

Power Cluster Assembly for Military Aircraft Hangar

The military were amongst the first organisations in the UK to adopt earth leakage and earth continuity monitoring equipment to protect personnel from the dangers of mains voltage electricity. At Blakley Electrics we have been supplying protected sockets for military aircraft installations for over 40 years. Originally these were all single socket assemblies (which are still available) but in more recent times, particularly for installation within hangars, we have developed multi-socket Power Clusters fitted with an array of industrial sockets from 16A to 125A, at 400V, 230V and 110V. When required, we can also fit aircraft connectors to BS 4G173 rated at 200V 400Hz and 28V DC, complete with isolating transformers and power supplies in accordance with BS 2G219.

On a recent hangar project there was a requirement for a number of assemblies with multiple 50Hz sockets. The assemblies incorporated a 200A 4P mains isolator, which was controlled by an emergency stop button fitted to the front of the assembly. On the distribution side the following Marechal decontactor sockets to BS EN 60309-1 were fitted:

- 1 no. 125A 400V 3P+N+p+E
- 2 no. 63A 400V 3P+N+p+E
- 2 no. 32A 400V 3P+N+p+E
- 2 no. 16A 230V SP+N+p+E
- 1 no. 16A 110V 2P+E fed from an integral 2kVA transformer

The 125A socket was protected by a Blakley MRCD-R series variable RCD and the other mains voltage sockets were protected by Blakley ELS series 30mA fixed sensitivity RCDs. Each RCD works in conjunction with an associated MCB and provides protection in accordance with BS EN 60947-2 annex m. The mains voltage sockets were also protected by Earth Continuity Monitors which control AC4 rated contactors with external ON / OFF controls. The protection arrangements are as specified in military Technical Bulletin 03/05: Fixed electrical power distribution for aircraft hangars and hardened aircraft shelters.

Technical Bulletin 03/05 also requires each socket to incorporate a number of other features, which assist users and maintainers:

- Supply Healthy Indicator
- Earth Leakage Trip Indicator
- Earth Monitoring Fault Indicator
- Pilot Core Protection Selector Switch (with / without rectifier)
- Rectifier Polarity Selector Switch

These indicators and selector switches were located to the front of the assembly, behind hinged, lockable covers, which prevent unauthorised interference.

The assemblies also incorporated a pair of retractable earth cable reels complete with 15 metres of flexible cable and a heavy duty clip. The reels are located at a convenient height for users and the socket plate is angled, also for the convenience of users.

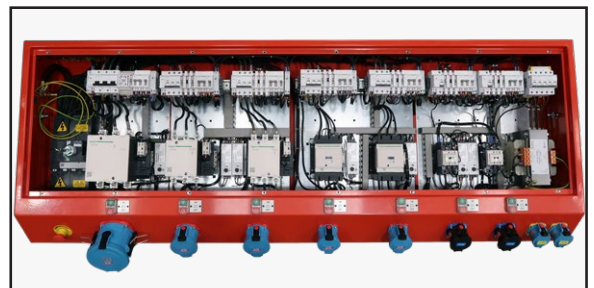
If you have a possible requirement for military or commercial hangar distribution equipment, please contact the Blakley Projects Team.



Power Cluster Assembly, Part No. A7293036
mounted on free-standing frame



Power Cluster Assembly, Part No. A7293036,
which can be wall or frame mounted



Power Cluster Assembly, Part No. A7293036,
with front cover removed.