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STANDARD

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JIS C 3662-6 : 2003
(IEC 60227-6 : 2001)
(JCMA)

**Polyvinyl chloride insulated cables of
rated voltages up to and including
450/750V — Part 6: Lift cables and
cables for flexible connections**

ICS 29.060.20

Reference number : JIS C 3662-6 : 2003 (E)

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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 The Japanese Electric Wire & Cable Maker's Association (JCMA) 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 3662-6:1998** is replaced with this Standard.

This revision has been made based on **IEC 60227-6:2001**, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V — Part 6: Lift cables and cables for flexible connections* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties. **JIS C 3662** consists of the following 7 parts under the general title Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V.

- Part 1: General requirements
- Part 2: Test methods
- Part 3: Non-sheathed cables for fixed wiring
- Part 4: Sheathed cables for fixed wiring
- Part 5: Flexible cables (cords)
- Part 6: Lift cables and cables for flexible connections
- Part 7: Flexible cables screened and unscreened with two or more conductors

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 6: Lift cables and cables for flexible connections

Introduction This Japanese Industrial Standard has been prepared based on the third edition of **IEC 60227-6** *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V — Part 6: Lift cables and cables for flexible connections*, published in 2001 without modifying the technical contents.

Portions underlined with dots are the matters not stated in the original International Standard.

1 General rule

1.1 Scope This part of **JIS C 3662** details the particular specifications for both circular and flat lift cables and cables for flexible connections of rated voltages up to and including 450/750 V.

Each cable complies with the appropriate requirements given in **JIS C 3662-1**, and with the particular requirements of this part of **JIS C 3662**.

NOTE : The International Standard corresponding to this Standard is as follows.

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

IEC 60227-6:2001, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V — Part 6: Lift cables and cables for flexible connections* (IDT)

1.2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of publication is given to these referred standards, only the edition of the indicated year constitutes the provision of this Standard but the revision and amendment made thereafter do not apply. The normative references without the indication of the year of coming into effect apply only to the most recent edition (including amendments).

JIS C 3660-1-1 *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-1: Methods for general application — Measurement of thickness and overall dimensions — Tests for determining the mechanical properties*

NOTE : **IEC 60811-1-1:1993** *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-1: Methods for general application — Measuring of thickness and overall dimensions — Tests for determining the mechanical properties* and Amendment 1 (2001) are identical with the said standard.

JIS C 3660-1-2 *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-2: Methods for general application — Thermal ageing methods*

NOTE : **IEC 60811-1-2:1985** *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-2: Methods for general application — Thermal ageing methods*, Amendment 1 (1989) and Amendment 2 (2000) are identical with the said standard.

JIS C 3660-1-4 *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-4: Methods for general application — Test at low temperature*

NOTE : **IEC 60811-1-4:1985** *Common test methods for insulating and sheathing materials of electric and optical cables — Part 1-4: Methods for general application — Test at low temperature*, Amendment 1 (1993) and Amendment 2 (2001) are identical with the said standard.

JIS C 3660-3-1 *Common test methods for insulating and sheathing materials of electric and optical cables — Part 3-1: Methods specific to PVC compounds — Pressure test at high temperature — Tests for resistance to cracking*

NOTE : **IEC 60811-3-1:1985** *Common test methods for insulating and sheathing materials of electric and optical cables — Part 3-1: Methods specific to PVC compounds — Pressure test at high temperature — Tests for resistance to cracking*, Amendment 1 (1994) and Amendment 2 (2001) are identical with the said standard.

JIS C 3660-3-2 *Common test methods for insulating and sheathing materials of electric cables — Part 3: Methods specific to PVC compounds — Section 2: Loss of mass test — Thermal stability test*

NOTE : **IEC 60811-3-2:1985** *Common test methods for insulating and sheathing materials of electric cables — Part 3: Methods specific to PVC compounds — Section 2: Loss of mass test — Thermal stability test* is identical with the said standard.

JIS C 3662-1 *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V — Part 1: General requirements*, Amendment 1 (1995) and Amendment 2 (1998)

NOTE : **IEC 60227-1:1993** *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 1: General requirements*, Amendment 1 (1995) and Amendment 2 (1998) are identical with the said standard.

JIS C 3662-2 *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 2: Test methods*

NOTE : **IEC 60227-2:1997** *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 2: Test methods*

JIS C 3664 *Conductors of insulated cables*

NOTE : **IEC 60228:1978** *Conductors of insulated cables* and Amendment 1 (1993) are identical with the said standard.

JIS C 3665-1 *Tests on electric cables under fire conditions — Part 1: Test on a single vertical insulated wire or cable*

NOTE : IEC 60332-1:1993 *Tests on electric cables under fire conditions — Part 1: Test on a single vertical insulated wire or cable* is identical with the said standard.

IEC 60096-0-1:1990 *Radio-frequency cables — Part 0-1: Guide to the design of detailed specifications — Coaxial cables 1* and Amendment 1 (2000)

IEC 60502-1:1997 *Power cables with extruded insulated and their accessories for rated voltages from 1 kV ($U_m = 1,2$ kV) up to 30 kV ($U_m = 36$ kV) — Part 1: Cables for rated voltages of 1 kV ($U_m = 1,2$ kV) and 3 kV ($U_m = 3,6$ kV) 3* and Amendment 1 (1998)

2 Flat polyvinyl chloride sheathed lift cable and cable for flexible connections

2.1 Code designation 60227 IEC 71 f

2.2 Rated voltage

- 300/500 V for cables with conductors having nominal cross-sectional areas not exceeding 1 mm²;
- 450/750 V for conductors larger than 1 mm².

2.3 Construction

2.3.1 Conductor Number of conductors: 3, 4, 5, 6, 9, 12, 16, 18, 20 or 24.

The combination of the cross-sectional areas and the number of conductors belonging to them is given in the following table 1:

Table 1 Cross-sectional areas and the number of conductors

Nominal cross-sectional area of conductors mm ²	Number of conductors
0.75 and 1	(3), (4), (5), 6, 9, 12, (16), (18), (20) or 24
1.5 and 2.5	(3), 4, 5, 6, 9 or 12
4, 6, 10, 16 and 25	4 or 5

Values in parentheses are the non-preferred types.

The conductors shall comply with the requirements given in JIS C 3664 for class 5 conductors.

The conductors of the cores in the side position may consist of copper wires and steel wires. The nominal geometric cross-sectional area of these conductors shall be equal to that of the other conductors and the maximum resistance shall be not more than twice the maximum resistance of a copper conductor of the same nominal cross-sectional area.

2.3.2 Insulation The insulation shall be polyvinyl chloride compound of type PVC/D applied around each conductor.

The insulation thickness shall comply with the specified value given in table 4, column 2.