



Type B RCD Assemblies

The publication of the 18th Edition IET Wiring Regulations has seen an expansion of section 531: Devices for the protection against electric shock by automatic disconnection of supply. In particular, section 531.3, Residual Current Devices (RCDs), has been expanded to reflect the advances in recent years in diverse areas such as Electric Vehicle Charging, Solar PV power supply systems and the wider use of Variable Speed Drives within plant and machinery, such as tower cranes for the construction sector.

Our standard ranges of fixed sensitivity RCD, typically rated up to 100A, are classified as Type AC assemblies. Our standard range of variable RCDs rated up to 1600A, are classified as Type A assemblies. As non-standard assemblies, we can supply Type B variable RCDs, typically rated up to 630A.

Type B RCDs provide all of the protection provided by Type AC, Type A and Type F RCDs. In addition they are designed to operate correctly with residual sinusoidal alternating currents up to 1000Hz, residual alternating currents superimposed on a smooth direct current 0.4 times the rated residual operating current, residual pulsating direct currents superimposed on a smooth direct current of 0.4 times the rated residual operating current and residual direct currents which may result from rectifying circuits. Type B RCDs meet the requirements of BS EN 60947-2, annex M.

On a major UK construction project, we have recently supplied a series of Type B variable RCD assemblies rated up to 630A. These assemblies are to supply tower cranes with Variable Speed Drives (VSD). The characteristics of the VSDs would compromise the protection provided by our Type A variable RCDs, hence the need for Type B assemblies.

The sensitivity range of the variable Type B RCD is dictated by the current rating of the overall assembly. At 630A the sensitivity range is 500mA to 3A. At lower current ratings, other sensitivity ranges apply. The time delay adjustment range of the Type B RCD is 0.1 to 10 seconds. However, it is important to note that on a TT supply, the maximum time delay should be 1 second.

The recent 630A Type B RCD assemblies were supplied in allinsulated, GRP enclosures providing protection to IP55. They were configured for cable entry and exit via a non-ferrous gland plate in the underside of the enclosure. The incoming supply terminates directly on to the MCCB and the outgoing load connection is on to heavy duty, copper bar terminals.

Assemblies providing Type B RCD protection can also be supplied in steel enclosures or they can be incorporated on the outgoing side of our Mains Distribution Assemblies in place of the standard Type A variable RCDs.

If you would like to discuss an application requiring a Type B RCD, please contact the Blakley Projects Team.



Different Types of RCD Assembly



A7183352 - Type B 630A RCD with shield plate removed



Variable modular RCD with pre-wired core balance current tranformer with shield plate removed

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