

Life Is On

Schneider  
Electric

# Innovation for MV distribution

Introducing Premset switchgear, a new way to design, install, and operate MV networks.

[schneider-electric.us/premset](https://schneider-electric.us/premset)





# Building a smarter future with reliable, efficient energy.

Premset™ architecture: Innovation to meet your needs

## The experience of a leader in MV distribution

### A global player with local capabilities

Schneider Electric has 160,000 people in more than 100 countries dedicated to delivering reliable products and solutions. It's this global reach that helps us ensure high quality and local project and service capabilities, no matter your location.

### Combining technologies for breakthrough innovation

Combining our expertise in both air-insulated switchgear and gas-insulated switchgear, we're breaking new ground with the increased reliability of Shielded Solid Insulation System (2SIS).

### Network management making you smart grid-ready

Add to this our familiarity with all aspects of medium-voltage (MV) network management and you have a partner who knows what the smart grid will mean for your business and how best to keep you at the forefront of technology.

## A new generation of switchgear technology

A technological breakthrough, opening the way to improved efficiency and customer experience:

- **Reduced opportunity of arc flash or contact with live parts**  
Insulation and screening of all live parts with 2SIS reduces the likelihood of exposure to electrical hazards.
- **Longer time between maintenance intervals**  
2SIS offers improved performance in harsh and demanding environments compared to traditional switchgear.
- **Flexible, simple, modular and functional**  
Easy to install and easy to use, with operator friendly switchgear and minimum servicing of main units thanks to 2SIS.
- **Smart grid ready, distributed intelligence**  
Advanced protection, control and monitoring, fully integrated for higher dependability and energy efficiency.

# 4 million

A global partner you can trust.

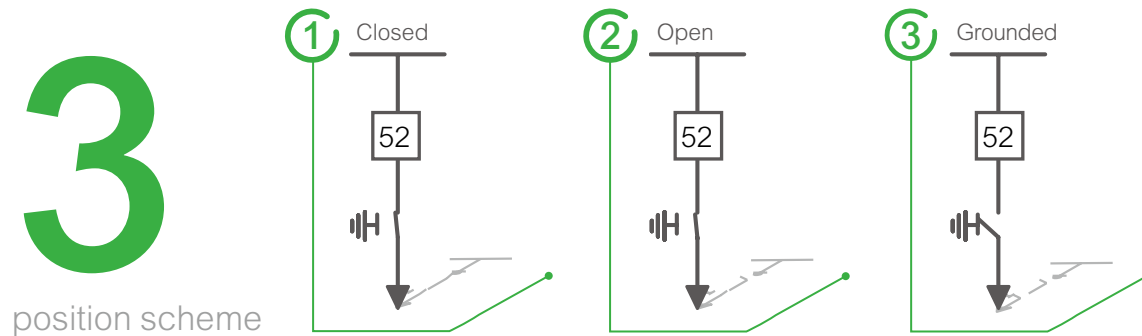
4,000,000 functions  
installed worldwide through  
our existing ranges.

# Customer Experience

## An intuitive 3-in-1 architecture for simple, intuitive operation

With its 3-in-1 switchgear design, the Premset system's operational interface is simple, intuitive, and user friendly. The circuit breaker is in series with the isolating grounding switch, which, combined with interlocks, provides integrally designed protection for the operator.

There are also only three possible operating positions: closed, open, and grounded.



### Simple and user-friendly operation

The Premset 3-in-1 system has proven itself to be more reliable and end-user friendly, providing:

- Grounding in a single operation
- Intuitive mimic diagram and operation
- Direct downstream cable grounding
- Positively driven built-in interlocks
- Easy front access to cable test injection points.

### Intuitive operation reduces worker risk

With only two operations from line to ground — one to open and one to ground — the Premset range promotes lower risk to the operator by keeping all aspects as simple as possible.

Additionally, standard built-in interlocking between the main and grounding functions is positively driven, which contributes to making every interaction with the unit easier and confident.

### 2SIS delivers reduced chance of arc flash event or contact with live parts

This three-position scheme provides an integrated cable test feature implemented by dedicated grounded rods, accessible from the front, without needing to enter the cable box or unmount cable terminations.

# Efficiency

## Smart grid and advanced digital management solutions across your network

The electricity market is changing. Every day, end-users' expectations increase and suppliers worldwide gain a greater awareness of energy's environmental impact. Meanwhile, overall consumption is steadily growing. But as this reliance on electricity grows globally, the ways in which we produce, distribute, and use energy must also evolve. The solution will involve not only smarter demand, but also smarter supply and a smarter grid.

### Intelligent, smart grid-ready solutions

To meet these challenges, we need to enhance our electrical distribution networks with intelligent, smart grid-ready solutions that bring a new level of efficiency through advanced monitoring and control.

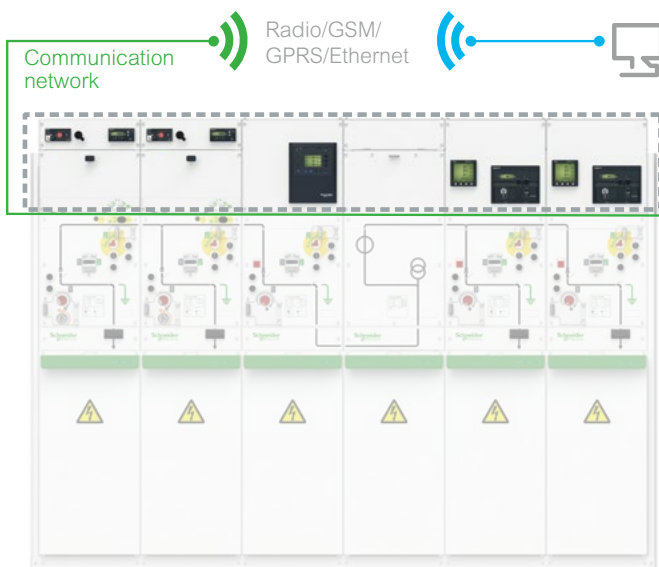
This is precisely what Premset architecture is designed to do, enhancing your installation with such features as:

- Switchgear automation, with built-in communication and local intelligence
- Load management, with integrated smart metering
- Asset management, with advanced switchgear and transformer monitoring
- Automatic transfer system, with integrated source transfer solution to reduce power supply interruption

### Architecture with distributed intelligence

The intelligent electronic devices used in Premset solutions allow easy integration based on a standard communications protocol with a plug-and-play scanning system for easy configuration.

All this adds up to a flexible system with integrated Web technology, pre-engineered and pre-tested, which you can easily upgrade as necessary. With Premset architecture, you can easily build a smarter MV distribution system.



## Intelligent

Electronic devices

-  **Fault detection**
-  **Protection**
-  **Measurement**
-  **Local control**
-  **Remote control**



# Reliability

## Long-lasting performance with the Shielded Solid Insulation System (2SIS)

In addition to its impressive ability to maintain optimal performance in any environment, the 2SIS is also the combination of robustness with a flexible and modular design, allowing its functional blocks to be used in any combination.



Shielded Solid Insulation System

### Extending protection to the entire switchgear

While insulation has previously been used, Premset switchgear is the first global product using solid and shielded insulation.

2SIS insulation allows for several design benefits:

- Protection from environmental impact
- Negates electric fields in the switchgear
- Long maintenance intervals

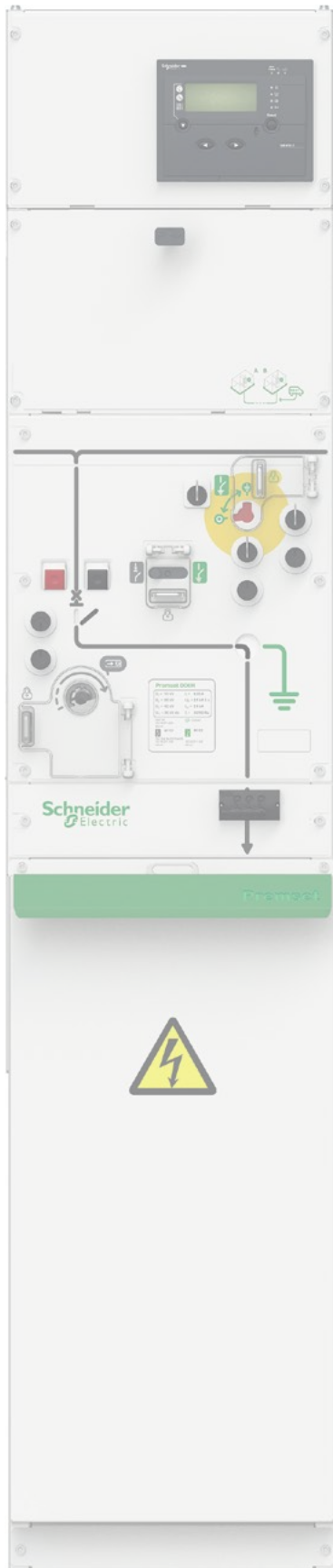
### Reduced internal arcing risk

The ground shielded system helps to extend the equipment service life, resulting a lower total cost of ownership.

And, with no part of the main circuit exposed to free air, you'll also:

- Minimize risk of internal arcing
- Optimize maintenance operations
- Reduce risk of downtime

2SIS is applicable for any switching function such as load break switches or circuit breakers.



### High modularity with total insulation

Premset system architecture is based on type-tested assemblies of functional blocks, which are designed to work together in every combination. This simplifies the design and use of your MV switchgear.

In addition, the plug-and-play design of accessories and auxiliaries makes even last minute or field modifications possible.

Mix-and-match control, monitoring, MV functions, field upgradeability, and servicing ensure the most cost-effective configurations.

These modular options also:

- **Improve** cost savings
- **Optimize** delivery times
- **Facilitate** modifications

The offer also includes a consistent range of compact, reliable circuit breakers, from the simplest cost-effective low load circuit breakers to heavy-duty high operation protection functions. These have all been optimized with a highly competitive market in mind, designed to deliver higher performance at optimized cost.

Same design for every configuration

- ① LV cabinet
- ② Cable test
- ③ Top connection
- ④ Core unit
- ⑤ Bottom connection
- ⑥ Bottom compartment

# Flexibility

## A compact and modular design for all functions

Premset range is a functional switchgear with the added advantage of being both simplified and modular. The end result is a system that is easy to choose, easy to use, cost effective, and facilitates both simple installation and modification.

### Fast, easy installation, upgrading, and maintenance

Because the range uses the same design for every configuration, customizing the switchgear to your needs is easier than ever. And with its standardized dimensions, reduced footprint, and simple front power connections, time and money spent installing Premset switchgear is greatly reduced.

Every aspect of the system is designed with the intention of making installation and adaptations as seamless as possible, including:

- **Straightforward** assembly because identical busbar and cable connections are used for the entire range
- **Easy-to-install** patented universal flat power connection system
- **Easy cabling** since all cables connections are at a height of 27.5 inches
- **Minimized** maintenance and servicing requirements

Upgrading is easy, with the same auxiliaries, accessories, and monitoring devices being used for the entire range. In fact, this plug-and-play design also allows on-site additions that do not require any special training, tools, or adjustments.

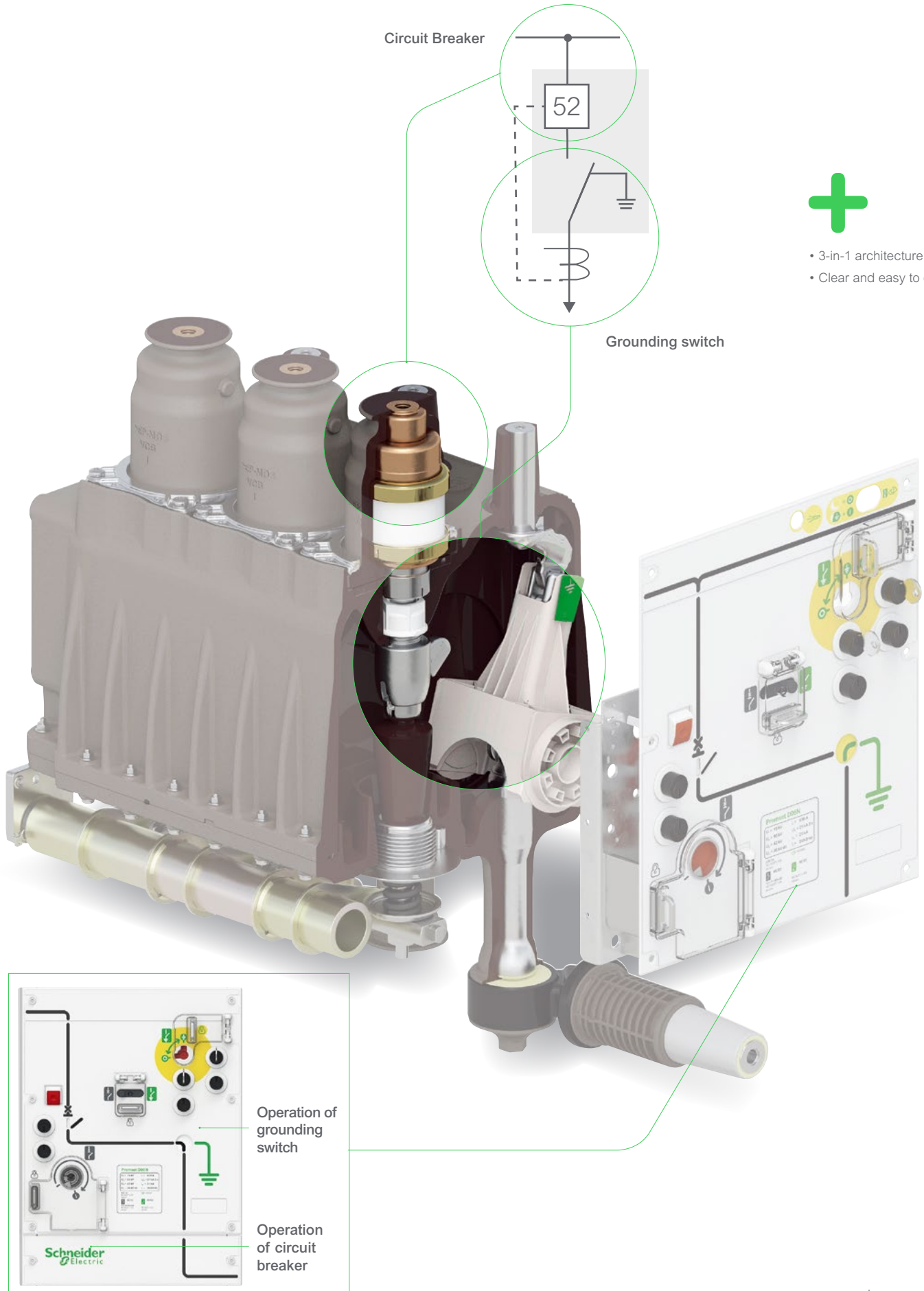
Lastly, end-of-life management is easier because the innovative design means there are far fewer labor and administrative considerations.



- Modular combination
- Optimized circuit breakers







Circuit Breaker

52

Grounding switch



- 3-in-1 architecture
- Clear and easy to operate

Operation of  
grounding  
switch

Operation of  
circuit  
breaker

# Premset

## Standards and technical characteristics

Premset units meet all the following recommendations, standards, and specifications:



## Premset 15 kV compact vacuum circuit breaker switchgear

### Technical characteristics

Rated voltage	5 kV	15 kV
Rated current	up to 1200 A	
Maximum short-time interrupting current	25 kA (2 sec)	
Rated BIL withstand voltage	95 kV	
Dimensions W x H x D	14.75 in. x 65 in. x 36 in.	

\* 29.5 in.: 1200 A circuit breaker  
 \*\* Please consult us for availability

### Standards information

Premset units meet all the following recommendations:

Standards	Specifications
ANSI/IEEE C37.20.3	Standard for Metal-Enclosed Interrupter Switchgear
ANSI/IEEE C37.04	Standard Rating Structure for AC High-Voltage Circuit Breakers
ANSI/IEEE C37.06	Standard for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
ANSI/IEEE C37.09	Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
ANSI/IEEE C37.11	Standard Requirements for Electrical Control for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis
ANSI/IEEE 386	Standard for Separable Insulated Connector Systems for Power Distribution Systems Above 600 V
NEMA SG4	Alternating-Current High Voltage Circuit Breaker
ASTM B-117	Standard Practice for Operating Salt Spray (Fog) Apparatus
IEC 61869	Current and Voltage transformers
IEC 60255	Electrical relays



## Schneider Electric: A partner you can trust

### Delivering innovative products, services, and solutions worldwide

With more than 235 service centers in 72 countries and millions of MV units installed worldwide, Schneider Electric is the ideal partner to optimize your installation's efficiency throughout its life cycle.

Peace of mind is critical when overseeing operations, and our Premset architecture, as well as our solutions and services, are all designed to bring high customer experience and consistent performance to any environment while minimizing maintenance and ensuring the easiest end-of-life treatment.

We pride ourselves on consistently bringing both reliability and innovation to the table, devoting 4 to 5 percent of sales annually to R&D. It's this history of investment that has proactively made us smart grid-ready, with products and solutions that support all your MV needs.

Our vision isn't just to connect our customers to the smart grid, but also to connect them with each other, facilitating smarter interactions and leading to increased energy management capabilities.

In moving toward this goal, we're confident our greatest achievements are still ahead of us.

# 160,000

people in 100+ countries.

# 5%

of sales devoted to R&D.



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