

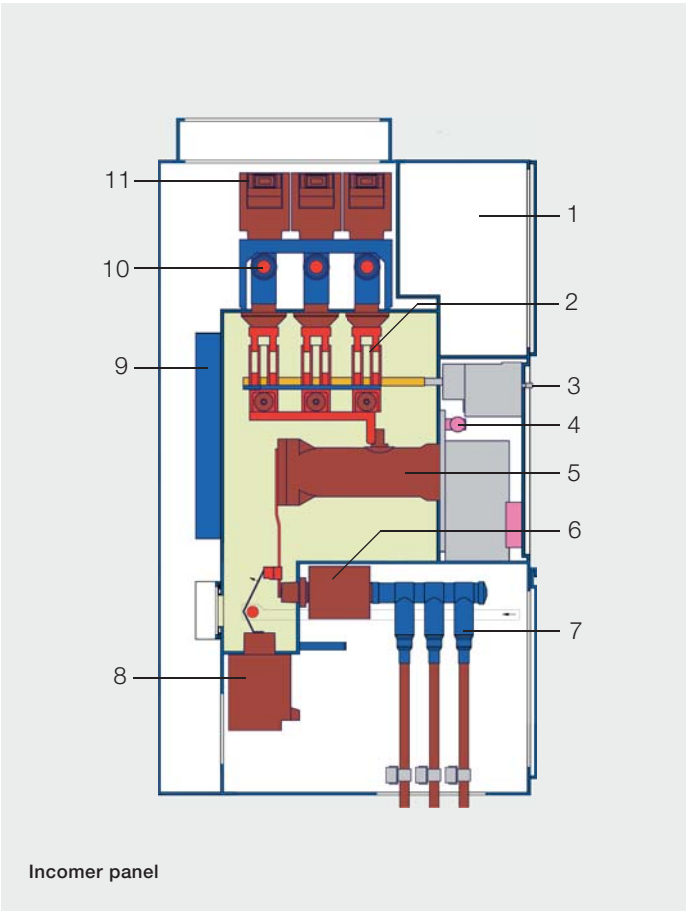


# ZX0.2

## Gas-insulated medium voltage switchgear

# ZX0.2

## Single busbar system



Incomer panel

- 1 Removable low voltage compartment with protection and control unit
- 2 Three position disconnect
- 3 Local controls in front of mechanism bay
- 4 Gas density sensor and filling valve
- 5 Circuit-breaker
- 6 Current transformers
- 7 Cable connector on outer cone
- 8 Isolatable voltage transformers on the cable side
- 9 Heat sink
- 10 Solid-insulated busbars
- 11 Plug-in voltage transformers on the busbars

### Metal-enclosed

As a further development of the tried and tested ZX0, ZX0.2 with its high current carrying capacity of 2500 A for incoming feeders, busbars and sectionalizers offers the use of voltages up to 36 kV.

The metal-enclosed single busbar system is suitable not only for wall mounted installation, but also for free-standing installation with IAC classification AFLR to IEC62271-200. The switchgear can be operated in networks with short-circuit currents up to 31.5 kA.

Due to long cable bushings the use of current transformers with very high efficiency, even at low primary currents, is permitted.

The low voltage compartment and operating mechanism bay are in general spatially separated from each other. Local operation of the panel is effected manually at the freely accessible operator control area in front of the mechanism bay, with options of electrical pushbuttons and remote control. Mechanical interlocking of the operating mechanisms in defined switch positions prevents maloperation.

### Configurations

Together with outgoing and incoming feeder panels with circuit-breakers for various rated currents, panel variants for sectionalizing, pure disconnecter panels or outgoing feeder panels with switch-disconnectors and HV HRC fuses (up to 24 kV) round off the range.

### Accessibility

The switchgear can be operated remotely or by controls located on the front of the panels. The power cables are accessible at the front of the system. The panels can be installed optionally against a wall or free-standing in the room with an additional rear wall to protect the operators.

### SF<sub>6</sub> insulation

Hermetically sealed enclosures filled with SF<sub>6</sub> insulating gas, and solid insulation, ensure that all live high voltage parts are protected from fluctuating ambient influences. The system cannot therefore be affected by dust, humidity, harmful gases or vermin.

Technical data		IEC Ratings			
Rated voltage	kV	12	24	36	
Maximum operating voltage	kV	12	24	36	
Test voltages	kV	28/75	50/125	70/170	
Rated frequency	Hz	50/60	50/60	50/60	
Rated current of busbars	A	... 1250 ... 2500	... 1250 ... 2500	... 1250 ... 2500	
Rated current of tee-off with circuit-breaker	A	... 630 ... 1250 ... 2500	... 630 ... 1250 ... 2500	... 1250 ... 2500	
Rated current of tee-off with switch-disconnector and fuses	A	... 100	... 63	-	
Rated peak withstand current for circuit-breaker	kA	... 62.5 ... 80	... 62.5 ... 80	... 80	
Rated short-time current 3 s for circuit-breaker	kA	... 25 ... 31.5	... 25 ... 31.5	... 31.5	
Internal Arc Classification <sup>1)</sup>	Wall installation IAC AFL 31.5 kA 1s, Free-standing installation IAC AFLR 31.5 1s				

<sup>1)</sup> to IEC 62271-200

Pressure relief in the switchroom or via duct to the outside

# ZX0.2-components

## Durable and reliable

### High quality switching devices

The stationary-mounted vacuum circuit-breakers are three-phase switching devices and fundamentally consist of a mechanical stored-energy spring operating mechanism and three poles with the vacuum interrupters.

The three position disconnectors are combined disconnectors and earthing switches. The three switch positions, connecting, disconnecting and earthing, are clearly defined by the mechanical structure of the switch, reliably precluding simultaneous connecting and earthing.

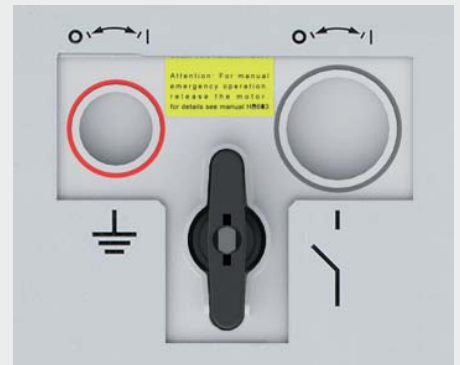
For earthing, the three position disconnector prepares - under no current - for the connection to earth. Earthing proper is performed by the circuit-breaker. A circuit-breaker is of higher quality in the earthing function than any other earthing switch. The combination of these high quality switching devices with the sealed for life SF<sub>6</sub>-filled enclosures ensures that the switchgear systems are maintenance-free. Irrespective of this, the enclosures with their o-ring seals on components, covers and filler valves fundamentally permit the performance of repairs. In general minor damage cannot necessitate the replacement of an entire panel.



Controls for switching devices



Secured to prevent deearthing



Selector lever is interlocked against switching position of circuit-breaker

### Always the right connection

The power cables are connected with outer cone cable connectors in the cable termination compartment. Up to three parallel cables can be installed. Depending on the connector type, a surge arrester can be fitted in addition or in place of one of the cables.

A non-return valve on the enclosure permits systematic removal of the insulating gas at the end of a panel's service life.

### Current transformers

Generously dimensioned window-type current transformers with several cores supply the signals required for protection and metering.

### Voltage transformers

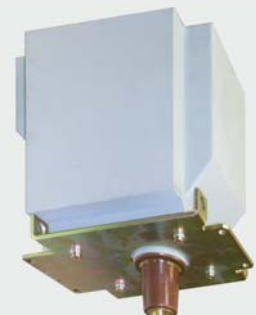
Shockproof voltage transformers are plugged onto the busbars. In the cable termination compartment, the voltage transformers are stationary mounted and isolatable. As an alternative, plug-in voltage transformers can also be used there.



Cable compartment with current transformers



Busbar compartment with support for voltage transformers



Plug-in voltage transformer

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