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Australian/New Zealand Standard™

Low-voltage switchgear and controlgear

Part 6.2: Multiple function equipment—Control and protective switching devices (or equipment) (CPS)

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Low-voltage switchgear and controlgear

Part 6.2: Multiple function equipment—Control and protective switching devices (or equipment) (CPS)

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-006, Industrial Switchgear and Controlgear.

This part of IEC 60947 applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1,000 V a.c. or 1,500 V d.c.

The object of this part is to state—

(a) the characteristics of CPSs;

(b) the conditions with which CPSs comply with reference to their operation and behaviour, their dielectric properties, and the degree of protection provided by their enclosure where applicable;

(c) the tests intended to verify that these conditions have been met, and the methods to be adopted for these tests; and

(d) the information to be marked on or given with the CPSs.

This Standard is identical with, and has been reproduced from IEC 60947-6-2, Ed. 2.1 (2007), *Low-voltage switchgear and controlgear*, Part 6-2: *Multiple function equipment—Control and protective switching devices (or equipment) (CPS)*. A vertical line in the margins shows where IEC 60947-6-2, Ed. 2.0 (2002) has been modified by amendment 1 (2007).

The principal difference between this and the previous edition is that this is a joint Australian/New Zealand Standard.

This Standard should be read in conjunction with IEC 60947-1.

The numbering of the tables is not identical to that of the first edition and its Amendments 1 and 2.

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

(A) In the source text 'this part of IEC 60947' should read 'this Australian/New Zealand Standard'.

(B) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
IEC		AS/NZS	
60034	Rotating electrical machines	60034	Rotating electrical machines
60034-1	Part 1: Rating and performance	60034.1	Part 1: Rating and performance (IEC 60034-1, Ed. 11 (2004) MOD)
60695	Fire hazard testing	60695	Fire hazard testing
60695-2-10	Part 2-10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure	60695.2.10	Part 2.10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure
60695-2-11	Part 2-11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products	60695.2.11	Part 2.11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products

60695-2-12	Part 2-12: Glowing/hot-wire based test methods—Glow-wire flammability test method for materials	60695.2.12	Part 2.12: Glowing/hot-wire based test methods—Glow-wire flammability test method for materials
60695-2-13	Part 2-13: Glowing/hot-wire based test methods—Glow-wire ignitability test method for materials	60695.2.13	Part 2.13: Glowing/hot-wire based test methods—Glow-wire ignitability test method for materials
60695-11-10	Part 11-10: Test flames—50 W horizontal and vertical flame test methods Amendment 1 (2003)	60695.11.10	Part 11.10: Test flames—50 W horizontal and vertical flame test methods
IEC		AS/NZS	
61000	Electromagnetic compatibility (EMC)	61000	Electromagnetic compatibility (EMC)
		AS/NZS IEC	
61000-4-2	Part 4-2: Testing and measurement techniques—Electrostatic discharge immunity test Amendment 1 (1998) Amendment 2 (2000)	61000.4.2	Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test
61000-4-3	Part 4-3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test	61000.4.3	Part 4.3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test
61000-4-4	Part 4-4: Testing and measurement techniques—Electrical fast transient/burst immunity test	61000.4.4	Part 4.4: Testing and measurement techniques—Electrical fast transient/burst immunity test
		AS/NZS	
61000-4-5	Part 4-5: Testing and measurement techniques—Surge immunity test Amendment 1 (2000)	61000.4.5	Part 4.5: Testing and measurement techniques—Surge immunity test
		AS/NZS IEC	
61000-4-6	Part 4-6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields Amendment 1 (2004) Amendment 2 (2006)	61000.4.6	Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields
		AS IEC	
61131	Programmable controllers	61131	Programmable controllers
61131.2	Part 2: Equipment requirements and tests	61131.2	Part 2: Equipment requirements and tests
CISPR		AS/NZS CISPR	
11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic Radio-frequency disturbance characteristics—Limits and methods of measurement Amendment 1 (2004) Amendment 2 (2006)	11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic Radio-frequency disturbance characteristics—Limits and methods of measurement

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes 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

1 Scope and object 11
2 Normative references 11
3 Definitions 12
3.1 Control and protective switching device (or equipment) (CPS) 12
3.2 CPS suitable for isolation 13
3.3 CPS for motor control and protection 13
3.3.1 Direct-on-line CPS 13
3.3.2 Reversing CPS 13
3.3.3 Two-direction CPS 13
3.4 Opening time 13
3.5 Phase loss sensitive relay or release (for motor protection) 14
4 Classification 14
5 Characteristics 14
5.1 Summary of characteristics 14
5.2 Type of CPS 15
5.2.1 Number of poles 15
5.2.2 Kind of current (a.c. or d.c.) 15
5.2.3 Method of operation 15
5.2.4 Method of control 15
5.2.5 Method of resetting after overload 15
5.2.6 Method of rearming after short-circuit 15
5.3 Rated and limiting values of the main circuit 15
5.3.1 Rated voltages 15
5.3.2 Currents and powers 16
5.3.3 Rated frequency 16
5.3.4 Rated duties 16
5.3.5 Normal load and overload characteristics 16
5.3.6 Short circuit characteristics 16
5.4 Utilization categories 17
5.4.1 Standard utilization categories 17
5.4.2 Assignment of utilization categories based on the results of tests 18
5.4.3 Application of utilization categories for motor control duty 19
5.5 Control circuits 19
5.6 Auxiliary circuits 20
5.7 Relays or releases 20
5.7.1 Types of relays or releases 20
5.7.2 Characteristic values 21
5.7.3 Designation and current setting of overload relays or releases 21
5.7.4 Time current characteristics of over current relays or releases 21
5.7.5 Influence of ambient air temperature 22

Page

6 Product information....22
6.1 Nature of information....22
6.1.1 Identification....22
6.1.2 Characteristics....22
6.2 Marking....23
6.3 Instructions for installation, operation and maintenance....23
7 Normal service, mounting and transport conditions....24
8 Constructional and performance requirements....24
8.1 Constructional requirements....24
8.1.1 Materials....24
8.1.2 Current-carrying parts and their connections....24
8.1.3 Clearances and creepage distances....24
8.1.4 Actuator....24
8.1.5 Indication of the contact position....24
8.1.6 Additional safety requirements for CPS's suitable for isolation....25
8.1.7 Terminals....25
8.1.8 Additional requirements for CPS's provided with a neutral pole....25
8.1.9 Provisions for protective earthing....25
8.1.10 Enclosures for CPS's....25
8.2 Performance requirements....25
8.2.1 Operating conditions....25
8.2.2 Temperature rise....31
8.2.3 Dielectric properties....34
8.2.4 Performance under no load, normal load and overload conditions....34
8.2.5 Ability to make, carry and break short-circuit currents....39
8.3 Electromagnetic compatibility (EMC)....40
8.3.1 General....40
8.3.2 Immunity....40
8.3.3 Emission....41
9 Tests....41
9.1 Kind of tests....41
9.1.1 General....41
9.1.2 Type tests....41
9.1.3 Routine tests....41
9.1.4 Sampling tests....41
9.1.5 Special tests....41
9.2 Compliance with constructional requirements....42
9.3 Compliance with performance requirements....42
9.3.1 Test sequences....42
9.3.2 General test conditions....42
9.3.3 Performance under no load, normal load and overload conditions....43
9.3.4 Performance under short-circuit conditions....47
9.3.5 EMC tests....49

Page

9.4 Test sequences 61
9.4.1 Test Sequence I: Temperature-rise, operating limits, dielectric properties 63
9.4.2 Test Sequence II: Performance under normal load and overload conditions 66
9.4.3 Test sequence III: Operational performance before and after operating sequences at I_{cr} and "r" current test 67
9.4.4 Test Sequence IV: Operational performance before and after operating sequences at I_{cs} 68
9.4.5 Test Sequence V: Additional breaking capacity 69
9.4.6 Test Sequence VI: Additional test sequence for four-pole CPS's 69
9.4.7 Test Sequence VII: Additional test sequence for CPS's intended for use in an individual enclosure 70
9.4.8 Test sequence VIII: EMC 70
9.5 Routine tests 70
9.5.1 General 70
9.5.2 Operation and operating limits 70
9.5.3 Dielectric tests 71

Annex A (normative) Special tests 100
Annex B Vacant 103
Annex C (normative) Marking and identification of CPS terminals 104
Annex D (informative) Items subject to agreement between manufacturer and user 108
Annex E (informative) Examples of control circuit configurations 109
Annex F (normative) Coordination under short-circuit conditions between a CPS and another short-circuit protective device associated in the same circuit 112
Annex G (normative) Test sequence for CPS for IT systems 121
Annex H (normative) Extended functions within electronic overload relays or releases 123

Figure 1 – Multiple of current setting limits for ambient air temperature time-delay overload relays or releases (see 8.2.1.5.1) 72
Figure 2a – Elevation 73
Figure 2b – Sections A-A and B-B 74
Figure 2 – EUT mounted in metallic enclosure – Two-phase poles in series configuration 74
Figure 3a – Elevation 75
Figure 3b – Sections A-A and B-B 76
Figure 3 – EUT mounted in metallic enclosure – Three-phase poles in series configuration 76
Figure 4a – Elevation 77
Figure 4b – Sections A-A and B-B 78
Figure 4 – EUT mounted in metallic enclosure – Three-phase configuration 78
Figure 5 – Test circuit for emission tests, immunity to harmonics, current dips, electrostatic discharges and radiated electromagnetic fields – Two-phase poles in series configuration 79

Page

Figure 6 – Test circuit for emission tests, immunity to harmonics, current dips, electrostatic discharges and radiated electromagnetic fields – Three-phase poles in series configuration 80
Figure 7 – Test circuit for emission tests, immunity to harmonics, current dips, electrostatic discharges and radiated electromagnetic fields – Three-phase configuration....81
Figure 8 – Test set-up for the verification of immunity to electrostatic discharges....82
Figure 9 – Test set-up for immunity to radiated electromagnetic fields 83
Figure 10 – Test set-up for conducted disturbances induced by radio-frequency fields (common mode) – Two-phase poles in series configuration 84
Figure 11 – Test set-up for conducted disturbances induced by radio-frequency fields (common mode) – Three-phase poles in series configuration....85
Figure 12 – Test set-up for conducted disturbances induced by radio-frequency fields (common mode) – Three-phase configuration....86
Figure 13 – Circuit for electrical fast transients/bursts (EFT/B) immunity test – Two-phase poles in series configuration 87
Figure 14 – Circuit for electrical fast transients/bursts (EFT/B) immunity test – Three-phase poles in series configuration 88
Figure 15 – Circuit for electrical fast transients/bursts (EFT/B) immunity test – Three-phase configuration....89
Figure 16 – Test set-up for electrical fast transients/bursts (EFT/B) immunity test....90
Figure 17 – Test circuit for the verification of the influence of surges in the main circuit (line-to-earth) – Two-phase poles configuration 91
Figure 18 – Test circuit for the verification of the influence of current surges in the main circuit – Two-phase poles configuration....92
Figure 19 – Test circuit for the verification of the influence of surges in the main circuit (line-to-earth) – Three-phase poles in series configuration....93
Figure 20 – Test circuit for the verification of the influence of current surges in the main circuit – Three-phase poles in series configuration....94
Figure 21 – Test circuit for the verification of the influence of surges in the main circuit (line to earth) – Three-phase configuration 95
Figure 22 – Test circuit for the verification of the influence of current surges in the main circuit – Three-phase configuration....96
Figure 23 – Representation of test current produced by back-to-back thyristors 97
Figure 24 – Test current for the verification of the influence of the current dips and interruptions 98
Figure 25 – Radiated emission test set-up 98
Figure 26 – Thermal memory test....99
Figure F.1 – Over-current coordination between a CPS and a fuse or back-up protection by a fuse operating characteristics 117
Figure F.2 – Total discrimination between CPSs and circuit-breakers – Case 1....118
Figure F.3 – Total discrimination between CPSs and circuit-breakers – Case 2....118
Figure F.4 – Back-up protection by a CPS/circuit-breaker – Operating characteristics – Case 1 119
Figure F.5 – Back-up protection by a CPS/circuit-breaker – Operating characteristics – Case 2 119

Page

Figure F.6 – Example of test circuit for conditional short-circuit breaking capacity tests showing cable connections for a 3-pole CPS (C_1) 120
Figure H.1 – Test circuit for the verification of the operating characteristic of a residual current electronic overload relay 127

Table 1 – Utilization categories 18
Table 2 – Limits of operation of inverse time-delay overload relays or releases when energized on all poles 28
Table 3 – Trip classes of overload relays or releases for utilization categories AC-42, AC-43, AC-44, DC-43, DC-45 29
Table 4 – Limits of operation of three-pole inverse time-delay overload relays or releases when energized on two poles only 29
Table 5 – Temperature rise limits of terminals 31
Table 6 – Temperature-rise limits of accessible parts 32
Table 7 – Temperature-rise limits for insulated coils in air 33
Table 8 – Intermittent duty test cycle data 33
Table 9 – Rated making and breaking capacities – Making and breaking conditions corresponding to the utilization categories 35
Table 10 – Relationship between current broken I_c and OFF time for the verification of rated making and breaking capacities 36
Table 11 – Conventional operational performance after making/breaking capacity tests 37
Table 12 – Operational performance before and after short-circuit tests at I_{cr} and I_{cs} 38
Table 13 – Prospective conventional test current I_{cr} and "r" current (I_r) as a function of the maximum I_e for a given construction 39
Table 14 – Acceptance criteria when EM disturbances are present 40
Table 15 – Test parameters for current dips and interruptions 59
Table 16 – Test sequences 62
Table G.1 – Individual pole 121
Table H.1 – Operating time of residual current electronic overload relays 124

INTRODUCTION

The provisions of the General Rules are applicable to this part of IEC 60947-6, where specifically called for. General Rules clauses and subclauses thus applicable as well as tables, figures and appendices are identified by reference to Part 1 of IEC 60947-1, for example, 1.2.3, table 4, or annex A of Part 1.

AUSTRALIAN/NEW ZEALAND STANDARD

Low-voltage switchgear and controlgear

Part 6.2:
Multiple function equipment—Control and protective switching devices (or equipment) (CPS)

1 Scope and object

This part of IEC 60947 applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1 000 V a.c. or 1 500 V d.c.

CPSs are intended to provide both protective and control functions for circuits and are operated otherwise than by hand. They may also fulfill additional functions, such as isolation.

Digital inputs and/or digital outputs contained in CPSs, and intended to be compatible with PLCs are covered by IEC 61131-2.

The object of this part is to state:

– the characteristics of CPS's;
– the conditions with which CPS's shall comply with reference to their operation and behaviour, their dielectric properties, the degree of protection provided by their enclosure where applicable;
– the tests intended to verify that these conditions have been met, and the methods to be adopted for these tests;
– the information to be marked on or given with the CPS's.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60034-1:2004, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60085:2004, *Electrical insulation – Thermal classification*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-2-12:2000, *Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability test method for materials*