

ORION 12kV Withdrawable Switchgear

SPE is at the forefront of switchgear development with their ORION Metal Clad range of 12kV vacuum switchgear, utilising the well proven vertically isolated, horizontal withdrawable, integrally earthed concept. The ORION switchgear has been designed with the specific objective of providing customers with a fully withdrawable switchboard, based on well-established and preferred operating procedures complying with the latest IEC standards.

The ORION switchgear also provides customers with a cost effective solution to extend historic air insulated 12kV switchboards within the 550mm width of the ORION panel without the requirement of a busbar adaptor chamber.

The ORION panel also allows the extension of existing compound filled switchboards utilising a 250mm extension chamber.

This unique feature is ideally suited where space is limited. It also enables customers to maintain the same operating procedures as the existing switchboards.

The ORION panel provides a versatile solution, which can be used to extend single busbar switchboards, or either the back or front busbars of double busbar switchboards.



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ORION panel and truck mounted vacuum circuit breaker delivers the following benefits:

- Integral earthing is available on all panels for both busbar and feeder circuit positions, clearly identified and having a positive location in each position, achieved by a selector device
- Automatic safety shutters are provided to cover high voltage connections when the circuit breaker is in the isolated position which can be padlocked in the closed position. The shutters can be manually operated and held in the open position to allow testing. These shutters automatically close when the circuit breaker is installed in the unit
- Facility to remotely rack the circuit breaker into the selected position behind closed doors thereby providing addition operator safety
- Fully interlocked
- Truck mounted vacuum circuit breaker
- Bespoke protection and control
- Ample accommodation is provided for current transformer
- Full remote control
- Option of bottom or top entry rear cable box
- Allows SWS, GEC, AEI, Reyrolle, Brush units to be extended without the requirement of busbar adaptor chambers, thereby providing a compact commercially attractive solution
- Conventional motorised spring mechanism
- Additional operator safety with the provision of arc fault containment, class IAC AF

Technical Specification

| Items | Unit | 400, 630, 800, 1250A |
|--|------|----------------------|
| Rated voltage | kV | 12 |
| Rated frequency | Hz | 50 |
| Rated power frequency withstand voltage (between phases, to earth) 1 minute dry | kV | 28 |
| Rated power frequency withstand voltage (across the isolating distance) 1 minute dry | | 38 |
| Rated power frequency withstand voltage (control and auxiliary circuit) 1 minute dry | | 2 |
| Rated lightning impulse voltage (between phases, to earth) | kVp | 75 (95) |
| Rated lightning impulse voltage (across the isolating distance) | | 85 (110) |
| Rated partial discharge | | <10pc @ 13.2kV |
| Rated short-time current 3s | kA | 25 |
| Rated peak withstand current | kAp | 62.5 |
| Rated short circuit making current | kAp | 62.5 |
| Rated fault breaking current | kA | 25 |
| Mechanical Life | ops | 10,000 |
| Electrical endurance | | Class E2 |
| Rated operating sequence | s | O-0.3-CO-15-CO |
| Rated control voltage for remote operation | Vdc | 110 |
| Operating temperature range | °C | -5 to +40 |
| Maximum altitude above sea level | m | 1000 |
| Relative humidity | % | 0-100 |
| Degree of protection high voltage | | IP3X |
| Degree of protection low voltage (Indoor) | | IP4X |
| Rated arc fault containment | | IAC AF 25kA 1s |

Applicable Specifications

- IEC6227-100
- IEC 62271-200



**Switchgear Product
Enhancement**

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