

250A Distribution Boards with DC Immune RCD Protection to Supply EV Chargers in Network Rail Car Parks

For over 50 years Blakley Electrics have supplied DC Immune RCD protection assemblies for installation in Network Rail premises that are adjacent to railway lines supplied via the 750V DC Third Rail traction system. Our modular residual current devices (MRCDs), which are Type A devices and meet the requirements of BS EN 60947-2 Annex M, are largely immune to the effects of stray DC currents, which can desensitise standard 30mA RCDs, preventing them from affording personnel with Basic (direct contact) protection.

We offer a standard range of standalone, surface mounting, single phase and three-phase DC Immune RCD assemblies rated up to 100A (our ELE series). These are available with 30mA fixed sensitivity protection or variable time and current RCD protection (sensitivity adjustable from 30mA to 30A and time delay adjustable from 0 to 10 seconds). We can also group mount individual DC Immune RCDs within a common enclosure. This version of assembly is often adopted when DC Immune RCD protection is only required on selected circuits. When RCD protection is required on every circuit, we can provide distribution boards (DCIDBs) with an incoming main switch feeding multiple outgoing ways i.e. with each circuit protected by a DC Immune RCD.

Most DCIDBs have main switches rated at 100A and they utilise enclosures from our standard range of IP66 MCB distribution boards. However, on a recent EV related project, the assemblies required incoming switchgear rated at 250A, combined with a high number of outgoing ways. In addition, some of the boards required the incorporation of MID approved energy meters. We were able to accommodate these requirements through the development of a range of larger IP66 enclosures.

Many of the 250A rated DCIDBs were fitted on the outgoing side with multiple 40A 4P MCBs each with 30mA DC Immune RCD protection and were dedicated to feeding 22kW chargers. Other boards were fitted with a mix of DP and 4P outgoing MCBs, each with DC Immune protection, to supply offices, ticket machines, etc.

If you have a requirement for a standalone DC Immune RCD assembly or a multiway version, please contact the Blakley Projects team who will be pleased to be of assistance.



A7293373 Distribution Board with 250A 4P incoming switch and 16 no. 40A 4P / 30mA DC Immune MRCDs.



A7293373 Distribution Board with 250A 4P incoming switch and 16 no. 40A 4P / 30mA DC Immune MRCDs. Shield plates removed.