

Graphical symbols for components of servo-mechanisms —

Part 1: Transducers and Magnetic Amplifiers

Confirmed
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Co-operating organizations

The Instrument Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Association of Scientific Workers
- British Ceramic Research Association
- British Clock and Watch Manufacturers' Association
- British Electrical and Allied Industries Research Association
- British Electrical and Allied Manufacturers' Association*
- British Industrial Measuring and Control Apparatus Manufacturers' Association*
- British Iron and Steel Federation*
- British Nautical Instrument Trade Association
- British Railways, The British Transport Commission
- British Scientific Instrument Research Association
- Council of British Manufacturers of Petroleum Equipment*
- Electricity Council, The Generating Board and the Area Boards in England and Wales
- Engineering Equipment Users' Association
- Gauge and Tool Makers' Association
- Institute of Physics
- Institution of Chemical Engineers
- Institution of Electrical Engineers*
- Institution of Heating and Ventilating Engineers
- Institution of Mechanical Engineers
- Iron and Steel Institute
- Meteorological Office
- Ministry of Aviation*
- Ministry of Health
- Ministry of Housing and Local Government
- National Coal Board
- National Physical Laboratory (D.S.I.R.)
- Oil Companies Materials Association*
- Radio Industry Council
- Scientific Instrument Manufacturers' Association*
- Society of Instrument Technology
- Water-tube Boilermakers' Association*

The Government department and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this standard:

- Admiralty
- Electronic Engineering Association
- Institution of Gas Engineers
- Society of British Aircraft Constructors Limited
- War Office
- Individual companies

This British Standard, having been approved by the Instrument Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 25 May 1960

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The following BSI references relate to the work on this standard:
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Foreword

This standard makes reference to the following British Standards:

BS 822, *Recommendations for terminal markings for electrical machinery and apparatus*.

BS 1523, *Glossary of terms used in automatic controlling and regulating systems: Section 5, Components of servo-mechanisms*.

This British Standard tabulates standard graphical symbols for transducers and magnetic amplifiers; it is the first section of a more comprehensive publication which is intended to serve as a companion standard to BS 1523:Section 5:1954 and to contain standard graphical symbols for the Components of servo-mechanisms, defined therein.

Part 1 has been published in advance of the more comprehensive document in response to a number of requests received from Industry for the early publication of standard symbols for transducers.

The many types of transducer vary greatly in complexity and function; illustrations are given of a number of typical transducers using certain basic component symbols, in a form suitable for the more detailed type of circuit diagram.

A section on graphical symbols for magnetic amplifiers has been included. Although these amplifiers all contain transducers there is considered to be a requirement for a simpler type of symbol with detached excitation windings for use when magnetic amplifiers have to be shown in less detail in circuit and schematic diagrams.

The graphical symbols here tabulated have been accepted by representatives of both manufacturers and users of servo-control apparatus, and are also in accordance with other British Standards denoting graphical symbols for electrical engineering and telecommunication.

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.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover 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.

Section 1. Transducer component symbols

Figure 1 — Transducer core

NOTE The symbol  indicates that the saturable properties of the core are being utilized.

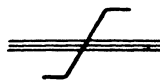


Figure 2 — Transducer power windings

NOTE 1 For methods of indicating the polarity in relation to other windings see Appendix and Figure 4 to Figure 17.
NOTE 2 Ref. in BS 1523 (5):5226

PREFERRED

ALTERNATIVE



Figure 3 — Transducer excitation (control, bias, self-excitation, etc.) windings

NOTE 1 One or all of these symbols may be used in the same diagram, the size being a matter of convenience in the layout. Symbols (a) and (b) will be drawn with lines thicker than the general wiring. Dots indicate points of same instantaneous polarity. For methods of indicating the polarity in relation to other windings see Appendix and Figure 4 to Figure 17.

NOTE 2 Ref. in BS 1523 (5):5228.

