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HORIZON 38kV Outdoor Circuit Breaker

The Horizon fills the market need for outdoor, ground-mounted circuit breakers and features the award-winning magnetic actuator technology.

Designed for a 38kV application, the Horizon can be used with other products from BRUSH Switchgear to provide cost-effective and compact substations or breathe new life into existing substations by replacing old and obsolete equipment.

Key Features

- Superior, proven technology with minimal maintenance
- Vacuum interruption in an SF₆ filled, controlled environment
- Dead tank construction suitable for live or dead tank applications
- Internal arc containment
- Generous accommodation for current transformers
- The lightweight aluminium tank makes the Horizon easier to transport and install
- The silicone rubber bushings are resistant to damage from vandalism or mishandling and have an extended creepage of 1550mm
- Cubicle with space for ancillary equipment and option for integrated control and protection relay
- Optional Adjustable Legs version

Ratings

Maximum System Voltage
38kV

Continuous Current
1250/2000A

Interrupting Current
25/31.5kA

Rated Operating Sequence
O - 0.3sec - CO - 15sec - CO

Impulse Voltage Withstand
170kV at atmosphere pressure 0.0 bar (g)
200kV at 0.3 bar (g)

Power Frequency Withstand Dry
1min 80kV

Power Frequency Withstand Wet
10secs 80kV

Control Voltage
110/125 V dc (48 & 220 Optional)

Rated Frequency
50/60Hz

Rated 3 sec Short-Time Current
25/31.5kA

Rated Peak Making Current
65/82kA

Ambient Air Temperature
-50 – +50 °C

Weight
800kg

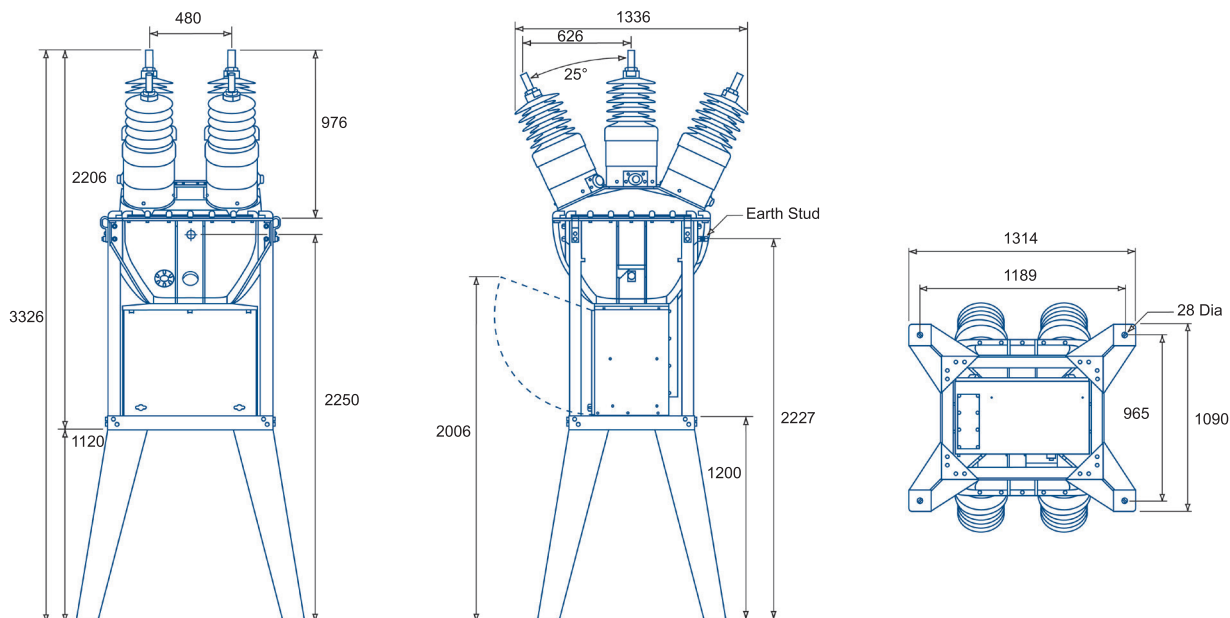
Standards

- ANSI C37.06
- ANSI C37.09
- IEC 62271 Series of Standards
- ENA Notice of Conformity No.1034

Patents

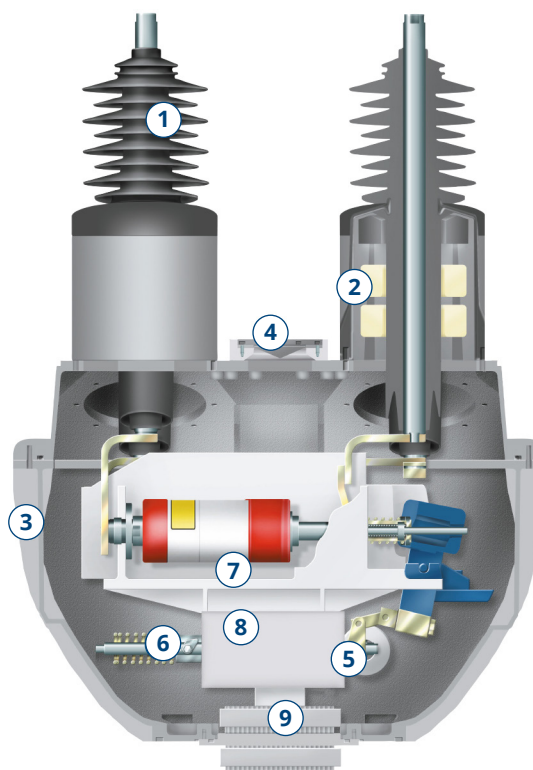
- GB2289374 B
- EP 0 909 453 B1

Dimensions (mm)



Horizon Mechanical Features

- ① The bushings consist of a conductor with over moulded EPDM core giving a gas tight seal and impact resistance. Removable self-cleaning, hydrophobic silicone sheds offer very high pollution resistance with no maintenance.
- ② Current Transformers are located within the bushing design, external to the gas enclosure, to allow for easy changing/addition.
- ③ Lightweight aluminium housing, secured by stainless steel bolts and incorporating rubber 'O' ring seals.
- ④ Pressure-relief disc, to comply with IEC 62271 Series of Standards, offering the highest levels of safety.
- ⑤ Mechanical ON/OFF position indication visible through clear viewing window from ground level.
- ⑥ Manual trip and lockout handle, operated from control cubicle.
- ⑦ A single moulding supports the three phase vacuum interrupter assembly, magnetic actuator mechanism and one-piece drive beam.
- ⑧ The magnetic actuator is based on a solenoid plunger, held in the tripped or closed position by a permanent magnet.
- ⑨ Bulkhead connection to control cubicle.



Optional Extras

- Fully insulated HV joint boots
- Metering CTs
- SF₆ pressure sensor and indication
- Mechanical key interlocking to prevent unauthorised tripping and closing

Accessories

- Portable test set
- Gas-filling equipment
- Hand held pressure gauge

Control Cubicle

The weatherproof cubicle, sealed to IP45, incorporates the multi-core termination blocks, heater, auxiliary supplies and a light.

There is space for auxiliary equipment such as control switches and a variety of control and protection relays, including the Panacea Control and Protection Relay.

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