AS 60470—2001
IEC 60470:2000



Australian Standard™

# High-voltage alternating current contactors and contactor-based motor-starters

Standards Australia

This Australian Standard was prepared by Committee EL-007, Power Switchgear. It was approved on behalf of the Council of Standards Australia on 20 August 2001 and published on 12 October 2001.

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Australasian Railway Association

Australian British Chamber of Commerce

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# High-voltage alternating current contactors and contactor-based motor-starters

Originated as part of AS 1864—1976 and AS 2232.1—1979.
AS 1864—1976 and AS 2232.1—1979 revised, amalgamated and redesignated as AS 60470—2001.



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# PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-007, Power Switchgear, to supersede AS 1864—1976 and AS 2232.1—1979.

This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this Standard is to state the characteristics of contactors, starters and associated equipment, the conditions with which contactors or starters shall comply, the tests intended for confirming that these conditions have been met and the methods to be adopted for these tests and the information to be given with the equipment or in the manufacturer's literature.

This Standard is identical in technical content with and has been reproduced from IEC 60470:2000, *High-voltage alternating current contactors and contactor-based motor-starters*.

An informative Australian only Annex ZA has been added to inform the reader of items to be agreed between manufacturer and user. Annex ZA has been shaded to emphasize that it is additional information.

This Standard differs from AS 1864—1976 and AS 2232.1—1979 in the following areas:

(a) Vacuum and SF6 contactors are included.

(b) Additional utilization categories.

(c) Conditions for construction and operation in service.

(d) Type and routine tests.

(e) Requirements for transport, storage, erection, operation, maintenance and safety.

(f) Guide to the selection of contactors and motor-starters for service.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative annex' is only for information and guidance.

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Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian table, figure or passage of text that is added (and identified by shading) is part of this Standard.

## 1 General

### 1.1 Scope and object

This International Standard is applicable to a.c. contactors and/or contactor-based motor-starters designed for indoor installation and operation at frequencies up to and including 60 Hz on systems having voltages above 1 000 V but not exceeding 12 000 V.

It is applicable only to three-pole contactors and starters for use in three-phase systems, and single-pole contactors and starters for use in single-phase systems. Two-pole contactors and starters for use in single-phase systems are subject to agreement between manufacturer and user.

Contactors and/or starters dealt with in this standard are not normally designed to interrupt short-circuit currents. Therefore, suitable short-circuit protection (see 3.4.110.12 and note 2 below) forms part of the installation, but not necessarily of the contactor or the starter.

In this context, this standard gives requirements for

– contactors associated with overload and/or short-circuit protective devices (SCPD);

– starters associated with separate short-circuit protective devices and/or with separate short-circuit and integrated overload protective devices;

– contactors or starters combined, under specified conditions, with their own short-circuit protective devices. Such combinations, for example combination starters (see 3.4.110.9), are rated as units.

Contactors intended for closing and opening electric circuits and, if combined with suitable relays, for protecting these circuits against operating overloads which may occur therein, are covered in this standard.

This standard is also applicable to the operating devices of contactors and to their auxiliary equipment.

Motor-starters intended to start and accelerate motors to normal speed, to ensure continuous operation of motors, to switch off the supply from the motor and to provide means for the protection of motors and associated circuits against operating overloads are dealt with.