

Australian Standard™

**Uninterruptible power systems (UPS)**

**Part 1.1: General and safety  
requirements for UPS used  
in operator access areas**

This Australian Standard was prepared by Committee EL-027, Power Electronics. It was approved on behalf of the Council of Standards Australia on 29 July 2003 and published on 3 October 2003.

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The following are represented on Committee EL-027:

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Electricity Supply Association of Australia  
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Australian Standard™

## **Uninterruptible power systems (UPS)**

### **Part 1.1: General and safety requirements for UPS used in operator access areas**

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-027, Power Electronics.

The objective of this Standard is to provide designers, manufacturers, owners and operators with general and safety requirements for Uninterruptible Power Systems (UPS) with a low voltage a.c. output intended to be installed in operator accessible areas.

This Standard is identical with, and has been reproduced from, IEC 62040-1-1:2002, *Uninterruptible power systems (UPS), Part 1-1: General and safety requirements for UPS used in operator access areas* including Corrigendum 1 (December 2002). This Standard is to be read in conjunction with AS/NZS 60950.1 *Information technology equipment—Safety, Part 1: General requirements*.

To assist users of this Standard, the definitions for connection of the supply and insulation classes from AS/NZS 60950.1 have been added as notes to clauses 3.4 and 3.8 respectively.

This Standard is part of a series, which consists of the following:

AS

62040 Uninterruptible power systems (UPS)

62040.1.1 Part 1.1: General and safety requirements for UPS used in operator access areas (this Standard)

62040.1.2 Part 1.2: General and safety requirements for UPS used in restricted access locations

62040.2 Part 2: Electromagnetic compatibility (EMC) requirements

62040.3 Part 3: Method of specifying the performance and test requirements

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- (c) A full point should be substituted for a comma when referring to a decimal marker.

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## STANDARDS AUSTRALIA

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**Australia Standard****Uninterruptible power systems (UPS)****Part 1.1: General and safety requirements for UPS used  
in operator access areas**

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**1 Scope and specific applications****1.1 Scope**

This standard applies to electronic **uninterruptible power systems (UPS)** with an electrical energy storage device in the d.c. link. It is to be used with IEC 60950-1 which is referred to in this standard as "RD".

When any item is referred to by the phrase "The definitions or the provisions of item/RD apply", this phrase is intended to mean that the definitions or provisions in that item of IEC 60950-1 apply, except any which are clearly inapplicable to uninterruptible power systems. National requirements additional to those in IEC 60950-1 apply and are found as notes under relevant clauses of the RD.

The primary function of the **UPS** covered by this standard is to ensure continuity of an alternating power source. The **UPS** may also serve to improve the quality of the power source by keeping it within specified characteristics.

This standard is applicable to **UPS** which are movable, stationary, fixed or for building-in, for use on low-voltage distribution systems and intended to be installed in any **operator** accessible area. It specifies requirements to ensure safety for the **operator** and layman who may come into contact with the equipment and, where specifically stated, for the **service person**.

This standard is intended to ensure the safety of installed **UPS**, both as a single **UPS** unit or as a system of interconnected **UPS** units, subject to installing, operating and maintaining the **UPS** in the manner prescribed by the manufacturer.

This standard does not cover d.c. supplied electronic ballasts (IEC 60924 and IEC 60925), **UPS** intended to be installed in separated electrical locations and **UPS** based on rotating machines.

The relevant general and safety requirements for **UPS** installed in restricted access locations are given in IEC 62040-1-2; electromagnetic compatibility (EMC) requirements and definitions are given in IEC 62040-2.

**1.2 Specific applications**

Even if this standard does not cover all types of **UPS**, it may be taken as a guide for such equipment. Requirements additional to those specified in this standard may be necessary for specific applications, for example:

- **UPS** intended for operation while exposed, for example, to extremes of temperature; to excessive dust, moisture, or vibration; to flammable gases; to corrosive or explosive atmospheres;