



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

### **Part 1: Safety requirements (IEC 62040-1:2017 (ED 2.0), MOD)**

**STANDARDS**  
Australia



AS 62040.1:2019

This Australian Standard ® was prepared by EL-027, Power Electronics. It was approved on behalf of the Council of Standards Australia on 14 June 2019.

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The following are represented on Committee EL-027:

- Australian Industry Group
- Bureau of Steel Manufacturers of Australia
- Engineers Australia
- University of Newcastle

This Standard was issued in draft form for comment as DR AS 62040.1:2019.

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Originated as AS 62040.1.1—2003 and AS 62040.1.2—2003.  
Revised, amalgamated and redesignated as AS 62040.1:2019.

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## Preface

This Standard was prepared by the Standards Australia Committee EL-027, Power Electronics, to supersede AS 62040.1.1—2003, *Uninterruptible power systems (UPS), Part 1.1: General and safety requirements for UPS used in operator access areas* and AS 62040.1.2—2003, *Uninterruptible power systems (UPS), Part 1.2: General and safety requirements for UPS used in restricted access locations*.

The objective of this Standard is to specify requirements to ensure safety for the ordinary person who comes into contact with uninterruptible power systems (UPS) and, where specifically stated, for the skilled person. This includes the reduction of risks of fire, electric shock, thermal, energy and mechanical hazards during use and operation and, where specifically stated, during service and maintenance.

This Standard applies to movable, stationary, fixed or built-in UPS for use in low voltage distribution systems and that are intended to be installed in an area accessible by an ordinary person or in a restricted access area as applicable, that deliver fixed frequency AC output voltage with port voltages not exceeding 1 000 V AC or 1 500 V DC and that include an energy storage device.

This Standard applies to pluggable and to permanently connected UPS, whether consisting of a system of interconnected units or of independent units, subject to installing, operating and maintaining the UPS in the manner prescribed by the manufacturer.

This Standard does not cover:

- (a) UPS that have a DC output;
- (b) systems for operation on moving platforms including, but not limited to, aircrafts, ships and motor vehicles;
- (c) external AC or DC input and output distribution boards covered by their specific product standard;
- (d) stand-alone static transfer systems (STS) covered by IEC 62310-1;
- (e) systems wherein the output voltage is directly derived from a rotating machine;
- (f) telecommunications apparatus other than UPS for such apparatus; and
- (g) functional safety aspects covered by IEC 61508 (all parts).

This Standard is an adoption with national modifications, and has been reproduced from, IEC 62040-1:2017, *Uninterruptible power systems (UPS) — Part 1: Safety requirements*. The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the variations to IEC 62040-1:2017 for the application of this Standard in Australia.

As this document has been reproduced from an International Standard, the following applies:

- (i) In the source text “this part of IEC 62040” should read “this Australian Standard”.
- (ii) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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