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Small switches for indoor use

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Foreword

This translation has been made based on the original Japanese Industrial Standard 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 Japan Electrical Wiring Devices and Equipment Industries Association (JEWA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS C 8304:1994** is replaced with this Standard.

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Small switches for indoor use

Introduction

This Japanese Industrial Standard has been prepared based on **JIS C 8304** revised in 1994 reviewing the contents as a product standard and quoting provisions concerning safety from a part of **JIS C 8281-1**.

No International Standard corresponding to this Standard has been established at this point.

1 Scope

This Standard specifies small switches for indoor use which are mounted mainly on indoor and outside walls of housing and the like, used in cable runs of a.c. 300 V or less and 20 A or less with a frequency of 50 Hz or 60 Hz at 40 °C or lower in ambient temperature, for lamps or small electrical appliances (hereafter referred to as “switches”).

This Standard applies to switches with pilot lamp, time delay switches, sensor switches, timer switches, electronic switches, wide handle type switches, switches for indoor-wiring synthetic resin duct and water proof type switches.

This Standard does not apply to switches with automatic breaking mechanism, explosion-proof switches, electromagnetic remote control switches, specially designed switches used for a certain small electrical appliance and other special switches and switches which start and stop motors (including ones incorporated in small electrical appliances) and dimmers which control luminance of illumination.

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 apply but the revisions (including amendments) made thereafter shall not apply.

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

JIS C 3307 : 2000 *600 V Polyvinyl chloride insulated wires*

JIS C 3342 : 2000 *600 V Polyvinyl chloride insulated and sheathed cables*

JIS C 3612 : 2002 *600 V Flame retardant polyethylene insulated wires*

JIS C 8281-1 : 2003 *Switches for household and similar fixed-electrical installations—Part 1: General requirements*

JIS C 8303 : 2007 *Plugs and receptacles for domestic and similar general use*

JIS C 8306 : 1996 *Testing methods for wiring devices*

JIS C 8340 : 1999 *Boxes and box covers for rigid metal conduits*

JIS C 8375 : 1992 *Mounting frame for interchangeable wiring devices of large square boss type*

JIS H 3100 : 2006 *Copper and copper alloy sheets, plates and strips*

JIS H 3110:2006 *Phosphor bronze and nickel silver sheets, plates and strips*

JIS H 3130:2006 *Copper beryllium alloy, copper titanium alloy, phosphor bronze, copper-nickel-tin alloy and nickel silver sheets, plates and strips for springs*

3 Terms and definitions

For the purposes of this Standard, the following terms and definitions apply.

3.1 tumbler switch

a switch in which the contact is opened and closed by the operation of the actuator in two opposite directions

3.2 rotary switch

a switch in which the contact is opened and closed by the rotation of the actuator

3.3 push-button switch

a switch in which the contact is opened and closed by the push- or pull-operation of the button(s)

3.4 cord-operated switch

a switch in which the contact is opened and closed by the operation of the pull string

3.5 wide handle type switch

a kind of tumbler switch, push-button switch and the like in which the actuator is large sized

3.6 electronic switch

a switch in which the semiconductor contact or the mechanical contact is mainly closed and opened by an electronic circuit

Electronic delay switch, electronic timer switch, sensor switch, etc. are in this category.

3.7 time-delay switch

a switch in which the contact is opened and closed with a time lag after the operation of the actuator

In general, the time delay is several tens of seconds to several minutes.

3.8 timer switch

a switch in which the contact is opened and closed after the time set by operating the actuator

There are motor type, spring type, electronic type, etc. In general, the set time is several tens of seconds to several hours.

3.9 sensor switch

a switch which houses sensors and makes/breaks by detecting temperature, light, etc.

The sensor switch includes a hot-wire automatic switch, a proximity switch and a touch switch.

3.10 screwless terminal

a terminal in which a conductor of a wire (solid annealed copper wire) is directly inserted into the terminal and automatically connected

There are reusable type and nonreusable type.

3.11 switch with pilot lamp

a switch which accommodates a pilot lamp

There are two kinds; one is operated by the voltage of electric circuit, and the other is operated by the load current to be passed.

3.12 water proof type

such structure type as being usable in the outside wall of housing with which rain-water is splashed

They are classified into drip-proof type II, rainproof type, splash proof type and jet flow type according to the grade of waterproof.

In addition, when the grade of waterproof is classified in accordance with **JIS C 0920**, International Protection code of drip-proof type II, rainproof type, splash proof type and jet flow type is IPX2, IPX3, IPX4 and IPX5, respectively.

3.13 ordinary type

forms other than water proof type

3.14 interchangeable type

such a flush type switch that three pieces of which can be attached and detached to a mounting frame at the maximum and the frame can be attached to the switch box specified in attached figure 2 of **JIS C 8340**

There are high-angle type and wide handle type, etc.

3.15 conductive metal parts

parts carrying rated current

3.16 single pole switch

standard switches used for single-pole single-throw to make/break load for single place at single place

3.17 3 way switch

a switch used for single-pole change-over to make/break load for single place at two places

This is used mainly at the top and bottom of the stairs.

3.18 4 way switch

a switch used for single-pole change-over to make/break load for single location at multiple places by interlocking 3 way switch

3.19 two pole switch

a switch used for double-pole single-throw at the place where both poles are broken