

Product Validation - Short Circuit Testing, up to 65kA

As part of our on-going product development and validation process, we recently commissioned third party short circuit testing of a 1600A B7 Mains Distribution Assembly (MDA). The assembly was based on a standard build B7 MDA but with adaptations to facilitate the testing, which was carried out at a laboratory in the Netherlands. Earlier MDAs have had bus bar systems tested at 50kA for 0.1 second but this latest testing was more wide ranging and included testing the bus bar system at up to 65kA for 1 second (I_{cw}) and the rest of the assembly at 50kA (I_{cc}), which is consistent with the Schneider switchgear fitted into our standard B7 series 1600A MDA.

The tests were:

- Horizontal bus bar, three-phase fault: I_{cw} 65kA for 1 second
- Horizontal bus bar, phase to neutral fault: I_{cw} 39kA for 1 second
- Horizontal bus bar, three-phase fault: I_{cw} 50kA for 1 second
- Horizontal bus bar, phase to neutral fault: I_{cw} 30kA for 1 second
- Incoming terminations, 1600A MCCB and main bus bar, three phase fault: I_{cc} 50kA
- Incoming terminations, 1600A MCCB and main bus bar, phase to neutral fault: I_{cc} 30kA
- 800A, 630A, 400A, 250A and 100A distribution MCCB/RCDs, three-phase fault: I_{cc} 50kA
- 800A, 630A, 400A, 250A and 100A distribution MCCB/RCDs, phase to neutral fault: I_{cc} 30kA
- Main earth terminal to distribution earth bar, phase to neutral fault: I_{cc} 30kA

The unit comfortably passed all tests (ASTA certificate no. 21262 refers) but we were also able to make observations that will guide the future development of B7 series MDAs as well as the designs of related products within our range.

Blakley Electrics have amassed a wealth of type test data over the last 25 years, in such diverse areas as IP rating, temperature rise, corrosion resistance, shock and vibration, lifting arrangements, as well as short circuit performance, helping us to develop an unrivalled range of specialist products, which are in use around the world.



B7 1600A MDA configured for Testing



Special Incoming Termination Arrangement



Connections for testing outgoing MCCB / RCDs



Connections for testing bus bar system

THE POWER PROFESSIONALS

TDS23 - 08/18

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