7.2 kV Medium Voltage Switchgear

VC-V6A (VCB)
VC-VS6A (VCS)
Comply with IEC62271-200
The VC-V6A and VC-VS6A conforms to IEC 62271-200 standard and is designed and manufactured utilizing Fuji Electric state-of-the-art technology.

**VC-V6A, VC-VS6A Comply with Relevant IEC Standards and are Third Party Tested**
- IEC 62271-1 Common specifications
- IEC 62271-200 Metal-enclosed switchgear
- IEC 62271-100 Circuit-breakers
- IEC 62271-102 Earthing switch
- IEC 62271-106 Contactors

**Safety Feature**
- Loss of service continuity: LSC2B
- Partition class: PM
- Internal arc classification: AFLR
- Automatic metallic shutters
- VCB and VCS interlocked with compartment door
- Rear cover interlocked with earthing switch
- Exhaust duct with optional extension pieces

**Easy Maintenance and Installation**
- VCB and VCS does not need to applied a lifter at withdraw out of switchgear
- Separate protection and control on top of VCB and VCS compartment
- Test terminal located on the front of LV panel
- Easy access for the main-cable termination

**Components**
- VCB is compatible with NE type of Fuji Electric
- Accomodate cast-resin, ring-type CTs for VCB and wound-type CTs for VCS
- The voltage transformer for busbar is draw-out type and can be performed maintenance easily and safety
Earth switch cannot be ‘Closed’ with the circuit breaker in the ‘Service’ position.

Circuit breaker can only be moved from ‘Test-Disconnected’ to ‘Service’ position when earthing switch is ‘Open’.

Individually operated
Earthed metal
Can be padlock in closed position

Operated from front of switchgear
‘Closed/Open’ status visible from front circuit breaker window
Mechanical interlock option with the cable compartment door

Busbar up to 2,500 A normal current 31.5/40 kA short circuit current
Copper busbar, air insulated, epoxy coated
31.5 kA is arc fault withstand

Mechanical interlock with the circuit breaker compartment such that:
Earth switch cannot be ‘Closed’ with the circuit breaker in the ‘Service’ position
Circuit breaker can only be moved from ‘Test-Disconnected’ to ‘Service’ position when earthing switch is ‘Open’

Circuit breaker racking mechanism
Safety interlocks
Compartment door is mechanically interlocked with the circuit breaker/contactor truck such that door can only be opened when truck is in the ‘Test-Disconnected’ position
Breaker secondary contact interlocked with the breaker and can only be removed in the test position
Viewing window provides visual indication of the position of the circuit breaker/contactor truck.
### Electrical Ratings/Dimensions

<table>
<thead>
<tr>
<th></th>
<th>Type</th>
<th>VC-V6A</th>
<th>VC-V66A</th>
</tr>
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<tbody>
<tr>
<td>Applied standard</td>
<td>IEC 62271-200</td>
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<tr>
<td>Rated voltage</td>
<td>7.2 kV</td>
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<tr>
<td>Rated frequency</td>
<td>50 Hz, 60 Hz</td>
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<tr>
<td>Busbar rated current</td>
<td>630 A, 1250 A, 2000 A, 2500 A</td>
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<tr>
<td>Load side rated current</td>
<td>630 A, 1250 A, 2000 A, 2500 A</td>
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<tr>
<td>Rated short time withstand current</td>
<td>31.5 kA 3s, 40 kA 3s</td>
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<tr>
<td>Internal arc classification (IAC)</td>
<td>AFLR S1.5 kA 1 sec</td>
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<tr>
<td>Rated power-frequency withstand voltage</td>
<td>20 kV 1 min</td>
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<tr>
<td>Rated lightning impulse withstand voltage</td>
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<tr>
<td>Loss of service continuity category</td>
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<tr>
<td>Dimensions</td>
<td>Height</td>
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<td>Depth</td>
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<td>2000 A</td>
<td>750 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2500 A</td>
<td>900 mm</td>
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</table>

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### Single Line Diagram

![Single Line Diagram](chart.png)

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### Type Testing

Type testing on the VC-V6A(VCB), VC-V66A(VCS) was performed based on the international standard IEC62271-200, and the main typing tests performed are as follows.

#### Type Testing

Main circuits and, where applicable, the earthing circuits of the switchgear and controlgear shall be subjected to a test to prove their ability to carry the rated peak withstand current and the rated short-time withstand current.

#### Dielectric Tests

This test verified that the main circuit can withstand the applied voltage when the standard rated lighting impulse withstand voltage and power-frequency withstand voltage are applied.

#### Internal Arc Test

The internal arc test is intended to verify the effectiveness of the design in protecting persons in case of an internal arc, when the switchgear and controlgear is in normal service condition. The internal arc test is only applicable to metal-enclosed switchgear and controlgear, intended to be qualified as IAC classified.

#### Temperature Rise Test

The temperature rise of the various parts of the switchgear or auxiliary equipment for which limits are specified, shall not exceed the values specified in IEC62271-1.