

MEDIUM VOLTAGE PRODUCTS

# SafePlus AirPlus 24kV

## Eco-efficient compact switchgear



The SafePlus AirPlus is a gas insulated compact switchgear with AirPlus™ as insulation medium:

The eco-efficient solution for secondary distribution networks up to 24kV.

As an alternative to SF<sub>6</sub>, SafePlus AirPlus helps users with a green focus to reduce the climate impact of their distribution grid:

- Global Warming Potential (GWP) < 1
- No SF<sub>6</sub> regulations - today and in the future
- Same compactness as SafePlus with SF<sub>6</sub>
- True GIS - independent from ambient air

### Independent from ambient conditions

SafePlus AirPlus is a true GIS switchgear with a sealed stainless steel gas tank containing all live parts and switching functions.

### Safe, reliable and maintenance-free

The constant gas conditions in the encapsulation ensure a high level of reliability as well as personnel safety and a virtually maintenance-free system.

### Known SafePlus compactness

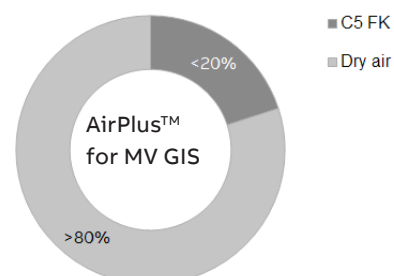
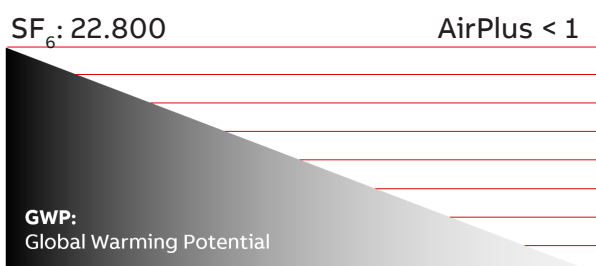
Like the proven SafePlus with SF<sub>6</sub> insulation, the SafePlus AirPlus is the most compact solution on the market - ideal for utility, CSS, light industry and building applications up to 24kV.

### Eco-efficient with a GWP < 1

The SafePlus AirPlus completely avoids the use of SF<sub>6</sub>, and is the ideal solution for customers with a green focus. This avoids any actions and costs related to the regulations for SF<sub>6</sub> - now and in the future!

### AirPlus composition for MV

The AirPlus composition consists of more than 80% dry air and less than 20% C5 Fluoroketones (C5 FK), 3M™ Novec™ 5110 Fluid.



Technical Data		Switch	Earthing switch/disconnector	Vacuum circuit-breaker	Earthing switch/disconnector
Rated voltage	kV	24	24	24	24
Power frequency withstand voltage	kV	50	50	50	50
Impuls withstand voltage	kV	125	125	125	125
Rated normal current	A	630		630	
Breaking capacities					
- active load	A	630		630	
- closed loop	A	630			
- off load cable charging	A	10		25	
- earth fault	A	200			
- earth fault cable charging	A	115			
- short-circuit breaking current	kA			16	
- single capacitor bank breaking current	A	135			
Making capacity	kA	40	40	40	40
Short time current 3 sec.	kA	16	16	16	16

### Modularity

All modules are only 325 mm wide, which is the same width as for the existing SF<sub>6</sub>-insulated SafeRing/ SafePlus portfolio.

SafePlus AirPlus can be configured with a maximum of 5 modules in one air tank with an internal busbar.

#### • D-module for direct cable connection

D-module is a direct connection module, which can be placed as the first or the last module of a switchgear unit with common gas volume.

#### • C-module for ring cable connection

The cable-connection module uses vacuum technology for switching, in series with an earthing switch/disconnector.

#### • V-module for transformer protection

The transformer is protected by a vacuum circuit-breaker combined with a relay and current transformers. The standard relays do not require an external power supply.

#### Width of the units

Unit	A (mm)
2-way	696
3-way	1021
4-way	1346
5-way	1671

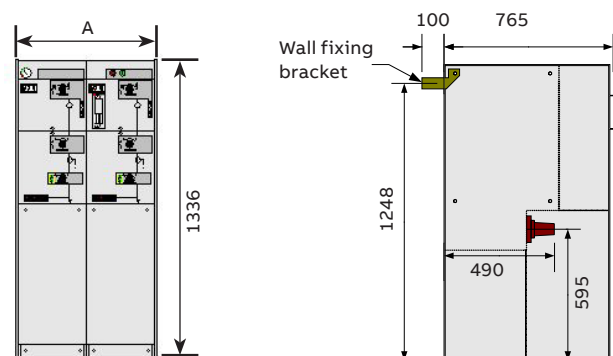
### Standard features

- Operating mechanisms with integral mechanical interlocking
- Facilities for padlocking on switching functions
- Manometer for pressure monitoring
- Lifting lug for easy handling

### Additional features

- Motor operation
- Capacitive voltage indication
- Auxiliary switches & trip coils
- Short-circuit indicator
- Cable covers interlocked / arc-proof
- Extra base frame (290 or 450 mm height)

### Dimensional drawings



For standard ring main unit applications ABB recommend the use of SafeRing AirPlus ring main unit. Please contact your local ABB for more information on SafeRing and SafePlus products.