

Longwall Electrical Systems





NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

NEPEAN Power offers complete engineer designed equipment for a complete longwall system ranging from IP 56/flameproof transformers, flameproof distribution control boxes to control and monitoring enclosures that are certified and compliant to all relevant standards.

The NEPEAN Power flameproof longwall DCB is available in various combinations with up to 8 outlets at 3.3kV. The equipment is designed and manufactured with an emphasis on safety, reliability and accessibility for normal maintenance.

The DCB has separate enclosures for the main incomer supply, 3.3kV outlets, gas detection and PLC/control.

The isolator serves two functions, firstly it protects against overloads or short circuits, and the second is to provide a means of isolating power from the control enclosure. The control enclosure houses contactors and protection relays for each outlet, arranged in easily maintained modular sections.

It is both electrically and mechanically interlocked to the isolator compartment to ensure that it can only be opened while the power is isolated. NEPEAN Powers Longwall Control & Monitoring Enclosure is designed to complement NEPEAN Power's longwall substation range utilising the PLC and SCADA systems to display all operating functions and fault conditions for the face supports, shearer, face drives, pumps station, substation, signalling and communication system, gas monitoring and mine included projects i.e. conveyor system.

The NEPEAN Power Longwall Substation can be manufactured in either flameproof or ingress protection versions up to 7.5MVA and typically 11KV/3.3KV.

Benefits

- A high tension custom built enclosure incorporating the 11kV.
 The design is type tested to IP56 as per the requirements of AS60529:2004 and type tested for arc fault containment to AS62271.200
- The main transformer is rated for an incoming voltage of 11000V, 3 phase 50Hz and will be configured to provide a secondary voltage of 3300V up to 7.5MVA
- The 3.3kV supply compartments are fully welded construction type tested to IP56 as per the requirements of AS60529:2004. The enclosure is a multi-compartment segregated distribution board incorporating outlets and is configured to meet the requirements of AS4871.2012. For ease of movement around the site the custom manufactured skid can be mounted on a motorised track.