

Specification for

Automatic change-over contactors for emergency lighting systems

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Power Electrical Engineering Standards Policy Committee (PEL/-) to Technical Committee PEL/10, upon which the following bodies were represented:

- ASTA Certification Services
- Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA Ltd.)
- British Gas plc
- ERA Technology Ltd.
- Electrical Contractors' Association
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)
- Electricity Supply Industry in England and Wales
- Electronic Components Industry Federation
- GAMBICA (BEAMA Ltd.)
- Health and Safety Executive
- Institution of Electrical Engineers

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Foreword

This new edition of BS 764 has been prepared under the direction of the Power Electrical Engineering Standards Policy Committee. It introduces technical changes to bring the standard up-to-date and includes references to new materials to eliminate the use of asbestos and asbestos products. This new edition does not reflect a full review of the standard which will be undertaken in due course. This British Standard replaces BS 764:1954 which is withdrawn.

Assessed capability. Users of this British Standard are advised to consider the desirability of assessment and registration of a supplier's quality systems against the appropriate Part of BS 5750 by a third party certification body.

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 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.

1 Scope

This British Standard specifies d.c. and single-phase a.c. automatic double-pole change-over contactors for low voltages up to 250 V employed in conjunction with storage batteries or other alternative source of supply, to provide a means of automatically changing the current supplied to safety lights from the normal source to the alternative source when the normal source fails, and of reconnecting the safety lights to the normal source when this source is restored.

This standard does not apply to three-phase a.c. automatic change-over contactors.

NOTE 1 Appendix B lists information to be supplied to the manufacturer with the enquiry and/or order.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard, the following definitions apply.

2.1

automatic change-over contactor

a complete apparatus for effecting automatic change-over of the safety lights from the normal supply to the alternative supply when the normal supply fails, and for returning the safety lights to the normal supply when this supply is restored. The return operation may be effected through the agency of a relay which, if employed, is an integral part of the contactor

2.2

safety lights

lights which are normally connected to normal supply and are changed over to the alternative supply when the normal supply fails, e.g. the safety lights specified under the Cinematograph Regulations

2.3

main contactor

apparatus constructed in accordance with this specification, excepting the relay if employed. Where the complete automatic change-over contactor is intended, this is made clear in relevant clauses

2.4

relay

a voltage dependent relay, the function of which is to cause the main contactor to change from the emergency to the normal position when the main supply voltage has recovered to a particular value

2.5

contactor coil

the shunt connected coil energized from the normal supply, which causes the main contactor either to change to, or to remain in, the normal position

2.6

relay coil

the shunt connected coil, energized from the normal supply, which causes the relay contacts to move to one of their two positions

2.7

load carrying contacts

contacts on the main contactors which in either normal or emergency conditions carry the current for supplying the safety lights

2.8

“silver” contact

a contact composed of or faced with not less than 0.4064 mm of fine silver or other material of equivalent performance

2.9

normal position of main contactor

the position of the main contactor when it is connecting the safety lights to the normal supply

2.10

emergency position of main contactor

the position of the main contactor when it is connecting the safety lights to the emergency supply

2.11

dust-protecting enclosure

an enclosure constructed to prevent the ready ingress of dust

3 Characteristics

3.1 Rating

The complete apparatus shall be rated in terms of its current-carrying capacity and voltage and also in terms of frequency if a.c.

3.2 Sizes

The following current ratings shall apply:

- a) 15 A at 30 V;
- b) 15 A, 30 A, 60 A and 100 A at voltages not exceeding 250 V.

Where a total load in excess of 100 A applies, it should be divided over two or more separate circuits, each controlled by an independent automatic change-over contactor.