iVB 12kV Intelligent Embedded Pole Vacuum Circuit Breaker

iVB 12kV Intelligent Embedded Pole Vacuum Circuit Breaker is applied for Protection and Control

MV Power Public Distribution and Industrial Grid

iVB 12kV Intelligent Embedded Pole Vacuum Circuit Breaker

Product conforms to:

- IEC 62271-100: Single voltage alternating current circuit breakers
- IEC 62271-1: High voltage alternating current circuit breakers
- GB156-2001: High voltage alternating current circuit breakers
- GB/T12042-1999: Common specifications for high-voltage switchgear and control gear standards
- DL/T 402-2007: High-voltage alternating current circuit breakers
- GB/T 12043-2000: 12kV-40.5kV High-voltage alternating current circuit breakers
- GB/T 593-2006: Common specifications for high-voltage switchgear and control gear standards
- JB/T 3855-2008: 3.6-40.5kV Indoor High-voltage alternating current circuit breaker
- GB/T 14598-2008: Electrical Relay

Comprehensive Routine Testing

Includes:

- Power Frequency Withstand Voltage test from contact to contact, phase to phase and phase to earth
- High and low voltage test for open and close circuit
- Auxiliary and control circuit electric tests
- Circuit Resistance Test
- Open and close speed test
- Open and close time test
- Contact balance time
- Relay protection multi-operation test

China Xihari Type Test

- Electronegative test
- Temperature rise test
- Breaking capacity test
- Dynamic and thermal stability test
- Mechanical life test
- Electrical life test
- Mechanical life curve
- EMC test

Optional Accessories

- IEC 6 Intelligent Relay Protection
- Current Transformer
- Magnetic interrupt
- Under voltage release
- Under voltage shunt release
- Network interrupt module
- Key interlock
- Closing interrupt electromagnetic

Scope of supply

- Circuit breaker
- Undercarriage
- Secondary plug
- Mechanical interlock
- Embedded arm
- Interface component
- L-name

Outline Dimension

<table>
<thead>
<tr>
<th>Component</th>
<th>Unit: mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual charge shaft</td>
<td>150</td>
</tr>
<tr>
<td>Manual close button</td>
<td>386</td>
</tr>
<tr>
<td>Open/Close indicator</td>
<td>150</td>
</tr>
<tr>
<td>Charge indicator</td>
<td>470</td>
</tr>
<tr>
<td>Trip unit</td>
<td>205</td>
</tr>
<tr>
<td>Manual open button</td>
<td>470</td>
</tr>
<tr>
<td>Ready-to-close indicator</td>
<td>569</td>
</tr>
<tr>
<td>Mechanical counter</td>
<td>266</td>
</tr>
<tr>
<td>Name plate</td>
<td>150</td>
</tr>
</tbody>
</table>

Technical Specification

<table>
<thead>
<tr>
<th>Rated voltage (kV)</th>
<th>12</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated short time withstand current (kA)</td>
<td>25</td>
<td>31.5</td>
</tr>
<tr>
<td>Rated peak value withstand current (kA)</td>
<td>63</td>
<td>80</td>
</tr>
<tr>
<td>Rated short circuit breaking current (kA)</td>
<td>63</td>
<td>80</td>
</tr>
<tr>
<td>Operation sequence</td>
<td>O-0.3s-CO-180s-CO</td>
<td></td>
</tr>
<tr>
<td>Opening time</td>
<td>≤ 50ms</td>
<td></td>
</tr>
<tr>
<td>Total breaking time</td>
<td>≤ 65ms</td>
<td></td>
</tr>
<tr>
<td>Closing time</td>
<td>≤ 60ms</td>
<td></td>
</tr>
<tr>
<td>Pole distance (mm)</td>
<td>±1</td>
<td></td>
</tr>
</tbody>
</table>

Max. operation over voltage (Un) ≤ 2.5Un

Mechanical life time: 10,000 operations

Electrical life: E2

For more information, please visit www.geindustrial.com
VCB is the most critical component for MV Switchgear

**iVB integrates conveniently for you**
- Easy operation, easy maintenance and high reliability
- Consummate and reliable interlock mechanism for personal safety
- Recycle of components at 80%
- Integrated intelligent relay protection control and precise sensor
- Friendly human machine interface
- Multi communication protocol support
- Smart grid solution

**High performance current transformer**
- Rogowski Coil
- Excellent linearity and no phase angle error
- No risk of secondary open circuit
- Easy to install and maintain

**iTU Intelligent relay protection and control**
- LCD display and pull-down menu
- Display all the parameters
- Waveform capture and data record
- Touch-screen
- Manual/auto reset switch
- Measuring range plug
- Relay protection input and output
- Modbus communication protocol
- Option for HMI communication and IEC61850 available

**Easy for maintenance**
- With outstanding technology, iVB is almost free maintenance. When maintenance is required, the integrated structure and interchangeability makes the process safer and easier. And when power fault occurs, operation people can shorten the power-off period in the absolutely safe area.

**Easy for installation**
- iVB is easy to be transported and stored with its slim size. It can apply for all kinds of demand and even more options with its full parameters.

**Highly Integration**
- iVB offers reliable solutions for grids including newly-built, upgrade and refurbishment projects with its flexible function.

**Easy for integrated installation**
- Originated from GE's strict quality control system and perfect design

**GE quality control system assurance**
- With advanced manufacturing process and integrated testing, each breaker complies with the standards and specifications which ensured the best quality.

**Comprehensive interlocks prevent incorrect operation**
- Standard mechanical and electrical interlock
- Padlock for VCB open position
- Key lock for VCB open position
- Open/close button lock
- Key lock for VCB lock-out
- Network interlock
- Rejection feature

**Intelligence Modular Design Safety, Reliability**

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