

General requirements for rotating electrical machines —

Part 0: General introduction and information on other Parts

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Power Electrical Engineering Standards Committee (PEL/-) to Technical Committee PEL/1, upon which the following bodies were represented:

Association of Consulting Engineers
 Association of Electrical Machinery Trades
 Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA Ltd.)
 Association of Supervisory and Executive Engineers
 Bureau of Engineer Surveyors
 ERA Technology Ltd.
 Electricity Supply Industry in England and Wales
 Engineer Surveyors Section of the ASTMS
 Engineering Equipment and Materials Users' Association
 Health and Safety Executive
 Ministry of Defence
 National Coal Board
 Power Generation Association (BEAMA Ltd.)
 Rotating Electrical Machines Association (BEAMA Ltd.)
 South of Scotland Electricity Board

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Foreword

This Part of BS 4999 has been prepared under the direction of the Power Electrical Engineering Standards Committee and supersedes BS 4999:Index:1977, which is withdrawn.

This British Standard consists of separately published Parts each of which includes requirements applicable to rotating electrical machines in general (excluding air-borne machines). These Parts will, where appropriate, be called for by the individual Parts of BS 5000 "Specification for rotating electrical machines of particular types or for particular applications", which cover particular types of machine.

No machine can comply with all the requirements of BS 4999 since some Parts will not be applicable to every machine and other Parts provide a choice of features or characteristics from which a selection has to be made. Requirements for certain types of machine incorporating such selections are specified in BS 5000.

Machines not coming within the scope of BS 5000, but complying with selected Parts of BS 4999, may be described and marked as complying with the requirements of this British Standard, it being understood that the choice of performance, etc. has been agreed between the user and the manufacturer.

Table 1 gives a list of other Parts of BS 4999, their titles and relationships to international standards and the standards that they supersede; some Part numbers have been reserved for future allocation to Parts that may ultimately be required for publication.

It is not anticipated that all of the individual Parts of BS 4999 will be issued in numerical sequence and, as new Parts are issued, this Part will be brought up to date to indicate the current position.

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 and 2 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.

Table 1 — Information on other Parts of BS 4999

Part number	Title	Superseded standards	Relationship to international standards
101	Specification for rating and performance	BS 4999-1:1972 BS 4999-4:1972 BS 4999-30:1972 BS 4999-31:1972 BS 4999-32:1972 BS 4999-69:1972	Technically equivalent to CENELEC HD 53.1.S2 and IEC 34-1:1983
102	Methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	BS 4999-33:1977	Identical with IEC 34-2:1972 and IEC 34-2A:1974
103	Specification for symbols	BS 4999-2:1976	Related to IEC 72:1971 and IEC 72A:1970
104 ^a	Methods of test for determining synchronous machine quantities	BS 4296:1968	Identical with IEC 34-4:1985
105 ^a	Classification of degrees of protection provided by enclosures for rotating machines	BS 4999-20:1972	Identical with CENELEC EN 60034-5 Technically equivalent to IEC 34-5:1981
106	Classification of methods of cooling	BS 4999-21:1972	Technically equivalent to CENELEC HD 53.6 and IEC 34-6:1969
107	Specification for symbols for types of construction and mounting arrangements	BS 4999-22:1977	Identical with IEC 34-7:1972
108	Specification for terminal markings and direction of rotation	BS 4999-3:1981	Technically equivalent to CENELEC HD 53.8.S3 Related to IEC 34-8:1972
109	Specification for noise levels, including test methods	BS 4999-51:1973	Technically equivalent to CENELEC HD 53.9 Related to IEC 34-9:1972
110	(Reserved for future additions)	—	—
111	Specification for built-in thermal protection for electric motors rated at 660 volts a.c. and below	BS 4999-72:1972	Related to IEC 34-11:1978, IEC 34-11-2:1984 and IEC 34-11-3:1984
112	Specification for starting performance of single-speed three-phase cage induction motors	BS 4999-41:1977	Technically equivalent to CENELEC HD 53.12 Related to IEC 34-12:1980
113–			
139	(Reserved for future additions)	—	—
140	Specification for voltage regulation and parallel operation of a.c. synchronous generators	BS 4999-40:1972	—
141	Specification for standard dimensions	BS 4999-10:1976	Technically equivalent to CENELEC HD 231 Related to IEC 72:1971 and IEC 72A:1970

^a In preparation or planned for future publication.

Table 1 — Information on other Parts of BS 4999

Part number	Title	Superseded standards	Relationship to international standards
142	Specification for mechanical performance: vibration	BS 4999-50:1978	Technically equivalent to CENELEC HD 347 Related to ISO 2373:1974
143	Specification for tests	BS 4999-60:1976	—
144	Specification for the insulation of bars and coils of high voltage machines, including test methods	BS 4999-61:1977	Technically equivalent to CENELEC HD 345
145	Specification for winding terminations	BS 4999-71:1984	—
146 ^a	Specification for definitions and nomenclature for carbon brushes, brush-holders, commutators and slip-rings	BS 4362-A1:1968	Technically equivalent to CENELEC HD 56 Identical with IEC 276:1968
147 ^a	Specification for dimensions of brushes and brush-holders for electrical machinery	BS 96:1954	Identical with IEC 136:1986

^a In preparation or planned for future publication.

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