

Health and Safety Executive OC 483/14

Field Operations Division

To

FCG Specialist Inspectors (Electrical)

ELECTRICAL PROTECTION FOR MAINFRAME COMPUTERS

1 This OC advises inspectors on recent developments in providing overcurrent and short-circuit protection for mainframe computers.

2 Clauses 2.7 and 5.4 of BS 7002: 1989 *Specification for safety of information technology equipment including electrical business equipment* (EN 60 950: 1988) require the provision of such protection. Clause 2.7 refers to the protection for primary circuits which may be provided by the fixed installation or within the equipment. This clause also requires protective devices provided under Clause 5.4 for abnormal operating and fault conditions to be integral parts of the equipment.

3 A number of mainframe computers including those supplied by IBM use 110 kVA input transformers. It is understood that these may be separate units (cubicles) or form part of the main equipment. In the USA, where IEC 950 is the appropriate standard, the overcurrent and short-circuit protection is provided by the installation. IEC 950 permits such provision, it is not as prescriptive as EN 60 950.

4 IBM intend to import similar equipment into Europe and have asked about the provision of electrical protection, being aware that EN 60 950: 1988 is much more prescriptive than IEC 950.

5 After discussion it was agreed that provided the installation complies with the Electricity at Work Regulations 1989 and in particular reg.11, then compliance with EN 60 950: 1988 was not necessary.

6 Where the input transformer cubicle is sited away from the equipment, it is not acceptable for the secondary connections, cables, busbars etc to the equipment to be regarded as a "Fault Free Zone". The appropriate electrical protection shall be provided at the transformer for the secondary system.

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ASI headings

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