

### 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.

### Schneider Electric – expertise in electrical distribution, automation and control

Schneider Electric is the leading UK and world expert in the development and manufacture of products for the distribution and industrial applications of electricity. In the UK, Schneider Electric operates from 18 industrial and commercial sites, providing employment for 2,500 people, and achieves an annual turnover in excess of £270 million.

With its brands, Merlin Gerin, Modicon, Square D and Telemecanique, Schneider Electric offers a full range of products and services for Consultants, Specifiers, Contractors, OEMs, Panel Builders, and the electrical supply industry for commercial and industrial applications.

**Merlin Gerin** is one of the leading experts in electrical distribution technology. Its comprehensive array of extra-high, medium and low voltage products and systems is designed to manage and protect electrical installations, ensure safety and supply power reliability and continuity.

**Modicon** is a leading brand and marketer of high technology programmable controllers (PLCs) and motion control systems used in industrial automation. Its international catalogue includes PLCs, numerical controllers, specialised programming, terminals, software, fieldbus and ethernet communication networks, and human machine interfaces (HMI).

**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 world wide in commercial applications.

**Telemecanique** is a UK market leader and world expert in industrial control and automation. It provides complete solutions, with its range of components, programmable logic controllers, variable speed drives and communications software. In addition, it offers power distribution through prefabricated busbar trunking.

# Local support nationwide

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### Regional product showrooms

#### Midlands

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Merlin Gerin  
Modicon  
Square D  
Telemecanique

Merlin Gerin  
Modicon  
Square D  
Telemecanique

## Merlin Gerin

Feeder pillars  
The key to cost effective  
low voltage distribution



# Outdoor feeder pillars

## Choose to save costs



Outdoor feeder pillars are ideal for low voltage (LV) distribution when indoor space is either unavailable or is needed for other purposes.

Not only does a feeder pillar cost less than a purpose built substation, it is also much smaller. So it can be sited closer to the load, cutting installation and running costs.

And when it comes to the overriding consideration of safety, Merlin Gerin feeder pillars are second to none. Safety to IP2X standards under all operating conditions means that even an unskilled operator is always protected from live conductors.

Used individually or as an integrated part of a package substation, an outdoor feeder pillar is the distribution solution that provides the lowest total cost of ownership for many sites.

## Safe, flexible and much more...

Easy and safe to use – Merlin Gerin feeder pillars are built to the highest safety levels, which means they can be operated by less skilled personnel, reducing training costs.

Saves valuable indoor floor space – on many sites, such as retail outlets and hospitals, indoor floor space is at a premium and its loss to an indoor switchroom is unacceptable. Outdoor feeder pillars simply sidestep this issue.

Reduces cabling – requiring no external housing, outdoor feeder pillars are compact and can be installed closer to the point of demand. This reduces substantially the length of cable runs required, which is often a dominant cost during installation. The associated level of expensive circuit protection can also be lower. As an added benefit for the end user, operational costs are cut because shorter cables mean lower losses.

High availability for low ownership costs – monitoring and control systems are easily integrated with Merlin Gerin feeder pillars. The ability to monitor and control low voltage systems remotely can greatly boost utilisation of the feeder pillar by enabling the network to be reconfigured to minimise costly supply failures. Remote monitoring is also a tremendous aid to energy management schemes.

Meets future requirements – Merlin Gerin feeder pillars are designed with future needs in mind. Feeder pillars are usually specified and installed with capacity to spare. Circuits can be readily added at any time to allow the installation to expand as demand grows. Monitoring and control options can also be easily retrofitted, which all means you make the best use of your available capital, while protecting your investment for many years to come.

Long life, low maintenance – Merlin Gerin feeder pillars are manufactured from robust 3mm sheet steel, hot zinc metal sprayed and powder coated that is cured to produce a tough gloss finish. All of which makes the enclosure vandal proof and weatherproof for reliable operation in all environmental conditions.

## Where feeder pillars bring benefits:



### Airports

Outdoor feeder pillars are a superb solution for distribution from an airport's own 11kV network.

### Hospitals

Indoor space for switchboards is hard to justify and outdoor feeder pillars provide the most cost effective solution for taking off supplies from transformer ring main units.

### Retail parks

Commonly use outdoor feeder pillars for supplying car parks and shop units from a landlord's distribution system.

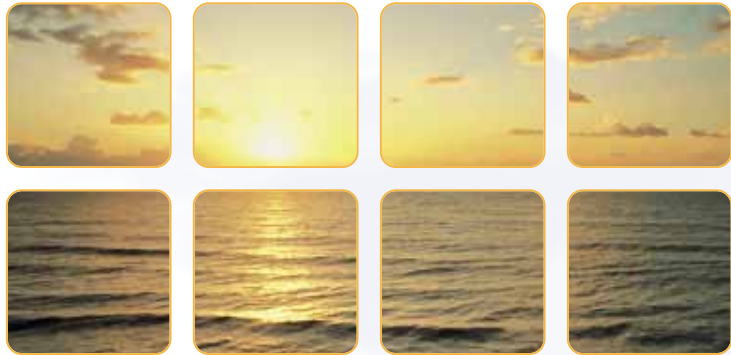
### Water treatment works

Remote installations like small pump houses and sewerage treatment works, particularly in rural areas, are especially suited to outdoor feeder pillars.

### Other sectors

Pharmaceuticals, docks, educational establishments, sports facilities, industrial refurbishment, telecommunications and many other sectors have new build and refurbishment applications, that greatly benefit from the lower cabling costs and space saving features of outdoor feeder pillars.

# Fusegear or circuit breaker?

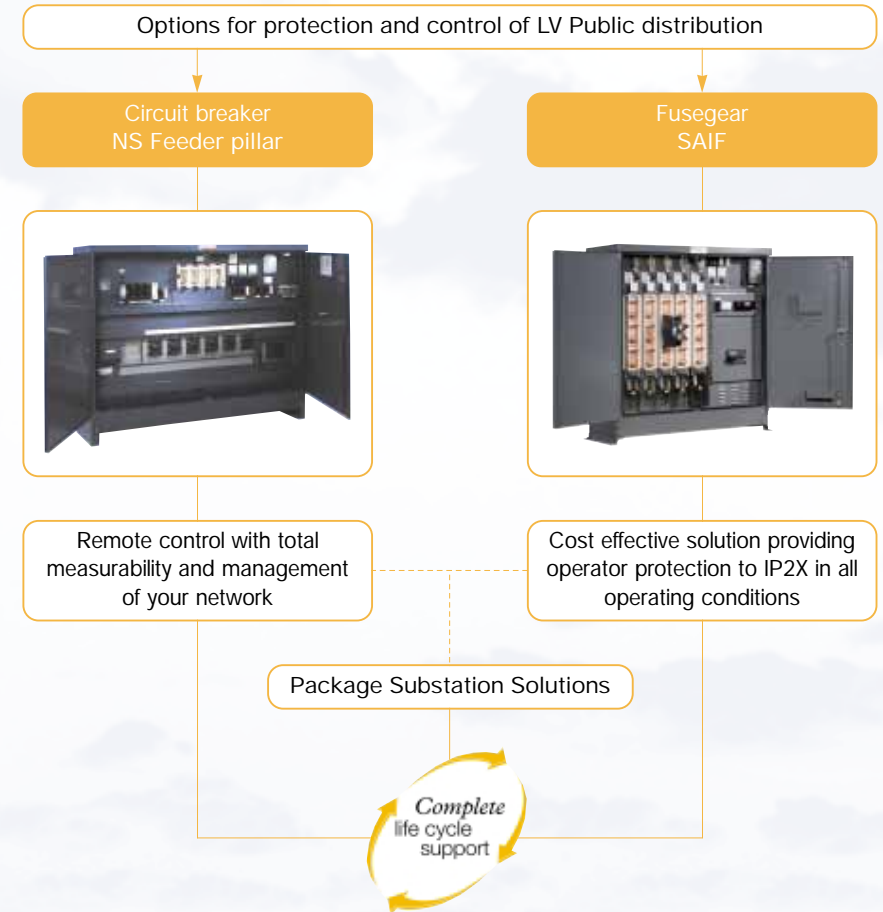


Once it is clear that an outdoor feeder pillar is the choice for your installation, simply select either circuit breaker or fusegear protection.

As the clear market leader in feeder pillars, Merlin Gerin offers the best of both types with its Switched And Insulated Fusegear (SAIF) and NS circuit breaker ranges.

Custom built to suit your application, Merlin Gerin feeder pillars are delivered as a complete assembled product to site, reducing costly site installation time, whilst maintaining short product lead times.

# Merlin Gerin leads the way



# NS Feeder pillars

Advanced technology circuit breaker option



The Merlin Gerin range of NS feeder pillars offers market leading performance coupled with a wide choice of additional functions. Like SAIF, these products can be transformer mounted as part of a package substation or can be left freestanding and cable connected.

## Advanced technology

Operator safety is assured to IP2X protection under all conditions. The Compact NS circuit breakers use a special cassette that allows them to be mounted anywhere on the busbar system for maximum flexibility. The cassette also ensures the correct torque on the busbars is automatically achieved.

NS feeder pillars use Merlin Gerin's comprehensive range of moulded case and air circuit breakers. Compact NS circuit breakers incorporate rota active breaking, with a response time of about 1ms meeting the highest levels defined by IEC 947-2. The circuit breakers also enable total discrimination to be easily achieved.

PowerLogic software can be incorporated to manage NS feeder pillars. This powerful software allows communication, monitoring and control to save energy and reduce costs. It ensures power quality and assists in improving the reliability of supply and minimise downtime.

NS feeder pillars offer:

- Remote control, monitoring and status of each circuit breaker
- Compact NS offers add on modules for ammeters, earth fault / insulation protection
- Outgoing ratings from 16A to 3200A
- Three pole and neutral or four pole busbar systems up to 3200A
- PowerLogic network management software

## Applications in Action



### Lord's Cricket Ground

Location: London

Background: An upgrade of the 11kV electrical supply was undertaken in time for the cricket World Cup. A Merlin Gerin NS feeder pillar was installed as part of a package substation.

The feeder pillar's small size allowed it to be sited in the ground's Coronation Gardens, 160m closer to the new grandstand, new scoreboards and offices, than the original location where London Electricity's supply enters the ground. This saved the cost of buying and installing several hundred metres of new cable.

The solution: The substation, comprising a 1,000kVA transformer, a Merlin Gerin Ringmaster ring main unit and the NS feeder pillar directly coupled onto the transformer, was supplied ready for immediate installation. The installation has a 1,600A air circuit breaker in-coming and six outgoing 4-pole LV supplies protected by moulded case circuit breakers rated up to 630A.

"There's no way we could have had a conventional brick-built switchroom in the Gardens, but we convinced the authorities that the feeder pillar would work in this location," says Mark Patten of specifier Begley Patten Engineering. "Being familiar with Merlin Gerin products, I was confident that specifying a fully weatherproof substation based on the company's feeder pillars would be an excellent solution."



### Queen Alexandra Hospital of Portsmouth Hospitals NHS Trust

Location: Portsmouth

Background: Outdated feeder pillars at the Queen Alexandra Hospital needed to be replaced to bring the hospital's electrical distribution system up to current standards. In addition, extra circuits were required.

The solution: Four Merlin Gerin NS circuit breaker feeder pillars, in a range of sizes, were installed close-coupled to four different types of existing transformer to provide stand-alone substations located independently within the hospital grounds. The pillars are front-accessed, preventing any need to enter the transformer compound if maintenance or adjustments are required.

The fully weatherproof NS feeder pillars are controlled by a 1,250A in-coming and provide a range of outgoing supplies up to 400A. Direct replacement of the existing pillars was far more economical than installing an internal switchboard, which would have required long cable runs.

The installation also takes advantage of the NS feeder pillar's accessories to provide connection to the hospital's street lighting system.

# SAIF Fusegear

The safe fused option



Merlin Gerin Switched And Insulated Fusegear (SAIF) is the world's safest feeder pillar range. It provides IP2X operator protection in all operating conditions, even when fuses are being replaced with the pillar live.

## Safe technology

Fault make, load break switching can be safely performed by less experienced operators thanks to the ASTA-certified switching using the fully transferable independent manual switching mechanism, which is the only way that the fuse carrier can be switched. Correct operation does not depend on the skill of the operator or the speed with which the handle is turned.

SAIF offers:

- Indoor and outdoor applications
- Enclosures suitable for direct mounting to transformers or for free standing installation
- Busbar systems and disconnectors rated up to 3200A
- Through fault capacity of 50kA for one second
- 400, 630 and 800A fuseways
- Each fuseway phase is fully segregated with its own arc chutes
- Wide range of metering facilities and accessories
- IP2X test probe access to SAIF fuse carriers and disconnectors

## Applications in Action



### Ministry of Defence / Department of Environment

Locations: Across the UK

Background: Many MoD sites have in the past been supplied with conventional feeder pillar designs. However, the Electricity at Work Regulations of April 1990 restricted working on, or near to live conductors (regulation 14). To avoid prosecution, these regulations have made it necessary to isolate the entire pillar before opening the doors or removing fuse handles. On many MoD sites, security of supply is, by nature, essential. This meant conventional feeder pillars had to be replaced with solutions providing inherent safety.

The solution: Over 200 major MoD sites have chosen SAIF feeder pillars for new and replacement applications. SAIF is the only fusegear that can be assumed to meet regulation 14 under all circumstances whilst complying with the Defence Estates Organisation (Works) Specification 039 Fuse Pillars.



### Pendennis Castle

Location: Falmouth, Cornwall

Background: A popular tourist attraction managed by English Heritage, Pendennis Castle was built during the reign of Henry VIII. It was subsequently extended and remained in military use until the 1950s.

A Merlin Gerin SAIF 4-way free-standing outdoor feeder pillar, rated to 800A, has updated the castle's electrical distribution system.

The solution: The SAIF feeder pillar is part of a project to upgrade the electrical distribution, telecommunications and sub-distribution systems at Pendennis Castle.

The feeder pillar feeds most parts of the castle, including an area called the Half Moon Battery and its observation post, used during World War II, and the Elizabethan East Bastion.

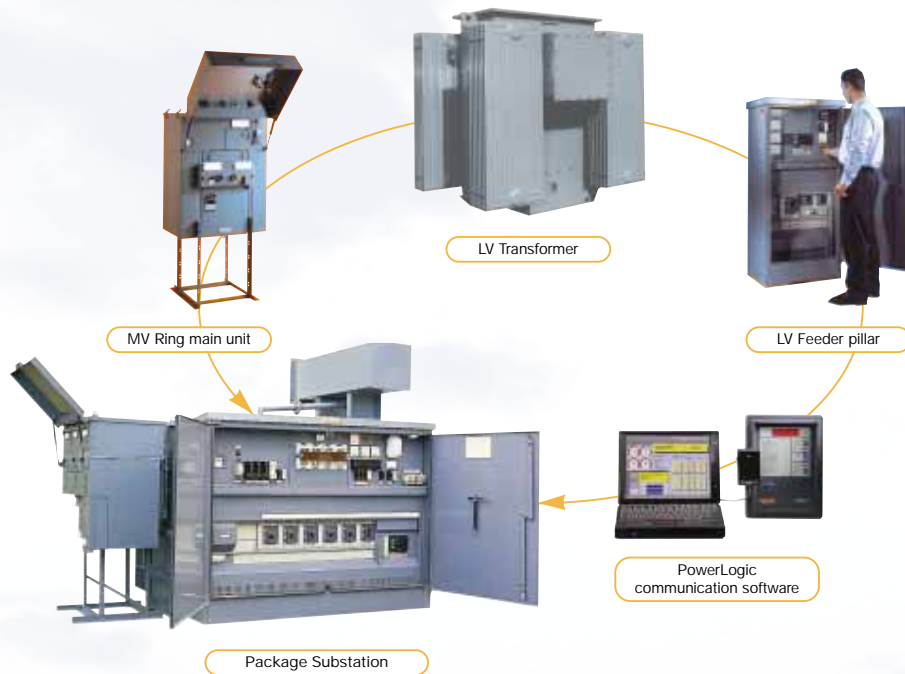
"Safety, quality of construction and ease of use were primary considerations in the choice of equipment," comments consulting engineer Alan Traynor of Hoare, Lee and Partners. "Flexibility was also a factor in that additional circuits can be readily added to the unit in the future, if required."

# Package substations

One-stop... one contact... one complete package...

Merlin Gerin is able to provide one-stop engineered packaged substations, tailored to customer requirements.

NS and SAIF feeder pillars can be ground mounted to form part of a package substation. This includes the Merlin Gerin range of transformers, MV switchgear and LV feeder pillars. All of which can now be managed by PowerLogic, the powerful software that allows communication, monitoring and control, giving an 'intelligent' package substation solution.



# Total lifecycle support

Whether you have selected SAIF fusegear or NS circuit breaker feeder pillars, Schneider Electric's expertise is with you, from specification to after-sales.



When we say you get a total package, we mean it. Not just the product, but the all important support that makes the difference between a product sale and a complete solution. With expertise on network design, installation and operation, you can be sure of the best solution from Schneider Electric.

## Project management and technical expertise

Tailored to meet your individual requirements. A single point of contact cuts your workload and ensures that all project elements are properly co-ordinated and managed.

## System design

Expertise in electrical distribution, protection and control, provides solutions to meet your individual requirements.

## System protection studies

Assistance with the selection of network protection, fault level calculations and protection discrimination studies are available to meet safety and supply requirements.

## Supply, installation and commissioning

Products are installed, tested and commissioned by fully trained technicians.

## System Automation

Expertise on improving network performance in terms of security, availability and energy efficiency is available, with integration of protection, control and monitoring into SCADA systems.

## Technical backup

With extended warranty options and a comprehensive maintenance service, expertise and technical backup from Schneider Electric is always at hand.