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**JIS C 4605** : 2020

(JEMA/JSA)

**AC load break switches for rated voltages  
above 1 kV up to and including 52 kV**

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## Contents

	Page
Introduction .....	1
1 Scope and normative reference .....	1
1.1 Scope .....	1
1.2 Normative references .....	2
2 Normal and special service conditions .....	4
2.0A General .....	4
2.1 Normal service conditions .....	4
2.2 Special service conditions .....	6
3 Terms and definitions .....	9
3.1 General terms .....	9
3.2 Assemblies of switchgear and controlgear .....	9
3.3 Parts of assemblies .....	9
3.4 Switching devices .....	9
3.5 Parts of switch .....	11
3.6 Operation .....	11
3.7 Characteristic quantities .....	11
3.7A General terms .....	14
3.7B Terms relative to classification .....	15
3.7C Terms relative to ratings .....	15
3.7D Terms relative to construction .....	15
3.7E Terms relative to tests .....	16
3A Classification of switch .....	18
3A.1 Classification according to installation site .....	18
3A.2 Classification according to energy for switching operation .....	18
3A.3 Classification according to arc suppressing media (symbol) .....	19
3A.4 Classification according to enclosure structure .....	19
3A.5 Classification according to resistance to salt pollution of outdoor switch .....	19
4 Ratings .....	19
4.0 Ratings of switch .....	19
4.1 Rated voltage ( $U_r$ ) .....	20
4.2 Rated withstand voltage .....	20
4.3 Rated frequency ( $f_r$ ) .....	22
4.4 Rated normal current and temperature rise .....	22
4.5 Rated short-time withstand current ( $I_k$ ) .....	24
4.6 Rated peak withstand current ( $I_p$ ) .....	25
4.7 Rated duration of short-circuit ( $t_k$ ) .....	25
4.8 Rated control voltage ( $U_a$ ) .....	25

4.9	Rated frequency of control circuit .....	26
4.10	Rated pressure of compressed gas supply for controlled pressure systems .....	26
4.11	Rated filling levels for insulation .....	26
4.101	Rated mainly active load-breaking capacity ( $I_{load}$ ) .....	26
4.102	Rated closed-loop breaking capacity ( $I_{loop}$ ) .....	27
4.102A	Rated no-load transformer breaking capacity .....	27
4.103	Rated charging breaking capacity .....	27
4.103A	Rated capacitor breaking capacity .....	28
4.104	Rated line-charging breaking current ( $I_{lc}$ ) .....	28
4.105	Rated single capacitor bank breaking current for special purpose switches ( $I_{sb}$ ) .....	28
4.106	Rated back-to-back capacitor bank breaking current for special purpose switches ( $I_{bb}$ ) .....	28
4.107	Rated back-to-back capacitor bank inrush making current for special purpose switches ( $I_{in}$ ) .....	28
4.108	Rated earth fault breaking current ( $I_{ef1}$ ) .....	28
4.109	Rated cable- and line-charging breaking current under earth fault conditions ( $I_{ef2}$ ) .....	28
4.110	Rated motor breaking current for special purpose switches ( $I_{mot}$ ) .....	28
4.111	Rated short-circuit making current (peak value) ( $I_m$ ) .....	28
4.112	Rated breaking and making currents for a general purpose switch .....	29
4.113	Ratings for limited purpose switches .....	29
4.114	Ratings for special purpose switches .....	29
4.115	Ratings for switches backed by fuses .....	29
4.116	Type and classes for general purpose, limited purpose and special purpose switches .....	29
5	Design and construction .....	29
5.1	Requirements for liquids in the switch .....	29
5.2	Requirements for gas in the switch .....	29
5.3	Earthing of switch .....	29
5.4	Control circuit .....	30
5.5	Direct operation (solenoid operation or motor operation) .....	34
5.6	Stored energy operation .....	34
5.7	Independent manual or power operation (independent unlatched operation) .....	35
5.8	Operation of releases .....	35
5.9	Low- and high-pressure interlocking and monitoring devices .....	35
5.10	Nameplates and instruction manuals .....	35
5.11	Interlocking devices .....	38
5.12	Position indication .....	38
5.13	Degrees of protection provided by enclosures .....	38
5.14	Creepage distances for outdoor insulators .....	39
5.15	Gas and vacuum tightness .....	39

5.16	Liquid tightness .....	39
5.17	Fire hazard (flammability) .....	39
5.18	Electromagnetic compatibility (EMC) .....	40
5.19	X-ray emission .....	40
5.20	Corrosion .....	40
5.101	Making and breaking operations .....	40
5.102	Requirements for switch-disconnectors .....	40
5.103	Mechanical strength .....	40
5.104	Securing the making/breaking position .....	41
5.105	Auxiliary contacts for signalling .....	41
5.106	No-load transformer breaking capacity .....	41
5.106A	Construction in general .....	41
5.106B	Coating and plating .....	41
5.106C	Colour of coating .....	41
5.106D	Enclosure .....	42
5.106E	Operating mechanism .....	42
5.106F	Attaching mechanism (hanger and suspending metal fitting) .....	43
5.106G	Bushing and supporting insulation .....	44
5.106H	External connection terminal .....	44
5.106I	Vacuum switch .....	47
5.106J	Gas switch .....	47
5.106K	Marking on outside of outdoor switch .....	47
5.106L	Markings on supply side and load side of switch .....	48
6	Type tests .....	48
6.1	General .....	48
6.1.A	Appearance and construction tests .....	51
6.2	Dielectric test (withstand voltage test) .....	51
6.3	Radio interference voltage (RIV) test .....	54
6.4	Measurement of the resistance of circuits .....	54
6.5	Temperature-rise tests .....	55
6.6	Short-time withstand current tests .....	58
6.7	Verification of degrees of protection .....	60
6.8	Tightness tests .....	61
6.9	Electromagnetic compatibility test (EMC) .....	62
6.10	Additional tests on control circuits .....	62
6.11	X-radiation test procedure for vacuum interrupters .....	65
6.101	Making and breaking test .....	66
6.102	Mechanical and environmental tests .....	83
6.102A	Characteristic tests of bushing and support insulator .....	88
7	Routine tests .....	92
7.0	General .....	92
7.1	Dielectric test on the main circuits .....	92
7.2	Tests on control circuits .....	93
7.3	Measurement of the resistance of the main circuit .....	93

7.4	Tightness tests	93
7.5	Design and visual checks	94
7.101	No-voltage continuous making and breaking tests	94
8	Guide to the selection of switch	95
8.101	General	95
8.102	Conditions affecting application	95
8.103	Insulation coordination	95
8.104	Selection of class of switch	95
8.105	Tests for special applications	95
9	Information to be given with inquiries, tenders and orders	96
10	Transport, storage, installation, operation and maintenance	96
10.0	General	96
10.1	Conditions during transport, storage and installation	96
10.2	Installation	96
10.3	Operation	97
10.4	Maintenance	97
10A	Designation of product	100
11	Safety	100
11.0	General	100
11.1	Precautions by manufacturers	101
11.2	Precautions by users	101
11.3	Electrical aspects	102
11.4	Mechanical aspects	102
11.5	Thermal aspects	102
11.6	Operation aspects	102
12	Influence of the product on the environment	102
Annex A (normative)	Tolerance on test quantities for type tests	103
Annex JA (informative)	Corrosion : Information regarding service conditions and recommended test requirements	106
Annex JB (normative)	Determination of the equivalent r.m.s. value of a short-time current during a short circuit of a given duration	107
Annex JC (normative)	Method of determining test frequency	108
Annex JD (normative)	Method of determining unbalance factors of breaking current and applied voltage	109
Annex JE (normative)	Method of determining power-frequency recovery voltage	111
Annex JF (normative)	Method of determining damping time constant of making and breaking current	113
Annex JG (normative)	Method of determining prospective transient recovery	

	voltage value of test circuit .....	115
Annex JH (normative)	Method of determining power factor .....	116
Annex JI (informative)	Comparison table between JIS and corresponding International Standard .....	120

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## Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Electrical Manufacturers' Association (JEMA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS C 4605 : 1998**), which has been technically revised.

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# AC load break switches for rated voltages above 1 kV up to and including 52 kV

## Introduction

This Japanese Industrial Standard has been prepared based on **IEC 62271-103** : 2011, Edition 1, with some modifications of the technical contents in consideration of the power distribution system in Japan and the product form indigenous to Japan.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JI. Annex JA to Annex JH are unique to **JIS** and not given in the corresponding International Standard.

## 1 Scope and normative references

### 1.1 Scope

This Standard is applicable to three-phase, alternating current switches and switch-disconnectors (hereafter referred to as switches), for indoor and outdoor installations, for rated voltages above 1 kV up to and including 52 kV and for rated frequencies 50 Hz and/or 60 Hz, which are manually operated or electrically operated.

This Standard is also applicable to three-phase, alternating current switches used on single-phase electric circuit.

This standard is also applicable to the operating devices of these switches and to their control equipment.

Switch-disconnectors are also covered by **JIS C 4606** : 2011 and **IEC 62271-102** : 2001 for their disconnecting function.

This Standard establishes requirements for switches used in distribution systems.

This Standard is not applicable to switches for capacitor, electric furnace, motor, etc., which is frequently opened and closed. However, when the number of opening and closing operations is within the scope of this Standard, this Standard is applicable to those switches as agreed between the interested parties.

It is assumed that opening and closing operations are performed according to the manufacturer's instructions. A breaking operation should not immediately follow a making operation since the current may exceed the rated breaking current of the switch immediately after the making operation even though the current is within the rated breaking current.

Earthing switches are not covered by this Standard. Earthing switches shall be in accordance with **IEC 62271-102** : 2001.

NOTE 1 Except where special clarification is required, the term "switch" is used to refer to all kinds of switches and switch-disconnectors within the

scope of this Standard.

NOTE 2 Since NOTE 2 given in the International Standard is a normative content, it has been moved to the main body.

NOTE 3 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

**IEC 62271-103** : 2011 *High-voltage switchgear and controlgear — Part 103 : Switches for rated voltages above 1 kV up to and including 52 kV (MOD)*

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDI (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

## 1.2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For standards with the year indication, only the editions of the indicated year shall be applied and the revisions (including amendments) made thereafter shall not be applied. For those without the indication of the year, the most recent editions (including amendments) shall be applied.

JIS C 0445 : 1999 *Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system*

NOTE Corresponding International Standard : IEC 60445 *Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system*

JIS C 0920 : 2003 *Degrees of protection provided by enclosures (IP Code)*

NOTE Corresponding International Standard : IEC 60529 : 1989 *Degrees of protection provided by enclosures (IP Code)*

JIS C 3316 : 2008 *Polyvinyl chloride insulated wires for electrical apparatus*

JIS C 3611 : 1991 *Insulated wires for cubicle type unit substation for 6.6 kV receiving*

JIS C 3801-1 : 1999 *Testing method for insulators — Part 1 : Insulators for overhead line*

JIS C 3801-3 : 1999 *Testing method for insulators — Part 3 : Hollow insulators*

JIS C 3802 : 1964 *Permissible limits of visual defects for insulating porcelains*

JIS C 4003 : 2010 *Electrical insulation — Thermal evaluation and designation*

JIS C 4606 : 2011 *Indoor use disconnectors for 3.3 kV or 6.6 kV*

JIS C 4902-1 *High voltage power capacitors and attached apparatus — Part 1 : Capacitors*

JIS C 60068-2 (all parts) *Environmental testing — Part 2 : Tests*