

Australian Standard™

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



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

Revised and designated 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 60170:2000, *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.

## CONTENTS

	<i>Page</i>
1 General .....	1
1.1 Scope and object .....	1
1.2 Normative references .....	3
2 Normal and special service conditions .....	4
2.1 Normal service conditions .....	4
2.2 Special service conditions .....	4
3 Definitions .....	5
3.1 General terms .....	5
3.2 Assemblies of switchgear and controlgear .....	5
3.3 Parts of assemblies .....	5
3.4 Switching devices .....	5
3.5 Parts of switchgear and controlgear .....	8
3.6 Operation .....	9
3.7 Characteristic quantities .....	11
3.101 Fuses .....	14
4 Ratings .....	15
4.1 Rated voltage ( $U_r$ ) .....	17
4.2 Rated insulation level .....	17
4.3 Rated frequency ( $f_r$ ) .....	18
4.4 Rated normal current and temperature rise .....	18
4.5 Rated short-time withstand current ( $I_k$ ) .....	18
4.6 Rated peak withstand current ( $I_p$ ) .....	19
4.7 Rated duration of short circuit ( $t_k$ ) .....	19
4.8 Rated supply voltage of closing and opening devices, and of auxiliary and control circuits ( $U_c$ ) .....	19
4.9 Rated supply frequency of closing and opening devices, and of auxiliary circuits .....	19
4.10 Rated pressure of compressed gas supply for insulation and/or operation .....	19
4.101 Rated operational current ( $I_e$ ) or rated operational power .....	19
4.102 Rated duties .....	20
4.103 Rated load and overload characteristics .....	21
4.104 Utilization category .....	22
4.105 Mechanical endurance .....	23
4.106 Electrical endurance .....	23
4.107 Coordination with short-circuit protective devices .....	23
4.108 Types and characteristics of automatic change-over devices and automatic acceleration control devices .....	25
4.109 Types and characteristics of starting auto-transformers or reactors .....	26
4.110 Types and characteristics of starting resistors for rheostatic rotor starters .....	26
4.111 Characteristics dependent on starter type .....	26

	<i>Page</i>
5 Design and construction .....	27
5.1 Requirements for liquids .....	27
5.2 Requirements for gases .....	27
5.3 Earthing .....	27
5.4 Auxiliary and control equipment .....	28
5.5 Dependent power operation .....	28
5.6 Stored energy operation .....	28
5.7 Independent manual operation .....	28
5.8 Operation of releases .....	28
5.9 Low- and high-pressure interlocking and monitoring devices .....	28
5.10 Nameplates .....	28
5.11 Interlocking devices .....	29
5.12 Position indication .....	29
5.13 Degrees of protection by enclosures .....	29
5.14 Creepage distances .....	29
5.15 Gas and vacuum tightness .....	29
5.16 Liquid tightness .....	29
5.17 Flammability .....	29
5.18 Electromagnetic compatibility (EMC) .....	30
5.101 Types of relay or release .....	30
5.102 Enclosures .....	34
5.103 Combination starters .....	34
5.104 Linkages between the fuse striker(s) and the indicator or contactor release .....	34
6 Type tests .....	34
6.1 General .....	34
6.2 Dielectric tests .....	35
6.3 Radio interference voltage (r.i.v.) test .....	36
6.4 Measurement of the resistance of circuits .....	36
6.5 Temperature rise tests .....	36
6.6 Short-time withstand current and peak withstand current tests .....	40
6.7 Verification of the protection .....	40
6.8 Tightness tests .....	40
6.9 Electromagnetic compatibility tests (EMC) .....	40
6.101 Mechanical tests .....	40
6.102 Verification of rated making and breaking capacity .....	42
6.103 Overload current withstand tests .....	46
6.104 Short-circuit current making and breaking tests .....	46
6.105 Verification of operating limits and characteristics of overload relays .....	46
6.106 Verification of coordination with SCPDs .....	47
6.107 Electrical endurance tests .....	51
6.108 Motor switching tests .....	51

	<i>Page</i>
7	Routine tests ..... 52
7.1	Dielectric test on the main circuit ..... 52
7.2	Dielectric test on auxiliary and control circuits ..... 52
7.3	Measurement of the resistance of the main circuit ..... 52
7.4	Tightness test ..... 52
7.5	Design and visual checks ..... 52
7.101	Operating tests ..... 52
7.102	Tests dependent on starter type ..... 53
8	Guide to the selection of contactors and motor-starters for service ..... 53
8.101	General ..... 53
8.102	Selection of ratings and characteristics for service conditions ..... 54
9	Information to be given with enquiries, tenders and orders ..... 57
9.101	Information to be given with enquiries, tenders and orders ..... 57
9.102	Information to be given for coordination with current-limiting fuse (CPL) ..... 58
10	Rules for transport, storage, erection, operation and maintenance ..... 59
11	Safety ..... 59
Annex A (normative) Records and reports of type tests for making, breaking and short-time current performance ..... 68	
<b>Annex ZA (informative) Items subject to agreement between manufacturer and user ..... 71</b>	
Figure 1 –	Examples of speed/time curves ..... 60
Figure 2 –	Test duties A and B – preferred earth point ..... 61
Figure 3 –	Test duties A and B – alternative earth point ..... 62
Figure 4 –	Test duty C – preferred earth point ..... 63
Figure 5 –	Test duty C – alternative earth point ..... 64
Figure 6 –	Representation by two parameters of a prospective TRV of a circuit ..... 64
Figure 7 –	Representation by four parameters of a prospective TRV of a circuit ..... 65
Figure 8 –	Representation of the specified TRV by a two-parameter reference line and a delay line ..... 65
Figure 9 –	Determination of power frequency recovery voltage ..... 66
Figure 10 –	Characteristics for determining take-over current ..... 67
Table 1 –	Ratings and characteristics ..... 16
Table 2 –	Utilization categories ..... 22
Table 3 –	Characteristics dependent on starter type ..... 27
Table 4 –	Characteristics of the opening operation of overload relays when energized on all poles ..... 32
Table 5 –	Characteristics of the opening operation of three-pole thermal overload relays when energized on two poles only ..... 32
Table 6 –	Characteristics of the opening by three-pole phase failure sensitive thermal overload relays when their poles are not equally energized ..... 33
Table 7 –	Applicable type tests ..... 35
Table 8 –	Test copper conductors for test currents up to 800 A inclusive ..... 37
Table 9 –	Intermittent duty operating cycles ..... 38

Table 10 – Verification of rated making and breaking capacities – Conditions for making and breaking corresponding to the several utilization categories at rated voltage $U_r$ .....	42
Table 11 – Relationship between current broken $I_c$ and OFF time.....	45
Table 12 – Overload current withstand requirements.....	46
Table 13 – Transient recovery voltage characteristics .....	50
Table 14 – Verification of the number of on-load operating cycles – Conditions for making and breaking corresponding to the several utilization categories ....	51

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## STANDARDS AUSTRALIA

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**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.