

# SPECIAL PROJECT

## Stainless Steel Dockside Distribution Equipment

When ships, off-shore rigs and other vessels are first constructed or are in dock for refit, there is usually a significant requirement for temporary power. A wide range of activities may need to be carried out in and around the vessel or structure, such as welding, stress relieving, pumping, drying, lighting, painting, grinding, etc., which require 400V, 230V and 110V supplies to be readily available.

In order to meet these requirements, a dockside distribution system needs to be quick to install, easy to reconfigure and provide high levels of electrical protection for Users. The core components of the system need to be able to operate for long periods in a harsh marine atmosphere, without the need for high levels of routine maintenance. Assemblies also have to be of robust construction, to stand up to the rough handling that they are likely to encounter. The Blakley Electrics Project Team has recently been involved in the development of a bespoke, dockside distribution system that seeks to address all of these requirements.

The images alongside show the main components of this system, which comprise of 200A and 400A distribution assemblies, 400:110V transformers and 110V distribution assemblies. All of the assemblies feature high IP rating, heavy duty enclosures fabricated from stainless steel grade 316L. The enclosures are painted after fabrication, so that they are easily identifiable on site. Larger enclosures are mounted within crash frames, which provide mechanical protection to the enclosure bodies. The crash frames also incorporate fork lift pockets and lifting eyes to ensure that the assemblies can be safely transported around the site. The frames also increase the stability of the assemblies.

All of the assemblies are plug-in (incoming and outgoing connections), apart from the incoming connections to the 200A and 400A assemblies, which are hard wired via non-ferrous gland plates. When the gland plates are not in use, a hinged cover is provided to maintain the IP rating even when the gland plate has been drilled. All sockets rated up to 63A are individually protected by MCB and fixed RCCB. The 125A 110V sockets fitted to the transformers are individually protected by MCCB and variable time and current RCD.

The larger assemblies, mounted within crash frames, incorporate phase indicators to show the condition of the supply. Anti-condensation heaters with a dedicated 16A 230V auxiliary connection are also incorporated, enabling the heater to be supplied when the assemblies are in external, long term storage. The transformer assembly has a tap changing switch, which allows different tapings on the primary winding to be selected (off load).

The smallest assemblies, which are 110V only, incorporate a 125A inlet and through socket (unprotected). The outgoing 16A and 32A 110V sockets are protected by individual DP RCBOs suitable for 110V operation. The 110V assemblies are not mounted within crash frames but they are designed to be fixed to hand rails / scaffolding.

If you have a requirement for heavy duty Dockside Distribution Assemblies, please contact our Projects Team who will be pleased to discuss your specific requirements.



Dockside Distribution Assembly, 400A,  
Part No. A7292235



Dockside Distribution Assembly, 200A  
Part No. A7292236



Dockside Transformer, 41.25kVA, 400:110V  
Part No. A7042949



Socket Outlet Assemblies, 110V, 125A  
Part No. A7191691

## THE POWER PROFESSIONALS

SP43 - 05/17

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