

## Mains Distribution Assemblies, Form 4

On fast track construction projects there is an increasing awareness of (i) the delays and disruption that occurs when Mains Distribution Assemblies (MDAs) have to be isolated to allow routine activities such as connecting or disconnecting cables and (ii) the hazards associated with NOT isolating MDAs, to carry routine activities such as connecting or disconnecting cables. The most effective way of addressing this conflict is to install MDAs with Form 4 Type 3 segregation, which allow any circuit to be connected or disconnected in complete safety WITHOUT the need to isolate the overall MDA.

When an MDA has Form 4 Type 3 segregation, the incoming switchgear, the bus bars and every outgoing device is housed within its own compartment. Each switchgear compartment has its own door, gland plate and removable shield plate. In addition, the live side of each device is fully shrouded. When a cable needs to be connected or disconnected, the relevant MCCB can be padlocked in the OFF position, the shield plate can then be removed, which allows the cable to be safely terminated or disconnected as required.

Form 4 MDAs tend to be high current assemblies and alongside there are images of two types of 1600A MDA that have been manufactured in recent times. The modular design of our Form 4 MDA enables us to accommodate a very wide combination of incoming and outgoing devices.

In view of the benefits of Form 4 segregation, some sites are extending their use to lower current MDAs. Alongside is an image of a 400A MDA with Form 4 segregation, which has the same level of segregation as the high current versions.

Form 4 MDAs are usually double-fronted i.e. with switchgear fitted to the front and rear of the assembly, which minimises the footprint of the MDA.

Assembly A7193341 (the top image) is one of a number of Form 4 MDAs that we have supplied to a major construction project in the UK. To maximise access for glanding and terminating multiple large cross section SWA cables, MDAs are mounted on substantial self supporting sub-frames, which bridge wide, deep cable trenches. For maximum access whilst cables are being glanded and terminated, the underside of the sub-frame is open and removable foot plates are fitted once each section of the MDA has been connected (in the above image the footplates are shown fitted).

If you would like to discuss a possible requirement for a Form 4 MDA, please contact the Blakley Projects Team who will be pleased to assist.



A7193341 Form 4 1600A MDA on Galvanized Sub-Frame, which increases access for cable termination



A7191759 Form 4 MDA 1600A, Separate Stand Extension Supplied for Fitting On Site



A7084598 Form 4 MDA 400A, Enclosure Fabricated from Grade 316L Stainless Steel