

## Power Cluster Assemblies for Aircraft Hangars and Hardened Aircraft Shelters

Power Clusters are multi-voltage distribution assemblies incorporating a range of sockets fed from a single incoming supply. They are configured to meet specific installation requirements, to ensure operators are provided with the full range of power supplies required. Price comparisons between fitting a Power Cluster in place of individual socket outlets show a proven reduction in the overall cost of the installation.

### Supplies for Ground Support Equipment (GSE)

Traditionally, 230V / 400V 50 Hz outlets to supply GSE, have been individual units manufactured to DOE Standard SEG 148 and MoD Technical Bulletin TB 97/40. The latest revision of the Technical Bulletin is TB 03/05, which can be applied to both single socket assemblies or multi-socket Power Clusters.

Blakley Power Clusters can be offered as free-standing or wall mounting assemblies. Each assembly incorporates an incoming MCCB Isolator and Emergency Stop push button.

A range of single and three-phase sockets can be incorporated at 16A, 32A, 63A and 125A. Circuit protection meets the requirements of TB 03/05 with each socket incorporating MCB, RCD and PEMs protection.

To simplify use and maximise on-site flexibility, each socket includes associated ON / OFF Push Button control, Diode Reversal Switch, Pilot Core Protection Selection Switch, Trip Indication and Test Buttons.

For Workshop Facilities additional 110V sockets to BS EN 60309-2 can be incorporated (including integral transformer) as well as 13A 230V sockets to BS1363.

The whole assembly is designed, manufactured and tested in accordance with our accreditation to ISO9001:2008.

Please see over the page for Power Cluster Assemblies incorporating Aircraft Outlets and a separate data sheet for individual socket outlet assemblies with PEMS protection to supply Ground Support Equipment in hangars, etc.



## Power Cluster Assemblies Incorporating Aircraft Outlets

These Power Cluster assemblies incorporate (a) 28V DC Aircraft Sockets, (b) 200V 400 Hz Aircraft Sockets and (c) 230V / 400V 50 Hz PEMs protected sockets rated at 16A, 32A, 63A or 125A.

Each Power Cluster assembly receives two supplies: a 400V 50Hz TP+N supply and an earthed 200V 400 Hz TP supply. The assemblies incorporate all required interlock circuitry, switchgear, controlgear, isolation transformers and transformer rectifier sets to provide aircraft supplies in accordance with BS2G219 and 50Hz supplies protected in accordance with TB 03/05.

Power Clusters are made to order but typically comprise of the following equipment.

### Enclosures

Wall mounting and free-standing patterns are available. Free-standing enclosures generally provide a minimum of 1000mm ground clearance to the electrical equipment.

### Aircraft Outlets

1 no. 28V DC aircraft socket to BS 4G173 supplied from an integral 415V to 28V DC 2 kW transformer rectifier set. The 28V DC supply quality is in accordance with BS2G219 and is also “user adjustable” to compensate for volts drop at the aircraft.

1 no. 200V 400Hz aircraft socket to BS 4G173 fed from an integral, 45 kVA 1:1 ratio isolating transformer (other transformer ratings can be incorporated).

The aircraft sockets are protected and interlocked in accordance with BS 4G173 and can also incorporate an interlock by-pass switch when supplying Apache Helicopters.

### 50 Hz Outlets

A range of single and three-phase sockets can be incorporated at 16A, 32A, 63A and 125A. Circuit protection meets the requirements of TB 03/05 with each socket incorporating MCB, RCD and PEMs protection. To simplify use and maximise on-site flexibility, each socket includes associated ON / OFF Push Button control, Diode Reversal Switch, Pilot Core Protection Selection Switch, Trip Indication and Test Buttons.

For Workshop Facilities additional 110V sockets to BS EN 60309-2 can be incorporated (including integral transformer) as well as 13A 230V sockets to BS1363.

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