



## INSTALLATION AND MAINTENANCE PROCEDURES FOR ASSEMBLIES

### MECHANICAL FIXING

Assemblies should be securely fixed to a suitable back plate or frame, which will support the weight of the equipment. Care should be taken to ensure that the fixing centres are not stressed and line up with the holes on the back plate, straps or insulated feet. Proper care should also be taken in selecting the correct fastener and locking hardware. It is recommended that the largest possible fastener is used, e.g. if a securing hole is dimensioned 7 mm then a suitable fastener would be an M6.

### ELECTRICAL FIXING

Electrical connections are equally important. When selecting cables or busbars extreme care must be taken to avoid any stress on the assembly. Cables and busbars must always be supported. It is recommended that electrical connections be as flexible as possible. Again the correct size fasteners must be used. It is also critical that cables and busbar are suitable size to carry the rated current and any overloads the equipment is designed for.

### FUSE REPLACEMENT

When replacing fuses care must be taken to ensure the fuse is seated squarely on its' mounting. This will avoid undue stress on the fuse or associated components when the fasteners are secured.

### VENTILATION

Diode and thyristor assemblies do get hot. It is not a fault with the equipment. The assembly will have been designed to operate at or within a specified temperature range. It is important therefore to make sure these parameters are observed. Care must be taken to ensure the assembly is located in such a manner that the operating environment is not violated and operating temperatures exceeded. When locating an assembly in an enclosure a free flow of air is recommended, to allow proper ventilation. If this is not possible and unless previously agreed Power Products International Limited should be contacted to advise on equipment suitability. In the case of oil cooling the operating conditions would have been agreed at the point of an order being placed.

### INSULATION TESTS

Diodes, thyristors and indeed any semiconductor device is sensitive to voltage. The devices for an assembly will be selected according to the working conditions at the time the order for the equipment was placed. It is therefore very important that insulation testing procedures are strictly adhered to. When insulation testing at any test voltage the semiconductor device (diode, thyristor, transistor, MOSFET, IGBT etc.) must be isolated, by linking all the connections of the device together to form a 'short circuit'. This will protect the device from damage due to over voltage. If additional information is required please contact Power Products International Limited.

### MAINTENANCE

Any Power Products' assembly will require little or no attention or maintenance during the course of it's working life. The installation procedure will ensure that the mechanical fixings and electrical connections are secure. Where there is a risk of vibration, a check should be made of all connections and fixings determined by the severity of the vibration. Where the equipment is cooled by natural convection the assembly should be cleaned or dusted at time periods appropriate to the build up of foreign material. For equipment cooled by fans supplied as an integral part of the assembly, cleaning or dusting may be required on a more regular basis. A clean assembly will operate and give satisfactory service. Integral fans are maintenance free and only require the same attention as the main assembly.