
British Standard Glossary of Electrotechnical, power, telecommunication, electronics, lighting and colour terms

Part 2. Terms particular to power engineering Group 06. Switchgear and controlgear terminology (including fuse terminology)

Glossaire des termes relatifs à l'électrotechnique, à l'électricité, aux télécommunications,
à l'électronique, à l'éclairage et à la couleur

Partie 2. Termes particuliers à l'électrotechnique

Group 06. Appareillage (y inclus fusibles) – Terminologie

Glossarium von Begriffen aus der Elektronik, Energietechnik, Fernmeldetechnik, Elektronik,
Lichttechnik und Farbphysik

Teil 2. Begriffe der Energietechnik

Gruppe 06. Begriffe aus dem Gebiet der Steuer- und Schaltgeräte einschließlich Sicherungen

Guide to the glossary

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- Group 09 Radio interference terminology
- Group Radiological terminology*
- Group Integrated electronic circuit terminology*

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

Part 2 Terms particular to power engineering

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(including fuse terminology)**
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Titles to any further groups will be added in due course.

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

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*Not yet published, as at September 1985.

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Foreword

This Group of Part 2 of BS 4727, prepared under the direction of the General Electrotechnical Engineering Standards Committee, contains terms and definitions relating to switchgear and controlgear. The terms and definitions are technically identical with the corresponding terms appearing in Chapter 441, second edition, of the International Electrotechnical Vocabulary.

This standard supersedes BS 4727 : Part 2 : Group 06 : 1972 which is withdrawn.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 These four glossaries have now been withdrawn.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 03 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.

Square brackets [] enclose words which may replace a preceding part of an expression.

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

Glossary

206 1 (441-11) General terms

No.	Term	Definition
206 1001 (441-11-01)	switchgear and controlgear	A general term covering switching devices and their combination with associated control, measuring, protective and regulating equipment, also assemblies of such devices and equipment with associated interconnections, accessories, enclosures and supporting structures.
206 1002 (441-11-02)	switchgear	A general term covering switching devices and their combination with associated control, measuring, protective and regulating equipment, also assemblies of such devices and equipment with associated interconnections, accessories, enclosures and supporting structures, intended in principle for use in connection with generation, transmission, distribution and conversion of electric energy.
206 1003 (441-11-03)	controlgear	A general term covering switching devices and their combination with associated control, measuring, protective and regulating equipment, also assemblies of such devices and equipment with associated interconnections, accessories, enclosures and supporting structures, intended in principle for the control of electric energy consuming equipment.
206 1004 (441-11-04)	indoor switchgear and controlgear	Switchgear and controlgear designed solely for installation within a building or other housing, where the switchgear and controlgear is protected against wind, rain, snow, abnormal dirt deposits, abnormal condensation, ice and hoar frost.
206 1005 (441-11-05)	outdoor switchgear and controlgear	Switchgear and controlgear suitable for installation in the open air, i.e. capable of withstanding wind, rain, snow, dirt deposits, condensation, ice and hoar frost.
206 1006 (441-11-06)	over-current	A current exceeding the rated current.
206 1007 (441-11-07)	short-circuit current	An over-current resulting from a short circuit due to a fault or an incorrect connection in an electric circuit.
206 1008 (441-11-08)	overload	Operating conditions in an electrically undamaged circuit, which cause an over-current.
206 1009 (441-11-09)	conductive part	A part which is capable of conducting current although it may not necessarily be used for carrying service current.
206 1010 (441-11-10)	exposed conductive part	A conductive part which can readily be touched and which is not normally alive, but which may become alive under fault conditions. NOTE. Typical exposed conductive parts are walls of enclosures, operating handles, etc.
206 1011 (441-11-11)	segregation	<i>Of conductors.</i> An arrangement of conductors with earthed metal interposed between them in such a manner that disruptive discharges can only occur to earth.
206 1012 (441-11-12)	separation	<i>Of conductors.</i> An arrangement of conductors with solid insulation interposed in such a manner that disruptive discharges cannot occur between them.

No.		Term	Definition
206 1013	(441-11-13)	ambient air temperature	The temperature, determined under prescribed conditions, of the air surrounding the complete switching device or fuse. NOTE. For switching devices or fuses installed inside an enclosure, it is the temperature of the air outside the enclosure.
206 2 (441-12) Assemblies of switchgear and controlgear			
206 2001	(441-12-01)	assembly	<i>Of switchgear and controlgear.</i> A combination of switchgear and/or controlgear completely assembled with all internal electrical and mechanical interconnections.
206 2002	(441-12-02)	enclosed assembly	<i>Of switchgear and controlgear.</i> An assembly enclosed on all sides, top and bottom in such a manner as to provide a specified degree of protection. NOTE. The mounting surface may form a part of the enclosure when specified in the relevant British Standard.
206 2003	(441-12-03)	factory-built assembly (FBA)	<i>Of switchgear and controlgear.</i> An assembly built and assembled under the responsibility of the manufacturer and conforming to an established type or system, without deviations likely to influence the performance significantly from that of the typical assembly verified to be in accordance with the relevant British Standard.
206 2004	(441-12-04)	metal-enclosed switchgear and controlgear	Switchgear and controlgear assemblies with an external metal enclosure intended to be earthed, and complete except for external connections. NOTE. This term generally applies to high-voltage switchgear and controlgear.
206 2005	(441-12-05)	gas-insulated metal-enclosed switchgear	Metal-enclosed switchgear in which the insulation is obtained, at least partly, by an insulating gas other than air at atmospheric pressure. NOTE. This term generally applies to high-voltage switchgear and controlgear.
206 2006	(441-12-06)	insulation-enclosed switchgear and controlgear	Switchgear and controlgear assemblies with an external insulation enclosure and complete except for external connections. NOTE. This term generally applies to high-voltage switchgear and controlgear.
206 2007	(441-12-07)	busbar trunking system	A factory-built assembly in the form of a conductor system comprising busbars which are spaced and supported by insulating material in a duct, trough or similar enclosure. NOTE. This term generally applies to low-voltage systems.
206 2008	(441-12-08)	control station	An assembly of one or more control switches fixed on the same panel or located in the same enclosure. NOTE. A control station panel or enclosure may also contain related equipment, e.g., potentiometers, signal lamps, instruments, etc.

206 3 (441-13) Parts of assemblies

No.		Term	Definition
206 3001	(441-13-01)	enclosure	<i>Of an assembly.</i> A part of an assembly providing a specified degree of protection of equipment against external influences and a specified degree of protection against approach to or contact with live parts and against contact with moving parts.
206 3002	(441-13-02)	main circuit	<i>Of an assembly.</i> All the conductive parts of an assembly included in a circuit which is intended to transmit electrical energy.
206 3003	(441-13-03)	auxiliary circuit	<i>Of an assembly.</i> All the conductive parts of an assembly of switchgear and controlgear included in a circuit (other than the main circuit) intended to control, measure, signal and regulate. NOTE. The auxiliary circuits of an assembly include the control and auxiliary circuits of the switching devices.
206 3004	(441-13-04)	functional unit	<i>Of an assembly.</i> A part of an assembly of switchgear and controlgear comprising all the components of the main circuits and auxiliary circuits that contribute to the fulfilment of a single function. NOTE. Functional units may be distinguished according to the function for which they are intended e.g.: incoming unit, through which electrical energy is normally fed into the assembly, outgoing unit through which electrical energy is normally supplied to one or more external circuits.
206 3005	(441-13-05)	compartment	<i>Of an assembly.</i> A part of an assembly enclosed except for openings necessary for interconnection, control or ventilation.
206 3006	(441-13-06)	partition	<i>Of an assembly.</i> A part of an assembly separating one compartment from other compartments.
206 3007	(441-13-07)	shutter	<i>Of an assembly.</i> A part of an assembly that can be moved from a position where it permits contacts of a removable part to engage fixed contacts, to a position where it becomes a part of the enclosure or partition shielding the fixed contacts.
206 3008	(441-13-08)	removable part	<i>Of an assembly.</i> A part of an assembly that may be removed entirely from the assembly and replaced even though the main circuit is alive.
206 3009	(441-13-09)	withdrawable part	<i>Of an assembly.</i> A removable part of an assembly that can be moved to one or more positions in which an isolating distance or a segregation between open contacts is established while the part remains mechanically attached to the assembly. NOTE. The isolating distance or the segregation always relates to the main circuit. It may or may not refer to the auxiliary circuits or to control circuits.

206 4 (441-14) Switching devices

No.		Term	Definition
206 4001	(441-14-01)	switching device	A device designed to make or break the current in one or more electric circuits.
206 4002	(441-14-02)	mechanical switching device	A switching device designed to close and open one or more electric circuits by means of separable contacts. NOTE. Any mechanical switching device may be designated according to the medium in which its contacts open and close, e.g. air, SF₆, oil.
206 4003	(441-14-03)	semiconductor switching device	A switching device designed to make the current in an electric circuit by means of the controlled conductivity of a semiconductor.
206 4004	(441-14-04)	fuse-combination unit	A combination of a mechanical switching device and one or more fuses in a composite unit, assembled by the manufacturer or in accordance with his instructions. NOTE. Some fuse-combination units may be provided with a striker release such that the operation of any striker causes all poles of the associated mechanical switching device to open.
206 4005	(441-14-05)	disconnecter	A mechanical switching device which provides, in the open position, an isolating distance in accordance with specified requirements. NOTE. A disconnecter is capable of opening and closing a circuit either when negligible current is broken or made, or when no significant change in the voltage across the terminals of each of the poles of the disconnecter occurs. It is also capable of carrying currents under normal circuit conditions and carrying for a specified time currents under abnormal conditions such as those of short circuit.
206 4006	(441-14-06 [07])	divided support disconnecter [earthing switch]	A disconnecter [earthing switch] in which the fixed and moving contacts of each pole are not supported by a common base or frame. NOTE 1. A typical example is the pantograph or semi-pantograph disconnecter. NOTE 2. This term applies to high-voltage disconnecters only.
206 4008	(441-14-08)	centre-break disconnecter	A disconnecter in which both contacts of each pole are movable and engage at a point substantially midway between their supports. NOTE. This term applies to high-voltage disconnecters only.
206 4009	(441-14-09)	double-break disconnecter	A disconnecter that opens a circuit at two points.
206 4010	(441-14-10)	switch	<i>Mechanical.</i> A mechanical switching device capable of making, carrying and breaking currents under normal circuit conditions which may include specified operating overload conditions and also carrying for a specified time currents under specified abnormal circuit conditions such as those of short circuit. NOTE. A switch may be capable of making but not breaking short-circuit currents.

No.		Term	Definition
206 4011	(441-14-11)	earthing switch	A mechanical switching device for earthing parts of a circuit, capable of withstanding for a specified time currents under abnormal conditions such as those of short circuit, but not required to carry current under normal conditions of the circuit. NOTE. An earthing switch may have a short-circuit making capacity.
206 4012	(441-14-12)	switch-disconnector	A switch which, in the open position, satisfies the isolating requirements specified for a disconnector.
206 4013	(441-14-13)	gas evolving switch	A switch in which the gas is evolved and moved by the thermal action of the arc.
206 4014	(441-14-14 [15] [16])	switch [disconnector] [switch-disconnector] -fuse	A switch [disconnector] [switch-disconnector] in which one or more poles have a fuse in series in a composite unit.
206 4017	(441-14-17 [18] [19])	fuse-switch [fuse-disconnector] [fuse-switch-disconnector]	A switch [disconnector] [switch-disconnector] in which a fuse-link or a fuse-carrier with fuse-link forms the moving contact.
206 4020	(441-14-20)	circuit-breaker	A mechanical switching device, capable of making, carrying and breaking currents under normal circuit conditions and also making, carrying for a specified time and breaking currents under specified abnormal circuit conditions such as those of short circuit.
206 4021	(441-14-21)	current-limiting circuit-breaker	A circuit-breaker with a break-time short enough to prevent the short-circuit current reaching its otherwise attainable peak value.
206 4022	(441-14-22)	integrally fused circuit-breaker	A combination, in a single device, of a circuit-breaker and fuses, one fuse being placed in series with each pole of the circuit-breaker intended to be connected to a phase conductor.
206 4023	(441-14-23)	circuit-breaker with lock-out preventing closing	A circuit-breaker in which none of the moving contacts can make current if the closing command is initiated while the conditions which should cause the opening operation remain established.
206 4024	(441-14-24)	moulded-case circuit-breaker	A circuit-breaker having a supporting housing of moulded insulating material forming an integral part of the circuit-breaker.
206 4025	(441-14-25)	dead tank circuit-breaker	A circuit-breaker with interrupters in an earthed metal tank.
206 4026	(441-14-25)	live tank circuit-breaker	A circuit-breaker with interrupters in a tank insulated from earth.
206 4027	(441-14-27)	air circuit-breaker	A circuit-breaker in which the contacts open and close in air at atmospheric pressure.
206 4028	(441-14-28)	oil circuit-breaker	A circuit-breaker in which the contacts open and close in oil. NOTE. Typical examples of oil circuit-breakers are live tank minimum oil circuit-breakers and dead tank bulk oil circuit-breakers.