

# ORiON 12kV Vertical Withdrawable Switchgear

SPE Energy is at the forefront of Switchgear development with their ORiON Metal Clad range of 12kV Vacuum Circuit Breaker (VCB) Switchgear, utilising the proven vertically isolated, horizontally withdrawable, fully integrally earthed concept.

ORiON Switchgear has been specifically designed to provide customers with a fully withdrawable Switchboard, based on well established preferred operating procedures complying with the latest IEC standards.

ORiON Switchgear provides the following solutions: -

- 1) A cost effective solution to extend historic air insulated 12kV Switchboards, utilising the 550 wide ORiON Panel without the need for a Busbar Adaptor Chamber.
- 2) ORiON Panels allows for extension of existing compound filled Switchboards' utilising a 250 wide Extension Chamber

ORiON's unique features are ideally suited where space is limited. It also allows the same operating procedures to be utilised.

ORiON Panels provides versatility, to extend single Busbar Switchboards, or either the front or back Busbars of double Busbar Switchboards



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**ORiON Panel and Truck mounted Vacuum Circuit Breakers (VCB's) have the following benefits :-**

- Integral Earthing is available for Busbar and Feeder Circuit positions. Clearly identified with a positive location in each selected position.
- Automatic Safety Shutters are provided to cover HV connections when the VCB is in the isolated position, and can be padlocked in the closed position. Shutters can be manually operated and held in the open position to allow testing. Shutters automatically close when the VCB is installed in the Panel.
- The VCB can be remotely racked in to the selected position from behind closed doors providing additional safety to the Operator. This should be specified at initial enquiry stage.
- Fully interlocked
- Truck mounted VCB
- Bespoke protection and control
- Ample accommodation is provided for CT's
- Full remote control
- Option of Bottom or Top Entry Rear Cable Box
- Allows AEI, Brush, GEC, Reyrolle and SWS Panels to be extended without the requirement of Busbar Adaptor Chamber, providing a compact commercially attractive solution.
- Conventional motorised spring mechanism
- Additional Operator safety with the provision of arc fault containment, Class IAC AF

Description	Unit	Ratings
Rated Maximum Voltage	kV	12
Frequency	Hz	50
Rated Power Frequency withstand voltage (between phases to earth) 60s dry	kV	28
Rated Power Frequency withstand voltage (across the isolating distance) 60s dry		38
Rated Power Frequency withstand (control and auxiliary circuit) 60s dry		2
Optional - Rated lightning impulse withstand voltage	kVp	75 (95)
Rated Lightning Impulse voltage, across the isolating distance		85 (110)
Rated Partial Discharge		<10pc at 13.2kV
Rated short time current 3s	kA	25
Rated short time withstand current	kA	62.5
Rated peak withstand current (Ip)	kA	62.5
Rated fault breaking current	kA	25
Rated Mechanical Life (M2)	cycles	10 000
Rated Electrical Endurance		Class E2
Rated operating sequence	s	O-0.3s-CO-15s-CO
Rated Control Voltage for Remote Operation	VDC	110
Rated Operating Temperature Range	°C	-5 to +40
Rated Relative Humidity	%	0-100
Maximum Altitude above Sea Level	m	1000
Rated Degree of Protection High Voltage		IP3X
Rated Degree of Protection Low Voltage (indoor)		IP4X
Rated Continuous Current	A	400/630/800/1250

**Applicable Specifications: - IEC62271-100 and IEC62271-200**