Product Introduction

UniGear ZS3.2
Metal-enclosed air insulated medium voltage switchgear

Power and productivity
for a better world™

UniGear ZS3.2
Metal-enclosed air insulated medium voltage switchgear. Fitted with vacuum circuit breaker type VD4 or SF_6 circuit breaker type HD4.

The metal-enclosed, air insulated switchgear panels of the UniGear ZS3.2 series, are designed for use in 36kV and 40.5kV systems. They are designed for indoor application.

UniGear ZS3.2 Robust and compact

- The panel is constructed by bolting together double folded components, manufactured from aluminum-zinc coated sheet steel, to form an extremely rigid construction.

- Primary circuit insulation and optimized conductor shape provide the platform for a compact air insulated panel.

UniGear ZS3.2 Safe and reliable

- All compartments are separated from each other by earthed sheet steel components to give a true "Metal-enclosed " construction. The three high voltage compartments are fitted with pressure relief plates on the top of the panel. Overpressure, in the event of an internal fault, will be released upward limiting damage to adjacent compartments as well as to personnel.

- The VD4 vacuum circuit breaker or the HD4 SF_6 circuit breaker are interchangeable and provide a complete range of switching solutions.

- Simple and effective interlocking prevents operator error.

- The operation of all equipment is carried out with the panel doors closed.

- Type tests to IEC 62271-200 have verified performance in the event of an internal fault.

UniGear ZS3.2 Availability and flexibility

- Vacuum or SF_6 circuit breaker technology is available.

- Circuit breakers with the same rating are interchangeable irrespective of switching technology.

- Versatile panel arrangements allow most switchgear configurations to be implemented.

UniGear ZS3.2 Suitable for all applications

- Complies with IEC and also with the Chinese " GB" National Standards and "DL" design requirements.

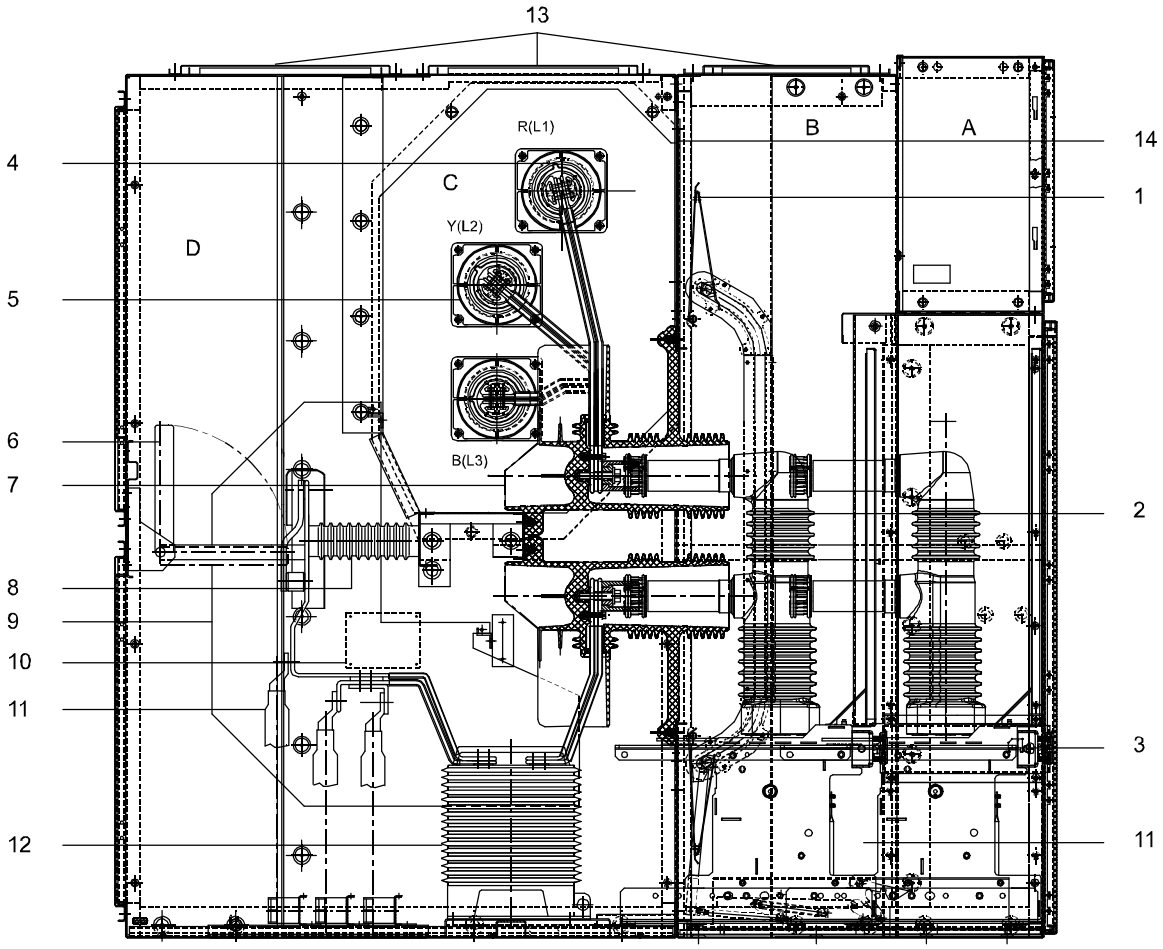
- Technical data, including high dielectric withstand capability, allows application in most systems where electrical energy is generated, distributed or utilized.

UniGear ZS3.2 Section View

A Low voltage compartment | B Circuit breaker compartment | C Busbar compartment | D Cable compartment

1 Hinged shutter system | 2 Circuit breaker | 3 Control wiring plug connector | 4 Busbar | 5 Busbar bushing | 6 Earthing switch | 7 Disconnect contacts and spout

8 Insulator | 9 Insulated separating plate | 10 Cable sealing ends | 11 Space heater | 12 Current transformer | 13 Pressure relief plate | 14 Partition plate



The basic structure of the switchgear panel comprises the panel itself and withdrawable part with circuit breaker.

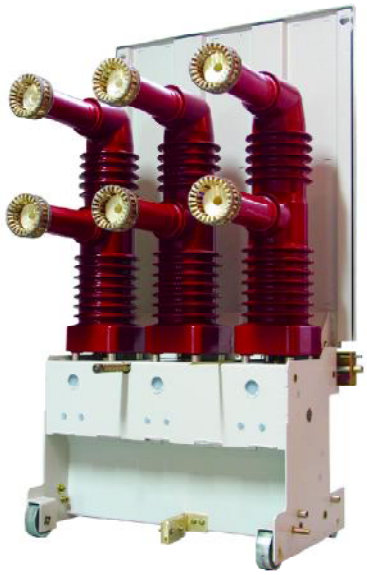
The panel consists of four separate compartments. That is circuit breaker compartment,busbar compartment, cable connection compartment and low voltage compartment.

Busbar compartment

"D" shaped busbars or rectangle busbars are used for inter-panel connections. Panels are divided by inter-panel bushings to prevent transfer of faults between panels. Busbars are provided with full insulation (including joints) to ensure that as far as possible the bus system is a fault free zone.

Cable compartment

Current transformers, earthing switch with short circuit making capacity, and surge arresters are installed in the cable compartment. Space is provided for multiple cable connections.



Low voltage compartment

All secondary equipment required for protection and control functions is located in this compartment. External control cables are terminated here after entering through generous metal enclosed ducts.

Circuit breaker compartment

The circuit breaker compartment accepts either a Vacuum or SF_6 circuit breaker mounted on a UniGear ZS3.2 switch-truck. Service and disconnect/test positions are accommodated entirely within the panel. Metallic shutters cover the disconnect contacts in the spout bushings when the circuit breaker is in the disconnect position providing true visible disconnection with earthed metal separation.

All operations are carried out with the doors closed. This ensures that protection of operators in the event of an internal fault is complete at this important time.

Withdrawable part

Circuit breakers are mounted on withdrawable trucks to provide the "disconnect" function. This disconnect position provides a visible indication of primary circuit separation and the withdrawable part is separated from the fixed part by earthed metal shutters. The disconnect position also allows testing of the apparatus with the primary circuit disconnected.

The drawout operation is performed with the panel door closed and the switch-truck remains entirely within the panel when it is in the disconnect position.

Other equipment including voltage and potential transformers with primary fuses may be mounted on a withdrawable switch-truck.

Interlocks, protection against incorrect operation

A complete series of mechanical interlocks are provided to ensure correct operation.

UniGear ZS3.2 A complete system of protection for plant, personnel and equipment

Reliable primary and secondary circuit components | Internal fault protection | Operation with doors closed (protection in place) | Complete interlocks

Technical Data

Rated voltage	kV	40.5
1 min power frequency withstand voltage	kV	95
Lightning impulse withstand voltage	kV	185
Rated frequency	Hz	50/60
Rated current of busbar	A	...3150
Rated current of tee-offs	A	...3150[1)]
Rated current of circuit Breaker	A	...3150[1)]
Rated short-circuit breaking current of circuit breaker	kA	..31.5
Rated peak withstand current	kA	80
Rated short time withstand current(3s)	kA	31.5
Auxiliary voltage	V	DC110, 220
Protection degree of the enclosure		IP4X
Protection degree of the circuit-breaker ompartment door open		IP2X
Standard panel dimensions(WxDxH)	mm	1200x2565x2400
Weight	kg	1100~2000

1) Up to 3150A at 40℃ and 2500A at 55℃ with forced ventilation,

2) Special DC Voltage on request.

Contact us

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