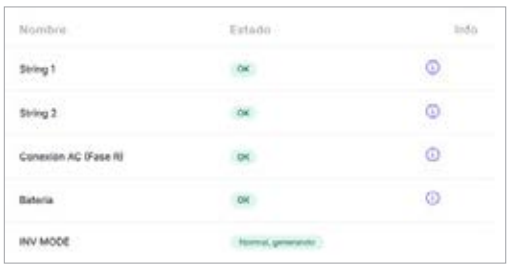
The platform can detect any anomaly in the system's performance, alerting the user or the authorised installer to implement corrective measures before the problem affects the energy supply.

Shared monitoring for viewing on any display

The **EQUINOX APP** and **web portal** also include the option to share a public display page. This feature allows third parties to consult the status of the plant from any device with a web browser, which is ideal for businesses and companies looking to showcase their energy generation, sustainability measures, and consumption data to the public.







SLC ENERGY MANAGER

Smart energy meter



SLC ENERGY MANAGER: Efficient energy management

The **SLC ENERGY MANAGER** stands out for its straightforward installation process and user-friendly method of configuring the system's basic parameters via cable or WiFi, ensuring no unnecessary time is wasted during the system startup. Additionally, the Energy Manager includes a range of advanced features that optimise performance and efficiency in solar photovoltaic installations, making it an invaluable ally for your solar projects.

One of the most recently integrated functions simplifies the installation process to avert potential complications when aligning the phase supply with the toroidal in three-phase equipment while verifying the orientation of the clamp meter in single-phase installations. It is the only device on the market that offers **automatic current transformer configuration**, enabling faster connections without metering errors.

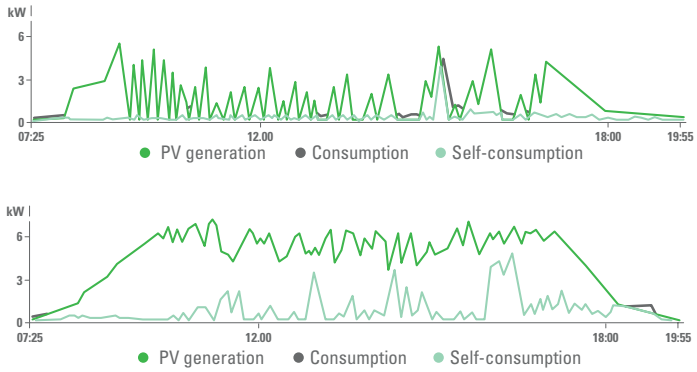
Performances

- Autoconfiguration of current transformers.
- Dynamic injection control.
- Programmable dry contact.
- Measurement capacity and Wi-Fi connectivity integrated in a single device.
- Access to the **EQUINOX APP** and web portal.
- Zero-injection management of surplus energy.
- Savings achieved through smart management of generation devices and loads.
- High degree of compatibility with existing systems.
- Complete solution option with current transformers included.



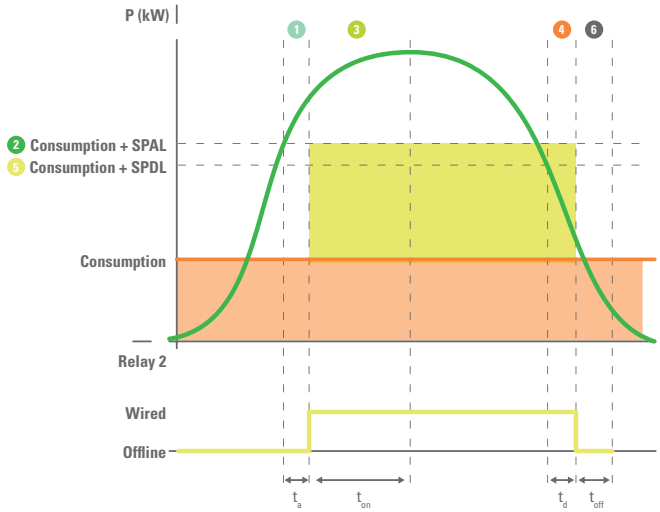
Dynamic feed-in control

Say goodbye to issues with inverter line surges caused by inadequate grid installations. Our device features dynamic feed-in control, which continuously regulates the energy fed into the grid, generating up to 80% more energy. This ensures safe and stable operation while preventing the system from exceeding safety thresholds. This is essential for working within the safe voltage range of the indoor installation and extending the lifetime of the electronic devices.



Programmable dry contact

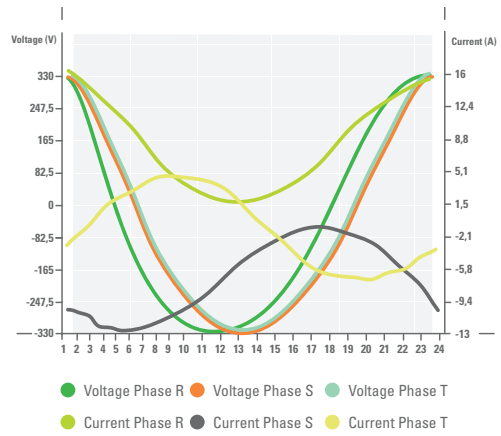
An integrated programmable dry contact allows surplus energy to be redirected to systems such as air-source heat pumps or resistive loads. This not only maximises the utilisation of the energy generated but also enhances the overall efficiency of the installation.



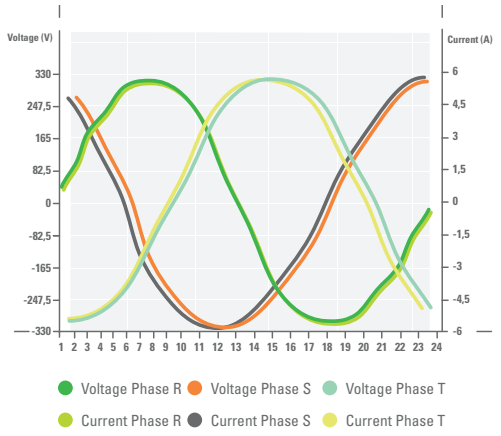
Energy community

An energy community can be created by installing and integrating different **SLC Energy Manager** devices in the homes or at the consumption points that form the community. Each user can view their energy consumption alongside their proportional share of the community's energy generation as if it were an individual photovoltaic system.

You can also configure up to ten weather probes to collect precise data on solar radiation, ambient temperature, and cell temperature. This allows for more accurate control of the plant and improved management of the generated energy.



Reading before applying automatic phase rotation



Reading after application of automatic phase rotation

Up to 30 devices in parallel

The system can handle up to 30 devices simultaneously for grid inverters and up to 4 devices for hybrid inverters, including zero feed-in capability. This feature is crucial for complying with specific regulations and ensuring that no excess power is released into the grid.

For more advanced users, it supports the connection of any transformer with a secondary current of 5 A, offers full configuration options for grid-related issues, and enables interaction with the device via API for integration into existing proprietary systems.

European servers

All data is stored on European servers, and the device is compatible with inverter equipment from other brands.

Additionally, it can be fully upgraded remotely, allowing you to continuously receive updates and enjoy new features without needing to replace the equipment.

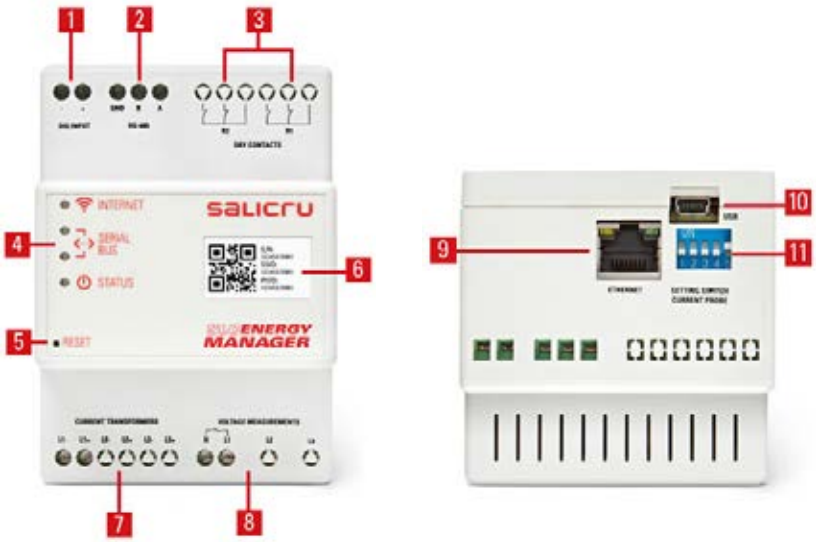
Together, these features make the **SLC ENERGY MANAGER** an intelligent and efficient solution for advanced solar energy management, optimising both the performance and profitability of installations.

SLC ENERGY MANAGER Range

MODEL	CODE	EAN CODE	DESCRIPTION
SLC ENERGY MANAGER 80D16	6B2OR000001	8436584874829	Single-phase Energy Manager with 80 A(1) transformer and with relay output
SLC ENERGY MANAGER ../5	6B2OQ000035	8436584874799	Single-phase Energy Manager without transformer and with relay output
SLC ENERGY MANAGER T 80D16	6B2OR000003	8436584874843	Three-phase Energy Manager with 80 A(1) transformer and with relay output
SLC ENERGY MANAGER T 300D50	6B2OR000004	8436584874850	Three-phase Energy Manager with 300 A(2) transformer and with relay output
SLC ENERGY MANAGER T ../5	6B2OQ000036	8436584874805	Three-phase Energy Manager without transformer and with relay output

(1) Current measuring transformer 80 A/100 mA clamp type for cables with a maximum diameter of 16 mm. included (x1 for single-phase / x3 for three-phase).
(2) Current measuring transformer 300 A/100 mA clamp type for cables with a maximum diameter of 50 mm. included (x1 for single-phase / x3 for three-phase).
For codes 6B2OQ000035 / 6B2OQ000036 the current transformer is not included. Compatible with CT for the following primary currents: 100/300/400/600/1000/1500/2000 A.

Connections



1. Digital signal input.
2. RS-485 output.
3. Relay outputs.
4. LED status indicators.
5. Hidden reset button.
6. Device configuration code.
7. Terminals for current transformers.
8. Device supply and voltage measurement.
9. Ethernet port.
10. USB port.
11. DIP switch for configuration.

Technical specifications

MODEL		SLC ENERGY MANAGER Single-phase	SLC ENERGY MANAGER Three-phase
INPUT	Rated voltage	110 - 240 Vac	
	Voltage range	± 10%	
	Rated frequency	50/60 Hz	
	Rated current	0,05 A	
VOLTAGE MEASUREMENT	Voltage range	110 - 265 Vac	3 × (190 - 458 Vac) + N
	Frequency range	50/60 Hz	
	Accuracy	1%	
CURRENT MEASUREMENT	Output current	100 mA(1) o 5 A(2)	
	Overcurrent	120% In	
	Accuracy	1%	
COMMUNICATION	Ports	RS-485 / Voltage sensor / CT sensor / LAN / Wifi	
	Interface	Embedded URL	
	Protocol	Modbus	
RELAYS	Amount	2(3)	
	Rated voltage	250 Vac	
	Rated current	6 A	
INPUT SIGNALS	Digital	5 Vdc	
GENERAL	Operating temperature	0 - 50 °C	
	Relative humidity	95% (without condensation)	
	Maxium operating altitude	3,000 masl	
	Degree of protection	IP20	
STANDARDS	Safety	UNE EN IEC 61010-1:2011/A1:2020, 61010-2-030	
	Electromagnetic compatibility (EMC)	UNE EN IEC 61326-1	
	Zero-injection	UNE 217001:2020	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	
DIMENSIONS	Depth × Width × Height (mm)	70.5 × 70 × 101	

(1) Compatible with CT with the following primary currents: 80/200/300/400/600/1000/2000 A.
(2) Compatible with CT with the following primary currents: 100/300/400/600/1000/1500/2000 A. Check for other currents.
(3) One relay is for a zero-injection contactor, and the other is fully programmable.

Information subject to change without notice.

EQUINOX2 S/SX

On-grid single-phase solar inverters from 2 to 10 kW

EQUINOX2 S/SX: Technology and design for a greener world

The new solar power inverters in Salicru's **EQUINOX2 S/SX** series are an excellent option for generating photovoltaic power in homes and commercial premises, allowing users to capture clean, cheap energy from the roof of their building.

Their stand out for their compact size, ease of installation and optimal heat dissipation. Internally, the device is equipped with the highest quality components and state-of-the-art technology (SiC). The **EQUINOX2** range offers exceptional advantages such as high efficiency and compatibility with any type of roof and panel configuration.

The S range includes 2, 3, 4, 5, 6, 8 and 10 kW devices, making them suitable for a wide range of projects. In addition, their wide input voltage range enables different numbers and types of photovoltaic modules to be connected, allowing for a flexible string design. **EQUINOX2 S/SX** devices can be monitored easily and intuitively via various communication interfaces (WiFi and LAN), the web portal and the free EQUINOX app for smartphones and tablets.

The high protection afforded by their epoxy-coated die-cast aluminium housing makes them suitable for indoor and outdoor use, and installation is fast and easy due to their compact, lightweight design, ease of grip and well-spaced connections in the lower part of the unit to facilitate operability.



Applications: Self-consumption in homes and businesses

Salicru's **Equinox2 S/SX** series has been specially designed for private energy production in homes and businesses.Installations of this type allow you to produce your own electrical power, reducing electricity bills and dependence on the conventional power grid by using the sun's energy, the cleanest and most ecological source of energy.



Performances

- Made from aluminium and coated with epoxy paint to guarantee optimum corrosion resistance.
- Compact and lightweight design to facilitate installation by a single operator.
- Excellent thermal design extends the life of the device.
- Integrated DC disconnector.
- Components of the highest quality and cutting-edge SiC technology; OLED display with advanced features.
- 7 power ratings. Can be fitted to any kind of home or premises.
- 2 MPPT Trackers with a wide voltage range, adaptable to most roofs.(1)
- High conversion efficiency and input current adapted to high-performance panels.
- Low start-up voltage of 60 Vdc.(2)
- Function to limit surpluses to the integrated network.
- Admits 30% of input power in DC, above the nominal voltage.
- Possibility of delivering 10% more power in addition to the nominal.
- Installation supervision via the web and the free EQUINOX app.(3)
- 10-year warranty, extendable to 20 years.



(1) Except models EQX-2001-S and EQX-3001-S, which have 1 MPPT tracker.
(2) 60V for 1 MPPT models, 80V for SX models and 120V for 2 MPPT S models.
(3) To obtain 24-hour data (generation, grid, and consumption), the optional communication device **SLC Energy Manager** is required.

Communication modules

The standard inverter includes a module for monitoring generation hours only. To monitor consumption 24 hours a day, the optional communication device **SLC Energy Manager** must be purchased.



Silent operation

The operating noise level of the **Equinox2 S/SX** inverters is minimum (less than 25 dB), since they do not use cooling fans, and this guarantees the users' well-being and comfort.

High efficiency

The new **Equinox2 S/SX** series is one of the most efficient on the market, which, when added to the wide voltage range, provides exceptional system performance levels.

Monitoring from app and website

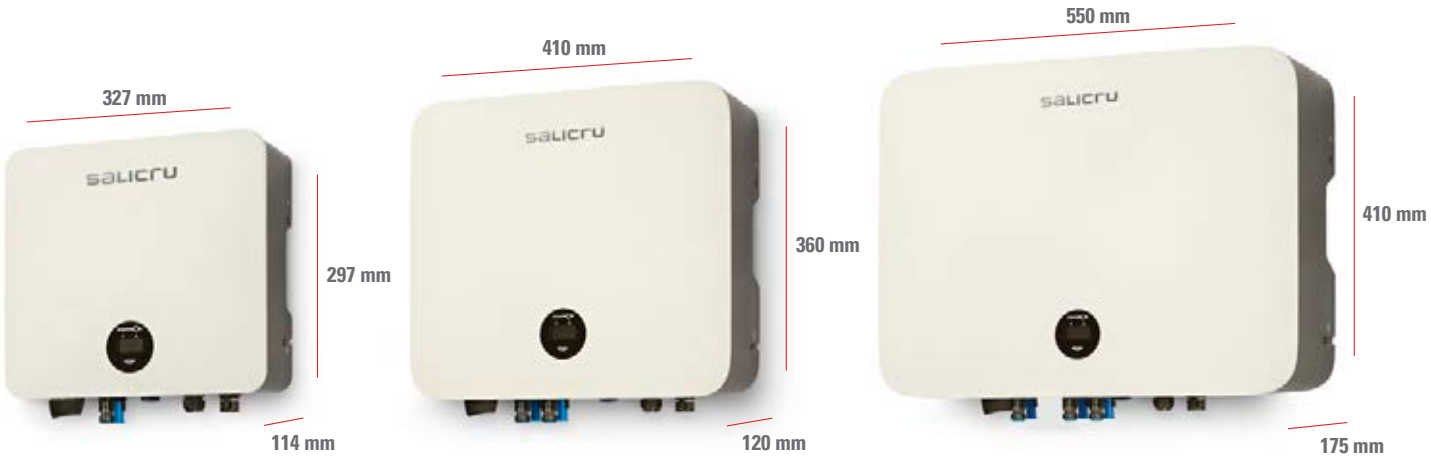
Both the free **EQUINOX** app and the web portal, consulting historical data and monitoring in real time the photovoltaic power produced, that consumed by loads, and that consumed by the mains or injected into it. The App also provides data on the cost savings achieved and the total reduction in CO2. **EQUINOX** allows you to activate the zero reinjection mode in your installation.



Range

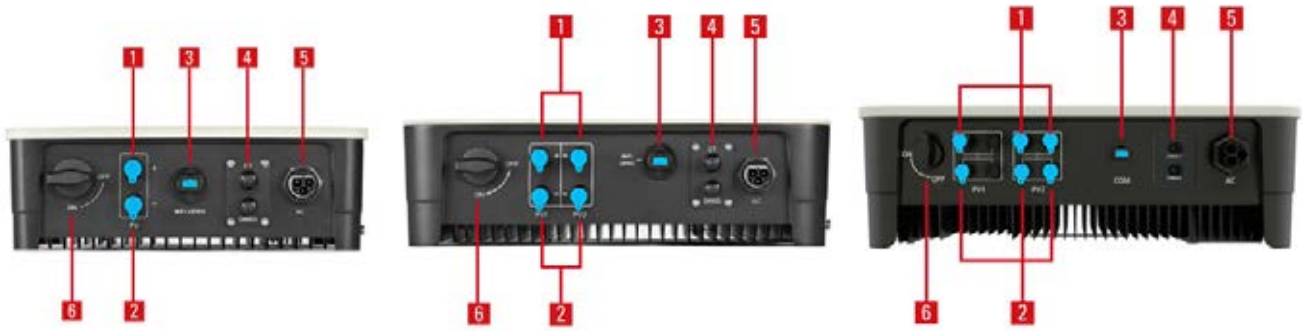
MODEL	CODE	MAXIMUM DC INPUT POWER (kW)	RATED POWER (kW)	MAXIMUM APPARENT OUTPUT POWER (kVA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 2001-S	6B2AB000001	2.6	2	2.2	8.7	114 × 327 × 297	6.5
EQX2 3001-S	6B2AB000002	3.9	3	3.3	13	114 × 327 × 297	6.5
EQX2 3002-S	6B2AB000003	3.9	3	3.3	13	120 × 410 × 360	13
EQX2 3002-SX	6B2AB000007	3.9	3	3.3	13	120 × 410 × 360	13
EQX2 4002-S	6B2AB000004	5.46	4.2	4.62	18.3	120 × 410 × 360	13
EQX2 4002-SX	6B2AB000008	5.46	4.2	4.62	18.3	120 × 410 × 360	13
EQX2 5002-SX	6B2AB000009	6.5	5	5.5	21.7	120 × 410 × 360	13
EQX2 6002-SX	6B2AB000010	7.8	6	6.6	26.1	120 × 410 × 360	13
EQX2 8002-SX	6B2AB000020	10.4	8	8.8	34.8	175 × 550 × 410	24
EQX2 10002-SX	6B2AB000021	13	10	11	43.5	175 × 550 × 410	26

Dimensions



EQX2 2001/3001-S | EQX2 3002÷6002-S/SX | EQX2 8002/10002-SX

Connections



EQX2 2001/3001-S | EQX2 3002÷6002-S/SX | EQX2 8002/10002-SX

1. Positive photovoltaic input terminals
2. Negative photovoltaic input terminals
3. Main communication port (communication module connection).
4. Auxiliary communication port (optional).
5. AC / mains output terminal.
6. DC disconnector.

Technical specifications

MODEL		EQX2 2001/3001-S	EQX2 3002/4002-S	EQX2 3002÷6002-SX	EQX2 8002/10002-SX
INPUT DC	Starting voltage (V)	60	120	80	
	Max. short-circuit current - Isc PV (A)	20	20/20	20/20	20/40
	Inputs per MPPT	1	1/1		1/2
	Inputs per MPPT	1	2		
	MPPT voltage range (VDC)	80 ÷ 450	100 ÷ 550		80 ÷ 550
	Input maximum current per tracker (A)	15	15/15	15/15	15/30(1)
	MPPT performance	99,9%			
OUTPUT	Power factor	0.8 inductive…0.8 capacitive			
	Network voltage	230 V Single-phase (L, N, PE)(2)			
	Voltage ranges	195,5 ÷ 253 V according to UNE 217002			
	Max. total harmonic distortion (THD)	<3%			
	Frequency	50 Hz (45,5 ÷ 55 Hz) / 60 Hz (55 ÷ 65 Hz)			
	Performance EU	97,0%	97,5%		97,6%
	Maximum performance	97,5%	98,1%		
COMMUNICATION	Ports	RS485, WiFi/LAN (optional)			
INDICATIONS	Type	2 LED states, OLED display			
PROTECTION	Input DC disconnector	Included			
	Integrated in the device	Inverse polarity DC, Residual Current, DC disconnector, Over-voltage, Over-temperature, Differential, Islanding operation, AC short-circuit, Over-voltage AC			
	Over-voltage protection category	PV: II / AC: II			
GENERAL	Contamination level	PD2/PD3			
	Self-consumption (at night)	<1 W			
	Operating temperature	-30°C ~ +60°C (de-rate for temperature >45°C)			
	Relative humidity	0 ~ 100%			
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)			
	Degree of protection	IP65			
	Cooling	Natural convection (no fans)(3)			
	Acoustic noise at 1 metre	≤25 dB(3)			
	Terminal type	MC4			
	Installation	Indoor and outdoor installation / Wall support			
	Topology	Transformerless Non-isolated (On grid)			
STANDARDS	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3(4)			
	Energy efficiency	IEC EN UNE 61683			
	Environmental tests	IEC EN UNE 60068-2-1/2/14/30			
	Operation / Protection	UNE EN 62116:2014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020			
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001			

(1) For PV inverters with more than 1 string per MPPT, please enquire about potential current restrictions
(2) For 2 x 230 V two-phase voltages, ask
(3) For EQX2 10002-SX smart fan cooling and ≤40 dB
(4) Consult available regulations for other countries

Information subject to change without notice.

EQUINOX2 T / T-RV

On-grid three-phase solar inverters from 4 to 100 kW

EQUINOX2 T / T-RV: Energy at the service of productivity

EQUINOX2 T solar inverters present a complete three-phase range, with competitively priced high performance, without sacrificing the slightest bit of quality.

The exceptional design, focused above all on functionality and reduction of thermal stress of the equipment, ensures ease of assembly, minimal installation space, durability, and constant performance. Aesthetically, it has been decided to follow the line of the **EQUINOX2 S/SX** single-phase family, with well-defined shapes and neutral colours, applied with a level of finish consistent with the high quality of the product. The control panel has a large integrated OLED display, offering optimal visibility.

Salicru's primary objective is to always offer cutting-edge technology in all its equipment. Consequently, the selection of components has the most advanced technology (SiC) and the seal of guarantee from the best manufacturers on the planet. The **EQUINOX2 T** series also offers monitoring of the photovoltaic installation through the web portal and the free **EQUINOX** app for smartphones and tablets.

The three-phase range starts at 4kW and goes up to 100kW. With complete and consistent power scaling and selection of MPPTs suited to the most common use cases, the **EQUINOX2 T** series is a great fit for the vast majority of projects, even with the **EQUINOX2 T-RV** range, designed specifically for revamping.



Applications: Self-consumption for small and medium businesses

The **EQUINOX2 T** series is generally designed to be used both in small (such as small shops or offices) and in larger premises (workshops, supermarkets, medium-sized companies) that decide to take a big step towards green energy thus gaining autonomy of electricity supply, reducing in turn the cost of energy.



Performances

- Reduced dimensions and weight.
- Wide operating temperature.
- Optimum resistance to corrosion.
- Layout of components oriented to thermal optimization, ensuring longer equipment life.
- Integrated surge protection for DC and AC.
- High-tech components made of Silicon Carbide.
- Scaling of fourteen powers. Adaptable to any type of project.
- From 2 to 10 MPPT trackers (depending on power) with a wide voltage range, adaptable to most roofs and/or surfaces.
- High conversion efficiency and input current adapted to high-performance panels.
- Low start-up voltage: 180 Vdc.(1)
- Function to limit surpluses to the integrated network.
- Admits 30% of input power in DC, above the nominal voltage.
- Possibility of delivering 10% more power in addition to the nominal.
- Supervision of the installation via the web and the free EQUINOX app.(2)
- 10-year warranty, extendable to 20 years.



(1) 200V for 100kW model.
(2) To obtain 24-hour data (generation, grid and consumption), the optional communication device SLC Energy Manager is required.

Quad Core

Quad Core processing, offering a 200 MHz frequency main module and a high-frequency communication module, with embedded high-speed access memories; all high end features at the heart of our three-phase inverters.

Communication modules

The standard inverter includes a module for monitoring generation hours only. If you wish to monitor consumption 24 hours a day, you must purchase the optional SLC Energy Manager communications device.



High Flexibility

As the power in a photovoltaic installation increases, the number of panels required also increases. Faced with this greater need for space, the lack of availability gives rise to a multitude of variables that complicate the configuration of the strings (differences in orientation, projected shadows, uneven slopes, etc).

The resulting diversity requires greater definition for the differentiated management of each panel group in order to get the most out of the installation.

Accordingly, our **EQUINOX2 T** series offers a greater number of MPPTs (Maximum Power Point Tracker) in relation to the power of the equipment. Reaching up to 10 MMPTs in the 100kW model.

Revamping

The Revamping kit includes a box that allows you to quickly and easily adapt your old installation, offering a practical, safe and hassle-free solution to modernise your system.

Monitoring from app and website

The free **EQUINOX** app and the website allow monitoring of the current status of the photovoltaic installation to consult log data and monitor in real time the photovoltaic power produced: consumed by load, consumed by the mains, or injected into it. The app also provides data regarding the cost savings achieved as well as the total reduction in CO2. Having the required options, **EQUINOX** allows you to activate the zero reinjection mode in your installation.



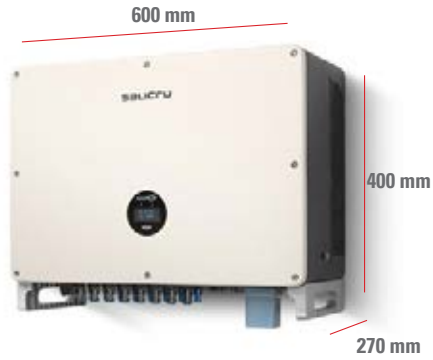
Range

MODEL	CODE	MAXIMUM DC INPUT POWER (kW)	RATED POWER (kW)	MAXIMUM APPARENT OUTPUT POWER (kVA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 4002-T	6B2AB000018	6.4	4	4.4	5.8	175 × 550 × 410	23
EQX2 5002-T	6B2AB000019	8	5	5.5	7.3	175 × 550 × 410	23
EQX2 6002-T	6B2AB000011	9.6	6	6.6	8.7	175 × 550 × 410	23
EQX2 8002-T	6B2AB000012	12.8	8	8.8	11.6	175 × 550 × 410	23
EQX2 10002-T	6B2AB000013	16	10	11	14.5	175 × 550 × 410	23
EQX2 12002-T	6B2AB000014	19.2	12	13.2	17.4	175 × 550 × 410	23
EQX2 15002-T	6B2AB000015	24	15	16.5	21.7	175 × 550 × 410	26
EQX2 17002-T	6B2AB000026	27.2	17	18.7	24.6	175 × 550 × 410	29
EQX2 20002-T	6B2AB000016	32	20	22	29	175 × 550 × 410	29
EQX2 25002-T	6B2AB000017	40	25	27.5	36.2	175 × 550 × 410	29
EQX2 33004-T	6B2AB000022	52.8	33	36.3	47.8	270 × 600 × 400	42
EQX2 40004-T	6B2AB000023	64	40	44	58	270 × 600 × 400	42
EQX2 50004-T	6B2AB000024	80	50	55	72.5	270 × 600 × 400	42
EQX2 60004-T	6B2AB000034	96	60	66	87	270 × 600 × 400	42
EQX2 100010-T	6B2AB000033	160	100	110	144.3	290 × 975 × 680	82
EQX2 33004-T-RV	6B2RO000015	52,8	33	36,6	47,8	270 x 600 x 400	43
EQX2 60004-T-RV	6B2RO000016	96	60	66	87	270 x 600 x 400	43
EQX2 100010-T-RV	6B2RO000014	160	100	110	144,3	290 x 975 x 680	83

Dimensions



EQX2 4002÷25002-T

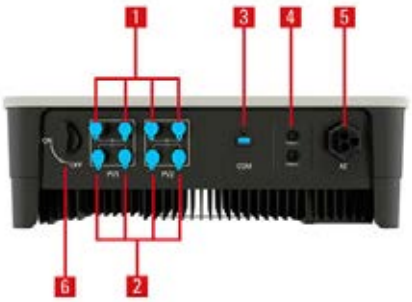


EQX2 33004÷60004-T/T-RV

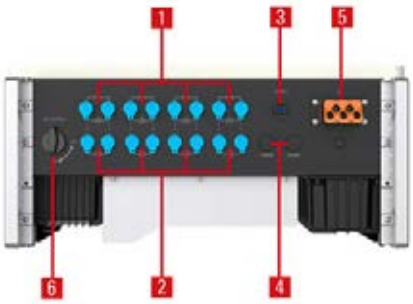


EQX2 100010-T/T-RV

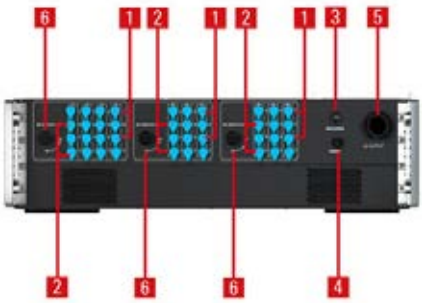
Connections



EQX2 4002÷25002-T



EQX2 33004÷60004-T/T-RV



EQX2 100010-T/T-RV

1. Positive photovoltaic input terminals
2. Negative photovoltaic input terminals
3. Main communication port (communication module connection).
4. Auxiliary communication port (optional).
5. AC / mains output terminal.
6. DC isolator switch.

Technical specifications

MODEL		EQX2 4002÷12002-T	EQX2 15002-T	EQX2 17002÷25002-T	EQX2 33004÷60004-T	EQX2 100010-T	EQX2 33004÷60004-T-RV	EQX2 100010-T-RV
INPUT DC	Starting voltage (V)	180				200	180	200
	Max. short-circuit current - Isc PV (A)	20/20 A	20/40 A	40/40 A	4*40 A	10*40 A	160	400
	Inputs per MPPT	1/1	1/2	2/2	2		4	10
	Inputs per MPPT	2			4	10	1	
	MPPT voltage range (VDC)	160 ÷ 1000			180 ÷ 1000	200 ÷ 950	180 ÷ 1000	200 ÷ 950
	Maximum input voltage (Vdc)	1100						
	Input maximum current per tracker (A)	15/15(1)	15/30(1)	30/30(1)	4*26(1)	10*26(1)	104	260
	MPPT performance	99,9%						
OUTPUT	Power factor	0.8 inductive…0.8 capacitive						
	Network voltage	3x400 V Three-phase (3L, N, PE)(2)						
	Voltage ranges	195.5 ÷ 253 V (Ph-N) according to UNE 217002						
	Max. total harmonic distortion (THD)	<3%						
	Frequency	50 Hz (45.5 ÷ 55 Hz) / 60 Hz (55 ÷ 65 Hz)						
	Performance EU	97,9% ÷ 98,2%			98,3%			
	Maximum performance	98,1% ÷ 98,6%			98,8%			
COMMUNICATION	Ports	RS485, WiFi						
INDICATIONS	Type	2 LED states, OLED display						
PROTECTION	Input DC disconnector	Included						
	Integrated in the device	Inverse polarity DC, Residual Current, DC disconnector, Over-voltage, Over-temperature, Differential, Islanding operation, AC short-circuit, Over-voltage AC						
	Over-voltage protection category	PV: II / AC: II						
GENERAL	Contamination level	PD2/PD3						
	Self-consumption (at night)	<1 W						
	Operating temperature	-30°C ~ +60°C (de-rate for temperature >45°C)						
	Relative humidity	0 ~ 100%						
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)						
	Degree of protection	IP65						
	Cooling	Natural convection (no fans)(3)						
	Acoustic noise at 1 metre	≤25 dB(3)						
	Terminal type	MC4						
	Installation	Indoor and outdoor installation / Wall support						
	Topology	Transformerless Non-isolated (On grid)						
STANDARDS	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3						
	Energy efficiency	IEC EN UNE 61683						
	Environmental tests	IEC EN UNE 60068-2-1/2/14/30						
	Operation / Protection	UNE EN 62116:2014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020						
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001						

(1) For PV inverters with more than 1 string per MPPT, please enquire about potential current restrictions
(2) For three-phase voltages without a neutral (triangle), ask
(3) For models from EQX2 17002-T (inclusive) Smart fan cooling and ≤ 72 dB
(4) Consult available regulations for other countries
(5) The single MPPT is distributed across the 10 inputs of the inverter.

Information subject to change without notice.

EQUINOX2 HSX

Single-phase hybrid solar inverters from 3 to 8 kW

EQUINOX2 HSX: Maximum energy availability

The **EQUINOX2 HSX** range of single-phase hybrid solar inverters makes maximum use of energy generated for self-consumption.

On the one hand, like the On-Grid models of the **EQUINOX2 S/SX/T** series, high-energy efficiency continues to be an important factor for **EQUINOX2 HSX**. However, the extreme versatility is an even more crucial factor.

The **EQUINOX2 HSX** devices have up to 6 operating modes. Peak Shaving mode, surplus energy graded management: load/batteries/grid, time-slot discrimination mode, automatic backup mode, isolated mode and operating mode without batteries.

In the characteristic back-up mode, the system functions as a UPS capable of supplying 100% of the nominal power of the inverter to the loads, and all with an automatic transfer less than 10 ms in case of a mains supply outage. In this regard, our **RESIDENTIAL BATTERIES (5-20 kWh)** allows scaled growth according to autonomy time and the loads that you want to supply with power. The wide voltage range accepted by the **EQUINOX2 HSX** and **EQUINOX2 HT** hybrid inverters makes it possible to connect batteries in series of up to 10 stackable modules, which provide 25.6kWh at a voltage of 512V.

The operating mode without batteries ensures that photovoltaic energy is still available even when the batteries are in poor condition, disconnected for replacement or even if the user decides to acquire them at a future date and initially operates the system without storage.



Applications: Domestic self-consumption up to 8kW with high sustainability

Whenever, whether in a domestic or small business environment, you want to ensure a high degree of independence from the grid or when consumption is concentrated in times outside those of maximum radiation, and the income from the sale of energy to the grid does not sufficiently compensate the expenditure item for energy from the conventional grid. The **RESIDENTIAL BATTERIES (5-20 kWh)** perfectly completes the hybrid solution.



Performances

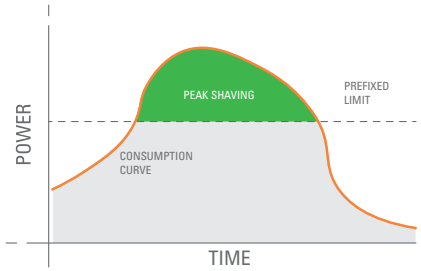
- High conversion efficiency and input current adapted to high-performance panels.
- Two 15 A MPPT trackers without current penalty by the battery connection.(1)
- Very low start-up voltage of 80 Vdc and battery charging capacity with low solar radiation.
- Admits +60% of input power in DC, above the nominal voltage.
- Possibility of delivering 10% more power in addition to the nominal.
- Fast charging/discharging of up to 30 A. Fast battery charging (1 hour).
- Back-up of up to 100% of nominal power, in battery mode.
- Made from aluminium and coated with epoxy paint to guarantee optimum corrosion resistance.
- Reduced dimensions and weight.
- Excellent thermal design extends the life of the device.
- Integrated DC disconnector.
- Plug & Play connection, with start-up and installation supervision through the free EQUINOX App, the web portal or the OLED screen.
- Incorporated meter and instrument transformers.
- Long battery life: 6000 cycles @ 80% DOD.
- Maximum energy efficiency:



(1) Except the 3 kW model which has 1 MPPT.

Peak Shaving

One of the 6 operating modes of the **EQUINOX2 HSX** is Peak Shaving. When we activate this inverter mode, we see that whenever the solar radiation is insufficient to satisfy a particular demand or the user has decided to limit grid consumption to a level less than the specific load demand, it will activate the batteries and complete the necessary power using the energy previously stored in the batteries. Thus, there is no need to consume additional energy from the grid and, therefore, there is no additional cost. Obviously, this will only happen if the power demanded is not greater than that of the inverter.



Work under minimum radiation conditions

The low start-up voltage is a characteristic common to all the **EQUINOX2** series. In other words, the solar radiation necessary for our system to start generating energy is minimal, only 80Vdc being required.

If the **EQUINOX2 HSX** hybrid inverters are also surprisingly under the threshold from which the batteries start to charge; the amortisation of the investment is ensured even under unfavourable conditions, whether by energy storage or direct consumption.

Autonomy adaptability

The **EQUINOX2 HSX** series is compatible with several battery models available on the market, although the **RESIDENTIAL BATTERIES (5-20 kWh)** batteries complement it in the best way, with scalable modular configuration, maximum adaptation to the desired autonomy and in line with the investment capacity of the user.



Range

MODEL	CODE	MAXIMUM DC INPUT POWER (kW)	RATED POWER (kW)	MAXIMUM APPARENT OUTPUT POWER (kVA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 3001-HSX	6B2AB000027	4.8	3	3.3	13	175 × 550 × 410	26
EQX2 4002-HSX	6B2AB000028	6.72	4.2	4.62	18.3	175 × 550 × 410	26
EQX2 5002-HSX	6B2AB000029	8	5	5.5	21.7	175 × 550 × 410	26
EQX2 6002-HSX	6B2AB000030	9.6	6	6.6	26.1	175 × 550 × 410	26
EQX2 8002-HSX	6B2AB000031	12.8	8	8.8	34.8	175 × 550 × 410	26

Battery selection

MODEL	BASE + BMS CODE	BATTERY CODE	RATED CAPACITY (kWh)	RATED VOLTAGE (V)	WEIGHT (kg)	COMPATABILITY
SUNWODA Residential 5 kWh	6B2AC000007	1 x 6B2AC000006	5	400	61	HSX, HT, HT+
SUNWODA Residential 10 kWh	6B2AC000007	2 x 6B2AC000006	10	400	112.5	HSX, HT, HT+
SUNWODA Residential 15 kWh	6B2AC000007	3 x 6B2AC000006	15	400	164	HSX, HT, HT+
SUNWODA Residential 20 kWh	6B2AC000007	4 x 6B2AC000006	20	400	215.5	HSX, HT, HT+

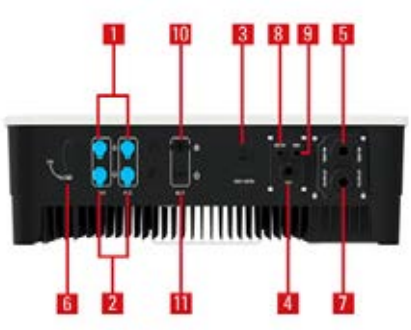
Up to 3 battery towers can be connected in parallel, achieving a capacity of up to 60 kWh.
For correct operation in isolated installations, the battery capacity must be at least double the power of the inverter.
To learn about additional capacity options, please refer to the product sheets of the corresponding batteries.

Dimensions



EQX2 3001÷8002-HSX

Connections



EQX2 3001÷8002-HSX

1. Positive photovoltaic input terminals
2. Negative photovoltaic input terminals
3. Main communication port (communication module connection).
4. Auxiliary communication port (optional).
5. AC / mains terminal.
6. DC disconnector.
7. Output connection for critical loads.
8. Connection port for current metering.
9. Communication port with batteries.
10. Positive battery connection terminal.
11. Negative battery connection terminal.

Technical specifications

MODEL		EQX2 3001-HSX	EQX2 4002-HSX	EQX2 5002÷8002-HSX
INPUT DC	Starting voltage (V)	80		
	Max. short-circuit current - Isc PV (A)	20	20/20	
	Inputs per MPPT	1/1		
	Inputs per MPPT	1	2	
	MPPT voltage range (VDC)	100 ÷ 550		
	Input maximum current per tracker (A)	15	15/15	
OUTPUT	Power factor	0.8 inductive…0.8 capacitive		
	Network voltage	230 V Single-phase (L, N, PE)(2)		
	Voltage ranges	195.5 ÷ 253 V according to UNE 217002		
	Max. total harmonic distortion (THD)	<3%		
	Frequency	50 Hz (45.5 ÷ 55 Hz) / 60 Hz (55 ÷ 65 Hz)		
	Performance EU	97,0%		
	Maximum performance	97,6%		
BATTERY	Battery type	Lithium with BMS		
	Voltage range	85 ÷ 500 V		
	Maximum charge/discharge current	30 A		
COMMUNICATION	Ports	RS485, WiFi		
INDICATIONS	Type	3 LED states, LED bar for battery level, OLED display		
PROTECTION	Input DC disconnector	Included		
	Integrated in the device	Inverse polarity DC, Residual Current, DC disconnector, Over-voltage, Over-temperature, Differential, Islanding operation, AC short-circuit, Over-voltage AC		
	Over-voltage protection category	PV: II / AC: II		
GENERAL	Contamination level	PD2/PD3		
	Self-consumption (at night)	<1 W		
	Operating temperature	-30°C ~ +60°C (de-rate for temperature >45°C)		
	Relative humidity	0~100%		
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)		
	Degree of protection	IP65		
	Isolation	Transformerless		
	Cooling	Natural convection (no fans)		
	Acoustic noise at 1 metre	<25 dB		
	Terminal type	MC4		
	Installation	Indoor and outdoor installation / Wall support		
	Topology	Transformerless hybrid		
STANDARDS	Certificate	EN 61000-6-2/3(3)		
	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3		
	Energy efficiency	IEC EN UNE 61683		
	Environmental tests	IEC EN UNE 60068-1/2/14/30		
	Operation / Protection	UNE EN 62116:2014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

(1) Minimum energy for starting the inverter up 150 W
(2) For 2 x 230 V two-phase voltages, ask
(3) Consult available regulations for other countries

Information subject to change without notice.

EQUINOX2 HT

Three-phase hybrid solar inverters from 4 to 12 kW

EQUINOX2 HT: Versatility with three-phase renewable energy

The **EQUINOX2 HT** three-phase hybrid solar inverters retain the features of the single-phase EQUINOX2 HSX range, for application in installations with 3 x 380 V / 3 x 400 V.

As such, we can continue to speak of maximum versatility. The **EQUINOX2 HT** has up to six operating modes: general or automatic mode, peak load mode, isolated mode, UPS mode, economy mode (allowing users to program battery charging/discharging and usage times via the app, web or display) and a mode for operation without batteries.

The mode for operation without batteries ensures that photovoltaic energy is still available even when the batteries are in poor condition, disconnected for replacement or even if the user decides to acquire them at a future date and initially operates the system without storage. Although this function is usually temporary, it helps to enhance the already comprehensive availability of the installation.

The UPS function is also of particular note. Thanks to technological advances, our inverter boasts a transfer speed of just 10 ms, thereby ensuring the continued operation of connected devices in the event of an unexpected power outage and without requiring any manual intervention.



Applications: Self-consumption up to 12 kW

The **EQUINOX2 HT** offers a high degree of independence from the electricity network, with a three-phase installation. It is the ideal solution for facilities with low- and medium-power equipment, such as workshops, small production facilities, food retailers, catering establishments, etc.



Performances

- Input current adapted for high-performance panels.
- Two 13 A MPPT trackers, without current penalty by the battery connection.
- Very low start-up voltage of 150/180 VDC (depending on the model) and the ability to charge the batteries even with low solar radiation.
- Admits +60% of input power in DC, above the nominal level.
- Battery transfer time of less than 10 ms.
- Option of delivering 10% more power in addition to the nominal.
- Fast charging/discharging of up to 25 A. Fast battery charging (1 hour).
- Back-up of up to 100% of nominal power, in battery mode.
- Wide battery voltage range: 135-750 V.
- Reduced dimensions and weight.
- Excellent fanless thermal design extends the life of the device and provides longer MTBF.
- Integrated DC disconnector.
- Plug & Play connection, with start-up and supervision of the installation via the free EQUINOX app, web portal or OLED screen.
- Meter and instrument transformers included.
- Useful life of the battery: 6,000 cycles @ 80% DOD.
- Maximum energy efficiency (up to 98.2%).



Fast charging and discharging

The **EQUINOX2 HT** enables a one-off delivery of current of up to 30 A, in the event that, in UPS or peak load mode, and on an exceptional basis, it is necessary to supply a load that exceeds the nominal power. In UPS mode, while using the batteries, a 12 kW unit can supply up to 20 kW on an exceptional basis.

Additionally, users can force fast battery charging to ensure full availability of power after just one hour.

Thanks to these features, the **EQUINOX2** hybrid series takes energy availability to the maximum level.

Maximum energy production

All of the models in the **EQUINOX2** series stand out for their low start-up voltage, which translates to maximum exploitation of solar radiation and a substantial increase in the number of production hours compared to our competitors' products.This increase is even more important in winter, when the number of hours of good solar radiation is significantly lower.



Smart energy management

The connection panel for our hybrid inverters allows users to discriminate between the connections for priority loads and those for secondary loads. Consequently, in the event of an interruption to the mains power supply, only the priority loads will be supplied by the energy stored in the batteries and the secondary loads will be ignored, thereby optimising the use of the previously stored energy.

In generation mode, the inverter distributes the photovoltaic energy in accordance with a scale of priorities, supplying the priority loads as a first preference, storing power as a second preference, and supplying power to the secondary circuit as a third preference (whether to supply secondary loads or send excess power to the mains network, as desired).

Range

MODEL	CODE	MAXIMUM DC INPUT POWER (kW)	RATED POWER (kW)	MAXIMUM APPARENT OUTPUT POWER (kVA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 4002-HT	6B2AB000035	6.4	4	4.4	5,7	175 × 550 × 410	26
EQX2 5002-HT	6B2AB000036	8	5	5.5	7,2	175 × 550 × 410	26
EQX2 6002-HT	6B2AB000037	9.6	6	6.6	8,6	175 × 550 × 410	26
EQX2 8002-HT	6B2AB000038	12.8	8	8.8	11,5	175 × 550 × 410	28
EQX2 10002-HT	6B2AB000039	16	10	11	14,5	175 × 550 × 410	28
EQX2 12002-HT	6B2AB000040	19.2	12	13.2	17,3	175 × 550 × 410	28

Battery selection

MODEL	BASE + BMS CODE	BATTERY CODE	RATED CAPACITY (kWh)	RATED VOLTAGE (V)	WEIGHT (kg)	COMPATABILITY
SUNWODA Residential 5 kWh	6B2AC000007	1 x 6B2AC000006	5	400	61	HSX, HT, HT+
SUNWODA Residential 10 kWh	6B2AC000007	2 x 6B2AC000006	10	400	112.5	HSX, HT, HT+
SUNWODA Residential 15 kWh	6B2AC000007	3 x 6B2AC000006	15	400	164	HSX, HT, HT+
SUNWODA Residential 20 kWh	6B2AC000007	4 x 6B2AC000006	20	400	215.5	HSX, HT, HT+

Up to 3 battery towers can be connected in parallel, achieving a capacity of up to 60 kWh.
For correct operation in isolated installations, the battery capacity must be at least double the power of the inverter.
To learn about additional capacity options, please refer to the product sheets of the corresponding batteries.

Dimensions



EQX2 4002÷12002-HT

Connections



EQX2 4002÷12002-HT

1. Positive photovoltaic input terminals.
2. Negative photovoltaic input terminals.
3. Main communication port (communication module connection).
4. Auxiliary communication port (optional).
5. AC / mains terminal.
6. DC disconnector.
7. Output connection for critical loads.
8. Connection port for current metering.
9. Communication port with batteries.
10. Positive battery connection terminal.
11. Negative battery connection terminal.

Technical specifications

MODEL		EQX2 4002/5002-HT	EQX2 6002-HT	EQX2 8002÷12002-HT
INPUT DC	Starting voltage (V)	150	180	
	Max. short-circuit current - Isc PV (A)	18/18		
	Inputs per MPPT	1/1		
	Inputs per MPPT	2		
	MPPT voltage range (VDC)	150 ÷ 850	200 ÷ 850	
	Input maximum current per tracker (A)	13/13		
OUTPUT	Power factor	0.8 inductive…0.8 capacitive		
	Network voltage	3x400 V Three-phase (3L, N, PE)		
	Voltage ranges	195.5 ÷ 253 V (F-N) according to UNE 217002		
	Max. total harmonic distortion (THD)	<3%		
	Frequency	50 Hz (45.5 ÷ 55 Hz) / 60 Hz (55 ÷ 65 Hz)		
	Performance EU	97,3%		97,4%
	Maximum performance	98,1%		98,2%
BATTERY	Battery type	Lithium with BMS		
	Voltage range	180 ÷ 750 V(2)	182 ÷ 750 V(2)	183 ÷ 750 V(2)
	Maximum charge/discharge current	25 A		
COMMUNICATION	Ports	RS485, WiFi		
INDICATIONS	Type	3 LED states, LED bar for battery level, OLED display		
PROTECTION	Input DC disconnector	Included		
	Integrated in the device	Inverse polarity DC, Residual Current, DC disconnector, Over-voltage, Over-temperature, Differential, Islanding operation, AC short-circuit, Over-voltage AC		
	Over-voltage protection category	PV: II / AC: II		
GENERAL	Contamination level	PD2/PD3		
	Self-consumption (at night)	<1 W		
	Operating temperature	-30°C ~ +60°C (de-rate for temperature >45°C)		
	Relative humidity	0~100%		
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)		
	Degree of protection	IP65		
	Acoustic noise at 1 metre	<25 dB		
	Terminal type	MC4		
	Installation	Indoor and outdoor installation / Wall support		
	Topology	Transformerless hybrid		
STANDARDS	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3		
	Energy efficiency	IEC EN UNE 61683		
	Environmental tests	IEC EN UNE 60068-1/2/14/30		
	Operation / Protection	UNE EN 62116:2014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

(1) Minimum energy for starting the inverter up 150 W
(2) For EQUINOX batteries: 550 V
(3) Consult available regulations for other countries

Information subject to change without notice.

EQUINOX2 HT+

Three-phase hybrid solar inverters from 15 to 50 kW

EQUINOX2 HT+: Maximize power with three-phase renewable energy

The **EQUINOX2 HT+** series of three-phase hybrid solar inverters improves the features and increases the power of the three-phase HT range, for application in installations with 3 x 380 V / 3 x 400 V.

As such, we can continue to speak of maximum versatility. By increasing the power of the hybrid inverter range, the **EQUINOX2 HT+** can be adapted to suit a wider range of scenarios and possibilities in more industrial settings. The power rating of the **EQUINOX2 HT+** goes up to 50 kW, while the inverters stand out for their high level of efficiency (98.8%). They boast batteries with a charge and discharge capacity of up to 100 A, an input current capacity of up to 30 A per string, and can work with unbalanced loads and phases, reaching levels of up to 110%. Like the EQUINOX2 HT range, they have a full backup function built into the device itself.

The mode for operation without batteries ensures that photovoltaic energy is still available even when the batteries are in poor condition, disconnected for replacement or even if the user decides to acquire them at a future date and initially operates the system without storage. Although this function is usually temporary, it helps to enhance the already comprehensive availability of the installation. It should also be noted that, for installations with very unbalanced phases, Salicru's hybrid range is an excellent solution for ensuring correct use of solar power.

The backup function for critical loads is also worth highlighting. Thanks to technological advances, the **EQUINOX2 HT+** boasts a transfer speed of just 20 ms, thereby ensuring the continued operation of connected devices in the event of an unexpected power outage and without requiring any manual intervention.



Applications: Self-consumption up to 50 kW

The **EQUINOX2 HT+** range offers a high degree of independence from the electricity grid, with a three-phase installation. It is the ideal solution for commercial facilities with low- and medium-powered machinery, such as garages, production centres, retail food outlets, the hospitality industry, etc. The devices also allow production processes to be scaled upwards without the need to increase the contracted power, thereby offering users direct savings on their monthly energy bills.



Performances

- Input current adapted for high-performance panels.
- 4 MPPT trackers with dual 30 A input.
- Very low start-up voltage of 200 VDC and battery charging capacity with low solar radiation.
- Admits DC input power 50% above the nominal level.
- Battery transfer time of less than 20 ms.
- Option of delivering 10% more power in addition to the nominal.
- Fast charging/discharging of up to 100 A. Fast battery charging (1 hour).
- Backup of up to 110% of nominal power, in battery mode.
- Wide battery voltage range: 135-750 V.
- Capacity to work with 110% unbalanced loads.
- 120% maximum output overload for 60 s in backup mode.
- Built-in DC disconnector.
- Plug & Play connection, with start-up and supervision of the installation via the free EQUINOX app, online platform or OLED screen.
- Meter and instrument transformers included.
- IP 65 rating for indoor and outdoor installations.
- Maximum energy efficiency (up to 98.8%).



Fast charging and discharging

The **EQUINOX2 HT+** enables a one-off delivery of current of up to 100 A, in the event that, in UPS or peak shaving mode (and on an exceptional basis), it is necessary to supply a load that exceeds the nominal power. The backup output can deliver up to 20% more power than the inverter's nominal power, for a period of 60 s.

Additionally, users can force fast battery charging to ensure full availability of power after just one hour.Thanks to these features, the **EQUINOX2** hybrid series take energy availability to the maximum level.

Maximum energy production

All of the models in the **EQUINOX2** series stand out for their low start-up voltage, which translates to maximum exploitation of solar radiation and a substantial increase in the number of production hours compared to our competitors' products.

This increase is even more important in winter, when the number of hours of good solar radiation is significantly lower.



Smart energy management

Thanks to the different operating modes (general, economy, peak shaving, UPS and isolated), the system can be adapted to suit different scenarios and applications, allowing users to discriminate between priority and secondary loads and to manage the charging and discharging of the battery.

The **EQUINOX2 HT+** hybrid solar inverters enable users to discriminate between two types of load: priority loads (those connected to the backup output) and secondary loads (those connected to the mains output). Thus, in the event of an interruption to the mains power supply, the energy stored in the batteries and solar panels will only be delivered to the priority loads, while the secondary loads will be ignored, thereby optimising the use of previously stored and/or generated energy.

Range

MODEL	CODE	MAXIMUM DC INPUT POWER (kW)	RATED POWER (kW)	MAXIMUM APPARENT OUTPUT POWER (kVA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 15002-HT+	6B2AE000012	23	15	16.5	21,7	210 × 534 × 418	31
EQX2 20002-HT+	6B2AE000013	30	20	22	29	210 × 534 × 418	31
EQX2 25004-HT+	6B2AE000014	38	25	27.5	38	300 × 800 × 620	72
EQX2 30004-HT+	6B2AE000015	45	30	33	43,5	300 × 800 × 620	72
EQX2 40004-HT+	6B2AE000016	60	40	44	60	300 × 800 × 620	72
EQX2 50004-HT+	6B2AE000017	75	50	55	75	300 × 800 × 620	72

Battery selection

MODEL	CODE	RATED CAPACITY (kWh)	RATED VOLTAGE (V)	DIMENSIONS (D x W x H mm)	WEIGHT (kg)	COMPATABILITY
SUNWODA Industrial 25 kWh	6B2EA000000	25	256	410 x 480 x 104	248	HSX, HT, HT+
SUNWODA Industrial 30 kWh	6B2EA000001	30	307.2	410 x 480 x 121	294	HSX, HT, HT+
SUNWODA Industrial 35 kWh	6B2EA000002	35	358.4	410 x 1180 x 700	340	HSX, HT, HT+
SUNWODA Industrial 40 kWh	6B2EA000003	40	409.6	410 x 1180 x 870	386	HSX, HT, HT+
SUNWODA Industrial 45 kWh	6B2EA000004	45	460.8	410 x 1180 x 870	432	HSX, HT, HT+
SUNWODA Industrial 50 kWh	6B2EA000005	50	512	410 x 1180 x 1040	478	HT, HT+
SUNWODA Industrial 55 kWh	6B2EA000006	55	563.2	410 x 1180 x 1040	524	HT, HT+
SUNWODA Industrial 60 kWh	6B2EA000007	60	614.4	410 x 1180 x 1210	570	HT, HT+
SUNWODA Industrial cabinet 60 kWh	6B2AC000005	60	614.4	750 x 1200 x 2160	880	HT, HT+

You can configure up to 6 towers/cabinets in parallel, reaching a maximum of 360 kWh.
For isolated installations, we recommend installing at least twice the rated power of the inverter.
To learn about additional capacity options, please refer to the data sheets of the corresponding batteries.

Dimensions



EQX2 15002/20002-HT+

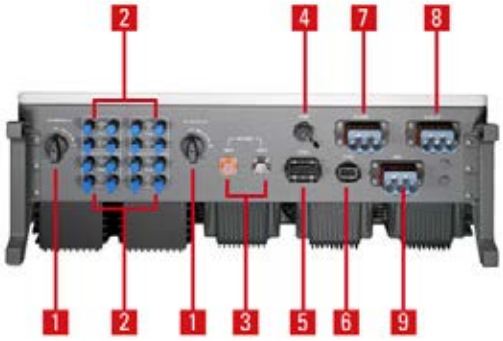


EQX2 25004÷50004-HT+

Connections



EQX2 15002/20002-HT+



EQX2 25004÷50004-HT+

1. DC disconnectors
2. MC4 DC connectors
3. Battery connectors
4. COM1 port (USB Wi-Fi connection)
5. COM2 port (BMS connection)
6. COM3 port (auxiliary connection)
7. AC output terminal
8. Backup output terminal
9. Connector for auxiliary generator only available for the EQX2 25004÷50004-HT+ models (under development)

Technical specifications

MODEL		EQX2 15002/20002-HT+	EQX2 25004÷50004-HT+
INPUT DC	Rated voltage	620	
	Starting voltage (V)	236	
	Max. short-circuit current - Isc PV (A)	40/40	
	Inputs per MPPT	2	
	Inputs per MPPT	2	4
	MPPT voltage range with battery	236 ÷ 850	
	MPPT voltage range (VDC)	200 ÷ 950	200 ÷ 850
	Input maximum current per tracker (A)	30	
OUTPUT	Power factor	0.8 inductive…0.8 capacitive	
	Network voltage	3x400 V Three-phase (3L, N, PE)	
	Voltage ranges	195.5 ÷ 253 V (F-N); adjustable depending on the country	
	Max. total harmonic distortion (THD)	<3 %	
	Frequency	50 Hz / 60 Hz; margins adjustable depending on the country	
	Performance EU	97,5%	98,3%
	DCI	<0,5 % In	
	Maximum performance	98,4%	98,8%
OUTPUT Back-up	Transfer time (ms)	<20	
BATTERY	Battery type	Lithium with BMS	
	Voltage range	135 ÷ 750 V	
	Maximum charge/discharge current	40 A	100 A
COMMUNICATION	Ports	CAN, RS485, WiFi/LAN (optional)	
INDICATIONS	Type	OLED & LED	
PROTECTION	Input DC disconnector	Bipolar. Load break	
	Integrated in the device	DC reverse polarity, battery input connection reversal, insulation resistance, DC overvoltage, temperature, residual current, island operation, AC overvoltage, overload, AC short circuit, GFCI	
	Over-voltage protection category	PV: II / AC: III	
GENERAL	Contamination level	PD2/PD3	
	Self-consumption (at night)	<15 W	
	Operating temperature	-30°C ~ +60°C (de-rate for temperature >45°C)	
	Relative humidity	0~100%	
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)	
	Degree of protection	IP65	
	Cooling	Smart fan	
	Acoustic noise at 1 metre	<40 dB	<50 dB
	Terminal type	MC4	
	Installation	Indoor and outdoor installation / Wall support	
	Topology	Transformerless hybrid	
STANDARDS	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3	
	Energy efficiency	IEC EN UNE 61683	
	Environmental tests	IEC EN UNE 60068-1/2/14/30	
	Operation / Protection	UNE EN 62116:2014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020(2)	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) With minimum power of 250 W
(2) Consult the regulations available for other countries

Information subject to change without notice.

RESIDENTIAL BATTERIES (5-20 kWh)

Modular batteries with a capacity of up to 60¸kWh



RESIDENTIAL BATTERIES FROM 5-20¸KWH

The best solution to complement our hybrid inverters is undoubtedly the battery series from the renowned manufacturer SUNWODA.

SUNWODA is a global leader in energy storage solutions using Lithium Iron Phosphate (LiFePO4). With more than 50,000 employees worldwide, it has established itself as a Tier-1 manufacturer recognised for its excellence and innovation.

The storage system stands out for its flexibility and scalability: thanks to its parallel connection with independent DC-DC modules, it allows configurations from 5 kWh to 20 kWh, expandable in 5 kWh increments, and can reach up to 60 kWh by combining three units. A versatile solution, capable of meeting any energy need.

Another of its significant advantages is the ease with which it can be expanded. The parallel connection and integrated DC-DC system in each module eliminate the need for the complex balancing procedures required by series systems. Simply add a new battery, and the management system automatically adjusts the load between the existing modules and the new one, without requiring any user intervention.

Uses: Joint installation with the EQUINOX2¸HSX/ HT/HT+

A specific firmware has been developed to maximise the performance of the batteries and meet the requirements of both the entire EQUINOX2 hybrid range and the needs of our customers.

It can be used in installations that require a high degree of independence from the electricity grid, as well as in situations where the hours of consumption and generation differ, making it more convenient to store the generated energy than to feed it into the grid.

Additionally, the system can accommodate occasional power demands that exceed the contracted capacity, a situation that frequently occurs in some industrial environments.



Features

· Excellent compact and aesthetic design
· High-voltage LIFEPO4 technology
· Fully modular capacity from 5 kWh to 20 kWh
· Parallel connection of up to 3 towers with a single inverter (60 kWh)
· Individual DC-DC converter for each module and parallel connection
· Easy to expand in the future
· Base with adjustable feet
· Telescopic wall mounting brackets
· Connectors and installation materials included
· 10-year warranty or 6,000 cycles
· Wi-Fi communications
· Optimised for domestic and off-grid installations
· Extended operating temperature range from -10°C to 50°C



Easy installation

Both the interconnection between modules and between the BMS and the modules is easily achieved when stacking using a quick connector and mechanical guide bolts that ensure a perfect fit. The battery group is connected to the inverter using easily accessible quick connectors on the side panel of the BMS.



Backup adaptability

The system's modular nature ensures optimal adjustment to the user's energy backup requirements, while adapting fully to their capacity for investment.



Comprehensive and instantaneous information

The module housing the BMS (Battery Management System) features a colour LCD screen that displays the battery percentage and status.



Range

MODEL	CODE	DESCRIPTION	DIMENSIONS (D x W x H mm)	WEIGHT (kg)
SUNWODA Residential BMS + BASE	6B2AC000007	Control module + base required for installing up to a maximum of 4 batteries	189 × 653 × 282	9.5
SUNWODA Residential battery module 5 kWh	6B2AC000006	5 kWh high-voltage $LiFePO_4$ (LFP) lithium iron phosphate battery with scalable modular configuration	189 × 653 × 315	51.5

Battery selection

MODEL	BASE + BMS CODE	BATTERY CODE	RATED CAPACITY (kWh)	RATED VOLTAGE (V)	WEIGHT (kg)	COMPATABILITY
SUNWODA Residential 5 kWh	6B2AC000007	1 x 6B2AC000006	5	400	61	HSX, HT, HT+
SUNWODA Residential 10 kWh	6B2AC000007	2 x 6B2AC000006	10	400	112.5	HSX, HT, HT+
SUNWODA Residential 15 kWh	6B2AC000007	3 x 6B2AC000006	15	400	164	HSX, HT, HT+
SUNWODA Residential 20 kWh	6B2AC000007	4 x 6B2AC000006	20	400	215.5	HSX, HT, HT+

Up to 3 battery towers can be connected in parallel, achieving a capacity of up to 60 kWh.
For correct operation in isolated installations, the battery capacity must be at least double the power of the inverter.

Dimensions



BASE | BATTERY MODULE | CONTROL MODULE (BMS)

Connections



BMS RIGHT | BMS LEFT

1. On/Off button.
2. Wi-Fi antenna
3. DC output isolator
4. Positive battery terminal.
5. Negative battery terminal.
6. Main communication port (inverter connection).
7. Ethernet connection.
8. Ports for connecting to other batteries
9. Earth connection.

Technical specifications

MODEL		BASE + BMS	BATTERY MODULE
BATTERY	Rated voltage	-	400
	Rated capacity (kWh)	-	5
	Rated charge/discharge power (kW)	-	2.5
GENERAL	Connections	DEVALAN BLUE MC4 & RJ-45	Integrated stackable connectors
	Level of protection	IP65	
	Indications	Colour display showing battery status and percentage	-
	Communication interface	CAN 2.0 / RS485 / WIFI / LAN	-
	Operating temperature range	-10°C to 50°C	
	Cooling	Natural cooling and forced air ventilation*	
	Relative humidity	5 ~ 95% (non-condensing)	
	Maximum operating altitude	2400 masl	
STANDARDS	Safety / EMC	CE / IEC UNE 62619 / UN 38.3	
	Corporate certifications	ISO 9001, ISO 14001, ISO 45001	
DIMENSIONS	Depth × Width × Height (mm)	189 x 653 x (80+202)	189 x 653 x 315
WEIGHT	Weight (kg)	9.5	51.5
CODE		6B2AC000007	6B2AC000006

*Power degradation up to a maximum of 5000 metres above sea level.

Information subject to change without notice.



INDUSTRIAL BATTERIES (25-60 kWh)

Modular batteries with a capacity of up to 360¸kWh



INDUSTRIAL BATTERIES FROM 25 TO 60¸KWH

The best solution to complement our hybrid inverters is undoubtedly the battery series from the renowned manufacturer SUNWODA.

SUNWODA is a global leader in energy storage solutions using Lithium Iron Phosphate ($LiFePO_4$). With more than 50,000 employees worldwide, it has established itself as a Tier-1 manufacturer recognised for its excellence and innovation.

This storage system stands out for its versatility and adaptability. Thanks to its rack-type design, it can be configured from 25 kWh to 60 kWh, increasing in 5 kWh increments with a single management unit, and reaching up to 360 kWh when combining six units. It's the perfect solution for industrial facilities of any size, especially those with limited space, as its modular design allows for customisation to meet any energy requirement.

We also offer an option designed for outdoor use: a 60 kWh cabinet with climate control and fire protection systems. The included wall-mounting bracket for the inverter and compact design facilitate installation and ensure optimal use of the available space.

Uses: Joint installation with the EQUINOX2¸HSX/HT/HT+

A specific firmware has been developed to maximise the performance of the batteries and meet the requirements of both the entire EQUINOX2 hybrid range and the needs of our customers. The system is primarily geared towards large installations that require high storage capacity, either to cover peaks in energy demand that cannot be met by solar panels or to store surplus energy for use during periods when there is no production. It's also ideal for large-scale isolated installations that require high battery capacity.



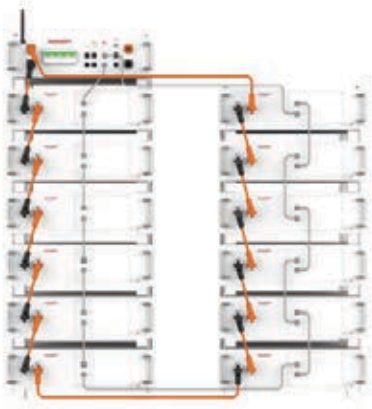
Features

- LiFePO$_4$ technology
- Flexible and modular configuration with a capacity of up to 360 kWh
- Possibility of future expansion
- Connectors and installation materials included
- 10-year warranty or 6,000 cycles
- WIFI and Ethernet communications
- Optimised for industrial and isolated installations
- Operating temperature range from 0°C to 50°C
- Cabinet includes climate control that increases the range from -30°C to 50°C
- Cabinet includes built-in fire protection
- Cabinet includes side support for inverter



Maximum capacity

If more than 60 kWh is required, up to 6 modules can be connected in parallel to achieve a total capacity of 360 kWh.



Backup adaptability

The system's modular nature ensures optimal adjustment to the user's energy backup requirements, while adapting fully to their capacity for investment.

All in one

With an outdoor-ready cabinet featuring built-in climate control and fire protection, you won't have to worry about anything. Simply mount your desired inverter on the side and make the connections.



Range

MODEL	CODE	RATED CAPACITY (kWh)	RATED VOLTAGE (V)	DIMENSIONS (D x W x H mm)	WEIGHT (kg)	COMPATABILITY
SUNWODA Industrial 25 kWh	6B2EA000000	25	256	410 x 480 x 104	248	HSX, HT, HT+
SUNWODA Industrial 30 kWh	6B2EA000001	30	307.2	410 x 480 x 121	294	HSX, HT, HT+
SUNWODA Industrial 35 kWh	6B2EA000002	35	358.4	410 x 1180 x 700	340	HSX, HT, HT+
SUNWODA Industrial 40 kWh	6B2EA000003	40	409.6	410 x 1180 x 870	386	HSX, HT, HT+
SUNWODA Industrial 45 kWh	6B2EA000004	45	460.8	410 x 1180 x 870	432	HSX, HT, HT+
SUNWODA Industrial 50 kWh	6B2EA000005	50	512	410 x 1180 x 1040	478	HT, HT+
SUNWODA Industrial 55 kWh	6B2EA000006	55	563.2	410 x 1180 x 1040	524	HT, HT+
SUNWODA Industrial 60 kWh	6B2EA000007	60	614.4	410 x 1180 x 1210	570	HT, HT+
SUNWODA Industrial cabinet 60 kWh	6B2AC000005	60	614.4	750 x 1200 x 2160	880	HT, HT+

You can configure up to 6 towers/cabinets in parallel, reaching a maximum of 360 kWh.
For isolated installations, we recommend installing at least twice the rated power of the inverter.

Dimensions



BATTERY MODULE

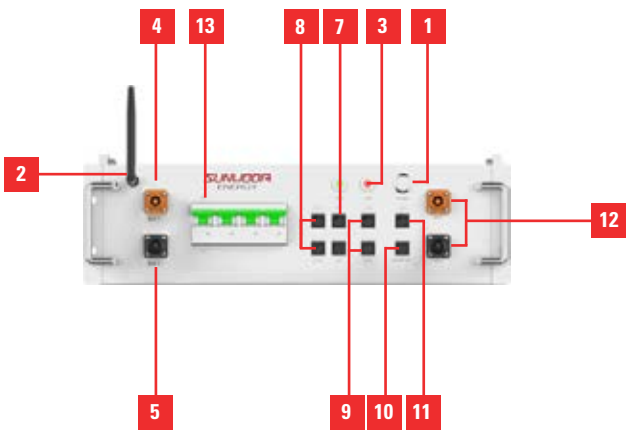


CONTROL MODULE (BMS)



INDUSTRIAL CABINET 60 kWh

Connections



CONTROL MODULE (BMS)

1. On/Off button.
2. Wi-Fi antenna
3. Alarm LED
4. Positive battery terminal.
5. Negative battery terminal.
6. Main communication port (inverter connection).
7. Ethernet connection.
8. Ports for connecting to other batteries
9. Earth connection.
10. WLAN connection.
11. LAN/RJ45 connection
12. Positive/negative output connector
13. DC Disconnector

Technical specifications

MODEL		INDUSTRIAL BATTERIES
BATTERY	Rated voltage	256 ÷ 615
	Rated capacity (kWh)	25 ÷ 60
	Rated charge/discharge power (kW)	12.5 ÷ 30
	Maximum charge/discharge current (A)	100
	Discharge cycles	6,000 cycles @ 25°C 0.5C 90% DOD, EOL 70%
GENERAL	Connections	Quick connectors / RJ45
	Level of protection	IP20 / IP5
	Communication interface	CAN 2.0 / RS485 / WIFI / LAN
	Operating temperature range	Charge: 0°C~50°C / Discharge -20°C~55°C / -30°C~50°C
	Cooling	Natural cooling/Air conditioning cooling
	Relative humidity	5 ~ 95% (non-condensing)
	Maximum operating altitude	2400 masl(1)
STANDARDS	Safety / EMC	CE / UN38.3 / IEC62619 / VDE-AR-N 4105 / IEC 6210
	Corporate certifications	ISO 9001, ISO 14001, ISO 45001
DIMENSIONS	Depth × Width × Height (mm)	410 ÷ 750 x 480 ÷ 1180 x 104 ÷ 2160
WEIGHT	Weight (kg)	248 ÷ 880

(1) Power degradation up to a maximum of 5000 metres above sea level.

Information subject to change without notice.



CV10

Variable frequency drives from 0.2 kW to 2.2 kW



CV10: Compact, flexible and easy-to-use single-phase input drives

Salicru's **Controlvit CV10** variable frequency drive series offers the most competitive solution for a wide range of applications. With a single-phase input voltage, it is designed to operate with low-power motors and has very complete hardware that features, among other things, a removable keypad with built-in potentiometer, dynamic braking unit, RS-485 Modbus communication and natural cooling in equipment of up to 0.75 kW.

Boasting an optimised and elegant design, it has advanced functions that are not typical in its segment, such as automatic energy- saving, PID control, shutdown by operating time, 16-speed multi-step control and basic sleep/wake mode.

In addition to all of this, also notable is Salicru's service, particularly its technical support during commissioning, and its two-year warranty, which includes immediate replacement in the event of fault.

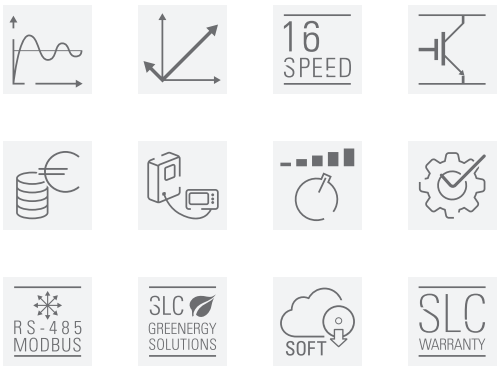
Applications:

The **CV10** is suitable for use with low-power motors of up to 2.2 kW which can be supplied with 230 Vac three-phase voltage. Its most common applications are: fans, extraction hoods, belt conveyors, pumps, agitators, mixers, saws, vibrators, dispensers, separators, blowers, industrial dryers, mobile advertising, high-speed doors, barriers, mobile trolleys and machinery in general.



Performances

· V/f control.
· Built-in potentiometer.
· Remote control with removable keypad.
· Optional EMC filter with easy connection.
· Advanced PID process control.
· Automatic energy saving.
· Built-in dynamic braking unit.
· DC braking.
· Simple sleep/wake function for control of one pump.
· 16-speed multi-step control.
· RS485 Modbus RTU communication.
· Natural cooling (without fan) for power ratings 0.2 ÷ 0.75 kW. Fans with on/off control and easy replacement for 1.5 and 2.2 kW.
· Automatic torque boost.
· Possibility of increasing/decreasing operation speed with external push buttons. (Up down operation).
· Shutdown by operating time.
· Dynamic current limitation.
· Optimised size.
· Intuitive parameter setting by keypad and using VITdrive software.
· SLC Greenergy solution.



Display

1. Indication of inverter status.
2. Indication of magnitude that appears on the display.
3. 5-digit LED display.
4. Potentiometer: enables setpoint to be changed.
5. Enter function codes / Confirm.
6. Enables movement between menus or digits.
7. Stops operation / Reset in the event of fault.
8. Increase/decrease data or raise/lower a function code.
9. Enables programming mode entry and exit.
10. Selectable function: JOG speed, spin reversal, change of operation method.
11. Enables start-up command to be given.





Software

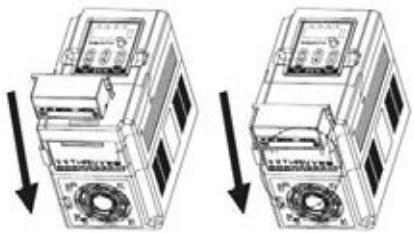
· Allows parameter setting of the equipment and facilitates commissioning and maintenance.
· Local and remote monitoring.

Technical support and service

· Pre- and after-sales service.
· Telephone technical support.
· Training courses.
· Online registration at www.salicru.com.

EMC Filters

Easy installation of category C3 EMC filter



Keypad and potentiometer always included

Regardless of the model, all drives in the range feature a keypad as standard (removable or film type, depending on the model) and analogue or digital potentiometer.

Range

MODEL	CODE	POWER (kW)	INPUT CURRENT (A)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CV10-002-S2	6B1AA000001	0.2	4.9	1.6	134 × 85 × 145	1.4
CV10-004-S2	6B1AA000002	0.4	6.5	2.5	134 × 85 × 145	1.4
CV10-008-S2	6B1AA000003	0.75	9.3	4.2	153 × 85 × 145	1.7
CV10-015-S2	6B1AA000004	1.5	15.7	7.5	153 × 100 × 170	1.7
CV10-022-S2	6B1AA000005	2.2	24	10	153 × 100 × 170	1.7

Power supply voltage: Single-phase 230 V

EMC Filters - Category C3

MODEL	VOLTAGE (V)	INVERTER	DIMENSIONS (F x AN x AL mm.)
IPF-EMC-CV10-008-S2	Single-phase 230 V	CV10…-S2 (0.2 ÷ 0.75 kW)	32 x 70 x 29
IPF-EMC-CV10-022-S2		CV10…-S2 (1.5 ÷ 2.2 kW)	32 x 81 x 32

Dimensions



CV10-002÷008-S2



CV10-015/022-S2

Connections



CV10-002÷022-S2

1. LED display.
2. Built-in potentiometer.
3. Operation keys.
4. Power terminal.
5. control terminal.
6. Output relay.

Technical specifications

MODEL		CV10
INPUT	Rated voltage	Single-phase 220 V (-15%) ÷ 240 V (+10%)
	Rated frequency	50/60 Hz / Allowed range: 47 ÷ 63 Hz
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of input voltage
	Frequency	0 ÷ 400 Hz
	Admissible overloads	150% for 1 min; 180% for 10 s; 200% for 1 s
	Maximum distance	<50 m without filter / between 50 and 100 m install chokes / >100 m sine wave filter
CONTROL SPECIFICATIONS	Type of motor	Asynchronous
	Method of control	V/f
	V/f characteristics	Linear and user defined
	Degree of control	1% of maximum output frequency
	Speed fluctuation	±5%
	Braking unit	Built-in
INPUT SIGNALS	Digital	4/5 programmable inputs, NPN logic, selectable polarity, virtual activation by communication, on/off delay times
	Analogue	1 input, 0 ÷ 10 V / 0 ÷ 20 mA. Built-in potentiometer
OUTPUT SIGNALS	Relay	1 multifunction output. Selectable standby mode (NO or NC) Maximum 3 A / 250 VAC, 1 A / 30 VDC. On/off delay
	Power Supply	24 V (±10%) 100 mA
	Analogue	1 selectable output 0 ÷ 10 V / 0 ÷ 20 mA, proportional to frequency, current, speed, voltage, torque, etc.
	Digital	1 multifunction open collector output (50 mA / 30 V) Selectable polarity and on/off delay
	Communication port	RS-485 Modbus-RTU
OPERATION	Method	Keypad (removable up to 5 m), control terminal and communication
	Frequency setting	Digital, analogue, multi-step, PID, Modbus communication
	Protection	Overcurrent, overvoltage, low voltage, inverter overheating, phase loss, overload, underload, etc.
FILTERING	EMC filter	Category C3 with easy connection as option
GENERAL	Ambient temperature	-10 ÷ 50°C (1% derating per degree exceeding 40°C)
	Degree of protection	IP20
	Cooling	0.2 ÷ 0.75 kW: Natural by radiator / 1.5 and 2.2 kW: Forced by fan
	Installation	Wall mounting
STANDARDS	Safety	EN 61800-5-1
	Electromagnetic compatibility (EMC)	EN 61800-3 C3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.

CV30

Variable frequency drives from 0.4 kW to 7.5 kW



CV30: General-purpose vector variable frequency drives

Salicru's **Controlvit CV30** variable frequency drive series stands out for its design, reliability, compact size and ease of use. The high quality of its components, advanced features and versatility make it the ideal variable frequency drive for the actuation of low-power motors (0.4 kW to 7.5 kW) in the vast majority of applications, being available for both single-phase (230 VAC) and three-phase (400 VAC and 230 VAC) supply voltages.

Its advanced sensorless vector control, which has two different algorithms depending on the required performance, ensures high torque even when working at very low speeds. In addition to all of this, it features an automatic energy-saving function which achieves significant consumption reductions, mainly in ventilation, water treatment and irrigation applications.

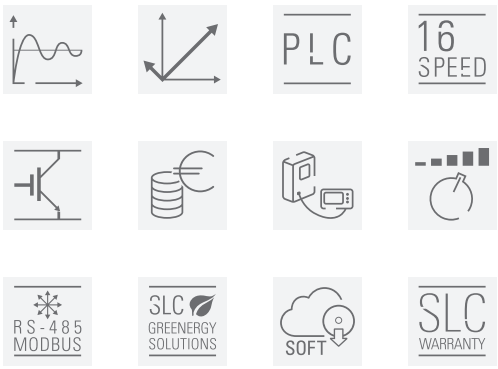
Applications:

The **CV30** can be incorporated into the vast majority of machinery, and can control pumps and fans. Some of its common applications are: belt conveyors, agitators, compressors, hoists, saws, vibrators, presses, polishers, barriers and high-speed doors, centrifugal and submersible pumps, blowers, separators, industrial washing machines, mobile trolleys, positioners, ornamental fountains, dispensers, air extraction equipment, fans, advertising and mobile stages, meat, textile and packaging machinery, etc.



Performances

· Selectable control: V/f, sensorless vector or torque control.
· EMC filter, built-in or optional for easy connection (depending on model).
· Automatic motor tuning (static and dynamic).
· 150% torque at 0.5 Hz.
· Advanced PID process control.
· Simple sleep/wake function for control of one pump.
· Simple PLC (automatic cycle) and 16-speed multi-step control.
· RS485 Modbus RTU communication.
· Built-in potentiometer.
· Remote control with removable or optional keypad (depending on model).
· Intuitive parameter setting.
· Compact size and side-by-side installation (depending on model).
· DIN rail mounting (depending on model).
· Built-in dynamic braking unit.
· DC braking.
· Automatic energy saving and kWh meter.
· Pulse train input (max. 50 kHz).
· Fly-start function.
· Numerous inputs/outputs (4/5 digital inputs, 1 pulse input, 2 analogue inputs and 2 analogue outputs, 2 relay outputs, 1 transistor output).
· Cooling fans with On/Off control and easy replacement.
· Monitoring and parameter setting using VITdrive software.
· SLC Greenergy solution.



Keypad and potentiometer always included

Regardless of the model, all drives in the range feature a keypad as standard (removable or film type, depending on the model) and analogue or digital potentiometer.

Built-in energy meter

The **CV30** and **CV50** series are equipped with a meter to measure the kWh consumed by the drive. This metering can be stopped in the event of testing, setting an initial value, resetting and accessing it via Modbus communication.

Software

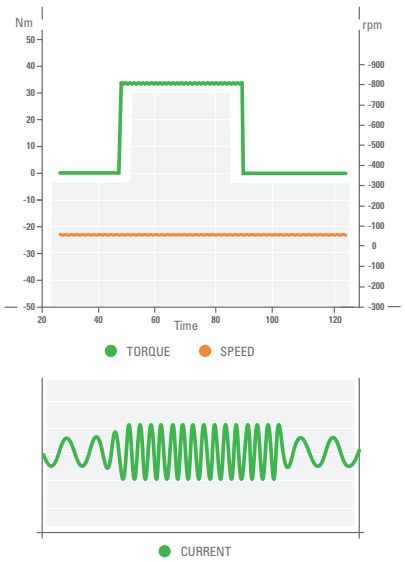
· Allows parameter setting of the equipment and facilitates commissioning and maintenance.
· Local and remote monitoring.

Technical support and service

· Pre- and after-sales service.
· Commissioning.
· Telephone technical support.
· Training courses.
· Online registration at www.salicru.com.

Advanced vector control

In the event of a sudden change in load with the motor running at 0.5 Hz, the speed remains constant and the assembly is capable of providing the torque demanded at full load.





Range

MODEL	CODE	POWER SUPPLY VOLTAGE	POWER (kW)	INPUT CURRENT (A)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CV30-004-S2	6B1BA000001	Single phase 230 V	0.4	6.5	2.5	123 × 80 × 160	1.3
CV30-008-S2	6B1BA000002	Single phase 230 V	0.75	9.3	4.2	123 × 80 × 160	1.3
CV30-015-S2	6B1BA000003	Single phase 230 V	1.5	15.7	7.5	140 × 80 × 185	1.6
CV30-022-S2	6B1BA000004	Single phase 230 V	2.2	24	10	140 × 80 × 185	1.6
CV30-008-4	6B1BC000001	Three-phase 400 V	0.75	3.4	2.5	140 × 80 × 185	1.4
CV30-015-4	6B1BC000002	Three-phase 400 V	1.5	5	4.2	140 × 80 × 185	1.4
CV30-022-4	6B1BC000003	Three-phase 400 V	2.2	5.8	5.5	140 × 80 × 185	1.4
CV30-040-4F	6B1BC000004	Three-phase 400 V	4	13.5	9.5	167 × 146 × 256	3.9
CV30-055-4F	6B1BC000005	Three-phase 400 V	5.5	19.5	14	167 × 146 × 256	3.9
CV30-075-4F	6B1BC000006	Three-phase 400 V	7.5	25	18.5	196 × 170 × 320	6.5
CV30-004-2	6B1BB000001	Three-phase 230 V	0.4	3.7	2.5	140 × 180 × 185	1.4
CV30-008-2	6B1BB000002	Three-phase 230 V	0.75	5	4.2	140 × 180 × 185	1.4
CV30-015-2F	6B1BB000003	Three-phase 230 V	1.5	7.7	7.5	167 × 146 × 256	3.9
CV30-022-2F	6B1BB000004	Three-phase 230 V	2.2	11	10	167 × 146 × 256	3.9
CV30-040-2F	6B1BB000005	Three-phase 230 V	4	17	16	167 × 146 × 256	3.9
CV30-055-2F	6B1BB000006	Three-phase 230 V	5.5	21	20	196 × 170 × 320	6.5
CV30-075-2F	6B1BB000007	Three-phase 230 V	7.5	31	30	196 × 170 × 320	6.5

EMC Filters - Category C3

MODEL	VOLTAGE (V)	INVERTER	DIMENSIONS (F x AN x AL mm.)
IPF-EMC-CV30-022-S2	Single phase 230 V	CV30…-S2 (0.4 ÷ 2.2 kW)	38 x 69 x 31
IPF-EMC-CV30-022-2/4	Three-phase 400 V Three-phase 230 V	CV30…-4 (0.75 ÷ 2.2 kW) CV30…-2 (0.4 ÷ 0.75 kW)	

Dimensions



CV30-004/008-S2



CV30-015/022-S2
CV30-008÷022-4
CV30-004/008-2



CV30-040/055-4F
CV30-015÷040-2F



CV30-075-4F
CV30-055/075-2F

Technical specifications

MODEL		CV30
INPUT	Rated voltage	Single phase 220 V (-15%) ÷ 240 V (+10%) / Three-phase 380 V (-15%) ÷ 440 V (+10%) / Three-phase 220 V (-15%) ÷ 240 V (+10%)
	Rated frequency	50/60 Hz / Allowed range: 47 ÷ 63 Hz
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of input voltage
	Frequency	0 ÷ 400 Hz
	Admissible overloads	150% for 1 min; 180% for 10 s; 200% for 1 s
	Maximum distance	<50 m without filter / between 50 and 100 m install chokes / >100 m sine wave filter
CONTROL SPECIFICATIONS	Type of motor	Asynchronous
	Method of control	V/f, sensorless vector control, torque control
	V/f characteristics	Linear, quadratic (3 types), user defined
	Degree of control	1% of maximum output frequency
	Speed fluctuation	±0.3% (in vector control mode)
	Braking unit	Built-in
INPUT SIGNALS	Digital	4/5 programmable inputs, PNP or NPN logic , pulse input, maximum frequency 50 kHz, selectable polarity, virtual activation, on/off delay times
	Analogue	2 inputs, AI2: 0 ÷ 10 V / 0 ÷ 20 mA and AI3: -10 ÷ 10 V Built-in potentiometer
OUTPUT SIGNALS	Relay	2 multifunction NO/NC switching outputs Maximum 3 A / 250 VAC, 1 A / 30 VDC. Selectable polarity and on/off delay
	Power Supply	24 V (±10%) 200 mA
	Analogue	2 selectable outputs 0 ÷ 10 V / 0 ÷ 20 mA, proportional to frequency, current, speed, voltage, torque, etc.
	Digital	1 multifunction open collector output (50 mA / 30 V) Selectable polarity and on/off delay
	Communication port	RS-485 Modbus-RTU
OPERATION	Method	Keypad, control terminal and communication. Removable keypad up to 30 m for models 3ø 380 ≥ 4 kW and 3ø 230 ≥ 1.5 kW. For other models, remote keypad (up to 30 m) as optional extra.
	Frequency setting	Digital, analogue, pulse train, multi-step, simple PLC, PID, Modbus communication
	Protection	Overcurrent, overvoltage, low voltage, inverter overheating, phase loss, overload, underload, etc.
FILTERING	EMC filter	Category C3 built-in for 3ø 380 V ≥ 4 kW and 3ø 230 V≥ 1.5 kW inverters. Category C3 with easy connection for others as option
GENERAL	Ambient temperature	-10 ÷ 50°C (1% derating per degree exceeding 40°C)
	Degree of protection	IP20
	Cooling	By easy-to-maintain fans
	Installation	Side-by-side type on DIN rail or wall mounting for 1ø 230 V / 3ø 380 V ≤2.2 kW and 3ø 230 V ≤0.75 kW inverters. Wall of cabinet or flange mounting for other inverters.
STANDARDS	Safety	EN 61800-5-1
	Electromagnetic compatibility (EMC)	EN 61800-3 C3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.

CV50

Variable frequency drives from 0.75 kW to 500 kW



CV50: High-performance multifunction vector frequency drives

Salicru's **Controlvit CV50** variable frequency drive series covers power ratings that range from 0.75 kW to 500 kW. They are suitable for both constant and variable torque applications (power duality), and therefore allow the costs of the system to be optimised by adapting to the type of load to be regulated.

They stand out for their design, reliability, ease of use and versatility, being suitable both for low-power applications, where it is necessary to have good control precision, and high-power applications, where it is important to maintain the appropriate torque and ensure continuity of operation.

Thanks to their automatic energy-saving function, they achieve significant consumption reductions, mainly in ventilation, water treatment and irrigation applications.

Applications:

The **CV50** is a dual inverter, meaning that it can work in constant and variable torque applications. For this reason, they are suitable for use in the following applications: pumps, fans, HVAC applications, compressors, extruders, mills, presses, mining industry and machinery in general.



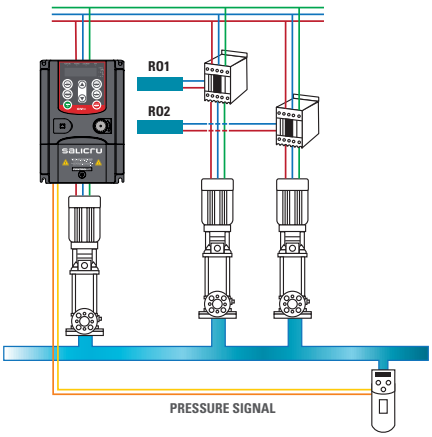
Performances

- Selectable control: V/f, sensorless vector or torque control.
- Built-in EMC filter.
- Power duality: constant torque / variable torque.
- Advanced sleep/wake function for control of up to 3 pumps.
- Motor auto-tuning motor tuning (static and dynamic).
- 150% torque at 0.5 Hz.
- Advanced PID process control.
- Simple PLC (automatic cycle) and 16-speed multi-step control.
- RS485 Modbus RTU communication.
- Built-in potentiometer.
- Remote control with removable or optional keypad.
- Intuitive parameter setting.
- Compact size.
- Built-in dynamic braking unit (≤30 kW).
- DC braking.
- Automatic energy saving and kWh meter.
- Pulse train input (max. 50 kHz).
- Fly start function.
- Numerous inputs/outputs (8 digital inputs, 1 pulse input, 2 analogue inputs and 2 analogue outputs, 2 relay outputs, 1 transistor output, 1 pulse output).
- Cooling fans with On/Off control and easy replacement.
- Monitoring and parameter setting using VITdrive software.
- SLC Greenergy solution.



Pumping systems

- The CV50 inverter enables the creation of a pressure unit with up to three pumps (main pump + two fixed auxiliary pumps).
- By means of a signal provided by the transducer, automatic PID pressure control is performed.
- The setpoint can be set via keypad, an analogue signal or RS485 Modbus communication.
- Features two level parameter setting modes for sleep or wake: % of sensor pressure or by frequency.



Advanced vector control

In the event of a sudden change in load with the motor running at 0.5 Hz, the speed remains constant and the assembly is capable of providing the torque demanded at full load.

Technical support and service

- Pre- and after-sales service.
- Telephone technical support.
- Maintenance contracts.
- Training courses.
- Online registration at www.salicru.com.



Range

MODEL	CODE	CONSTANT TORQUE			VARIABLE TORQUE			DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
		POWER (kW)	CURRENT INPUT (A)	CURRENT OUTPUT (A)	POWER (kW)	CURRENT INPUT (A)	CURRENT OUTPUT (A)		
CV50-008-4F	6B1CA000001	0.75	3.4	2.5	-	-	-	175 × 126 × 186	2.5
CV50-015-4F	6B1CA000002	1.5	5	3.7	-	-	-	175 × 126 × 186	2.5
CV50-022-4F	6B1CA000003	2.2	5.8	5	-	-	-	175 × 126 × 186	2.5
CV50-040-4F	6B1CA000004	4	13	9	5.5	19.5	14	181 × 146 × 256	4.1
CV50-055-4F	6B1CA000005	5.5	19.5	14	7.5	25	18.5	181 × 146 × 256	4.1
CV50-075-4F	6B1CA000006	7.5	25	18.5	11	32	25	216 × 170 × 320	7.4
CV50-110-4F	6B1CA000007	11	32	25	15	40	32	216 × 170 × 320	7.4
CV50-150-4F	6B1CA000008	15	40	32	18.5	47	38	216 × 170 × 320	7.4
CV50-185-4F	6B1CA000009	18.5	47	38	22	56	45	216 × 230 × 342	9
CV50-220-4F	6B1CA000010	22	56	45	30	70	60	245 × 255 × 407	11
CV50-300-4F	6B1CA000011	30	70	60	37	80	75	245 × 255 × 407	11
CV50-370-4F	6B1CA000012	37	80	75	45	94	92	325 × 270 × 555	32
CV50-450-4F	6B1CA000013	45	94	92	58	128	115	325 × 270 × 555	32
CV50-550-4F	6B1CA000014	55	128	115	75	160	150	325 × 270 × 555	32
CV50-750-4F	6B1CA000015	75	160	150	90	190	180	365 × 325 × 680	67
CV50-900-4F	6B1CA000016	90	190	180	110	225	215	365 × 325 × 680	67
CV50-1100-4F	6B1CA000017	110	225	215	132	265	260	365 × 325 × 680	67
CV50-1320-4F	6B1CA000018	132	265	260	160	310	305	360 × 500 × 870	110
CV50-1600-4F	6B1CA000019	160	310	305	185	345	340	360 × 500 × 870	110
CV50-1850-4F	6B1CA000020	185	345	340	200	385	380	360 × 500 × 870	110
CV50-2000-4F	6B1CA000021	200	385	380	220	430	425	360 × 500 × 870	110
CV50-2200-4F	6B1CA000022	220	430	425	250	485	480	380 × 750 × 1410	165
CV50-2500-4F	6B1CA000023	250	485	480	280	545	530	380 × 750 × 1410	165
CV50-2800-4F	6B1CA000024	280	545	530	315	610	600	380 × 750 × 1410	165
CV50-3150-4F	6B1CA000025	315	610	600	350	625	650	380 × 750 × 1410	165
CV50-3500-4F	6B1CA000026	350	625	650	400	715	720	560 × 620 × 1700	450
CV50-4000-4F	6B1CA000027	400	715	720	-	-	-	560 × 620 × 1700	450
CV50-5000-4F	6B1CA000028	500	890	860	-	-	-	560 × 620 × 1700	450

Power supply voltage: Three-phase 400 V

Dimensions



CV50-040/055-4F



CV50-075÷150-4F



CV50-220/300-4F

Technical specifications

MODEL		CV50
INPUT	Rated voltage	Three-phase 380 V (-15%) ÷ 440 V (+10%)
	Rated frequency	50/60 Hz / Allowed range: 47 ÷ 63 Hz
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of input voltage
	Frequency	0 ÷ 400 Hz
	Admissible overloads	Constant torque: 150% for 1 min; 180% for 10 s; 200% for 1 s Variable torque: 120% for 1 min
	Maximum distance	<50 m without filter / between 50 and 100 m install chokes / >100 m LC filter
CONTROL SPECIFICATIONS	Type of motor	Asynchronous
	Method of control	V/f, sensorless vector control, torque control
	V/f characteristics	Linear, quadratic (3 types), user defined
	Degree of control	1% of maximum output frequency
	Speed fluctuation	±0.3% (in vector control mode)
	Braking unit	Built-in for ≤30 kW, external (optional) for ≥37 kW
INPUT SIGNALS	Digital	8 programmable inputs, PNP or NPN logic, pulse input, maximum frequency 50 kHz, selectable polarity, virtual activation, On/Off delay times
	Analogue	2 inputs, AI2: 0 ÷ 10 V / 0 ÷ 20 mA and AI3: -10 ÷ 10V Built-in potentiometer
OUTPUT SIGNALS	Relay	2 multifunction NO/NC switching outputs Maximum 3 A / 250 VAC, 1 A / 30 VDC Selectable polarity and on/off delay
	Power Supply	24 V (±10%) 200 mA
	Analogue	2 selectable outputs 0 ÷ 10 V / 0 ÷ 20 mA, proportional to frequency, current, speed, voltage, torque, etc
	Digital	1 multifunction open collector output (200 mA / 30 V) 1 selectable output between pulses (max. 50 kHz) and open collector Selectable polarity and on/off delay
	Communication port	RS-485 Modbus-RTU
OPERATION	Method	Keypad, control terminal and communication Removable keypad up to 200 m for models ≥ 18.5 kW For other models, remote keypad (up to 200 m) as optional extra
	Frequency setting	Digital, analogue, pulse train, multi-step, simple PLC, PID, Modbus communication
	Protection	Overcurrent, overvoltage, low voltage, inverter overheating, phase loss, overload, underload, etc
FILTERING	EMC filter	Built-in. Category C3
	DC reactor	Installable in inverters ≥37 kW
GENERAL	Ambient temperature	-10° ÷ 50°C (3% derating per degree exceeding 40°C)
	Degree of protection	IP20
	Cooling	By easy-to-maintain fans
	Installation	Wall, flange and floor mounting for ≥ 220 kW
STANDARDS	Safety	EN 61800-5-1
	Electromagnetic compatibility (EMC)	EN 61800-3 C3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.

CV30-PV

Variable frequency drives for solar water pumping systems from 0.4 kW to 75 kW



CV30-PV: Variable frequency drives for solar water pumping systems

The **CV30-PV** drive allows water to be pumped using the radiation captured by solar panels as an energy source. The solar light energy obtained is transformed into direct current which powers the drive, and this in turn powers a submersible pump using alternating current, thus enabling water from the ground to be extracted. The extracted water can be stored in a tank or raft of storage for subsequent use, or it can be used for direct irrigation, depending on the needs of the farm.

This system is highly useful in locations that need a reliable, cost-effective water supply with a long service life and low maintenance costs. It is also environmentally friendly as it does not cause pollution or noise.

Applications:

The main application of the **CV30-PV** drive is agricultural irrigation, either by accumulating water in a tank for subsequent use or by direct irrigation from a well.

Other applications include domestic consumption in isolated areas, livestock water supply, fish farming, municipal and forestry irrigation, and desert control.



Performances

· Integrated advanced MPPT algorithm: Maximum power point tracking of solar panels and 99% efficiency.
· Automatic start and stop depending on the solar radiation.
· Easy configuration: It is only necessary to set a few parameters.
· Optimum functioning at all times, adapting to environmental conditions.
· Multiple protections: Particularly notable are its overvoltage protection and warning against reverse polarity in the photovoltaic input, and automatic overtemperature derating.
· Detection of dry well and full tank.
· Considerable reduction in the number of solar panels required thanks to the optional booster module (up to 2.2 kW).
· Possibility of isolated and switched power supply (mains or diesel generator) through the installation of an optional module.



Booster module

The BOOST MOD-320-PV module enables the number of solar panels required to power the system to be greatly reduced, resulting in considerable financial savings and simplified installation. It also allows automatic switching to the mains or a power generator. It can be used in drive models of up to 2.2 kW.



Automatic switching module

ATS MOD-...-4PV modules enable an automatic switching installation to be carried out. When the energy available in the solar panels is insufficient to power the drive, the system switches to the mains or generator, and switches back when the energy is sufficient.



Advanced vector control

In the event of a sudden change in load with the motor running at 0.5 Hz, the speed remains constant and the assembly is capable of providing the torque demanded at full load.

Technical support and service

· Pre- and after-sales service.
· Telephone technical support.
· Online registration at www.salicru.com.

Range

MODEL	CODE	POWER (kW)	DIMENSIONS (D × W × H mm)	SOLAR PANEL CONFIGURATION (MODULES PER STRING * NUMBER OF STRINGS)					
				Power: 425-450 Wp 144 Cells		Power: 480-505 Wp 150 Cells		Power: 510-550 Wp 110 Cells	
				Without BOOSTER	With BOOSTER	Without BOOSTER	With BOOSTER	Without BOOSTER	With BOOSTER
CV30-008-S2 PV	6B1DA000001	0.75	123 × 80 × 160	11*1	3*1	10*1	3*1	9*1	3*1
CV30-015-S2 PV	6B1DA000003	1.5	140 × 80 × 185	11*1	6*1	10*1	5*1	9*1	5*1
CV30-022-S2 PV	6B1DA000002	2.2	140 × 80 × 185	11*1	9*1	10*1	8*1	9*1	7*1

DC power supply voltage: 200 ÷ 400 V / Mains supply voltage: Single-phase 230 V

Dimensions

MODEL	CODE	POWER (kW)	DIMENSIONS (D × W × H mm)	SOLAR PANEL CONFIGURATION (MODULES PER STRING * NUMBER OF STRINGS)					
				Power: 425-450 Wp 144 Cells		Power: 480-505 Wp 150 Cells		Power: 510-550 Wp 110 Cells	
				Without BOOSTER	With BOOSTER	Without BOOSTER	With BOOSTER	Without BOOSTER	With BOOSTER
CV30-008-4 PV	6B1DC000011	0.75	140 × 80 × 185	18*1	3*1	16*1	3*1	15*1	3*1
CV30-015-4 PV	6B1DC000010	1.5	140 × 80 × 185	18*1	6*1	16*1	5*1	15*1	5*1
CV30-022-4 PV	6B1DC000001	2.2	140 × 80 × 185	18*1	9*1	16*1	8*1	15*1	7*1
CV30-040-4F PV	6B1DC000002	4	167 × 146 × 256	18*1	N/D	16*1	N/D	15*1	N/D
CV30-055-4F PV	6B1DC000003	5.5	167 × 146 × 256	18*1	N/D	16*1	N/D	15*2	N/D
CV30-075-4F PV	6B1DC000004	7.5	196 × 170 × 320	18*2	N/D	16*2	N/D	15*2	N/D
CV30-110-4F PV	6B1DC000012	11	196 × 170 × 320	18*2	N/D	16*2	N/D	15*3	N/D
CV30-150-4F PV	6B1DC000005	15	196 × 170 × 320	18*3	N/D	16*3	N/D	15*3	N/D
CV30-220-4F PV	6B1DC000006	22	184 × 200 × 340	18*4	N/D	16*4	N/D	15*5	N/D
CV30-300-4F PV	6B1DC000014	30	202 × 250 × 400	18*5	N/D	16*5	N/D	15*6	N/D
CV30-370-4F PV	6B1DC000007	37	202 × 250 × 400	18*6	N/D	16*7	N/D	15*7	N/D
CV30-550-4F PV	6B1DC000008	55	238 × 282 × 560	18*10	N/D	16*11	N/D	15*11	N/D
CV30-750-4F PV	6B1DC000009	75	238 × 282 × 560	18*12	N/D	16*13	N/D	15*15	N/D

DC power supply voltage: 300 ÷ 750 V / Mains supply voltage: Three-phase 400 V
N/A: Not available

Dimensions



CV30-015/022-S2 PV
CV30-008÷022-4 PV



CV30-220-4F PV



CV30-550/750-4F PV

Technical specifications

MODEL		S2 models	4 / 4F models
PHOTOVOLTAIC INPUT	Recommended DC input	200 ÷ 400 V	300 ÷ 750 V
	Recommended MPPT voltage	330 V	550 V
	Maximum DC voltage	440 V	800 V
	Starting voltage	200 V (80 V with booster)	300 V (80 V with booster)
	Minimum DC voltage	150 V (70 V with booster)	250 V (70 V with booster)
MAINS INPUT	Voltage	Single-phase 220 V (-15%) ÷ 240 V (+10%)	Three-phase 380 V (-15%) ÷ 440 V (+10%)(1)
	Frequency	50/60 Hz Permitted range: 47 ÷ 63 Hz	
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of the input voltage.	
	Admissible overloads	150% for 1 min; 180% for 10 s; 200% for 1s	
	Maximum distance	<50 m without filter / between 50 and 100 m install chockes / >100 m sine-wave filter.	
INPUT SIGNALS	Digital	5 programmable inputs, PNP or NPN logic. Selectable polarity, on/off delay times.	
OUTPUT SIGNALS	Relay	Drives ≤ 2.2 kW: 1 multifunction NO/NC switching output / Drives ≥ 4 kW: 2 multifunction NO/NC switching outputs Maximum 3 A / 250 Vac, 1 A / 30 Vdc	
	Analogue	Drives ≤ 2.2 kW: Not available / Drives ≥ 4 kW: 2 selectable outputs 0 ÷ 10 V / 0 ÷ 20 mA	
	Digital	Drives ≤ 2.2 kW: Not available / Drives ≥ 4 kW: 1 multifunction open collector output (50 mA / 30V)	
	Communication port	Drives ≤ 2.2 kW: 1 RS-485 Modbus RTU port + 1 RS-422 port / Drives ≥ 4 kW: 1 RS-485 Modbus RTU port	
SPECIFIC PROTECTIONS	Faults	Overvoltage, undervoltage, overcurrent, reverse polarity connection, communication failure with the booster module, broken hydraulic sensor.	
	Alarms	Weak light, underload, full tank.	
FILTERING	EMC filter	Drives ≤ 2.2 kW: Category C3 with easy connection as option / Drives ≥ 4 kW: Category C3 integrated	
GENERAL	Ambient temperature	- 10 ~ 50°C (1% derating per degree exceeding 40°C).	
	Degree of protection	IP20	
STANDARDS	Safety	EN 61800-5-1	
	Electromagnetic compatibility (EMC)	EN 61800-3 C3	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) Can work at 3 x 220~240 Vac through configuration, with derating of the nominal power

Information subject to change without notice.

ACV30-PV

Solar-powered pumping cabinets



ACV30-PV: Complete solution for solar-powered pumping facilities

The **ACV30-PV** cabinets offer a fully finished solution for solar-powered pumping facilities that use pumps of up to 5.5 kW. Depending on the model, they can be mounted indoors or outdoors, and offer the option of isolated systems (powered solely by solar panels), systems with automatic switchover to the power generator or mains, and systems with manual switchover.

They incorporate the **CV30-PV** drive, which is specifically designed for solar-powered pumping, and depending on the model they also include the **BOOST MOD-320-PV** booster module, which significantly reduces the number of panels required. They are equipped with the necessary protection at the solar panel input (DC circuit breaker and over-voltage protector) and, where applicable, the AC input (circuit breaker and contactor). As the distance between the drive and the pump can be considerable, all models are fitted with an output ferrite in order to prevent potential pump breakdowns; moreover, for particularly long distances (usually over 100 metres), the option of cabinet-mounted sine-wave filters is available.

To ensure full control of the system, the cabinets also include a water level sensor and digital clock/timer. This can be used to protect the pump against dry operation, and to set the system's operating times. Without a doubt, it is a solution that offers installers tremendous convenience and reliability, owing to the fact that potential issues with mounting and configuration are reduced to a minimum.

Applications:

The main application of the **ACV30-PV** solar-powered pumping cabinets is agricultural irrigation, either via the accumulation of water in a tank or feeder pool for subsequent use or via direct irrigation from a well.

Other applications include domestic consumption in isolated areas, livestock water supply, fish farming, municipal and forestry irrigation, and desert control.



Performances

- Simple to install and configure.
- Indoors or outdoors mounting.
- Isolated power supply or with automatic/manual switchover.
- Optional booster module.
- DC circuit breaker.
- AC circuit breaker for models with switchover to the generator or mains.
- DC over-voltage protector (Type II, 1,000 VDC).
- 24 VDC water level sensor + weights.
- Clock/timer for ON/OFF control.
- Control console and ON/OFF switch on the cabinet door (indoor mounting).
- Status indicator lights and ON/OFF switch on the cabinet door (outdoor mounting).
- Output ferrite.
- ATS automatic switchover module (>2.2 kW models with switchover).
- Optional cabinet-mounted sine wave filter, recommended for systems where the distance between the drive and the pump is over 100 metres.



Indoor mounting model

For added convenience, these models incorporate a control console mounted on the door of the cabinet. Thanks to this design feature, users do not need to open the cabinet in order to change the parameters or check the status of the system. Moreover, ample space has been set aside to incorporate additional control elements, in accordance with the needs of each facility.



Outdoor mounting model

For these models, the ON/OFF control and system status indicators are accessed via buttons on the door of the cabinet, thereby maintaining a high level of protection. The cabinet also includes a rain canopy to provide even more protection against inclement weather.



Dimensions



ACV30-PV Indoor mounting



ACV30-PV Outdoor mounting

Range

MODEL	CODE	MOUNTING	TYPE OF SYSTEM	BOOSTER	PUMP VOLTAGE (V)	MAXIMUM PUMP POWER (kW)
ACV30-015-S2 PV IAB	6B1BS000001	Indoor	Isolated	Yes	3 × 230	1.5
ACV30-022-4 PV IAB	6B1BS000002	Indoor	Isolated	Yes	3 × 400	2.2
ACV30-015-S2 PV IAD	6B1BS000003	Indoor	Isolated	No	3 × 230	1.5
ACV30-022-S2 PV IAD	6B1BS000004	Indoor	Isolated	No	3 × 230	2.2
ACV30-022-4 PV IAD	6B1BS000005	Indoor	Isolated	No	3 × 400	2.2
ACV30-055-4F PV IAD	6B1BS000006	Indoor	Isolated	No	3 × 400	5.5
ACV30-015-S2 PV IGB	6B1BS000007	Indoor	Automatic switchover to the generator	Yes	3 × 230	1.5
ACV30-022-S2 PV IGB	6B1BS000008	Indoor	Automatic switchover to the generator	Yes	3 × 230	2.2
ACV30-022-4 PV IGB	6B1BS000009	Indoor	Automatic switchover to the generator	Yes	3 × 400	2.2
ACV30-055-4F PV IGD	6B1BS000010	Indoor	Automatic switchover to the generator	No	3 × 400	5.5
ACV30-015-S2 PV IRB	6B1BS000011	Indoor	Automatic switchover to mains power	Yes	3 × 230	1.5
ACV30-022-S2 PV IRB	6B1BS000012	Indoor	Automatic switchover to mains power	Yes	3 × 230	2.2
ACV30-022-4 PV IRB	6B1BS000013	Indoor	Automatic switchover to mains power	Yes	3 × 400	2.2
ACV30-055-4F PV IRD	6B1BS000014	Indoor	Automatic switchover to mains power	No	3 × 400	5.5
ACV30-015-S2 PV IMB	6B1BS000015	Indoor	Manual switchover	Yes	3 × 230	1.5
ACV30-022-S2 PV IMB	6B1BS000016	Indoor	Manual switchover	Yes	3 × 230	2.2
ACV30-022-4 PV IMB	6B1BS000017	Indoor	Manual switchover	Yes	3 × 400	2.2
ACV30-055-4F PV IMD	6B1BS000018	Indoor	Manual switchover	No	3 × 400	5.5
ACV30-015-S2 PV EAB	6B1BS000019	Outdoor	Isolated	Yes	3 × 230	1.5
ACV30-022-4 PV EAB	6B1BS000020	Outdoor	Isolated	Yes	3 × 400	2.2
ACV30-015-S2 PV EAD	6B1BS000021	Outdoor	Isolated	No	3 × 230	1.5
ACV30-022-S2 PV EAD	6B1BS000022	Outdoor	Isolated	No	3 × 230	2.2
ACV30-022-4 PV EAD	6B1BS000023	Outdoor	Isolated	No	3 × 400	2.2
ACV30-055-4F PV EAD	6B1BS000024	Outdoor	Isolated	No	3 × 400	5.5
ACV30-015-S2 PV EGB	6B1BS000025	Outdoor	Automatic switchover to the generator	Yes	3 × 230	1.5
ACV30-022-S2 PV EGB	6B1BS000026	Outdoor	Automatic switchover to the generator	Yes	3 × 230	2.2
ACV30-022-4 PV EGB	6B1BS000027	Outdoor	Automatic switchover to the generator	Yes	3 × 400	2.2
ACV30-055-4F PV EGD	6B1BS000028	Outdoor	Automatic switchover to the generator	No	3 × 400	5.5
ACV30-015-S2 PV ERB	6B1BS000029	Outdoor	Automatic switchover to mains power	Yes	3 × 230	1.5
ACV30-022-S2 PV ERB	6B1BS000030	Outdoor	Automatic switchover to mains power	Yes	3 × 230	2.2
ACV30-022-4 PV ERB	6B1BS000031	Outdoor	Automatic switchover to mains power	Yes	3 × 400	2.2
ACV30-055-4F PV ERD	6B1BS000032	Outdoor	Automatic switchover to mains power	No	3 × 400	5.5
ACV30-015-S2 PV EMB	6B1BS000033	Outdoor	Manual switchover	Yes	3 × 230	1.5
ACV30-022-S2 PV EMB	6B1BS000034	Outdoor	Manual switchover	Yes	3 × 230	2.2
ACV30-022-4 PV EMB	6B1BS000035	Outdoor	Manual switchover	Yes	3 × 400	2.2
ACV30-055-4F PV EMD	6B1BS000036	Outdoor	Manual switchover	No	3 × 400	5.5

Technical specifications

MODEL		3x230 pumps	3x400 pumps
PHOTOVOLTAIC INPUT	Recommended DC input	200 ÷ 400 V	300 ÷ 750 V
	Recommended MPPT voltage	330 V	550 V
	Maximum DC voltage	440 V	800 V
	Starting voltage	200 V (80 V with booster)	300 V (80 V with booster)
	Minimum DC voltage	150 V (70 V with booster)	250 V (70 V with booster)
	DC protection	DC circuit breaker and overvoltage protector (Type II, 1,000 VDC)	
MAINS INPUT	Voltage	Single-phase 220 V (-15%) ÷ 240 V (+10%)	Three-phase 380 V (-15%) ÷ 440 V (+10%)
	Frequency	50/60 Hz Permitted range: 47 ÷ 63 Hz	
	AC protection	AC circuit breaker and contactor (for models with automatic switchover to the mains)	
OUTPUT	Rated voltage	Three-phase, 0 ÷ 100% of the input voltage.	
	Admissible overloads	150% for 1 min; 180% for 10 s; 200% for 1 s	
	Maximum distance	Install a sine wave filter if the distance between the drive and pump is > 100 m	
INPUT SIGNALS	Digital	5 programmable inputs, PNP or NPN logic. Selectable polarity, on/off delay times.	
OUTPUT SIGNALS	Relay	Drives ≤ 2.2 kW: 1 multifunction NO/NC switching output / Drives ≥ 4 kW: 2 multifunction NO/NC switching outputs Maximum 3 A / 250 Vac, 1 A / 30 Vdc	
	Analogue	Drives ≤ 2.2 kW: Not available / Drives ≥ 4 kW: 2 selectable outputs 0 ÷ 10 V / 0 ÷ 20 mA	
	Digital	Drives ≤ 2.2 kW: Not available / Drives ≥ 4 kW: 1 multifunction open collector output (50 mA / 30V)	
	Communication port	Drives ≤ 2.2 kW: 1 RS-485 Modbus RTU port + 1 RS-422 port / Drives ≥ 4 kW: 1 RS-485 Modbus RTU port	
OPERATION	Method	Indoor mounting: control console on the door of the cabinet and ON/OFF control via switch or clock/timer. Outdoor mounting: buttons on the door of the cabinet and clock/timer.	
	Pump protection	24 VDC water level sensor	25 VDC water level sensor
	Types of system	Isolated (powered solely by solar panels Automatic switchover to the generator Automatic switchover to the mains Manual switchover (to the power generator or mains)	
SPECIFIC PROTECTIONS	Faults	Overvoltage, undervoltage, overcurrent, reverse polarity connection, communication failure with the booster module, broken hydraulic sensor.	
	Alarms	Weak light, underload, full tank.	
FILTERING	EMC filter	Drives ≤ 2.2 kW: Category C3 with easy connection as option / Drives ≥ 4 kW: Category C3 integrated	
GENERAL	Ambient temperature	- 10 ~ 50°C (1% derating per degree exceeding 40°C).	
	Degree of protection	Indoor and outdoor versions	
STANDARDS	Safety	EN 61800-5-1	
	Electromagnetic compatibility (EMC)	EN 61800-3 C3	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

Information subject to change without notice.

DC POWER-S

DC power systems



DC POWER-S: Compact, flexible and modular DC power supply systems

Salicru's **DC power-S** energy systems feature the following components: DC-S rectifier modules, subracks, a control and monitoring system, a communications module and a DC distribution unit, all situated in a closed cabinet with the possibility of including batteries.

DC power-S system rectifier modules are available in power ratings of 1000, 2000 and 2700 W and output voltages of 24, 48, 60, 110, 125 and 220 Vdc. Its modular design enables up to 4 modules to be installed in a 19" 2U subrack, achieving very high power density.

The control and monitoring system manages the entire system: input and output measurements, battery charging currents (Batteries are not supported for 60V output voltage option), control of priority and non-priority loads and communication channels with the outside. The maximum number of rectifiers controlled by a control system is 30, enabling systems to achieve power ratings of up to 81 kW with N+n redundant configuration options.

The basic version of the communications module has: three programmable relays, a battery temperature sensor and an RS-232/485 channel. Extended version features a slot for an Ethernet/SNMP Nimbus adapter, an NiCd electrolyte level detection input and six additional relays.

Applications: Redundant protection for critical applications

Salicru's **DC power-S** energy systems provide a high-level power supply to always critical telecommunications systems,ensuring excellent operation without unexpected outages. Because of its modular nature, it can also be expanded according to needs, thereby optimising the investment. Typical applications include: fixed and mobile communications networks, broadband access networks, data and telecommunications networks and railway infrastructures,...



Performances

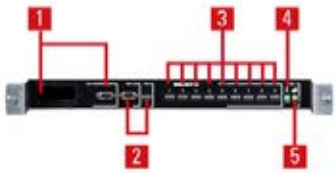
- Maximum power per system up to 81 kW.
- Flexible, scalable and N+n redundant systems, configurable for current demand and future expansion.
- High power density in the modules, up to 27 W/in3.
- High efficiency, up to 95% even with low load.
- Option of single or three-phase power supply.
- DC systems with output voltages of 24, 48, 60, 110, 125 or 220 Vdc.
- Wide operating temperature range from -20º C to +55º C.
- Wide input voltage range from 90 Vac to 290 Vac with power derating.
- Input power factor 1 for better performance.
- Modular design of the rectifiers and control system.
- Output current sharing between rectifiers.
- Front access for easy installation and maintenance.
- Hot-swap and hot-plug functions with automatic adjustment for module connection/disconnection.
- LLVD and BLVD - disconnection of non-priority loads and for low battery voltage.
- Full local control and monitoring system with LCD backlit (4x40 characters).
- Communication unit for remote monitoring.
- Monitoring software via Ethernet/Nimbus SNMP.
- Smart-mode to maximise MTBF (Mean Time Between Failures).



Communications

1. Slot for the telemagement or RS-232 interface.
2. RS-485 serial ports. MODBUS communication protocol.
3. Programmable relay (x6) interface.
4. Battery temperature measurement input.
5. NiCd electrolyte level detection input. (1)

(1) Only extended version.



SMART mode

Load sharing in normal operation.



Load sharing and cycling of rectifiers in Smart-mode operation.



Options

- Surge protector.
- Output voltage dropping diodes.
- Positive, negative or isolated output voltages.
- Sealed or open PbCa batteries, NiCd, etc.
- Extended communications module.
- Other degrees of IP protection.
- Wireless-link communication.
- Non priority loads diconnector.

Range

MODEL	POWER (W)	CURRENT (A)	OUTPUT VOLTAGE (VDC)	CURRENT PER SYSTEM (A)	POWER PER SYSTEM MODEL (kW)
DC-36-S	1000	36	24	36 ÷ 1080	1 ÷ 30
DC-18-S	1000	18	48	18 ÷ 540	1 ÷ 30
DC-16-S	1000	16	60	16 ÷ 480	1 ÷ 30
DC-8-S	1000	8	110	8 ÷ 240	1 ÷ 30
DC-7-S	1000	7	125	7 ÷ 210	1 ÷ 30
DC-4-S	1000	4	220	4 ÷ 120	1 ÷ 30
DC-70-S	2000	70	24	70 ÷ 2100	2 ÷ 60
DC-33-S	2000	33	60	33 ÷ 990	2 ÷ 60
DC-36-S	2000	36	48	36 ÷ 1080	2 ÷ 60
DC-16-S	2000	16	110	16 ÷ 480	2 ÷ 60
DC-15-S	2000	15	125	15 ÷ 450	2 ÷ 60
DC-8-S	2000	8	220	8 ÷ 240	2 ÷ 60
DC-50-S	2700	50	48	50 ÷ 1500	2,7 ÷ 81
DC-45-S	2700	45	60	45 ÷ 1350	2,7 ÷ 81
DC-22-S	2700	22	110	22 ÷ 660	2,7 ÷ 81
DC-20-S	2700	20	125	20 ÷ 600	2,7 ÷ 81
DC-10-S	2400	10	220	10 ÷ 300	2,4 ÷ 74

Dimensions



POWER MODULE

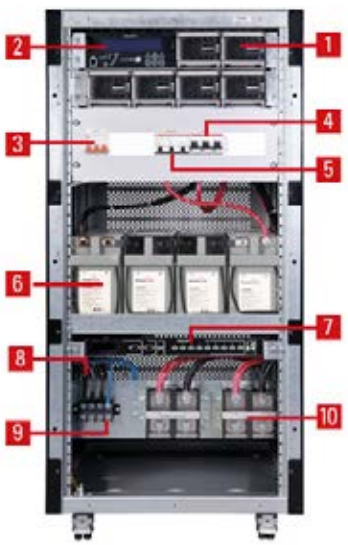


CONTROL MODULE



2 SUBRACK MODULES

Connections



1. Rectifier module
2. Centralised control
3. Input protection
4. Output distribution
5. Batteries protection (Batteries are not supported for 60 V output voltage option)
6. Batteries
7. Extended communication
8. Surge protector
9. Input terminals
10. Output terminals

Technical specifications

MODEL		DC POWER-S
INPUT	Rated voltage	120 / 127 / 220 / 230 / 240 V; 3x208 / 220 / 380 / 400 / 415 V (3F+PE)
	Voltage range	90 ÷ 290 Vac
	Rated frequency	50/60 Hz
	Total harmonic distortion (THDi)	<5%
	Power factor	>0.99 (PFC)
	Performance	Up to 95.5%
OUTPUT	DC nominal voltage	24, 48, 60, 110, 125, 220 V
	Accuracy	±1%
	Output voltage setting	-15% +25% (1)
	Maximum power (W)	30 / 60 / 81 kW
	Rectifier module power	1000 / 2000 / 2700 W
	Psophometric noise	<2 mV
	Load sharing between modules	Active parallel
	Maximum number of parallel modules	30
BATTERY	Protection	Against overvoltage, undervoltage and overload(2)
	Battery type	PbCa or NiCd
	Charge type	Constant I/U in accordance with DIN 41773
	Recharge time	Up to 80% in 4 hours (0.2C)
	Voltage/temperature compensation	Yes, customisable (mV/°C)
	Electrolyte level detection (NiCd battery)	Optional
COMMUNICATION	Ports	RS-232/485 - 7 relays
	Intelligent slot	Yes, one / Optional
PROTECTION	Input and output	Circuit breakers
	Battery	Fuses + switch(2)
GENERAL	Operating temperature	-20ºC ÷ +55ºC (2)
	Storage temperature	-40ºC ÷ +70ºC (3)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	3,000 masl(4)
	Dielectric strength (Input - Output)	2000V @1 minuto para 24, 48 Vdc / 4000 V @ 1 minuto para 110, 125, 220 Vdc
	Degree of protection	IP20
	Cooling	Forced
	Acoustic noise at 1 metre	<55 dB(A)
	Mean time between failures (MTBF)	250,000 hours
	Mean time to repair (MTTR)	15 minutes
STANDARDS	Safety	EN IEC 61204-7
	Electromagnetic compatibility (EMC)	EN IEC 61204-3
	Seismic (Optional)	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) -9% + 25% for voltages 110 Vdc
(2) Batteries are not supported for 60 Vdc output
(3) Power degradation for temperatures higher than 45°C.
(4) Without batteries
(5) Power degradation from 2000 m.a.s.l.

Information subject to change without notice.

DC POWER-SD

DC/DC power systems



DC POWER-SD: Power supply systems for stable direct current supply

Salicru's **DC power-SD** systems are supplied as an integrated solution housed in a closed cabinet, with the option of incorporating batteries. The system consists of rectifier modules, housing subracks, a DC distribution unit, a control and monitoring system, and a dedicated communications module.

The rectifiers are available in power ratings of 900, 1000, 1800, 2000 and 2700 W, and support output voltages of 24, 48, 60, 110 or 125 Vdc. Thanks to their modular architecture, it is possible to install 2 or 4 modules in a 19" 2U subrack, achieving high power density in a reduced footprint.

The control and monitoring system supervises input and output electrical parameters, controls battery charging currents, manages priority and non-priority loads, and handles the different external communication channels. This electronics platform allows systems of up to 21.6 kW to be configured, with the option of implementing N+n redundancy schemes.

The communications module includes three programmable relays, a battery temperature sensor and an RS-232/485 channel. In the extended version, it also adds a slot for a Nimbus Ethernet/SNMP adapter, an input for detecting electrolyte level in Ni-Cd batteries, and six additional relays.

Applications: Redundant protection for critical applications

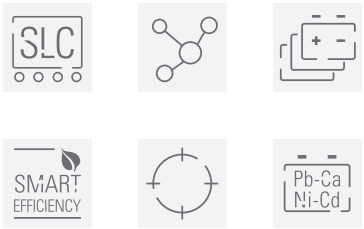
Designed for environments where direct current power supply is critical, **DC Power-SD** systems are an ideal solution for applications in railway infrastructure, power utilities and substations, as well as in signalling, control, telecommunications, protection and auxiliary service systems. Their ability to guarantee a stable, efficient and highly available power supply makes them a key element in industrial and energy installations that require maximum reliability, service continuity and adaptability to different DC voltage levels. They allow the use of a charger/rectifier with battery at the input to operate with different output voltages depending on the application.



SGS SGS SGS
salicru SMART SOLUTIONS

Performances

- Maximum power per system up to 21,6 kW.
- Flexible, scalable and N+n redundant systems, configurable for current demand and future expansion.
- High power density in the modules, up to 12 W/in3.
- High efficiency, up to 85% even with low load.
- Option of single or three-phase power supply.
- DC systems with output voltages of 24, 48, 60, 110 or 125 Vdc.
- Wide operating temperature range from -20º C to +55º C.
- Wide input voltage range from 90 Vdc to 290 Vdc with power derating.
- Modular design of the rectifiers and control system.
- Output current sharing between rectifiers.
- Front access for easy installation and maintenance.
- Hot-swap and hot-plug functions with automatic adjustment for module connection/disconnection.
- Full local control and monitoring system with LCD backlit (4x40 characters).
- Communication unit for remote monitoring.
- Monitoring software via Ethernet/Nimbus SNMP.
- Smart-mode to maximise MTBF (Mean Time Between Failures).

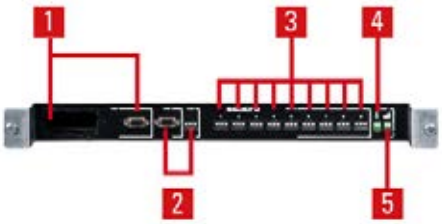




Communications

1. Slot for the telemagement or RS-232 interface.
2. RS-485 serial ports. MODBUS communication protocol.
3. Programmable relay (x9) interface.
4. Battery temperature measurement input.
5. NiCd electrolyte level detection input.(1)

(1) Extended version only.



SMART mode

Load sharing in normal operation.



Load sharing and cycling of rectifiers in Smart-mode operation.



Options

- Surge protector.
- Positive, negative or isolated output voltages.
- Sealed or open PbCa batteries, NiCd, etc.
- Extended communications module.
- Other degrees of IP protection.
- Conformal coating (tropicalization).
- Non priority loads disconnector.

Range

MODEL	CODE	POWER (W)	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)
DC-33-SD 24/90-290Vdc	6A2AG000003	900	90 ÷ 290	24	33
DC-41-SD 24/176-290Vdc	6A2AH000005	1000	200 ÷ 290	24	41
DC-66-SD 24/90-290Vdc	6A2AH000006	1800	90 ÷ 290	24	66
DC-70-SD 24/176-290Vdc	6A2AH000007	2000	200 ÷ 290	24	70
DC-18-SD 48/90-290Vdc	6A2AG000004	900	90 ÷ 290	48	18
DC-20-SD 48/176-290Vdc	6A2AH000008	1000	200 ÷ 290	48	20
DC-36-SD 48/90-290Vdc	6A2AH000009	1800	90 ÷ 290	48	36
DC-41-SD 48/176-290Vdc	6A2AH000010	2000	200 ÷ 290	48	41
DC-50-SD 48/176-290Vdc	6A2AH000011	2700	200 ÷ 290	48	50
DC-15-SD 60/90-290Vdc	6A2AH000012	900	90 ÷ 290	60	15
DC-16-SD 60/176-290Vdc	6A2AH000013	1000	200 ÷ 290	60	16
DC-30-SD 60/90-290Vdc	6A2AH000014	1800	90 ÷ 290	60	30
DC-32-SD 60/176-290Vdc	6A2AH000015	2000	200 ÷ 290	60	32
DC-45-SD 60/176-290Vdc	6A2AH000016	2700	200 ÷ 290	60	45
DC-9-SD 110/176-290Vdc	6A2AH000017	1000	200 ÷ 290	110	9
DC-18-SD 110/176-290Vdc	6A2AH000018	2000	200 ÷ 290	110	18
DC-22-SD 110/176-290Vdc	6A2AH000019	2700	200 ÷ 290	110	22
DC-8-SD 125/176-290Vdc	6A2AH000020	1000	200 ÷ 290	125	8
DC-16-SD 125/176-290Vdc	6A2AH000021	2000	200 ÷ 290	125	16
DC-20-SD 125/176-290Vdc	6A2AH000022	2700	200 ÷ 290	125	20

Dimensions



POWER MODULE 900/1000/2000/2700W



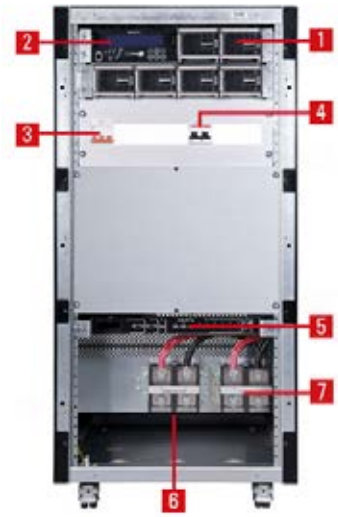
POWER MODULE 1800W



CONTROL MODULE

Connections

1. Power module
2. Centralised control
3. Input protection
4. Output distribution
5. Extended communication
6. Input terminals
7. Output terminals



Technical specifications

MODEL		DC POWER-SD
INPUT	Voltage range	90 ÷ 290 Vdc (depending on model)
	Performance	Up to 85%
OUTPUT	DC nominal voltage	24, 48, 60, 110, 125 V
	Accuracy	±1%
	Output voltage setting	-15% +25% (1)
	Maximum power (depending on model)	7,2kW ÷ 21,6 kW
	Rectifier module power	900 / 1000 / 1800 / 2000 / 2700 W
	Psophometric noise	<2 mV
	Load sharing between modules	Active parallel
	Maximum number of parallel modules	8 (2)
BATTERY (Optional)	Protection	Against overvoltage, undervoltage and overload
	Battery type	PbCa or NiCd (3)
	Charge type	Constant I/U in accordance with DIN 41773
	Recharge time	Up to 80% in 4 hours (0.2C)
	Voltage/temperature compensation	Yes, customisable (mV/°C)
	Electrolyte level detection (NiCd battery)	Optional
COMMUNICATION	Ports	RS-232/485 - 9 relays
	Intelligent slot	Yes, one / Optional
PROTECTION	Input and output	Circuit breakers
	Battery	Fuses + switch (3)
GENERAL	Operating temperature	-20ºC ÷ +55ºC (4)
	Storage temperature	-40ºC ÷ +70ºC (5)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	3,000 masl (6)
	Dielectric strength (Input - Output)	3500 V for 1 minute (input-earth) / 2000 V for 1 minute (output-earth) / 4000 V for 1 minute (input-output)
	Degree of protection	IP20
	Cooling	Forced
	Acoustic noise at 1 metre	<60 dB(A)
	Mean time between failures (MTBF)	485.000 hours (power module)
	Mean time to repair (MTTR)	5 minutes
STANDARDS	Safety	EN IEC 61204-7
	Electromagnetic compatibility (EMC)	EN IEC 61204-3
	Seismic (Optional)	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Other margins for voltages of 60 Vdc and 110 Vdc
(2) Maximum of 5 modules for 1800W power
(3) Batteries are not supported for 60Vdc output
(4) Power degradation for temperatures higher than 45°C.
(5) Without batteries
(6) Power degradation from 2000 m.a.s.l.

Information subject to change without notice.

DC POWER-L

Thyristor rectifiers 10 A - 800 A



DC POWER-L: Charging systems for stationary batteries

Salicru's **DC power-L** range of rectifiers/battery chargers, based on microprocessor-controlled thyristor technology, provides high-quality and reliable protection for critical DC loads.

The **DC power-L** series covers the range between 10 A and 800 A with outputs from 24 to 220 Vdc. The output accuracy is better than +/- 1% and the system is designed to charge open or sealed lead acid and nickel cadmium batteries.

All alarms, monitoring and status indicators (via display and LEDs) are managed through a digital control system. Each type of battery requires special charging characteristics, which are managed by the controller. The systems are completely customisable to the specific characteristics and needs of each client and application.

The robust design ensures that the installation requires low maintenance and can work for long periods without special attention.

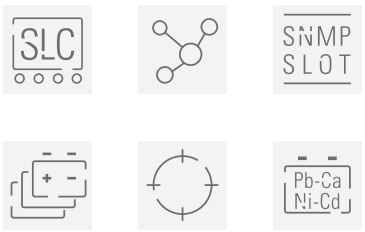
Applications: Efficient, reliable and robust solutions

DC power-L systems are designed to protect DC loads of maximum criticality and to operate with nickel cadmium or lead acid batteries in harsh and demanding operating environments, such as power plants, electrical substations, oil and gas pipelines, petrochemical plants, mines, railways, telecommunications facilities, hospitals, industrial plants, etc.



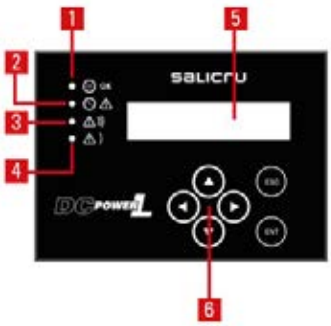
Performances

· Microprocessor-controlled thyristor technology.
· Galvanic isolation between input and output via transformer.
· Complete six-pulse bridge.
· Ventilation by natural convection.
· Standard DC output earth fault detection.
· Electrolyte level detection for NiCd batteries (optional).
· Charging states: floating, fast and exceptional.
· Robust and compact design.
· High power density.
· Monitoring of all equipment parameters through LCD display.
· Possibility of redundant parallel operation.
· Operation with lead acid or nickel cadmium batteries.
· Temperature-compensated float voltage.
· Automatic disconnection in the event of minimum battery voltage or temperature.
· Extensive configuration options.
· High MTBF and low MTTR.
· Easy installation, start-up and maintenance.



Display

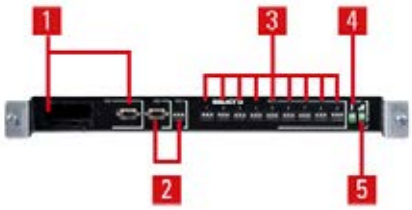
1. Output voltage indicator.
2. Input voltage fault indicator.
3. Urgent alarm indicator (customisable).
4. Non-urgent alarm indicator (customisable).
5. LCD display with multiple languages.
6. Navigation keys.



Communications

1. Slot for the telemagement or RS-232 interface.
2. RS-485 serial ports. MODBUS communication protocol.
3. Programmable relay (x6) interface.
4. Battery temperature measurement input.
5. NiCd electrolyte level detection input. (1)

(1) Only extended version.

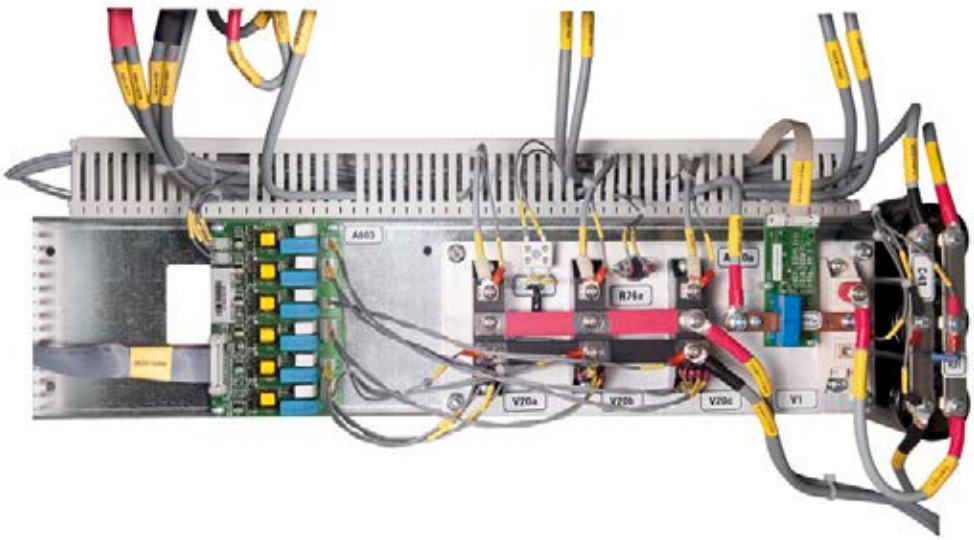


Options

· 12-pulse rectifier with isolation transformer.
· Voltage drop diodes.
· TCP/IP interface.
· Heater.
· Output diodes for parallel operation.
· Different types of batteries (SLA, lead acid, nickel cadmium, etc.).
· Other degrees of protection.
· Other input voltages on request.
· Top cable entry.
· Schuko outlet socket.
· Colour cabinet RAL9005.

Technical support and service

· Pre and post-sales advice.
· Multiple maintenance and telemaintenance options.



Range

MODEL	OUTPUT CURRENT (A)	INPUT VOLTAGE (VAC)	OUTPUT VOLTAGE (VDC)
DC-10-L	10	120 / 230	24 / 48 / 110 / 120 / 125 / 220
DC-20-L	20	120 / 230	24 / 48 / 110 / 120 / 125 / 220
DC-30-L	30	120 / 230	24 / 48 / 110 / 120 / 125 / 220
DC-50-L	50	120 / 230	24 / 48 / 110 / 120 / 125 / 220
DC-25-L	25	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-50-L	50	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-75-L	75	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-100-L	100	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-150-L	150	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-200-L	200	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-250-L	250	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-300-L	300	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-350-L	350	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-400-L	400	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-450-L	450	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-500-L	500	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-600-L	600	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-700-L	700	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-800-L	800	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220

Check for other output currents.

Dimensions



DC-10÷100-L



DC-150÷800-L

Technical specifications

MODEL		DC POWER-L
TECHNOLOGY		Thyristor
INPUT	Rated voltage	120 / 230 V (F + N); 3 × 208 / 3 × 220 / 3 × 400 V / 3 x 480 V (3F + PE)
	Voltage range	±15%
	Rated frequency	50/60 Hz
	Frequency range	±5%
	Power factor	0.85
	Performance	>85%
OUTPUT	DC nominal voltage	24 V, 48 V, 110 V, 120 V, 125 V, 220 V
	Float voltage	2.27 V/cell (Pb) / 1.4 ÷ 1.45 V/el (NiCd)
	Fast charging voltage	2.5 V/cell (Pb) / 1.5 V/el (NiCd)
	Exceptional charging voltage/formation	2.7 V/cell (Pb) / 1.65 V/el (NiCd)
	Accuracy	±1%
	Ripple	<1% (1)
	Single phase current	10 / 20 / 30 / 50 A(2)
	Three phase current	25 / 50 / 75 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 A(2)
BATTERY	Protection	Against overvoltage and undervoltage
	Battery type	PbCa (sealed or open) or NiCd
	Charge type	IU constant as per DIN 41773
	Recharge time	Up to 80% in 4 hours (0.2 C)
	Voltage/temperature compensation	Yes, customisable as per battery specifications (mV / °C)
	No. of cells Pb	12 (24 V) / 24 (48 V) / 55 (110 V) / 60 (120 V) / 62 (125 V) / 110 (220 V)
	No. of elements NiCd	19 (24 V) / 38 ÷ 39 (48 V) / 81 ÷ 86 (110 V) / 88 ÷ 94 (120 V) / 92 ÷ 96 (125 V) / 161 ÷ 173 (220 V)
COMMUNICATION	Ports	RS-232/485 - 6 Dry contacs
	Intelligent slot	Yes, one / Optional
	Protocol	MODBUS Yes
PROTECTION	Input and output	Circuit breaker
	Battery	Fuses
	Soft start	Yes
GENERAL	Operating temperature	-10º C ÷ +55º C (3)
	Storage temperature	-20º C ÷ +70º C (4)
	Relative humidity	Up to 95% non-condensing
	Maxium operating altitude	Up to 3000 m.a.s.l.(5)
	Colour	RAL7035
	Dielectric strength (Input - Output)	2500 V @1 min
	Degree of protection	IP20
	Cooling	Natural
STANDARDS	Safety	IEC/EN 61204-7, IEC 60146-1-1
	Electromagnetic compatibility (EMC)	IEC/EN 61204-3 class A
	Seismic (Optional)	IEC 60068-3-3:2019/COR1:2021 / UBC1997 Zone3 & Zone 4 Ip 1.5
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Premium version
(2) Includes battery charging current (Ibat). In Premium, Ibat version. can power loads
(3) Power degradation from +40ºC
(4) Without batteries
(5) Power degradation from 1000 m.a.s.l.

Information subject to change without notice.

DC POWER-L 12P

Thyristor rectifiers 25 A - 800 A



DC POWER-L 12P: Charging systems for stationary batteries

Salicru's 12 pulse **DC power-L 12P** range of rectifiers/battery chargers are based on microprocessor-controlled thyristor technology and provides a renewed state-of-the-art digital processing platform with maximum care for the battery and maximum reliability and protection for critical DC loads. The 12-pulse **DC power-L 12P** series is environmentally friendly with low harmonic distortion and a high power factor, and is highly efficient in reducing its carbon footprint.

The 12 pulse **DC power-L 12P** series covers the range between 25 A and 800 A with outputs from 24 to 220 Vdc. The output accuracy is better than ± 1% and the system is designed to charge open or sealed lead acid and nickel cadmium batteries. The entire range is ventilated by natural convection. The advanced digital control system is responsible for applying charge algorithms adapted to the different battery charging stages. These, combined with battery temperature compensation and control of the maximum charge current, determine the specific charging process for each battery type.

All alarms, monitoring and status indicators (via display and LEDs) are controlled by a microprocessor. The systems are completely customisable to the specific characteristics and needs of each client and application. The robust design of devices with natural ventilation allows parallel redundancy, master/slave, separate/shared battery, parallel capacity and other configurations, which results in a low-maintenance installation, being able to operate for long periods completely unattended.

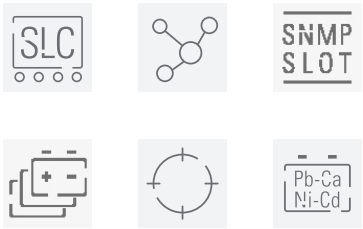
Applications: Efficient, reliable and robust solutions

DC power-L 12P systems are designed to protect DC loads of maximum criticality and to operate with nickel cadmium or lead acid batteries in harsh and demanding operating environments, such as power plants, electrical substations, oil and gas pipelines, petrochemical plants, mines, railways, telecommunications facilities, hospitals, industrial plants, etc.



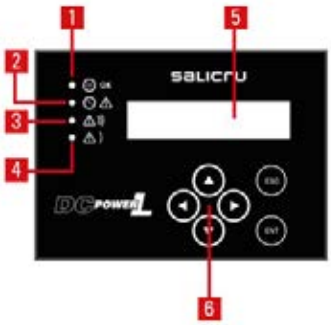
Performances

· Microprocessor-controlled thyristor technology.
· Galvanic isolation between input and output via transformer.
· Complete 12-pulse bridge.
· Ventilation by natural convection.
· Standard DC output earth fault detection.
· Electrolyte level detection for NiCd batteries (optional).
· Charging states: floating, fast and exceptional.
· Robust and compact design.
· High power density.
· Monitoring of all equipment parameters through LCD display.
· Possibility of parallel operation.
· Operation with lead acid or nickel cadmium batteries.
· Temperature-compensated float voltage.
· Automatic disconnection in the event of minimum battery voltage or temperature.
· Extensive configuration options.
· High MTBF and low MTTR.
· Easy installation, start-up and maintenance.



Display

1. Correct input voltage indicator.
2. Charger in operation indicator.
3. Indications state of the battery
4. Correct output voltage indicator.
5. LCD display with multiple languages.
6. Navigation keys.



Communications

1. Slot for the telemagement or RS-232 interface.
2. RS-485 serial ports. MODBUS communication protocol.
3. Programmable relay (x4) interface.
4. Battery temperature measurement input.
5. NiCd electrolyte level detection input. (1)

(1) Only extended version.

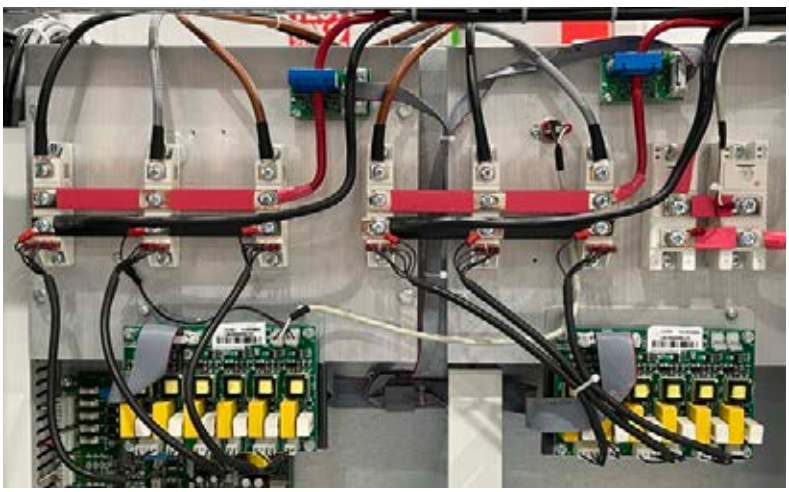


Options

· Voltage drop diodes.
· TCP/IP interface.
· Heater.
· Output diodes for parallel operation.
· Different types of batteries (SLA, lead acid, nickel cadmium, etc.).
· Other degrees of protection.
· Other input voltages on request.
· Top cable entry.
· Schuko outlet socket.
· Board with 9 additional relays.

Technical support and service

· Pre and post-sales advice.
· Multiple maintenance and telemaintenance options.



Range

MODEL	OUTPUT CURRENT (A)	INPUT VOLTAGE (VAC)	OUTPUT VOLTAGE (VDC)
DC-25-L 12P	25	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-50-L 12P	50	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-75-L 12P	75	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-100-L 12P	100	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-150-L 12P	150	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-200-L 12P	200	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-250-L 12P	250	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-300-L 12P	300	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-350-L 12P	350	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-400-L 12P	400	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-450-L 12P	450	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-500-L 12P	500	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-600-L 12P	600	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-700-L 12P	700	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220
DC-800-L 12P	800	3 × 208 / 3 × 220 / 3 × 400	24 / 48 / 110 / 120 / 125 / 220

Check for other output currents.

Dimensions



DC-25/50-L 12P



DC-75÷800-L 12P

Technical specifications

MODEL		DC POWER-L 12P
TECHNOLOGY		Thyristor, 12-pulse
INPUT	Rated voltage	3 × 208 / 3 × 220 / 3 × 400 V / 3 × 480 V (3F + PE)
	Voltage range	±15%
	Rated frequency	50/60 Hz
	Frequency range	±15%
	Total harmonic distortion (THDi)	8%
	Power factor	0.96
	Performance	94%
OUTPUT	DC nominal voltage	24 V, 48 V, 110 V, 120 V, 125 V, 220 V
	Float voltage	2.27 V/cell (Pb) / 1.4 ÷ 1.45 V/el (NiCd)
	Fast charging voltage	2.5 V/cell (Pb) / 1.5 V/el (NiCd)
	Exceptional charging voltage/formation	2.5 V/cell (Pb) / 1.5 V/el (NiCd)
	Accuracy	<1%
	Ripple	<1%
	Three phase current	25 / 50 / 75 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 700 / 800 A (1)
BATTERY	Protection	Against overvoltage and undervoltage
	Battery type	PbCa (sealed or open) or NiCd
	Charge type	IU constant as per DIN 41773
	Recharge time	Up to 80% in 4 hours (0.2 C)
	Voltage/temperature compensation	Yes, customisable as per battery specifications (mV / °C)
	No. of cells Pb	12 (24 V) / 24 (48 V) / 55 (110 V) / 60 (120 V) / 62 (125 V) / 110 (220 V)
	No. of elements NiCd	19 (24 V) / 38 ÷ 39 (48 V) / 81 ÷ 86 (110 V) / 88 ÷ 94 (120 V) / 92 ÷ 96 (125 V) / 161 ÷ 173 (220 V)
COMMUNICATION	Ports	RS-232/485 - 4 Dry contacs
	Intelligent slot	Yes, one
	Protocol	Modbus
PROTECTION	Input and output	Circuit breaker
	Battery	Fuses
	Soft start	Yes
GENERAL	Operating temperature	-10° C ÷ +55° C (2)
	Storage temperature	-20° C ÷ +70° C (3)
	Relative humidity	Up to 95% non-condensing
	Maxium operating altitude	Up to 3000 m.a.s.l.(4)
	Dielectric strength (Input - Output)	2500 V @1 min
	Degree of protection	IP20
	Cooling	Natural
STANDARDS	Safety	IEC/EN 61204-7, IEC 60146-1-1
	Electromagnetic compatibility (EMC)	IEC/EN 61204-3 class A
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Includes battery charging current (Ibat). In Premium, Ibat version. can power loads
(2) Power degradation from +40°C
(3) Without batteries
(4) Power degradation from 1000 m.a.s.l.

Information subject to change without notice.

CS-IS

DC power converters



CS-IS: High performance DC/AC industrial converters

Salicru's **CS IS** series DC/AC converters are based on technically advanced solutions such as PWM technology and digitally controlled servo systems so as to obtain: high performance, low distortion (THDv < 2%) and elevated stability. Moreover, they offer excellent tolerance to short-circuits, polarity inversion protection and the possibility of operating in Eco-mode.

The line is available in power ranges between 1000 and 20000 VA, with admissible continuous incoming voltage from 48 Vdc to 220 Vdc nominal input.

Applications: Energy conversion for industrial plants

Salicru's **CS IS** series provides quality AC power from a DC power source (normally batteries) for the most varied of industrial applications such as cogeneration and biomass plants, gas generators, water distributors, power stations and substations, telecommunications, etc..



Performances

- Polarity inversion protection DC.
- Availability in a wide range of voltages and outgoing power.
- Broad range of input voltage variation.
- LCD display comes standard.
- Communication through relay interface and RS-232 / RS-485.
- Excellent dynamic behavior.
- Automatic restart to re-establish incoming power.
- Ramp start.
- 19" rack or box casing.

Options

- Static bypass.
- EMI filters.
- Isolation transformer on the bypass line.
- Psofometric filter.
- Anti-harmonic filter.

Technical support and service

- Pre-sales and post-sales consultation service.
- Several maintenance and remote maintenance methods.

Range

MODEL	POWER (VA / W)	INPUT VOLTAGE (VDC)	DIMENSIONS (D × W × H mm)		WEIGHT (Kg)
			BOX	RACK	
CS 1000-IS	1000 / 1000	48,110,120,125,220	385 × 440 × 180	385 × 483 × 4U	28
CS 2000-IS	2000 / 2000	48,110,120,125,220	385 × 440 × 180	385 × 483 × 4U	30
CS 3000-IS	3000 / 3000	48,110,120,125,220	385 × 440 × 180	385 × 483 × 4U	32
CS 4000-IS	4000 / 4000	110,120,125,220	600 × 440 × 270	600 × 483 × 6U	63
CS 5000-IS	5000 / 5000	110,120,125,220	600 × 440 × 270	600 × 483 × 6U	68
CS 6000-IS	6000 / 6000	110,120,125,220	640 × 630 × 1310	-	84
CS 8000-IS	8000 / 8000	110,120,125,220	640 × 630 × 1310	-	120
CS 10000-IS	10000 / 10000	110,120,125,220	640 × 630 × 1310	-	135
CS 15000-IS	15000 / 15000	220	640 × 630 × 1310	-	150
CS 20000-IS	20000 / 20000	220	640 × 630 × 1310	-	170

Dimensions and weights for models without bypass nor filters and 230 Vac output voltage. Power factor 1. Ask for another power needs and/or configurations.
Dimensions for power models 1000, 2000 and 3000 with voltages ≥110 Vdc.

Technical specifications

MODEL		CS IS
INPUT	Rated voltage	48 V, 110 V, 120 V, 125 V, 220 V
	Voltage range	- 17%, + 20%
OUTPUT	Power factor	1
	AC nominal voltage	120 V, 220 V, 230 V, 240 V
	Accuracy	± 2%
	Synchronised frequency	0.1 Hz ÷ 9.9 Hz in increments of 0.1 Hz
	Free running frequency	± 0.05%
	Frequency	50 / 60 Hz
	Synchronous speed	1 Hz/s
	Performance	Up to 92%
	Admissible overloads	150% for 30 seconds / 125% for 45 seconds
GENERAL	Operating temperature	- 10° C ÷ + 40° C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2400 m.a.s.l
	Cooling	Forced
STANDARDS	Safety	EN IEC 61204-7
	Electromagnetic compatibility (EMC)	EN IEC 61204-3
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Information subject to change without notice.

CS-MV

Bi-directional DC/AC overhead line converter



CS-MV: Power your grid into the future

The two-way DC/AC converter (three-phase inverter) is a state-of-the-art power conversion solution. This 5-level converter (9 levels between phases) featuring 97 % efficiency, and designed to optimise the electrical infrastructure, converts direct current (DC) to alternating current (AC) and vice versa, with flexible two-way operation. Handling input voltages between 1500 and 3000 volts DC, and a stable output of 400 volts AC, it offers a scalable power output of up to 1 MW. This makes it ideal for stationary grid stabilisation applications, as well as large-scale industrial and commercial applications, where both DC to AC power conversion and AC to DC power backfeed are required. Our converter guarantees exceptional performance and proven reliability, boosting efficiency and meeting the power demands of the future, from energy storage systems to electric vehicles and renewable energy systems.

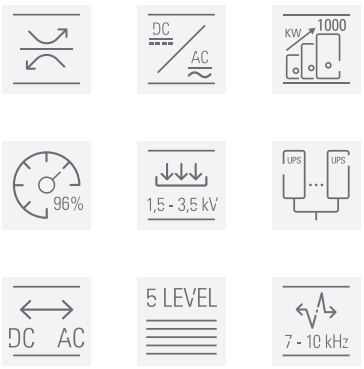
Applications: Efficiency and versatility in a sustainable energy system

The two-way DC/AC converter (three-phase inverter) is an advanced technical solution designed specifically for the transport industry. It can take input voltages typical in commuter, metro and railway DC overhead systems and transform them into a three-phase 400 VAC output, providing a versatile and reliable solution for a variety of industrial, commercial and electrical infrastructure applications. Its modular and scalable design can accommodate a wide range of needs, from electric vehicle charging stations to energy storage systems (ESS), stationary grid stabilisation applications and high-power industrial applications. It maximises energy conversion efficiency, reducing losses and optimising energy consumption.



Performances

· Overhead Contact Line Application (OCL) for 1500 VDC and 3300 VDC
· Output voltage 3 x 400 V / 50 Hz
· Input voltage between 1500 VDC and 3000 VDC
· Flexible use (up to 1000 kW)
· Safety and reliability with high quality galvanic isolation
· High insulation level of 18.5 kV - 1 min at 50 Hz
· High efficiency and power quality due to 5 levels of energy efficiency
· Maximum efficiency 97 %.
· Efficient and controlled AC/DC/AC power management capability
· Increased reliability by reducing energy losses and heat generation
· Bidirectional
· Reactive power management
· Harmonic compensation
· Redundancy and Scalability (up to 4 elements)
· Electromagnetic interference reduction



Range

MODEL	POWER (VA / W)	INPUT VOLTAGE (VDC)	DIMENSIONS (D × W × H mm)
CS-MV 125/10	125000 / 125000	1500 / 3300	1000 × 2600 × 2260
CS-MV 250/10	250000 / 250000	1500 / 3300	1000 × 2600 × 2260
CS-MV 375/10	375000 / 375000	1500 / 3300	1000 × 2600 × 2260
CS-MV 500/10	500000 / 500000	1500 / 3300	1000 × 2600 × 2260
CS-MV 250/7	250000 / 250000	1500 / 3300	1000 × 2600 × 2260
CS-MV 500/7	500000 / 500000	1500 / 3300	1000 × 2600 × 2260
CS-MV 750/7	750000 / 750000	1500 / 3300	1000 × 2600 × 2260
CS-MV 1000/7	1000000 / 1000000	1500 / 3300	1000 × 2600 × 2260

Manufactured according to customer requirements.
Indicative technical specifications.

Technical specifications

MODEL		CS-MV
INPUT	Rated voltage	1500 / 3300 V
	Voltage range	1350 ~ 1800 V / 3000 ~ 3900 V
OUTPUT	Power factor	1
	Rated voltage	3x400 V
	Accuracy	±1 %
	Frequency	50 Hz
	Performance	97 %
	Admissible overloads	125% @ 30 s.
GENERAL	Operating temperature	-20ºC ~ + 40ºC
	Cooling	Forced
STANDARDS	Safety	UNE-EN IEC 62477-2
	Railway	UNE-EN 50121-3-2 / UNE-EN 50124-1 / UNE-EN 50124-2 / UNE-CLC/TS 50238-2 / UNE-EN 61287-1 / UNE-EN IEC 62477-2
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

Non-contractual specifications. Final specifications according to project.

Information subject to change without notice.

IT

Electrical transformers and autotransformers



IT: Simple concepts, effective solutions

Salicru has been designing and manufacturing low voltage electrical transformers and autotransformers for more than 50 years, for use as **IT series** standalone solutions, or integrated within its wide range of power electronics solutions (uninterruptible power supplies, voltage stabilisers, rectifiers, etc.). At the same time, we have continuously improved our own production methods and processes in order to meet the needs of our customers and also for special requirements.

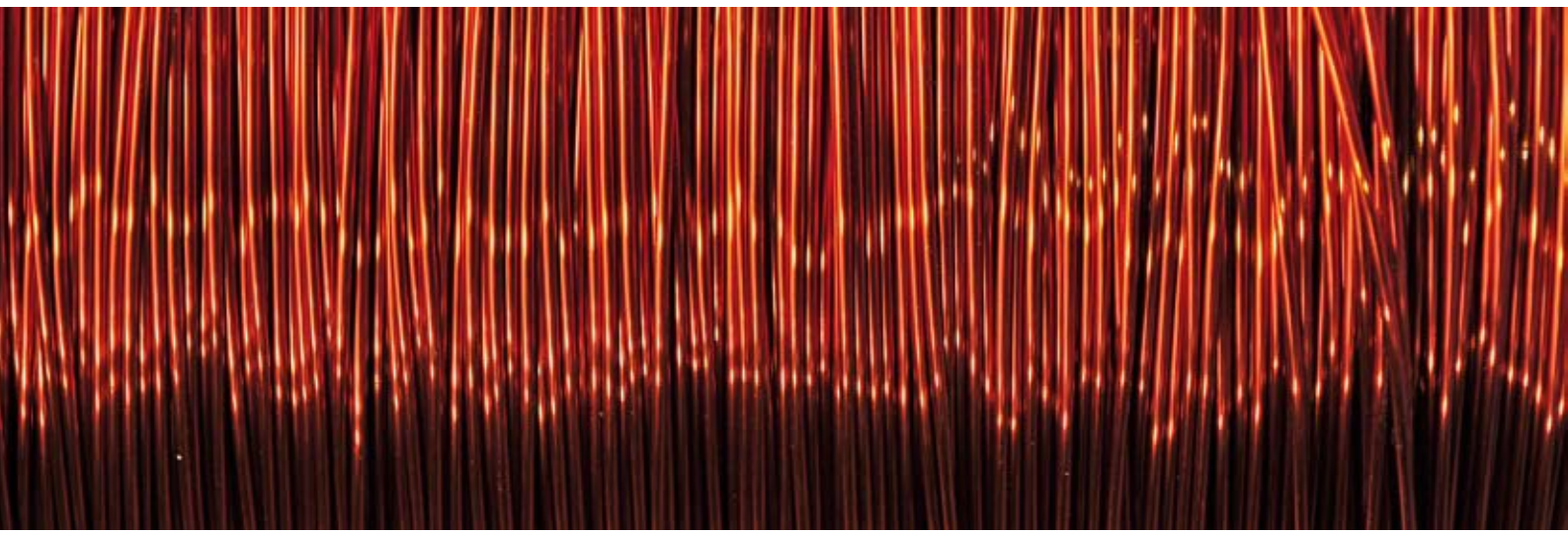
Single-phase and three-phase transformers are used as electrical isolation for reducing mains disturbances or adjusting the level of voltage coming from the grid. Autotransformers, on the other hand, with their serially-connected coils that do not provide galvanic isolation, have the function of converting one voltage to another, and, as such, are a more economical solution than transformers.

The transformers and autotransformers from Salicru's **IT series** are of the dry variety, made from low-loss magnetic plate and windings impregnated with class-H resin, and connected by means of clamp terminals or screws for pressure terminals. They can be manufactured with other voltages, regulation sockets, additional electrostatic screens, heat shields, etc., on request.

Applications: Adaptation and/or filtering of the supply voltage

Transformers are used in different types of industry, construction, energy technology and marine applications, such as electric motors, compressors, converters, cooling systems, UPSs and IT/TN networks. On the request of the customer, transformers can be manufactured for different voltages and frequencies, and feature, for example, an electrostatic screen between the primary and secondary windings, different finishes, wheels or other attachments.

And autotransformers are used for adapting the voltage of the mains supply to the voltage required to power all kinds of load and machinery.



Range

MODEL	TYPE	POWER (kVA / kW)	VOLTAGE	PRESENTATION
IT-T	Transformer	3,15 ÷ 20	Single-phase / Single-phase	Panel mounting
IT-T	Transformer	3,15 ÷ 20	Single-phase / Single-phase	Box
IT-T	Transformer	5 ÷ 200	Three-phase / Three-phase	Panel mounting
IT-T	Transformer	5 ÷ 200	Three-phase / Three-phase	Box
IT-ATR	Autotransformer	5 ÷ 40	Three-phase / Three-phase	Panel mounting
IT-ATR	Autotransformer	5 ÷ 40	Three-phase / Three-phase	Box

For other powers and versions, please enquire.

Technical specifications

MODEL		IT	
ELECTRICAL	Input/Output	Single-phase	Three-phase
	Power range	3,15 ÷ 20 kVA	5 ÷ 200 kVA
	Power factor	1	
	Connection group	Ii0	Dyn11 (1)
INPUT	Rated voltage	230 V (1)	3 × 400 V (1)
	Rated frequency	50 / 60 Hz	
	Magnetising current	< 6 In	
OUTPUT	Rated voltage	230 V (1)	3 × 400 V (1)
	Voltage drop (100% load)	< 4%	<5%
	Frequency	50 / 60 Hz	
	Performance	> 95%	
	Short-circuit voltage	< 2.6%	<3.1%
MANUFACTURE	Insulators	Class 155 (F)	
	Windings	Class 180 (H)	
	Windings material	Aluminium	
	Impregnation	Unsaturated polyester imide resin, low emission	
	Ventilation	ANAN	
GENERAL	Operating temperature	-25°C ÷ +40°C (climate class C2)	
	Storage temperature	-25°C ÷ +75°C	
	Relative humidity	Up to 95% non-condensing	
	Maxium operating altitude	2,400 masl	
	Version	Panel mounting or metal box	
	Colour (box version)	RAL 7035	
	Eye bolts for elevation	Yes, on units weighing more than 15 kg	
	Degree of protection	IP00 panel mounted version - IP23 boxed version	
	Heat loss (100% load)	<4.5%	<5%
	Vacuum heat loss	< 1.5%	
	Isolation voltage	3000 V input/output for 1 minute	
	Terminal type	Screw terminals	
OPTIONAL	K factor	K-4 / K-13 / K-20	
	Windings material	Copper	
	Wheels	For devices in box version	
	Isolation	Class 2 (Double isolation)	
STANDARDS	Safety	EN 61558-2-4 / EN 60076-11	
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001	

(1) Others available on request

Information subject to change without notice.

RE3

Electronic voltage stabilisers from 1000 VA to 150 kVA



RE3: The fastest and the most accurate electronic regulation system of the market

In today's electronic environment, saturated and highly unstable, where fluctuations in the power supply voltage are more than frequent, voltage stabilisers play a very important role in guaranteeing stable voltage to loads more sensitive to such variations.

The Salicru **RE** series of electronic stabilisers, based on a completely static structure of high efficiency, fast reply speed and excellent output precision, are made in single phase or three phase configuration and in a range of powers from 1000 VA to 150 kVA.

The three-phase units are conceived with a completely phase-independent regulation in order to avoid possible regulation problems due to imbalance in the loads. Moreover, the units include a static bypass to guarantee the power supply in the event of a possible fault.

Applications: Assured industrial processes

Many are the industrial processes where voltage stability is essential: from a wide range of applications where the numerical control processors and automatons are entrusted with guaranteeing the final result, up to all kinds of calculation centres, computer peripherals, transmission and communications equipment, laboratory equipment, etc.



Performances



· Power range, single and three-phase, up to 150 kVA.
· Ultra-fast regulation: reply speed under 100 ms.
· Digital control and parameters setting independent per phase.
· Entirely static structure, without moving elements, greater reliability.
· Static bypass, loads always supplied.
· In three-phase units, independent regulation per phase, immune to imbalances.
· Output precision better than ±2%.
· ±15% input regulation margins standard.
· Efficiency > 97%.
· Isolation transformer or ultra-isolation on unit output. (1)
· LCD Display, as standard, from 6 kVA single-phase or 15 kVA three-phase.
· Detection of voltage input or output (max/min) out of margins, as standard. (2)
· Comunication slot. (2)
· Overtemperature detection. (2)
· Do not introduce harmonics, or alter the power factor of the installation.
· Unaffected by line voltage harmonics; stabilisation based on true RMS.
· Stable operation in the event of load and/or voltage variations.
· Highly robust and reliable (high MTBF).
· Overvoltage surge supresion protection.
· Suitable for regenerative loads.

(1) Option
(2) For models with LCD display



Display

1. LCD 2x16 characters.
2. Navigation keys.
3. LEDs (alarm, bypass, normal operation and communications).



Options

· Relay interface.
· Manual maintenance bypass.(1)
· Protection of high-low voltage with manual or automatic reset (output voltage disconection when out of range).
· Isolation transformer (T).
· Ultra-isolation transformer (NS).
· Current transformers for measures of current, power (kVA / kW) and power factor.
· Overload protection. (1)
· Telemanagement card. (1)
· Extended communications module. (1)
· Extended ambient operating temperature from -20ºC.
· Input & output circuit breaker.

(1) Models with display

Technical support and service

· Pre-sale and after sales advisory service.
· Numerous maintenance and remote maintenance options.

Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
RE-1009-2	606CY000390	1000	280 × 210 × 185	9
RE-2009-2	606EG000390	2000	410 × 250 × 195	21
RE-3009-2	606EY000390	3000	410 × 250 × 195	22
RE-4509-2	606FW000390	4500	480 × 300 × 220	35
RE3 M 6-2	6A3AA000001	6000	620 × 250 × 500	57
RE3 M 9-2	6A3AA000002	9000	620 × 250 × 500	58
RE3 M 12-2	6A3AA000003	12000	590 × 340 × 580	67
RE3 M 15-2	6A3AA000004	15000	590 × 340 × 580	69

230 V 50 Hz input / 230 V 50 Hz output and ± 15% input range. For models with isolation transformer and other configurations, consult. Others powers upon request.

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
RET 3-4	606EY050390	3000	680 × 340 × 240	32
RET 6-4	606GU050390	6000	680 × 340 × 240	61
RET 9-4	606IA050390	9000	630 × 390 × 520	68
RE3 T 15-4	6A3BA000001	15000	905 × 460 × 705	80
RE3 T 20-4	6A3BA000002	20000	905 × 460 × 705	117
RE3 T 30-4	6A3BA000003	30000	905 × 460 × 705	164
RE3 T 45-4	6A3BA000004	45000	905 × 460 × 705	225
RE3 T 60-4	6A3BA000005	60000	905 × 460 × 705	260
RE3 T 75-4	6A3BA000006	75000	850 × 615 × 1315	317
RE3 T 100-4	6A3BA000007	100000	850 × 615 × 1315	343
RE3 T 150-4	6A3BA000015	150000	850 × 815 × 1315	650

3 x 400 V 50 Hz input / 3 x 400 V 50 Hz output and ± 15% input range. For models with isolation transformer and other configurations, consult. Others powers upon request

Dimensions



RE3 M 6/9-2



RE3 T 75÷150-4



RE3 T 200-4

Technical specifications

MODEL		RE3
INPUT	Single phase voltage	120 V, 220 V, 230 V, 240 V
	Three-phase voltage	3 × 208 V / 3 × 220 V / 3 × 380 V / 3 × 400 V / 3 × 415 V (3F + N) (1)
	Regulation range	±15% (2)
	Frequency range	47.5 ÷ 63 Hz
OUTPUT	Single phase rated voltage	120 V, 220 V, 230 V, 240 V
	Three-phase rated voltage	3 × 208 V / 3 × 220 V / 3 × 380 V / 3 × 400 V / 3 × 415 V (3F + N) (1)
	Accuracy	Better than ± 2%
	Total harmonic distortion (THDv)	Nil
	Frequency	48 ÷ 63 Hz
	Response time	<100 ms
	Performance	> 97%
	Admissible overloads	200% for 1 minute
BYPASS	Type	Static
GENERAL	Ambient temperature	-10º C ÷ + 45º C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2400 m.a.s.l.
	Cooling	Natural or forced depending on power rate
	Acoustic noise at 1 metre	< 45 dB(A)(3)
	Mean time between failures (MTBF)	60,000 hours
	Mean time to repair (MTTR)	30 minutes
	Electrical noise attenuation on common mode	With isolation transformer > 40 dB / With ultra-isolation transformer > 120 dB
STANDARDS	Safety	UNE EN IEC 61558-2-12; UNE EN IEC 61558-2-13
	Electromagnetic compatibility (EMC)	UNE EN IEC 62041
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Ask for other setting
(2) Other ranges under request
(3) <65 dB(A) for models with forced ventilation

Information subject to change without notice.

EMi3

Servomotor voltage stabiliser 5 kVA - 5 MVA



EMI3: Constant stabilisation and savings in overvoltages

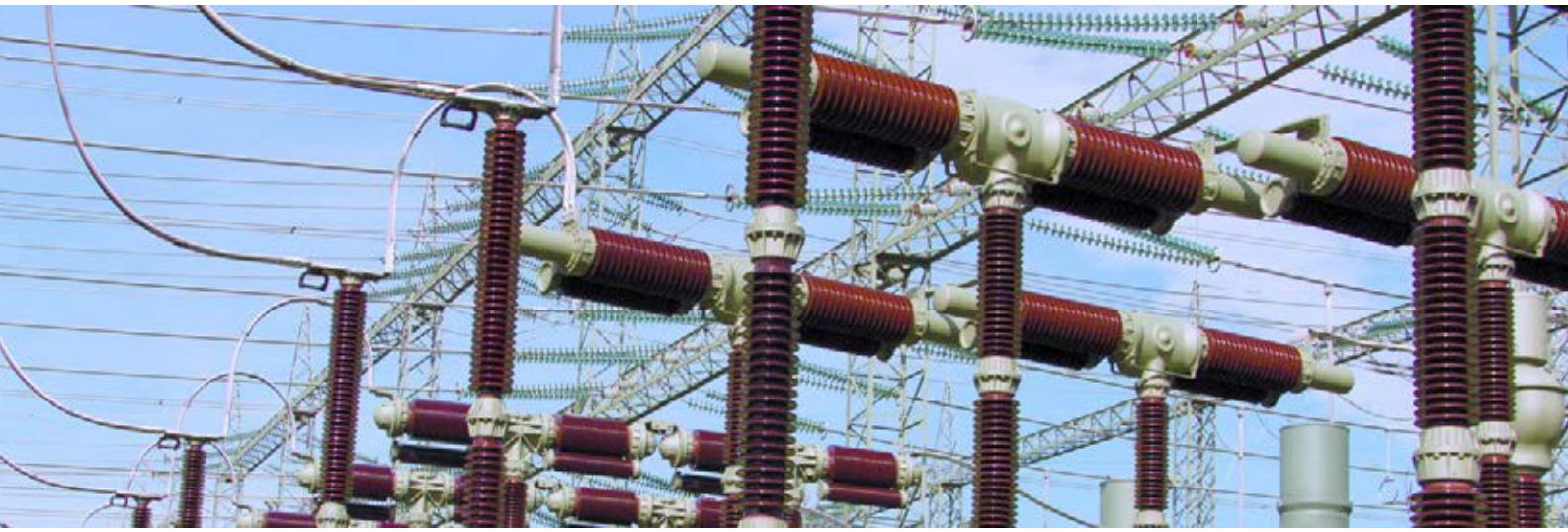
Issues such as the constant variation of loads connected to the mains, interference generated by the loads themselves, possible failures in distribution lines, voltage drops due to the length of the lines and problems caused by lightning make it impossible to have an electricity supply with a stable voltage. Salicru's **EMi3** servomotor voltage stabilisers are the ideal solution to protect sensitive equipment from constant voltage fluctuations in the power supply.

Moreover, in the event of drops in the total consumption of a power line, voltage tends to rise, causing overconsumption in the equipment that remains connected. By using a stabiliser, overconsumption can be eliminated, thereby producing significant cost savings and ensuring that connected loads function within the voltage range for which they were designed.

The operating principle is based on regulation, by means of a control circuit, of the variable autotransformer that supplies the voltage for the booster transformer in series, either in phase or in phase opposition, to achieve the rated value of the output voltage.

Applications: Effective protection for all types of critical load

Actions and operations in electrical substations, electric ovens, numerical controls, lifts, graphic printing equipment, production lines, medical equipment, TV repeater stations, machine tools (milling machines, trimming machines, presses, lathes, polishing machines, electrical discharge machines, etc.) are some of the applications, because of their power, extremely reactive nature and high sensitivity to voltage variations.

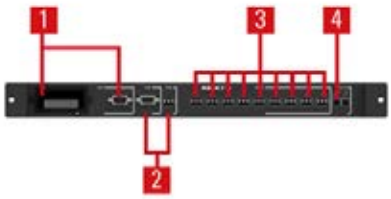


Performances

- Power range, single and three-phase, up to 5000 kVA.
- Fast and efficient toroidal autotransformers for the entire power range.
- Output accuracy better than 1% (adjustable).
- In three-phase units, independent regulation per phase, unaffected by imbalances.
- Input regulation range ±15% standard.
- High efficiency, up to 97.5%.
- High speed regulation, up to 70 V/s.
- Full LCD display for stabiliser control and monitoring.
- Guaranteed output stability through a MosFET servo control.
- Unaffected by line voltage harmonics; stabilisation based on true RMS.
- Stable operation in the event of load and/or voltage variations.
- Wide operating temperature range (-10°C to +55°C).
- Dry contact interface (2 standard and up to 11 optional).
- No harmonics injection.
- Mechanically-optimised design, easier maintenance.
- Transient overloads of up to 1000% of the rated admissible.
- Highly robust and reliable (high MTBF).
- Quiet operation.
- Overvoltage surge supresion protection.
- Suitable for regenerative loads.

Communications

1. Slot for remote management or RS-232 interface.
2. RS-485 serial ports. MODBUS communications protocol.
3. Programmable dry contact interface (x5).
4. Digital input.



Wide voltage regulation range

The range includes models with standard regulation (±15 %), as well as extended ±30 % versions for environments with greater voltage fluctuations.



Display

1. LCD 2x16 characters.
2. Navigation keys.
3. LEDs (alarm, bypass, normal operation and communications).



Options

- Output current, power and overload measurement.
- Maximum and minimum output voltage protection.
- Manual and automatic bypass.
- Overload contactor.
- Communications and relay module.
- Other regulation ranges.
- Galvanic isolation transformer.
- Output circuit breaker.
- Extended ambient operating temperature from -20ºC.

Range

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EMi3 M 5-2	6A5DA000001	5000	580 × 340 × 580	40
EMi3 M 7,5-2	6A5DA000002	7500	580 × 340 × 580	45
EMi3 M 10-2	6A5DA000003	10000	580 × 340 × 580	56
EMi3 M 15-2	6A5DA000004	15000	895 × 460 × 705	111
EMi3 M 20-2	6A5DA000005	20000	895 × 460 × 705	115
EMi3 M 25-2	6A5DA000006	25000	895 × 460 × 705	119
EMi3 M 30-2	6A5DA000007	30000	895 × 460 × 705	128
EMI3 M 40-2	6A5DA000008	40000	895 × 460 × 705	159
EMI3 M 50-2	6A5DA000009	50000	640 × 604 × 1315	292
EMI3 M 65-2	6A5DA000010	65000	840 x 604 x 1315	308
EMI3 M 75-2	6A5DA000011	75000	840 x 604 x 1315	319
EMI3 M 100-2	6A5DA000012	100000	840 x 604 x 1315	346
EMI3 M 150-2	6A5DA000013	150000	840 x 804 x 2115	400
EMI3 M 200-2	6A5DA000014	200000	840 x 804 x 2115	522
EMI3 M 250-2	6A5DA000015	250000	840 x 804 x 2115	688
EMI3 M 300-2	6A5DA000016	300000	840 x 804 x 2115	805
EMI3 M 350-2	6A5DA000040	350000	840 x 1204 x 2115	920

Nomenclature, dimensions and weights for models: Input 230 V 50 Hz / Output 230 V 50 Hz and input range +/-15%.
Others powers and/or other input ranges on request.

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EMI3 T 15-4F	6A5FA000002	15000	895 × 460 × 705	116
EMI3 T 20-4F	6A5FA000003	20000	895 × 460 × 705	144
EMI3 T 35-4F	6A5FA000004	35000	895 × 460 × 705	161
EMI3 T 55-4F	6A5FA000005	55000	640 × 604 × 1315	313
EMI3 T 70-4F	6A5FA000006	70000	640 × 604 × 1315	362
EMI3 T 90-4F	6A5FA000007	90000	840 × 604 × 2115	521
EMI3 T 110-4F	6A5FA000008	110000	840 × 604 × 2115	435
EMi3 T 140-4F	6A5FA000009	140000	840 × 604 × 2115	463
EMi3 T 175-4F	6A5FA000010	175000	840 × 804 × 2115	496
EMi3 T 220-4F	6A5FA000011	220000	840 × 1204 × 2115	730
EMi3 T 275-4F	6A5FA000012	275000	840 × 1204 × 2115	830
EMi3 T 330-4F	6A5FA000013	330000	840 × 1204 × 2115	887
EMI3 T 375-4F	6A5FA000016	375000	840 × 1204 × 2115	891
EMI3 T 450-4F	6A5FA000022	450.000	840 × 1604 × 2240	1223
EMI3 T 500-4F	6A5FA000023	500.000	840 × 1604 × 2240	1275
EMI3 T 600-4F	6A5FA000024	600.000	840 × 1604 × 2240	1503
EMI3 T 800-4F	6A5FA000025	800.000	840 × 3204 × 2240	1946
EMI3 T 1000-4F	6A5FA000026	1.000.000	840 × 3204 × 2240	2400
EMI3 T 1300-4F	6A5FA000027	1.300.000	840 × 3204 × 2240	3120
EMI3 T 1300-4F	6A5FA000027	1.300.000	840 × 3204 × 2240	3120

MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EMI3 T 2000-4F	6A5FA000091	2.000.000	1225 × 5613 × 2240	4675
EMI3 T 2500-4F	6A5FA000092	2.500.000	1225 × 5613 × 2240	5805
EMI3 T 3200-4F	6A5FA000093	3.200.000	840 × 9612 × 2240	7200
EMI3 T 4000-4F	6A5FA000094	4.000.000	840 × 9612 × 2240	9360
EMI3 T 5000-4F	6A5FA000095	5.000.000	1225 × 16839 × 2240	11316

Nomenclature, dimensions and weights for models: Input 3x400 V 50 Hz / Output 3x400 V 50 Hz, input range +/-15% and independent regulation per phase.
Others powers and/or other input ranges on request.

Technical specifications

MODEL		EMi3
INPUT	Single phase voltage	120 / 230 V (1)
	Three-phase voltage	3x208 / 3x400 / 3x480 (3F+N+PE) (1)
	Regulation range	±15%(2)
	Frequency range	47.5 ÷ 63 Hz
OUTPUT	Single phase rated voltage	120 / 220 / 230 / 240 V
	Three-phase rated voltage	3x208 / 3x400 / 3x480 (3F+N+PE) (1)
	Accuracy	± 3% (adjustable between 1% ÷ 5%)
	Output voltage setting	± 10%
	Total harmonic distortion (THDv)	<0.2%
	Frequency	48 ÷ 63 Hz
	Regulation speed	Up to 70 V/s
	Performance	Between 96.5% and 97.5%
	Voltage disconnection value	Adjustable (3)
	Admissible overloads	Up to 200% for 20 s
	Possible load variation	0 ÷ 100%
	Power factor influence	Independent
COMMUNICATION	Ports	2 Dry contacts / RS-232 (4)
	Intelligent slot	One (4)
INDICATIONS	Type	LCD display (2x16 characters) + 4 status LEDs
GENERAL	Ambient temperature	-10º C ÷ +55º C(2)
	Storage temperature	-20º C ÷ +85º C
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2,400 m.a.s.l.
	Cooling	Natural or forced depending on power rate(5)
	Acoustic noise at 1 metre	<45 dB(A)(6)
	Mean time between failures (MTBF)	60,000 hours
	Mean time to repair (MTTR)	30 minutes
STANDARDS	Safety	IEC/EN 61558-2-14
	Electromagnetic compatibility (EMC)	IEC/EN 62041
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Ask for other settings
(2) Other ranges available on request
(3) With optional voltage maximum-minimum
(4) Mutually exclusive ports
(5) Forced from 20 kVA for single phase and 55 kVA for three-phase
(6) <65 dB(A) for models with forced ventilation

Information subject to change without notice.

VR EQX

Bidirectional voltage regulator for self-consumption



VR EQX: Solution for mains voltage problems in photovoltaic installations

Salicru's **VR EQX** range of voltage regulators for mains-connected photovoltaic installations prevent outages due to over/under voltage in the power line.

Most regulations governing this type of system's connection to the grid require solar inverters to shut down if their voltage exceeds certain limits.

In unstable networks, this causes unwanted stoppages in the photovoltaic installation, with the consequent loss of power generation and a decrease in the useful life of solar inverters.

Since, in the vast majority of cases, the surplus energy generated is injected into the grid (in return for compensation), traditional unidirectional voltage stabilisers are unsuitable because they can't carry reverse current. Given that it constitutes a breach of regulations and exposes the loads to serious danger, manipulating the inverter is not a viable solution to the problem either.

These regulators record and manage the grid voltage at all times, responding with quick and precise voltage jumps during the short period of time it may be required for the vast majority of national grids.

Applications:

The **VR EQX** range is predominantly designed for grid-connected solar photovoltaic self-consumption installations when the main power line is liable to a certain amount of voltage instability. Regardless of the inverter brand, they ensure the viability of these systems, which are all subject to the same regulation.

Advance studies of the electrical network are generally difficult to carry out for various reasons, making these bidirectional voltage regulators indispensable for companies dedicated to offering these types of installations.



Performances

- Bidirectional voltage regulator.
- Fast, electronically-controlled recording and processing of electrical data from the network, allowing for high-speed regulation.
- Simple connection via an external terminal block.
- Circuit-breaker protection included.
- Does not generate and is not affected by harmonics in the line.
- Suitable for regenerative loads.
- The lightweight and compact single-phase models are suitable for one-person handling.
- Interior wall installation and optional exterior wall installation.
- Suitable for all mains-connected solar inverters.
- Guarantees an input voltage within the minimum and maximum margins established.



Bidirectional

Ensures optimal voltage quality.

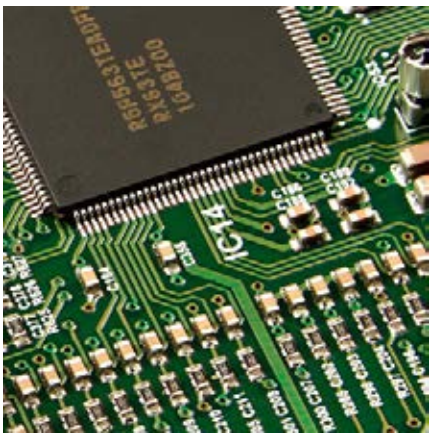
Compatibility

Compatible with all brands and models of inverters on the market.

(*) Check available powers and voltages.

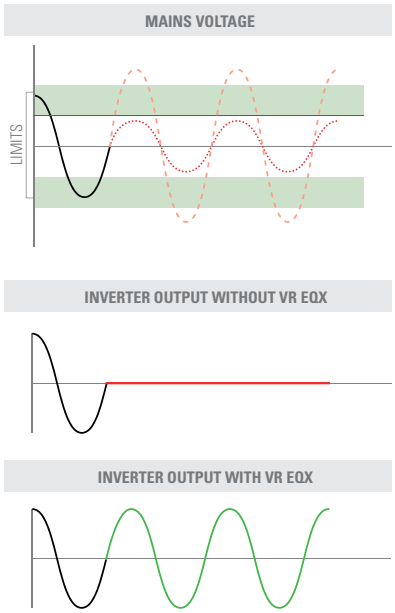
Quick-response

Electronic management ensures a quick response to undesirable mains voltage variations, establishing an immediate and quality energy supply.



Guaranteed generation

In both the single and three-phase models, our inverter will prevent disconnection in the event of mains voltage variations. Guaranteeing continual power generation.



Range

UNDERVOLTAGE REGULATORS	CODE	POWER (VA / W)	RATED VOLTAGE (V)	MINIMUM INPUT VOLTAGE (V)	MAXIMUM INPUT VOLTAGE (V)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
VR-5000-EQX-SL	6B2ST000004	5000	230	172.5	-	250 × 361 × 444	25
VR-6000-EQX-SL	6B2ST000005	6000	230	172.5	-	250 × 361 × 444	27
VR-10000-EQX-SL	6B2ST000044	10000	230	172.5	-	250 × 361 × 444	31

For higher power models and three-phase, please check EMI3 y RE3 products, compatible with regenerative loads

OVERVOLTAGE REGULATORS	CODE	POWER (VA / W)	RATED VOLTAGE (V)	MINIMUM INPUT VOLTAGE (V)	MAXIMUM INPUT VOLTAGE (V)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
VR-5000-EQX-SH	6B2ST000015	5000	230	-	276	250 × 361 × 444	25
VR-6000-EQX-SH	6B2ST000016	6000	230	-	276	250 × 361 × 444	27
VR-10000-EQX-SH	6B2ST000034	10000	230	-	276	250 × 361 × 444	31

For higher power models and three-phase, please check EMI3 y RE3 products, compatible with regenerative loads

UNDER/OVER VOLTAGE REGULATORS	CODE	POWER (VA / W)	RATED VOLTAGE (V)	MINIMUM INPUT VOLTAGE (V)	MAXIMUM INPUT VOLTAGE (V)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
VR-5000-EQX-SLH	6B2ST000026	5000	230	172,5	276	250 × 361 × 444	40
VR-6000-EQX-SLH	6B2ST000027	6000	230	172,5	276	250 × 361 × 444	44
VR-10000-EQX-SLH	6B2ST000042	10000	230	172,5	276	250 × 361 × 444	48

For higher power models and three-phase, please check EMI3 y RE3 products, compatible with regenerative loads

Dimensions



Technical specifications

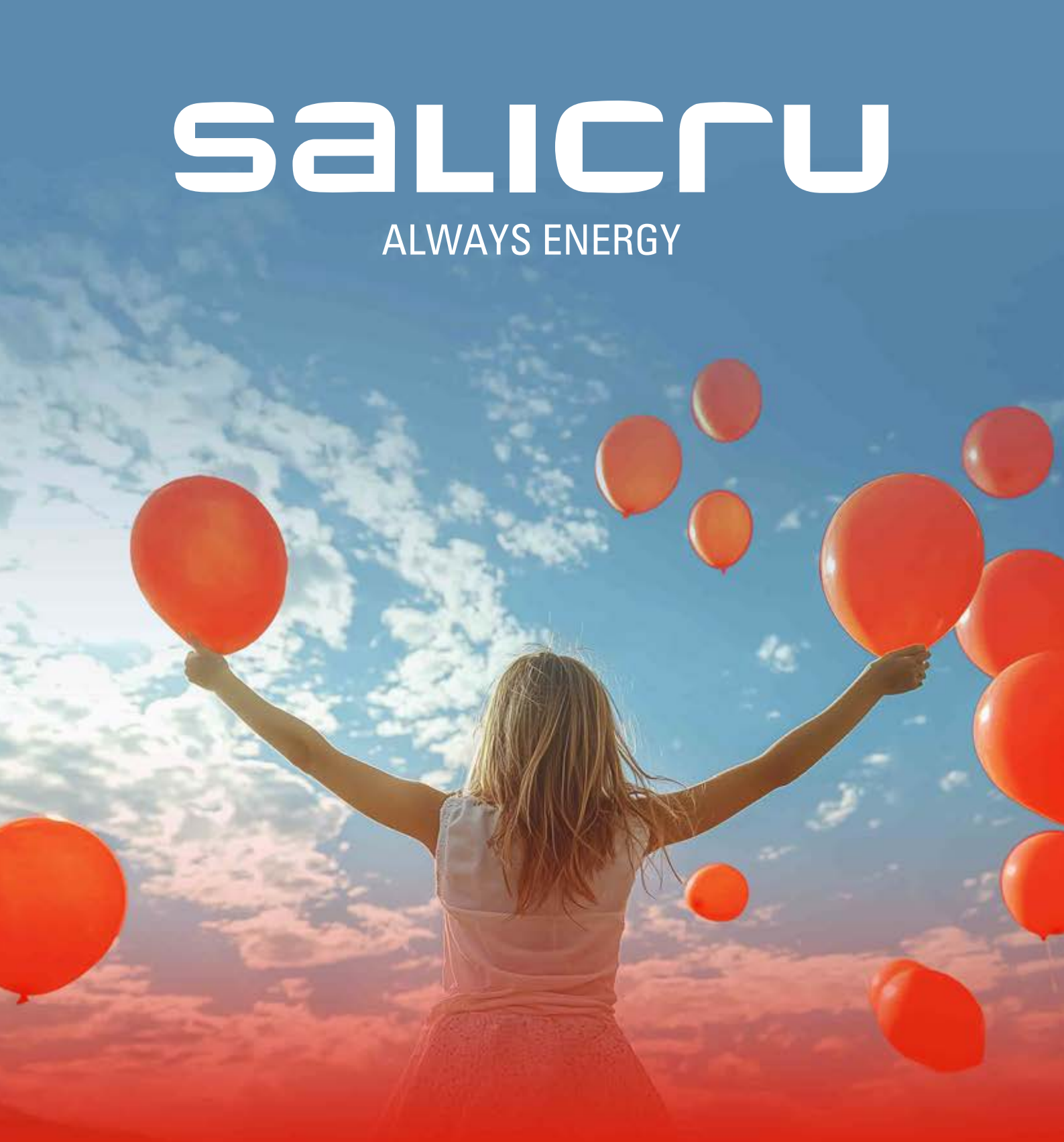
MODEL		Model -SL	Model -SH	Model -SLH
INPUT	Rated frequency	50Hz		
	Protection	1-pole breaker		
OUTPUT	Rated voltage	230 V		
	Response time	< 100 ms		
	Voltage surge	+23 V	-23 V	±23 V
	Total harmonic distortion (THDv)	Nule		
	Frequency	50Hz		
	Performance	> 97 %		
WORKING RANGES	Rated voltage	230 V		
	Voltage surge	23 V		
	Lower limit RD244/2019	195,5 V	Not applicable	195,5 V
	Minimum compensation voltage	172 ,5 V	Not applicable	172 ,5 V
	RD244/2019 upper limit	Not applicable	253 V	
	Maximum voltage with compensation	Not applicable	276 V	
	Margin over nominal	-25%	-20%	-25% / -20%
GENERAL	Ambient temperature	-10~50°C		
	Relative humidity	Up to 95%, non-condensing		
	Number of transformers	1 unit		
	Maxium operating altitude	2,400 masl		
	Degree of protection	IP20		
	Cooling	Natural		
	Acoustic noise at 1 metre	< 25dB		
STANDARDS	Safety	IEC-62103		
	Electromagnetic compatibility (EMC)	EN 61000-6-4; EN-6100-6-2		
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001		

(1) For higher power models and three-phase, please check EMI3 y RE3 products, compatible with regenerative loads

Information subject to change without notice.

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ALWAYS ENERGY



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PRODUCT RANGE

UPS - Uninterruptible Power Supply
Batteries
Variable frequency drives
Solar inverters
Voltage Stabilisers
DC Systems
Transformers

DESIGNED IN BARCELONA

NB: Salicru can offer other power electronics solutions depending on the specifications of the application or the technical requests.