

the interpretation of
EN 50131-6:2008 alarm systems
part 6: power supplies



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For other information please contact:

British Security Industry Association

t: **0845 389 3889**

f: 0845 389 0761

e: info@bsia.co.uk

www.bsia.co.uk

Abbreviations

The following abbreviations are used in this document:

APS	Alternative Power Source
CIE	Control and Indicating Equipment
EPS	External Power Source
I&HAS	Intrusion and Hold-up Alarm System
PPS	Prime Power Source
PS	Power Supply
SD	Storage Device
SPPS	Supplementary Prime Power Source

Introduction

BS EN 50131-6: Alarm systems – Intrusion and hold-up systems: Part 6: Power supplies, was revised and re-issued as EN50131-6:2008

This document has been prepared to give guidance on the interpretation of some of the clauses in the standard that are in need of further clarification. It is intended that this guideline can be used by manufacturers to self-certify their products to conform to the standard. This guidance document may be further revised as required.

Only those items in BS EN50131-6: 2008 that have been the subject of formal comment by BSIA members are listed below. All other clauses or parts of the standard are believed to be self-explanatory.

Power Sources

There is inconsistent usage of PPS (Prime Power Source) and EPS (External Power Source) in the EN50131 series of standards.

Figure 1 shows the relationship between each of these entities, as used within the standard. Essentially the PPS is the national grid mains supply. In those installations having a standby generator capability e.g. hospital, then the standby generator is the SPPS. The (mains) power input to an I&HAS may come from either source (PPS or SPPS) of which the I&HAS may have no knowledge and this input is therefore generically known to the I&HAS as the EPS. The APS is typically represented by any local standby power source (e.g. rechargeable battery) within the design and control of the I&HAS that can power the I&HAS (or part thereof) for a predetermined period of time in the event of loss of the EPS. Note that from EN50131-1 clause 9.2, if an SPPS is automatically switched into operation on loss of the PPS, the overall system standby period from the APS is reduced to 4 hours for I&HAS grades 2, 3 and 4.

EN50131-1 and TS50131-7 do not use the term “EPS” and refer to the immediate power source of the PS consistently as the “PPS”.

Power Supply Rating

The rating of the power supply (PS) is the total continuous output current capacity of the PS when operating under all conditions of EPS or from a SD of capacity as defined by the PS manufacturer for a grade dependent time. This is the output current that is available to power system components and does NOT include the additional current that is used by the PS to recharge any attached storage device. Note that where the PS is integral to another component e.g. a CIE, then the rating of the PS should exclude the CIE and the manufacturer should declare the CIE current consumption separately as a system component.

Note: the PS manufacturer must clearly state in the product documentation that the total PS rating must not be exceeded where independent power outputs have continuous rated outputs, the sum of which is greater than the total PS rating e.g. multiple fused connections.

Interpretation of clauses

Clause 3.1.4 independent power outputs

This clause refers to completely independent outputs from a power supply where a short circuit and/or overload on one output will have no affect on the others. Each output may have multiple connections. Simple fused outputs may not qualify as being independent if an overload or short circuit on one has an affect, even if only transitory (e.g. during finite time for fuseable link to fail), on another.

For the purposes of this interpretation the following diagram gives a typical example.

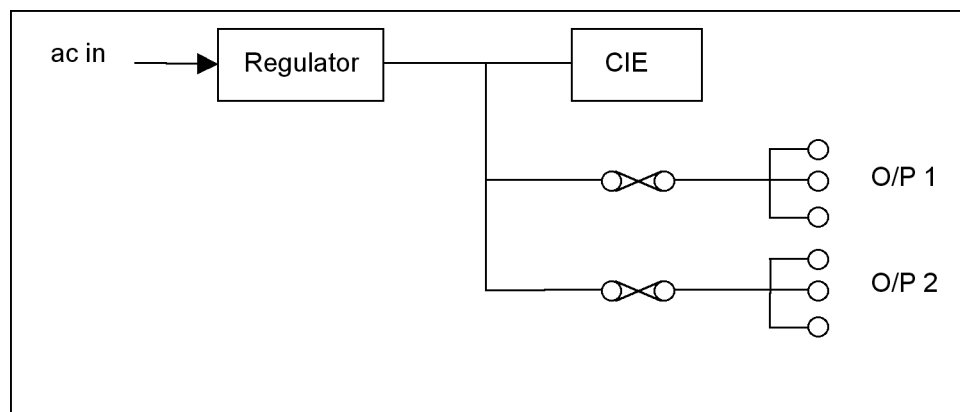


Figure 1 Example General Arrangement of PS and CIE with Independent Outputs

In the example shown in Figure 1, O/P 1 and O/P 2 may only be considered independent power outputs if applying a short circuit or overload to one will have no effect on the other. Although the CIE module is connected to the output of the regulating element, this connection is not considered an independent output of the PS for the purposes of the tests of clause 8.2.

Clause 4.3 APS Capability

Note that there is no longer a table within EN50131-6 for standby capability.

This is replaced by the simple requirement that the PS must be capable of meeting the system requirement of EN50131-1, Table 23.

Clause 4.11 Tamper security

There is inconsistency between the requirements of EN50131-6:2008 and those for CIE in EN50131-3:2009. For consistency, the requirements of EN50131-3:2009, clause 8.7 should be applied.

Clauses 7.19-7.22 Tests (Tamper security)

These tests should be replaced by those from EN50131-3:2009 clause 11.9 (see clause 4.11, above).