Low Voltage Equipment
Overview
A trusted provider

Schneider Electric, the global energy management specialist, offers an extensive range of integrated solutions designed to help organisations achieve safe, reliable and efficient use of their energy. Through our integrated approach as one Schneider Electric, we can help businesses in energy, industry, infrastructure, residential and every other conceivable type of building, meet their electrical needs.

With more than 90 years of experience, it’s reassuring to know our products offer the highest performance, safety and durability, having been proven in use in the most demanding environments. In all premises and manufacturing facilities, full compliance with BS, EN and IEC standards has been our policy for many years.

For more information call us on 0870 608 8 608 or click on www.schneider-electric.co.uk
<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Schneider Electric</td>
<td>4</td>
</tr>
<tr>
<td>Low Voltage Power products</td>
<td>6</td>
</tr>
<tr>
<td>Schneider Electric products</td>
<td>10</td>
</tr>
<tr>
<td>Indoor Package Substations</td>
<td>12</td>
</tr>
<tr>
<td>High Power Low Voltage Switchboards</td>
<td>14</td>
</tr>
<tr>
<td>Prisma medium power</td>
<td>16</td>
</tr>
<tr>
<td>Standard assemblies</td>
<td>18</td>
</tr>
<tr>
<td>Canalis Busbar Trunking</td>
<td>20</td>
</tr>
<tr>
<td>Metering and Monitoring</td>
<td>22</td>
</tr>
<tr>
<td>PowerView</td>
<td>23</td>
</tr>
<tr>
<td>Power Quality</td>
<td>24</td>
</tr>
<tr>
<td>Services and Projects</td>
<td>26</td>
</tr>
<tr>
<td>Case studies</td>
<td>28</td>
</tr>
<tr>
<td>Key markets</td>
<td>30</td>
</tr>
</tbody>
</table>

- **Support**: Service to back-up our offer
- **Flexibility**: Devices for an array of applications
- **Safety**: Quality solutions for peace of mind
As a global specialist in energy management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including energy, infrastructure, industrial processes, building automation, and data centres, as well as a broad presence in residential applications. Focused on making energy safe, reliable and efficient, the company’s 114,000 employees achieved sales of more than 18.3 billion euros in 2008, through an active commitment to help individuals and organisations “Make the most of their energy™”.

We have an extensive product range encompassing many internationally renowned brands, including Telemecanique, Merlin Gerin, Square D, Mita and Sarel. To increase the visibility of our name we’re moving into the future as one Schneider Electric to provide you with the widest offer in the industry.

By working as one Schneider Electric brand, it will be clearer that our ranges are highly compatible, offering integrated, tailored solutions for all your needs.
Solution provider for low voltage power products

As the leading supplier of low voltage electrical distribution equipment for both commercial and industrial buildings, we offer an extensive range of solutions.

From miniature circuit breakers and distribution boards to package substations, you can be reassured all our products are designed and manufactured to provide the specifier, installer and end user with technologies that offer the most advanced solutions.
Quality is at
the core of our business

Located in Telford in the heart of Shropshire, our low voltage equipment facility is a modern 3000m² factory utilising skilled personnel and the latest manufacturing techniques to produce our market leading products. Following the principles of Schneider Electric’s production system, which focuses on people, processes and quality, ensures we deliver total customer satisfaction.

Operating under a lean manufacturing system ensures we eliminate waste during production, improve efficiency, reduce faults, continually enhance our processes and improve the quality of the products for our customers. We also encourage our staff to think for themselves and hold daily meetings to cover issues around safety, quality, service and efficiency, where the team is encouraged to problem solve.

Make the most of your energy™
We’ll support you every step of the way

As a leading manufacturer, we offer comprehensive service and support above and beyond just providing technologies. From project management and site supervision to testing and commissioning, our team of designers, engineers and legislative experts will help ensure your project is a success.

All our devices are supported by routine and verified documentation, as well as comprehensive catalogues, operation and maintenance information. In addition, we operate to ISO9001 and ISO14001 standards and ensure all our products comply with industry legislation, directives and regulations, providing you and your customers with peace of mind.
Tendering
Our team of dedicated experts can help you through the tendering process. From specification analysis, we can develop solutions to meet customers’ requirements while highlighting products or solutions suitable for energy efficiency initiatives.

Design
Our consultancy service can help you with your designs and provide you with high quality CAD drawings for specification and purchasing needs. You can be assured the equipment we select will be optimised to meet your requirements and our assemblies are verified to IEC 61439-2 for the ultimate in quality.

Engineering
As you would expect from a leading manufacturer, all our products are produced to the highest standards. Functionality is at the core of our products, which are designed with you in mind. For seamless integration, our devices offer communication compatibility for metering, measuring and monitoring.

Production
Implementing lean manufacturing techniques ensures product availability. Adhering to ISO 9001 certification and following our own production system ‘SPS’, provides us with the flexibility to fulfil your requirements.

Manufacturing
Employing skilled personnel and investing in their training, guarantees our products are built by the best people. Hourly checks mean every single item is manufactured to the same standards.

Testing & inspection
We take quality seriously, which is why we carry out thorough and regular inspections during production to ensure we are consistently meeting your requirements and every product is 100% inspected prior to leaving the factory.
Driving innovation in the Low Voltage market

From concept and design through to manufacture and installation, we take responsibility for the entire life-cycle of our products. Our solutions are built to meet the needs of specifiers, installers and end-users, by integrating advanced technologies that provide a safe, reliable installation and are simple to use.
Indoor packaged substations
Packed with technology

Our package substations provide cost effective, safe and efficient Medium Voltage (MV) and Low Voltage (LV) distribution solutions. Combining MV transformers and LV distribution in a close coupled assembly, our devices offer fully integrated technologies which can be designed to meet individual needs.

Package substation switchboards

- Fully certified and manufactured to the latest standards
- Ratings to 7300A (horizontal busbar)
- Fault level ratings to 150kA 1 second
- Form 4 type 6

Prisma package substation switchboards

- Fully certified and manufactured to the latest standards
- Ratings to 3200A
- Fault level ratings to 85kA 1 second
- Form 4 type 6
Benefits

- A guaranteed verified assembly
- Cost saving through reduced on-site cabling and installation time
- Guaranteed protection coordination
- Space saving configuration to suit civil works
- Dry type cast resin transformer technology
- MV protection and switching technology

Medium voltage switchgear and connections

- Connected either directly to the transformer or via an external cable box
- Can be mounted on any side
- Fully certified MV switchgear
- Extendable MV switchgear configuration
- 200A and 630A MV switches and circuit breakers
- Applications up to 21kA at 13.8kV

Cast resin transformers

- Fire resistant
- Provide long life, high levels of safety and excellent environmental protection
- Side or rear mounting for flexibility
- Rating 500kVA to 3000kVA indoor mounted
- Up to 24kV primary voltage 400V secondary voltage
- Standards IEC 76-1 to 76-5, IEC 726 (1982)
- K rated transformers available
- Transformer enclosures IP21 as standard
- Transformer enclosure MV/LV interlocking to provide isolation before access
- Forced cooling options
High power low voltage switchboards
Investing in tomorrow’s operations

Our OKKEN switchboard is the ultimate power solution. Ideally suited to large projects and industrial processes, while maximising safety and offering ease of maintenance and operation. Typical applications include: airports, automotive, data centres, offices and healthcare.

Features

- Fully certified and manufactured to the latest standards
- Ratings to 7300A (horizontal busbar)
- Fault level ratings to 150kA 1 sec (horizontal busbar)
- Form 4 type 6 compartmented construction
- Incoming device up to 6300A, breaking capacity Ics 100% Icu
- 3 pole and 4 pole configurations
- Plug-in, disconnectable and withdrawable trays
- Circuit breaker, fuse and motor protection
- Up to IP54
- Outgoing circuit breakers up to 4000A
- Outgoing fuses up to 800A
- Motor control up to 250kW
- Epoxy/polyester powder coating finish, RAL 1000
- Front or rear access
Options

- Surge protection
- Auto change-over schemes
- PowerLogic metering and monitoring
- Power factor correction and active filtration
- G59 interfacing
- Mechanical interlocking
- Integrated metering, measuring and monitoring using the Compact NSX moulded case circuit breakers

Benefits

- Features withdrawable trays to achieve the highest level of supply availability
- Plug in and disconnectable trays offer flexibility to match individual application needs
- Busbars are shrouded to IP2X to help prevent accidental contact with live parts
- Cable connections can be configured to form 4 type 6 using front or rear access cable boxes
- Circuit breakers, fuses and motor control can be configured in the same column, maximising stacking density and reducing the switchboard footprint
- Power factor correction can be incorporated to aid efficient energy usage
- Incorporates an innovative set of test points on the incoming side of the switchboard for the ultimate in safety. This facilitates ‘proving dead’, earth fault loop impedance and short circuit potential testing, adhering to the latest health and safety requirements
- Thermal imaging can be undertaken on the incoming and horizontal busbar arrangements for preventative maintenance
- Meeting Part L of the building regulations is made simple by incorporating PowerLogic or other metering as part of the protective device. Power factor, kVA, current voltage, frequency power and harmonics can all be captured, for a complete energy monitoring solution
- OKKEN incorporates Schneider Electric’s world renown devices ensuring the ultimate in protection of your installation
Prisma medium power low voltage switchboards

A powerful performance

Our Prisma switchboards bring innovation to the market using a modular steelwork design. Prisma is ideally suited to commercial applications such as leisure facilities, offices, education establishments and hospitals.

It can also meet the needs of more industrial installations such as pharmaceutical. Incorporating bolt-on technology as well as compartmented solutions, Prisma offers simple installation, flexibility and ease of maintenance, with high stacking density to reduce the overall switchboard footprint.

Features

- Fully certified and manufactured to IEC 61439-2
- Ratings to 3200A (horizontal busbar)
- Fault ratings to 85kA 1 sec (horizontal busbar)
- Form 3 type 2 high density and form 4 type 6 compartmented construction
- Incoming device up to 3200A, breaking capacity Ics 100% Icu
- 3 Pole and 4 Pole configurations
- Top or bottom mounted horizontal busbars
- Fixed and plug on configuration
- Circuit breaker, fuse and motor protection
- Up to IP55
- Outgoing circuit breakers up to 2000A
- Outgoing fuse up to 800A
- Outgoing motor control up to 75kW
- Epoxy powder coating finish, RAL 9001
- Front or rear access
Options

- Surge protection
- Auto changeover schemes
- PowerLogic metering and monitoring
- Power factor correction
- G59 interfacing
- Mechanical interlocking
- Thermal imaging
- Integrated metering, measuring and monitoring using the Compact NSX moulded case circuit breakers.

Benefits

- The aesthetics of the Prisma switchboard means it can be located anywhere in any installation
- Prisma utilises compartmented construction, form 4 type 6, 3 pole devices and neutral links
- Alternative high-density construction, form 3 type 2
- Cable connections are simplified, using the circuit breaker with terminal shields, form 3 type 2 or cable boxes form 4 type 6
- Circuit breakers, fuses and motor control can be configured in the same column, maximising stacking density and reducing the switchboard footprint
- Power factor correction can be incorporated to facilitate efficient energy usage.
- Incorporates an innovative set of test points on the incoming side to maximise safety. This facilitates ‘proving dead’, earth fault loop impedance and short circuit potential testing
- Meeting Part L of the building regulations is made simple by utilising PowerLogic or integrating metering within the protection devices
- Prisma incorporates Schneider Electric’s market leading devices, ensuring the best protection, co-ordination and flexibility for your installation
Standard assemblies
Going beyond standard solutions

We offer both fully assembled and customised distribution boards. They are suitable for installation in all types of sub-distribution and final distribution applications. Standard assemblies can be designed and customised to meet your specific requirements.

Assembled standard product (ASP)

- Single phase distribution boards (up to 125A)
- 3 phase distribution boards (125A and 250A)
- Moulded case circuit breaker panelboards (up to 2000A)
- Fuse-switch panelboards
- Multiple distribution board assemblies
- Multiple panelboard assemblies
- Combined distribution and panelboard assemblies
- Metering to meet Part L of the building regulations
- Complete with incoming and outgoing devices, wiring and labelling
- Fully factory tested
Engineered standard product (ESP)

Larger and more complex installations may require standard products combined with additional equipment into one composite assembly.

These assemblies include:

- Control and command equipment, contactors and timeclocks
- Distribution boards with contactor control or under-voltage release
- Power factor correction equipment
- Building Management System interface facilities
- Auto source change-over systems
- Protective functions including earth fault relays and surge protection
- Integrated Installation Systems
- Fully factory tested

Benefits

- Manufactured to the latest standards and delivered direct to site, Standard Plus assemblies are fully tested ensuring a safe, reliable and optimised solution.
- Installation time is reduced and less skilled labour is required as the product is delivered ready-to-install
- Panelboards are simple to fit achieving Form 3 type 2 when used with terminal shields on the outgoing devices
- The flexibility of our standard products gives you an advantage in design, specification, installation and financial return. The range co-ordinates fully with OKKEN and Prisma switchboards, providing you with the benefits of a complete solution
- Quick delivery times - ASPs can be delivered in three weeks and ESPs on site within four weeks
Canalis busbar trunking

Getting better connected

Our Canalis range is the ultimate solution for power and lighting distribution. Fast and easy to install, it is a cost effective alternative to traditional cable systems. Canalis is simply plugged together, eliminating the need for drilling and cutting, which reduces installation time, cost and the requirement for skilled labour.

Canalis is a highly reliable and safe distribution system, requiring no additional trays or trunking. With tap off points at regular intervals, power is accessible with the flexibility to adapt to a change of use. Configured from straight lengths, corner pieces and flexible couplings, Canalis provides electrical distribution to meet any site’s layout.

Innovative, bright ideas that save time and money
Features

- KDP Flexible lighting busbar – 20A modular wiring system
- KBA 25A and 40A lighting busbar 2,4 pole
- KBB 25A and 40A lighting busbar 2,4,6,8 pole
- KNA 40A, 63A, 100A low power busbar + 160A
- KSA 100A, 160A, 250A, 400A, 500A, 630A, 800A medium power busbar + 1000A
- KSR 100A, 250A, 400A, 500A, 630A, 800A 1000A rising main power busbar

Benefits

- Sandwich construction (KT busbar)
- All metal construction for fire resistance
- IP55 (sprinkler proof construction)
- Fuse tap offs up to 1250A
- Aluminium and copper busbar technology
- Harmonic high power busbar (on request)
- Low smoke, low halogen construction
- J type fuse tap offs
- Taps offs incorporating metering
- Tap offs including protection with full system co-ordination
- Angled bends reduce space compared to traditional cabling
In today’s commercial and industrial installations, greater emphasis is being placed on the operation and use of electrical systems - power supply and security, optimisation of energy costs and asset management are all major considerations.

PowerLogic and Compact NSX can be incorporated into all products from Schneider Electric’s low voltage equipment range and tailored to your individual needs. This meets Part L of the building regulation’s requirement for metering and monitoring.

Benefits

- Device monitoring and status indication
- Power consumption kW, kVA, kVAR, PF, V, I
- Harmonic distortion, current and voltage
- Event capture
- Building Management System and communication links
- Flexibility is possible with optional access via Ethernet networking based on open TCP/IP protocol allowing upgrades at any time as well as incorporating additional devices.
- Ofgem meter available
PowerView

Transparent energy management

Our PowerView software enhances the PowerLogic EGX100 integrated gateway – an automatic monitoring and targeting solution.

- This helps organisations meet their obligations to comply with environmental legislation and directives, qualify for the Enhanced Capital allowance
- Save money and lower energy consumption.
- Entry range power and energy monitoring PC based software
- Ideal for small system applications
- Allows users to track real time power conditions, remotely monitor electrical equipment or installations across an entire network and apply cost allocations

Functionality includes:

- Viewing real time data
- Standard reports and trend plots
- Data logging
- Generates reports on measurement, trend patterns and energy usage by day and hour
- Users can measure, analyse and compare total harmonic distortion quantities
- Time of use schedules with 10 periods of energy accumulation

EGX300 Webserver:

Our PowerLogic EGX300 integrated gateway server enables you to view online via a web browser, real time electrical system data - an automatic monitoring and targeting solution.

Benefits

- Save money and lower energy consumption
- Web based solution
- Ideal for small systems
- Allows users to view real time and historical data across an entire network
Power quality
More output for less input

With the requirement for greater energy efficiency and high levels of power security, our power quality solutions are available for a variety of applications. Power factor correction (PFC) can help improve energy efficiency, reduce CO₂ emissions, lower costs, minimise system losses and cut your carbon footprint, as well as extend the available supply.

With harmonics being a potential problem, we can undertake on-site surveys and computer-based network analysis to provide a custom engineered solution tailored to your network. This enables harmonic levels to be brought within G5/4 compliance using active filter technology.
Features

- Standard PFC systems less than 15% harmonic content
- Detuned PFC systems more than 15% less than 50% harmonic content
- 50 kVar to 600kVar @ 400V AC 50 Hz
- 240V AC to 36kV
- Fixed PFC or automatic controlled
- Up to IP54
- Direct, switch disconnector or circuit breaker connected
- Free standing or integrated into OKKEN or Prisma switchboards

A range of filtering solutions is available with the following features:

- Fixed passive L/C shunt filters 240V AC/36kV
- Automatic passive L/C shunt filters 240V AC/36kV
- Sinewave 4 wire up to IP54 415V 50Hz active filters, 20A to 120 (plus multiples)
- Accusine 3 wire up to IP54 415V 50Hz active filters, 50A to 300A (plus multiples)
- Hybrid active/passive L/C filters 240V AC/36kV
- Real time reactive power compensation 240V AC/690V AC

To complete our power quality offer, off loading, positioning, installation and commissioning services are all available to ensure complete peace of mind.
Services and Projects
Tap into our expertise

Schneider Electric’s Services and Projects offer is the perfect complement to our low voltage equipment range. Helping you derive the maximum benefit from your electrical installation, Services and Projects boasts unrivalled expertise in electrical distribution and automation systems, as well as in addition to the knowledge that comes from being at the core of a major equipment manufacturer.

We aim to add value to each project phase, but the choice of services you use is entirely yours. You may want a support package covering the entire life cycle of your project, or you can select a combination of services to complement your resources or knowledge.
The Services and Projects offer covers:

Consultancy
Through our power and energy consultancy teams we’ll work with you to improve network reliability and reduce your energy usage. We deliver individually tailored solutions, achieving the most efficient solution from the outset and avoiding unnecessary delays and unplanned costs. Additionally, our team can work alongside your own design teams or appointed contractors, filling skills gaps and offering our specialist knowledge.

Design
The design phase selects the most suitable equipment and provides detailed drawings and technical specifications.

Implementation
These services cover thorough preparation, high quality installation and commissioning, minimising the risk of unplanned delays and extra costs, as well as maintaining optimum site safety.

Operation
These services ensure that your installation running costs are reduced through higher energy operational efficiency and are cost-effectively maintained with minimum downtime.

Modernisation
Faulty or ageing equipment can be upgraded to extend an installation’s life through retrofits, refurbishments or repairs.

Training
A wide range of training courses are available including safe systems of work, product standards and legislation. Training can be delivered via our highly experienced trainers either at the dedicated Schneider Electric Training Centre, at any of our offices or at your own premises.
Background
Next Generation Data Ltd has worked in partnership with Schneider Electric to create one of Europe’s largest and most advanced data centres in South Wales.

Solution
As with any large electrical installation, LV and MV equipment was required and the solution was a packaged substation that was installed at the site, to provide all power for the data centre. The equipment was built with integrated power distribution units (PDU). The Schneider Electric PDU has the capability to remotely monitor every electrical circuit in the network, so if a fault ever occurs it can be picked up immediately and counter-measures can be implemented.

Benefits
- equipment is built to bespoke requirements
- specification is made easier
- minimum time and costs
- only one point of contact for manufacturing, delivering and commissioning
- logistic costs are also decreased as the substation can be delivered in one single unit
- reliable solution
Background
The new 47-acre Derby “Super” Hospital site incorporates teaching, research and specialist treatment centres, as well as accommodating the facilities from both Derby City General Hospital and the Derbyshire Royal Infirmary.

Solution
The project required a modular wiring system. In response, Schneider Electric developed a new design for its distribution boards, which enabled the panels and their associated connections to be assembled within the factory and transported to site.

As the project required 480 distribution boards, the Isobar 4c range was chosen because it allows for hundreds of combinations to be assembled from just a few standard modules. The main LV switchboard used in the project contains air circuit breakers, which are both electrically and mechanically interlocked to perform automatic changeover.

Schneider Electric’s Canalis KTC trunking was specified as it is designed to feed high power into the buildings. A total of 1,154 metres of busbar trunking was used, ranging from 1600A to 5000A.

Benefits
- time saving due to speedy, tool-free connections
- off site build eliminated any possible site errors
- reduced the number of skilled electricians required
- reduced waste as integrated products were delivered in less packaging
- future-proofed technology for maintenance and repurposing of spaces
- ensured continuity of electrical supply
Key markets in Schneider Electric

With a vast portfolio of offers, we can provide equipment to suit any application, with products that specifically meet stringent sector standards.

- Health
- Education
- Retail
- Leisure
- Finance
- Government buildings

Standards
- ISO 9001
- ISO 14001
- IEC 61439-2

Processes
- Lean manufacturing
- Six sigma
Make the most of your energy™
Nationwide support on one number - call the Customer Information Centre on

0870 608 8 608

Fax 0870 608 8 606

Schneider Electric’s local support

Schneider Electric is committed to supporting its customers at every stage of a project. Our 180 sales engineers, the largest dedicated sales force in the UK electrical industry, operate from 4 customer support centres.

Our sales engineers are skilled at assessing individual requirements and combined with the expert support of our product specialists, will develop the most effective and economical answer taking relevant regulations and standards fully into account.

To access the expertise of the Schneider Electric group, please call 0870 608 8 608. Each customer support centre includes facilities for demonstrations and training, and presentation rooms fully equipped with audio visual and video, providing excellent meeting facilities.

Merlin Gerin

Merlin Gerin is a world leader in the manufacture and supply of high, medium and low voltage products for the distribution, protection, control and management of electrical systems and is focused on the needs of both the commercial and industrial sectors. The newly launched VDI Network Solutions offer provides flexible, configurable ethernet systems for all communication needs.

Square D

Square D is a total quality organisation and its business is to put electricity to work productively and effectively, protecting people, buildings and equipment. Its low voltage electrical distribution equipment, systems and services are used extensively in residential and commercial applications.

Telemecanique

Telemecanique is a UK market leader and world expert in automation and control. It provides complete solutions, with it’s range of components, Modicon range of high technology programmable controllers (PLCs), multiple fieldbus and ethernet communication networks, HMI, motion control systems, variable speed drives and communications software. In addition, it offers power distribution through prefabricated busbar trunking.

Local customer support centres

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Schneider Electric Ltd
Suites 1-6, Technology Building
James Watt Avenue
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Product showrooms

Industrial systems and solutions showroom
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Building systems and solutions showroom
Schneider Electric Ltd, Stafford Park 5, Telford, Shropshire TF3 3BL

Energy and Infrastructure systems and solutions showroom
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