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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 (0.5 bar gauge)
- 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
kV 38

Continuous Current
A 1250/2000

Interrupting Current
kA 25/31.5

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

Impulse Voltage Withstand
kV 170/200

Power Frequency Withstand Dry
kV 1min 80

Power Frequency Withstand Wet
kV 10secs 80

Rated Gas Pressure for above Atmospheric

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

Rated Frequency
Hz 50/60

Rated 3 sec Short-Time Current
kA 25/31.5

Rated Peak Making Current
kA 65/82

Ambient Air Temperature
°C -50 - +50

Degree of Protection
IP45

Weight
kg 800

Standards:

- IEC 60298
- IEC 60129
- IEC 60694
- IEC 62271-100
- EATS 41-36
- EATS 50-18

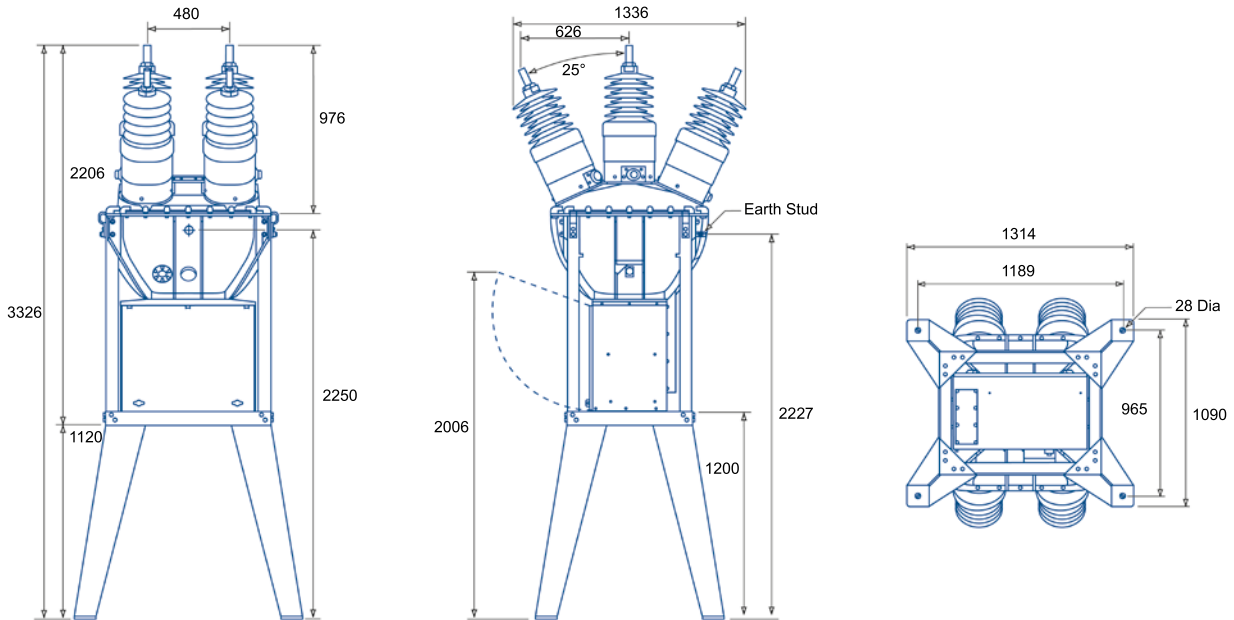
ANSI Standards:

- ANSI C37.06
- ANSI C37.09

Patents:

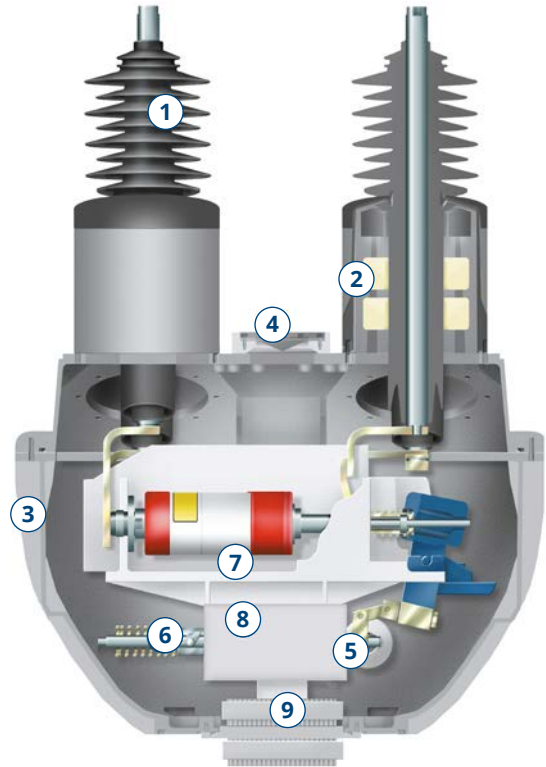
- GB2289374 B
- EP 0 909 453 B1

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 60298, 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.

BRUSH

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