BLAKLEY ELECTRICS

CASE STUDY
DATA SHEET

250A Assembly with Multiple RCD & Monitored Earth Protected Sockets

As part of the upgrading of facilites at a busy Royal Air Force station, the Blakley team recently designed and manufactured a heavy duty, 250A distribution assembly, which met the exact physical and electrical requirements of the station engineering team. Assemblies are permanently installed in exposed locations around the station and they are designed to withstand the rigours of permanent outdoor installation, as well as provide easy to operate RCD and Monitored Earth protected supplies required by the RAF to feed portable and transportable mains voltage plant and Ground Support equipment.

Multiple Socket Assemby with RCD & ME Protection

Heavy Duty Construction

The multi section enclosure provides protection to IP55 and is manufactured from 3mm mild steel, which makes it exceptionally robust. The layout of the assembly, with the sockets mounted on an angled section located above the controls, was a specific customer requirement.

Corrosion Protection

The enclosure benefits from our “E” grade paint finish (please refer to Tech Data Sheet TDS1 for full details of this high grade finish). Once fabricated, all enclosure parts are blast cleaned in accordance with BS7079 and then flame sprayed inside and out with molten zinc (to BS2569). The enclosure is then coated in electrostatically applied, polyester powder paint. The thick coating of zinc provides exceptional protection against corrosion, even if the painted top coat should be damaged.

Electrical Equipment

The assembly incorporates a 250A incoming isolator / switch with under volt release (UVR), which not only provides mains isolation and under volt protection, it also works in combination with an externally mounted Emergency Stop Button, to provide a fail safe means of emergency isolation.

Assemblies incorporate 1 no. 125A, 3P+N+p+E, 400V, IP67 socket and 1 no. 32A, 3P+N+p+E, 400V, IP67 socket to BS EN 60309-2. They are also fitted with 3 no. Marechal DS1, 30A, 2P+p+E 230V sockets to BS EN 60309-1. Each socket is protected by a 30mA sensitivity Earth Leakage Sensor and an Earth Continuity Monitor with a 1.5 ohms pilot-earth loop trip factor. There is also the option of providing Pilot Core Protection for each socket, by fitting a diode in the remote appliances fed from the sockets (a short circuit in the pilot-earth loop will cause the circuit to open). The routine ON / OFF / TEST / RESET / PCP selection operations can all be carried out externally, without the need to open doors or covers. Overcurrent protection is also provided by appropriately rated MCCBs and MCBs located behind the doors. A thermostatically controlled anti-condensation heater is also incorporated.

External controls for routine ON, OFF, TEST, RESET and PCP selection operations

For further details, please contact the Blakley Projects team.

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