
British Standard Specification for
**Controlgear for voltages up to and including
1000 V a.c. and 1200 V d.c.**

**Part 3. Additional requirements for contactors
subject to certification**

Appareillage de commande pour tensions inférieurs ou égales à 1000 V en courant alternatif
et 1200 V en courant continu

Partie 3. Prescriptions complémentaires pour contacteurs sujets à certification

Schaltgeräte für Spannungen bis zu 1000 V Wechselspannung und 1200 V Gleichspannung
Teil 3. Zusatzanforderungen für Schütze, die der Zertifizierung unterliegen

National foreword

This Part of BS 5424 has been prepared under the direction of the Power Electrical Engineering Standards Committee. It is identical with Publication 158-3 : 1985 ‘Low voltage controlgear. Part 3 : Additional requirements for contactors subject to certification,’ published by the International Electrotechnical Commission (IEC).

BS 5424 consists of the following Parts:

- Part 1 : 1977 Contactors
- Part 2 : 1987 Specification for semiconductor contactors (solid state contactors)
- Part 3 : 1987 Additional requirements for contactors subject to certification

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used in some places as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

References to page numbers in the text relate to IEC page numbers given in brackets at the bottom of each page.

Cross-references

International standard	Corresponding British Standard
IEC 73 : 1984	BS 4099 Colours of indicator lights, push-buttons, annunciators and digital readouts Part 1 : 1986 Specification for colours of indicator lights and push-buttons (Identical)
IEC 44 : 1963	BS 5420 : 1977 Specification for degrees of protection of enclosures of switchgear and controlgear for voltages up to and including 1000 V a.c. and 1200 V d.c. (Identical)
IEC 212 : 1971	BS 2844 : 1972 Memorandum on conditioning of solid electrical insulating materials prior to and during testing (Technically equivalent)
IEC 337-1 : 1970	BS 4794 Specification for control switches/ switches (switching devices including contactor relays, for control and auxiliary circuits, for voltages up to and including 1000 V a.c. and 1200 V d.c.) Part 1 : 1979 General requirements (Identical)
IEC 695-2-1 : 1980	BS 6458 Fire hazard testing for electrotechnical products Part 2 : Methods of test Section 2.1 : 1984 Glow-wire test (Identical)

The related British Standard to IEC 158-1 is BS 5424 : Part 1 : 1977.

The Technical Committee has reviewed the provisions of IEC 158-1 : 1970 plus Amendment 1 : 1983, IEC 158-1A : 1975, IEC 158-1B : 1979 and IEC 158-1C : 1982 to which reference is made in the text and has decided that they are acceptable for use in conjunction with this standard.

Copies of ASTM documents may be purchased through BSI Sales Department, Linford Wood, Milton Keynes MK14 6LE.

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

Amendment No. 1
published and effective from 21 December 1990
to BS 5424 : Part 3 : 1988

**Specification for controlgear for voltages up to
and including 1000 V a.c. and 1200 V d.c.**
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NOTE. This amendment is being published to effect the
implementation of CENELEC HD 419.3 S1.

Revised text

AMD 6446
December 1990

Front cover

Delete IEC 158-3 : 1985 at the top right hand side.
Underneath the title insert the following:

‘(Implementation of CENELEC HD 419.3 S1)’.

AMD 6446
December 1990

National foreword

Delete paragraph 1 and insert the following in its place.

‘This Part of BS 5424 has been prepared under the direction of the Power Electrical Engineering Standards Policy Committee and is related to IEC 158-3 : 1985 ‘Low voltage controlgear Part 3 Additional requirements for contactors subject to certification’, published by the International Electrotechnical Commission (IEC). This British Standard is in agreement with Harmonization Document HD 419.3 S1, published by the European Committee for Electrotechnical Standardization (CENELEC). HD 419.3 S1 is based on IEC 158-3 but has introduced modifications to 5 d), 8.2.103.2 and 8.2.104.’

In the list of cross-references delete ‘IEC 44 : 1963’ and insert ‘IEC 144 : 1963’.

AMD 6446
December 1990

Clause 5 Nameplates

In line 2 of the note delete ‘current’ and substitute ‘voltage’.

AMD 6446
December 1990

Clause 8.2.103.2 Glow-wire test

In line 3 of paragraph 2 delete ‘850 °C’ and insert ‘960 °C’.

Delete paragraph 9 commencing ‘The sample is regarded as . . .’ and substitute the following.

‘The sample is regarded as having passed the glow-wire test if, without the part burning away completely:

- the length of the flame does not exceed 30 mm while the tip is being pressed against the surface;*
- there is no visible flame and no sustained glowing, or if flames or glowing at the sample extinguish within 30 s after removal of the glow-wire;*
- the tip does not penetrate into the sample over a distance exceeding 15 mm with respect to the surface;*
- no burning drops or glowing particles fall from the sample.’*

AMD 6446
December 1990

Clause 8.2.104 Verification of resistance to rusting

Delete paragraph 2 and substitute the following.

'All grease is removed from parts to be tested, by using a suitable degreasing agent for 10 min.'

AMD 6446
December 1990

Back cover

Delete 'IEC 158-3 : 1985' at the top and bottom right hand side.

CONTENTS

Contents	Page
National foreword	Inside front cover
Committees responsible	Back cover
Clause	
1. General	2
2. Definitions	2
3. Classification	2
4. Characteristics of contactors	2
5. Nameplates	3
6. Standard conditions for operation in service	3
7. Standard conditions for construction	3
8. Tests	4
APPENDIX A — Information to be given by the user when conditions for operation in service differ from the standard	13
APPENDIX B — Clearances and creepage distances for low-voltage contactors	13
APPENDIX C — Protection of a contactor by a short-circuit protective device	13
APPENDIX D — Conventional test circuit for verification of making and breaking capacities for categories AC-1 to AC-4 and DC-1 to DC-5	13
APPENDIX AA— Impact test apparatus	14
APPENDIX BB— Test series to be carried out and number of samples to be submitted for certification purposes	17

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1. General

This clause of IEC Publication 158-1: Low-voltage Controlgear, Part 1: Contactors, applies except as follows:

1.1 Scope

First paragraph

Replacement:

This standard applies to electro-magnetic air-break contactors in accordance with IEC Publication 158-1 for which additional requirements are necessary in order to specify in sufficient detail certain testing parameters and procedures.

Additional notes:

3. — The need for additional requirements appears, for example, when contactors have to be tested and certified by appropriate testing authorities because of national or other laws or rules.
4. — If control switches are incorporated in contactors they shall comply with IEC Publication 337-1: Control Switches (Low-voltage Switching Devices for Control and Auxiliary Circuits, Including Contactor Relays), Part 1: General Requirements.

2. Definitions

This clause of IEC Publication 158-1 applies.

3. Classification

This clause of IEC Publication 158-1 applies.

4. Characteristics of contactors

This clause of IEC Publication 158-1 applies except as follows:

4.3.2.1 Rated conventional thermal current

Additional note

3. — This implies that I_{th} is higher than or at least equal to the highest stated rated operational current for uninterrupted duty.