

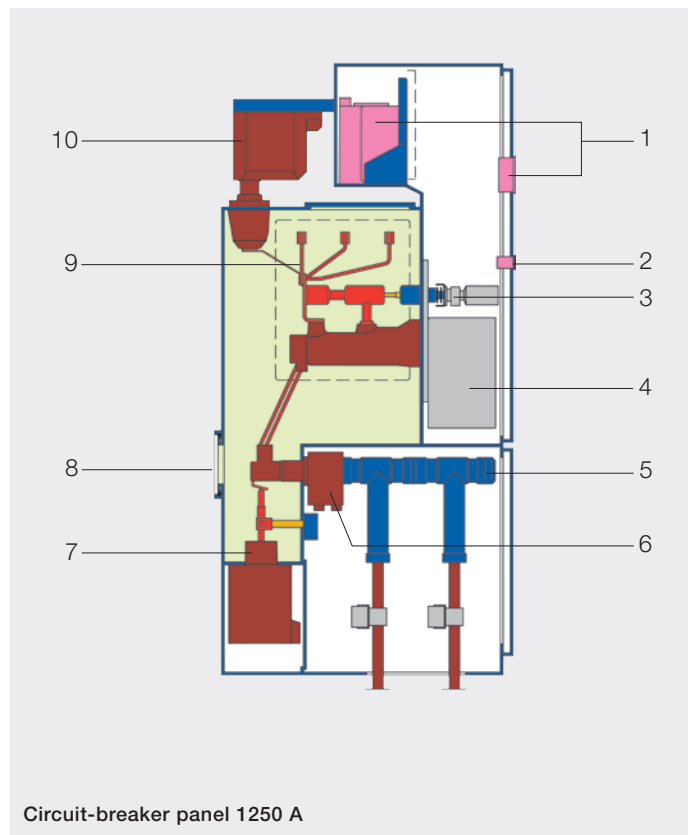


ZX0

Gas-insulated medium voltage switchgear

ZX0

Block design



- 1 Multifunctional protection and control unit
- 2 Measuring sockets for capacitive voltage indicator system
- 3 Three position disconnector
- 4 Vacuum circuit-breaker
- 5 Cable connector at outer cone
- 6 Ring-type current transformer
- 7 Isolatable voltage transformer – feeder
- 8 Pressure relief disk
- 9 Busbars
- 10 Plug-in voltage transformer – busbar

The metal-enclosed value solution

In the power distribution segment, cost-effectiveness and compactness are the factors that count. The tried and tested single busbar switchgear of type ZX0 therefore offers tailor-made parameters for this range of applications: Up to 24 kV, up to 25 kA and up to 1250 A for busbars, sectionalizers and incoming feeders, and widths of 400 and 600 mm for the individual functional units. Up to six units are grouped together in a block with all the switching devices and busbars under insulating gas. The blocks are connected by plug-in busbar technology and thus permit simple and safe installation without any gas work.

For operator control, there are the alternatives of manual operation for the three position disconnector with mechanical interlocking with the circuit-breaker, and purely electrical operation by motorized mechanism with electrical interlocks. Both combined protection and control units and pure protection devices can be used.

Configuration opportunities

Together with incoming and outgoing feeder panels with circuit-breakers, panel variants for sectionalizers, pure disconnector panels, outgoing feeder panels with switch-disconnectors with and without high voltage fuses and metering panels round off the range.

Accessibility

Operator control is effected either manually at the front of the system or, as an option, electrically with local or remote control. The power cables are accessible at the front. The switchgear can be installed either at a wall or free-standing in the room with an additional rear wall to protect the operators (IAC AFL(R) 25 kA 1s).

SF₆ insulation

All high voltage parts are effectively isolated from fluctuating ambient influences in sealed enclosures filled with SF₆ insulating gas. Dust, humidity, harmful gases or vermin therefore have no effect. Temperature-compensated pressure sensors reliably and continuously monitor their own function and the quality of the gas insulation.

Technical data	IEC Ratings		
Rated voltage	kV	12	24
Maximum operating voltage	kV	12	24
Test voltages	kV	28/75	50/125
Rated frequency	Hz	50/60	50/60
Rated busbar current	A	... 1250	... 1250
Rated current of feeder with CB	A	... 1250	... 1250
Rated current of feeder with load break switch	A	... 630	... 630
Rated peak withstand current	kA	... 62.5	... 62.5
Rated short-time current 3 s	kA	... 25	... 25
Internal Arc Classification ¹⁾	Wall installation: IAC AFL 25 kA 1s ; Free-standing installation IAC AFLR 25 kA 1s		

¹⁾ according to VDE 0671 part 200

ZX0 components

Durable and reliable

High quality components

The permanently installed vacuum circuit-breakers are three-phase switching devices and fundamentally consist of the mechanical stored-energy spring mechanism and three poles with the vacuum interrupters. The three position disconnectors constitute combined disconnectors and earthing switches. The three switch positions – connecting, disconnecting and earthing – are clearly defined by the mechanical structure of the switch, reliably excluding simultaneous connecting and earthing positions. For earthing, the three position disconnector – under no current – prepares the connection to earth.

Earthing proper is then performed by the circuit-breaker. A circuit-breaker in the function of an earthing switch is of higher quality than any other earthing switch. The combination of these high-quality switching devices with the sealed for life, SF₆-filled enclosures guarantees maintenance-free switchgear. Irrespective of this, the enclosures with O-ring seals on all components and covers and the filler valves provide an opportunity for repairs. No minor damage necessitates replacement of a complete block



Always the right connection

In the cable termination compartment, the power cables are connected with outer cone cable connectors. Up to three parallel cables can be installed. Depending on the connector type, a surge arrester can either be added or fitted as an alternative to one cable.

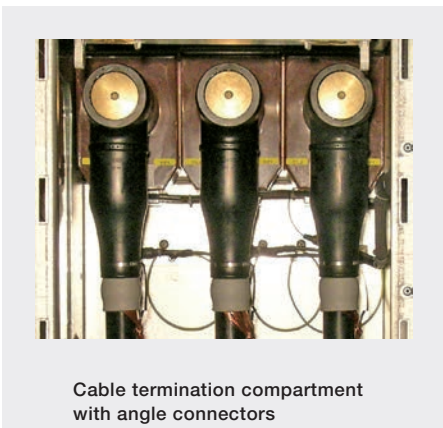
A non-return valve on the SF₆-filled stainless steel enclosure facilitates systematic extraction of the insulating gas at the end of a panel block's service life.

Current transformers

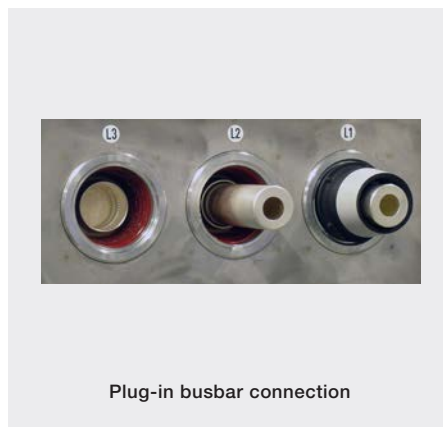
Window-type current transformers at the cable bushings and cable-type current transformers where required provide the necessary signals for protection and measurement.

Voltage transformers

Permanently mounted, isolatable voltage transformers can be installed in the cable termination compartment. Busbar measurement is performed in riser or metering panels by permanently mounted, isolatable transformers. Plug-in voltage transformers are available as an alternative.



Cable termination compartment with angle connectors



Plug-in busbar connection



HV HRC fuses

Contact

This product contains Sulphur hexafluoride (SF₆).

SF₆ is a fluorinated greenhouse gas with a GWP of 22800.

The maximum quantity per block of panels is 11 kg.

That corresponds to a CO₂ equivalent of 251 t.

Each block has a gas leakage monitor, and therefore regular leakage testing (to Fluorinated Gas Regulation 517/2014) is not required.

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