

Glossary of

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

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

Group 03: Relay terminology

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	Society of British Aerospace Companies
	South of Scotland Electricity Board
	Telecommunication Engineering and Manufacturing Association*

The Government departments and scientific and industrial organizations marked with an asterisk in the above list were directly represented on the committee entrusted with the preparation of this British Standard.

This British Standard, having been approved by the Electrical Industry Standards Committee and the Telecommunication Industry Standards Committee, was published under the authority of the Executive Board on 22 April 1971

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Foreword

This Group of Part 1 of this British Standard Glossary, prepared under the authority of the Electrical Industry Standards Committee and the Telecommunication Industry Standards Committee, contains terms and definitions relating to electrical relays and supersedes some of the terms and definitions of Subsection 24 of BS 204¹⁾ and Subsection 35 of BS 205²⁾. The terms and definitions are in close agreement with the corresponding terms in the latest edition of the International Electrotechnical Vocabulary prepared by the International Electrotechnical Commission (IEC).

In this new glossary a number of significant changes have been introduced. It has been decided to combine into one glossary the subjects previously covered by BS 204¹⁾, BS 205²⁾, BS 233³⁾ and BS 1611⁴⁾ glossaries. The glossary is divided into four main Parts, each of which is 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.*

As groups of terms within the new framework are published, the corresponding parts of the British Standards glossaries mentioned above will be withdrawn. Ultimately the new glossary will replace these standards completely and they will then be withdrawn.

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, as, for example, 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.

¹⁾ BS 204, "Glossary of terms used in telecommunication (including radio) and electronics".

²⁾ BS 205, "Glossary of terms used in electrical engineering".

³⁾ BS 233, "Glossary of terms used in illumination and photometry".

⁴⁾ BS 1611, "Glossary of colour terms used in science and industry".

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 within a subsection or section of the group. 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.

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 round brackets () enclose words or phrases which 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. The limiting sign ┐ indicates, if necessary, how many of the preceding words are replaced.

The terms included in this group are based on present British practice in the use of relays. Some terms have different meanings in different fields of use. They have therefore been listed in more than one section. In such cases cross references are given to the alternative definitions.

Several of the terms listed in this group are still under consideration by various BSI and IEC committees, with a view to obtaining greater uniformity of meaning in all applications of relays, and a revision will be issued as soon as practicable.

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 concepts
Group 02. General technological
terminology

Group 03. Relay terminology

Group 04. Measurement terminology^a
Group . Semiconductor terminology^a
Group . Electronic tube terminology^a
Group . Magnetism terminology^a
Group . Radiological terminology^a
Group . Radio interference 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. Static convertor terminology
Group 03. Rotating machinery terminology^a
Group 04. Transformer terminology^a
Group . Power switchgear terminology^a
Group . Power systems terminology^a
Group . Systems operation terminology^a
Group . Traction terminology^a
Group . Tariffs 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^a
Group 02. Telephony terminology^a
Group 03. Telegraphy, including facsimile,
terminology^a
Group 04. Broadcasting, radio and
television terminology^a
Group 05. Propagation and media
terminology^a
Group 06. Radio location and navigation
terminology^a
Group 07. Radiocommunications
terminology^a

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^a
Group 02. Vision and colour terminology^a
Group 03. Lighting technology terminology^a

^a Not yet published, as at April 1971.

103 1 General

No.	Term	Definition
103 11	<i>General terms</i>	
103 1101	relay	A device designed to produce sudden predetermined changes in one or more physical systems on the appearance of certain conditions in the physical system controlling it.
103 1102	physical-electrical relay	A relay controlled by a physical system and producing sudden predetermined changes in one or more electrical circuits.
103 1103	electrical relay	A relay designed to produce sudden predetermined changes in one or more electrical circuits after the appearance of certain conditions in the electrical circuit or circuits controlling it.
103 1104	<i>n</i>-contact relay	A relay which has <i>n</i> -contact circuits where “ <i>n</i> ” is a specified number.
103 12	<i>Types of relay</i>	
103 1201	electromechanical relay	An electrical relay having mechanism(s) and contact unit(s).
103 1202	shunted field relay	A relay with a path for the magnetic flux alternative to the one through the armature. Operation of the armature is dependent on the relative directions and magnitudes of the fluxes in each of the two paths.
103 1203	remanence relay	A relay which, after operation, remains held in the operated position by remanent magnetism.
103 1204	thermal relay	A relay in which the opening or closing of the contact circuit is determined by the effect produced by the heating of a part of the relay under the action of electric current(s).
103 1205	reed relay	A relay in which there is at least one reed contact unit. NOTE This definition does not apply to relays having mechanically-tuned reeds.
103 1206	ratchet relay	A relay in which the contact unit(s) is actuated by means of a ratchet or a ratchet and cam. NOTE Contact unit condition is not dependent upon armature position.
103 1207	shaded-pole relay	A relay incorporating a shading ring.
103 1208	induction relay	A relay in which a contact unit is actuated by forces resulting from an interaction of two or more magnetic fields with currents induced by them in a movable conductor, e.g. a disc or drum.
103 1209	attracted-armature relay	A relay having an electromagnet which, when energized, causes an armature to be attracted to a fixed pole or poles.
103 1210	mechanically interlocked relay^a	A relay having two or more coils and associated armatures in which the functional state of the contact units is determined by mechanical interlocking.
103 1211	mercury tube relay	A relay in which at least one mercury tube contact unit is used. NOTE A mercury tube relay may include other types of contact units.
103 1212	latching relay^b	A relay which, having been operated, has contact units which cannot be released without the actuation (electrically or mechanically) of a latch.
103 1213	snap-action relay	A relay in which the contact unit acts at high speed independently of the speed of the actuating mechanism.

^a See also 103 5307.

^b See also 103 5110.

No.	Term	Definition
103 1214	static relay	An electrical relay having neither mechanism nor contact unit. NOTE It is preferred that the term “static relay” should not be applied to a relay comprising both static and electromechanical elements.
103 13	<i>Contact units</i>	
103 1301	contact	An abstract term meaning a state of touching.
103 1302	contact circuit	The whole of the electrically conductive parts within a relay which are intended to be connected in an external circuit which the relay controls (see Figure 1).
103 1303	contact unit	The functional portion of a contact circuit (see Figure 1), or of two contact circuits with a common electrical connection, e.g. a changeover contact unit.
103 1304	contact member	A part of a contact unit which is electrically isolated from other such parts when the contact circuit is open (see Figure 1).
103 1305	contact point	That part of the contact member at which the contact circuit is interrupted (see Figure 1).
103 1306	contact bearer	A detail which carries the contact point(s). It may or may not be part of the contact circuit (see Figure 1).
103 1307	contact spring	A spring which exerts a force at the contact point. It may or may not be part of the contact circuit.
103 1308	single-contact contact unit	A contact unit with two contact points only in a given contact circuit, each carrying the full circuit current (see Figure 2a).
103 1309	twin-contact contact unit	A contact unit in which each contact member in a given contact circuit has two contact points which carry current in parallel (see Figure 2b).
103 1310	bridging-contact contact unit; double-break contact unit	A contact unit in which a single contact circuit is closed by the connection of two contact members through a third, all carrying the full circuit current (see Figure 2c).

