

Engineering diagram drawing practice —

Part 1: Recommendations for general principles

UDC 744:003.63:62

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- British Engine Group of SMMT
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- Electricity Supply Industry in England and Wales
- Electronic Engineering Association
- Engineering Equipment and Materials Users' Association
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The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- British Shipbuilders
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This British Standard, having been prepared under the direction of the General Mechanical Engineering Standards Committee, was published under the authority of the Board of BSI and comes into effect on 29 February 1988

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First published as BS 5070, May 1974
First revision as BS 5070: Part 1 February 1988

The following BSI references relate to the work on this standard:
Committee reference GME/4
Draft for comment 84/75487 DC

ISBN 0 580 15346 0

Amendments issued since publication

Amd. No.	Date of issue	Comments
8190	August 1994	Indicated by a sideline in the margin

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Foreword

This Part of BS 5070 has been prepared under the direction of the General Mechanical Engineering Standards Committee and, together with Parts 2 and 3¹⁾, supersedes BS 5070:1974 which is now withdrawn. The 1974 edition set out recommendations for drawing practice to be followed in preparing engineering diagrams in all fields of engineering with a view to securing uniformity between one drawing office and another in the same industry. It also aimed to increase uniformity between one field of engineering and another in the basic principles involved and in the designations for different types of diagram.

Attention is drawn to BS 5070 being a companion standard to BS 308; the latter covers engineering drawing practice used in a wide range of engineering disciplines. Commonly, as a diagram can be called a “drawing” and a drawing can be called a “diagram”, it is useful to summarize the difference in the scopes of these standards. BS 308 covers what are commonly accepted to be drawings that define shape, size and form. BS 5070 covers the drawing of diagrams that are normally associated with flow of one sort or another and which relate components (usually indicated by symbols) functionally one to another by the use of lines, but do not depict their shape, size or form; neither do they in general indicate physical connections or locations.

From experience with the 1974 edition it was decided that for this first revision, whilst bearing in mind the long term aim of uniformity of conventions, there was a need for more comprehensive treatment of the varying requirements of differing industries and for more careful attention to their presentation. BS 5070 is therefore now revised in Parts by which the practice and conventions of several disciplines and industries are collected into three groups. Part 1 covers general principles common to all subsequent Parts, which in turn deal particularly with electro-technology; control, flow and systems; and logic.

This standard gives recommendations for the drawing of engineering diagrams using the symbols given in relevant British Standards. It does not itself originate symbols. The diagrams in this standard contain symbols as they appear in the particular standards current at the time this publication was prepared. However, although every effort has been made to ensure that correct and current symbols have been used, it has to be recognized that the particular symbols standards are themselves subject to periodic review. It is therefore stressed that the relevant symbols standards, and not this standard, have to be consulted to obtain definitive symbols.

The recommendations of this standard have been established having regard to the requirements of microfilming. Diagrams prepared in accordance with this standard should be suitable for microfilming and reduced-size reproduction techniques.

During the course of this revision particular attention has been paid to developments in computer aided machine draughting and it has been established that such machines are currently capable of complying with this standard. Any minor exceptions due to the limitations of a particular system would not be expected to prejudice the understanding of a diagram otherwise claimed to comply with this standard.

It is recognized that though this standard is published in a number of Parts, there may be instances when certain recommendations and descriptions are repeated. This has been kept to a minimum and it is hoped that all the needs of any specialized engineering discipline are contained in the Part of this standard that deals with those specific needs.

¹⁾ An additional Part 4 is also in preparation.

This Part of this standard deals with general principles of diagram drawing including types, basic preparation and presentation. It is the base document from which the other Parts are developed.

Part 3 of this standard deals with a variety of non-electrical diagrams including those concerned with control and flow; transfer of materials (both solids and fluids, i.e. liquids, vapours and gases); and energy transfer (hydraulic, pneumatic and mechanical). Part 4 of this standard deals with logic diagrams.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 12, 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.

Notes on the presentation of this standard

NOTE 1 The figures illustrating the text in this standard are independent and each is selected solely for its simplicity and clarity to illustrate only the text to which it relates. They are not the only possible examples and they are not intended as design examples or to be full working diagrams, but otherwise are drawn according to the basic recommendations of this standard.

NOTE 2 Numerical values of components given in the figures throughout are arbitrarily chosen to assist in illustrating the point under consideration; they are typical and are not given as recommendations.

NOTE 3 In the figures in this standard, a convention is adopted of using capital letters for notes that would appear as part of the drawing and lower case letters are used for notes explaining the point under consideration in relation to the text. An exception to this may be found in some diagrams where unit symbols are customarily written in lower case.