

# SPECIAL PROJECT

## 1000V Plug-in Distribution Assemblies

Although most of the assemblies that we manufacture operate at a voltage of 400V or less, the scope of our ISO 9001 approval recognises that we also design and manufacture distribution assemblies rated up to 1000V and transformers up to 3300V.

Our Projects Team has recently been involved in a large Civil Engineering project, which not only required 1000V distribution equipment but it also had to be plug-in, as the very large plant that it supplies has to be relocated on a number of occasions as the job progresses. Although used above ground, the system uses mining connectors and trailing cables, due to the very harsh working environment.

The enclosures are derived from our B series of Mains Distribution Assemblies and are free-standing, providing protection to IP55. The switchgear is mounted within segregated compartments and the 1000V sockets are mounted behind padlockable doors, which can be closed once the 1000V plug is inserted into the socket, to eliminate unwanted interference. Some of the enclosures also incorporate ESI flanges, which mate with mining transformers, which also form part of the system (see image below) and were supplied and fitted by a third party.

The mining socket requires an electrical interlock to prevent insertion / withdrawal of the plug on load, which is achieved through the incorporation of a special Earth Continuity Monitor, working in conjunction with an Under Voltage Release in the associated MCCB. Some MCCBs are also provided with variable time and current RCD protection. The MCCBs are rated at 1150V and a step down isolation transformer, fed via 1000V fuses, is used to supply the auxiliary equipment at 400V, such as Under Voltage Releases, Earth Continuity Monitors, Earth Leakage Sensors, etc. The pilot-earth interlock loop circuit is also protected by a suitably rated HRC fuse.

The equipment will be used on the current project for the next one to two years. However, it is anticipated that this plug-in supply system will be adapted for use wherever the plant is used around the world.

If you have a requirement for heavy duty 1000V distribution equipment or 3300V transformers, please contact our Projects Team who will be pleased to discuss your requirements.



A7191693 - 500A 1000V Socket Assembly



A7191694 - 500A 1000V Input Assembly



A7191693 - Internal View, shield plate removed



## THE POWER PROFESSIONALS

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