

Glossary of

Electrotechnical, power, telecommunication, electronics, lighting and colour terms —

Part 2: Terms particular to power
engineering —

Group 02: Power electronics
terminology

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Committees responsible for this British Standard

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- Association of Consulting Engineers
- British Broadcasting Corporation
- British Radio and Electronic Equipment Manufacturers' Association
- British Telecom
- Electricity Supply Industry in England and Wales
- Electronic Engineering Association
- Institute of Physics
- Institution of Electrical Engineers
- Institution of Electronic and Radio Engineers
- Ministry of Defence
- Power Generation Association (BEAMA)
- Radio and Electronics Technical Press
- Telecommunication Engineering and Manufacturing Association (TEMA)

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Foreword

This Group of Part 2 of this British Standard Glossary, prepared under the direction of the General Electrotechnical Engineering Standards Committee, contains terms and definitions relating to power electronics. The terms and definitions are technically identical with the corresponding terms appearing in Chapter 551, first edition, of the International Electrotechnical Vocabulary.

This standard revises and supersedes BS 4727-2:Group 02:1971 which is now withdrawn.

BS 4727 combines into one glossary the subjects previously covered by BS 204 “*Glossary of terms used in telecommunication (including radio) and electronics*”, BS 205 “*Glossary of terms used in electrical engineering*”, BS 233 “*Glossary of terms used in illumination and photometry*” and BS 1611 “*Glossary of colour terms used in science and in industry*”. These four glossaries have now been withdrawn.

The glossary is divided into four main Parts, each of which is further subdivided into Groups. Each Group will comprise the terms and definitions used in a particular branch of electrical engineering and will be issued individually as soon as it is completed. This arrangement makes it possible to add new Groups or revise existing Groups at any time without affecting the remainder of the glossary.

The four main Parts of the glossary are as follows.

- *Part 1: Terms common to power, telecommunications and electronics;*
- *Part 2: Terms particular to power engineering;*
- *Part 3: Terms particular to telecommunications and electronics;*
- *Part 4: Terms particular to lighting and colour.*

Fundamental and general terms common to power, telecommunications and electronics respectively form the first two Groups of Part 1. General terms particular to Part 2 and Part 3 similarly form the first Groups of their respective Parts. The specialist Groups contain only the terms and definitions relating to their subject.

As far as has been practicable all terms and definitions established in current usage and falling within the scope of this glossary have been included. Experience has shown that it is rarely possible to replace, or even to modify, a well established term no matter what the logical or aesthetic shortcomings of that term may be. Current usage has therefore been accepted as the authority for terms and their meanings except where there has been a very good reason for doing otherwise, e.g. where terms have been considered to be fundamentally wrong, ambiguous, superfluous or in need of standardization. Where two or more synonymous terms are in use, those which are deprecated are omitted from the body of the text but are entered in the alphabetical index with a cross-reference to the standard term. In cases where it was felt that the time was not yet right to deprecate a synonym, preferred terms are given first and other terms are printed in less prominent type to indicate the intention to deprecate them in the course of time. Where synonyms are considered of equal value they are shown in the same type.

Where terms are used with somewhat different meanings in different branches of electrical engineering, appropriate definitions are given in the Groups of the glossary corresponding to these branches. Such a definition, when taken out of the context of its Group, should always be quoted with a preamble indicating its proper context.

It is to be noted that the given definition of a term represents the generally accepted meaning of that term. Under no circumstances should it be regarded as taking the place of a specification.

An effort has been made to arrange the terms in a logical order proceeding from the general to the specific and from the whole to the part and placing allied terms in proximity. Each term has assigned to it a Part number (one digit) and a Group number of two digits followed by a space and four digits, the first digit of which represents the section, the second digit the subsection and the last two digits the place within the subsection. The International Electrotechnical Vocabulary employs a different numbering system and for convenience the IEV number is given in parentheses after the BS number for each term.

A general view of the arrangement of the Group in the glossary can be obtained from the guide to the glossary. An alphabetical index of the terms of the Group is provided at the end to facilitate reference to particular terms. For simplicity, only the last four digits of a term's number are quoted in the index. It is recommended that the user of any Group of the glossary should consider the Group in association with the Groups covering general or fundamental terms within the Part, for Parts 2 and 3, and also together with Groups 01 and 02 of Part 1.

In this glossary parentheses () enclose words or phrases that are not part of the term or definition and can be omitted without affecting the meaning.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 16 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Guide to the glossary

Part 1: Terms common to power, telecommunications and electronics;

- Group 01. Fundamental terminology
- Group 02. Electrical and magnetic devices terminology
- Group 03. Relay terminology
- Group 04. Measurement terminology
- Group 05. Semiconductor terminology
- Group 06. Electronic tube terminology
- Group 07. Magnetism terminology
- Group 08. Piezo-electric device terminology
- Group 09. Radio interference terminology
- Group . Radiological terminology^a
- Group . Integrated electronic circuit terminology^a

Titles to any further groups will be added in due course.

Part 2: Terms particular to power engineering;

- Group 01. General power terminology
- Group 02. **Power electronics terminology**
- Group 03. Rotating machinery terminology
- Group 04. Transformer terminology
- Group 05. Voltage fluctuation terminology
- Group 06. Switchgear and controlgear terminology (including fuse terminology)
- Group 07. Tariffs terminology
- Group 08. Power cable terminology
- Group 09. Power systems terminology^a
- Group . Systems operation terminology^a
- Group . Traction terminology^a

Titles to any further groups will be added in due course

Part 3: Terms particular to telecommunications and electronics;

- Group 01. General telecommunication and electronics terminology
- Group 02. Telephony terminology
- Group 03. Telegraphy, including facsimile, terminology
- Group 04. Broadcasting, radio and television terminology

- Group 05. Propagation and media terminology
- Group 06. Radio location and navigation terminology
- Group 07. Radiocommunication terminology
- Group 08. Electro-acoustics terminology^a
- Group 09. Waveguide terminology
- Group 10. Recording and reproduction of sound and video terminology
- Group 11. Space radiocommunications terminology

Titles to any further groups will be added in due course

Part 4: Terms particular to lighting and colour;

- Group 01. Radiation and photometry terminology
- Group 02. Vision and colour terminology
- Group 03. Lighting technology terminology

^a Not yet published, as at November 1983.

202 1 (551-01) General terms

No.	Term	Definition
202 1001 (551-01-01)	power electronics	That part of electronics which deals with power technology.
202 1002 (551-01-02)	electronic (power) conversion	Change of one or more of the characteristics of an electric power system essentially without appreciable loss of power by means of electronic valve devices. Characteristics are, for example, voltage, number of phases and frequency (including zero frequency).
202 1003 (551-01-03)	(electronic) (power) switching	Switching an electric power circuit by means of electronic valve devices.
202 1004 (551-01-04)	(electronic) (power) resistance control	Control using continuous variation of the resistance of electronic devices.
202 1005 (551-01-05)	(electronic) (power) rectification	Electronic conversion from a.c. to d.c.
202 1006 (551-01-06)	(electronic) (power) inversion	Electronic conversion from d.c. to a.c.
202 1007 (551-01-07)	(electronic) a.c. (power) conversion	Electronic conversion from a.c. to d.c.
202 1008 (551-01-08)	(electronic) d.c. (power) conversion	Electronic conversion from d.c. to a.c.

202 2 (551-02) Electronic power convertors and electronic power switches

No.	Term	Definition
202 2001 (551-02-01)	(electronic) (power) convertor	An operative unit for electronic power conversion comprising one or more electronic valve devices (3001), transformers and filters if necessary and auxiliaries if any.
202 2002 (551-02-02)	(electronic) (power) rectifier	An electronic convertor for rectification.
202 2003 (551-02-03)	(electronic) (power) inverter	An electronic convertor for inversion.
202 2004 (551-02-04)	(electronic) a.c. (power) convertor	An electronic convertor for a.c. conversion.
202 2005 (551-02-05)	direct a.c. (power) convertor	An a.c. convertor without an intermediate d.c. link.
202 2006 (551-02-06)	indirect a.c. (power) convertor	An a.c. convertor with an intermediate d.c. link.
202 2007 (551-02-07)	(electronic) frequency convertor	An electronic a.c. convertor for changing the frequency.
202 2008 (551-02-08)	(electronic) phase convertor	An electronic a.c. convertor for changing the number of phases.
202 2009 (551-02-09)	(electronic) a.c. voltage convertor	An electronic a.c. convertor for changing the voltage.