



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 12706.4-2020

**Power cables with extruded insulation and their accessories for rated voltages from 1 kV
(Um=1.2 kV) up to 35 kV (Um=40.5 kV) - Part 4: Test requirements on accessories for
cables with rated voltages from 6 kV (Um=7.2 kV) up to 35 kV (Um=40.5 kV)**

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Foreword

GB/T 12706 Power Cables with Extruded Insulation and Their Accessories for Rated Voltages

from 1kV ($U_m = 1.2\text{kV}$) up to 35kV ($U_m = 40.5\text{kV}$) consists of the following 4 parts.

- Part 1.Cables for Rated Voltage of 1kV ($U_m = 1.2\text{kV}$) and 3kV ($U_m = 3.6\text{kV}$);
- Part 2.Cables for Rated Voltage of 6kV ($U_m = 7.2\text{kV}$) and 30kV ($U_m = 36\text{kV}$);
- Part 3.Cables for Rated Voltage of 35kV ($U_m = 40.5\text{kV}$);
- Part 4.Test Requirements on Accessories for Cables with Rated Voltages from 6kV ($U_m = 7.2\text{kV}$) up to 35kV ($U_m = 40.5\text{kV}$).

This Part is Part 4 of GB/T 12706.

This Part replaced GB/T 12706.4-2008 Power Cables with Extruded Insulation and Their Accessories for Rated Voltages from 6kV ($U_m = 7.2\text{kV}$) [Translator Note. here it should be 1kV

($U_m = 1.2\text{kV}$)] up to 35kV ($U_m = 40.5\text{kV}$) - Part 4.Test Requirements on Accessories for Cables

with Rated Voltages from 6kV ($U_m = 7.2\text{kV}$) up to 35kV ($U_m = 40.5\text{kV}$).

Compared with GB/T 12706.4-2008, this Part made the following major technical changes besides the editorial modifications.

- Added description and test requirements for internally tapered plug-in type separatable connectors (see 3.11 and Clause 8 of this Edition);
- Add the labeling of applicable standards for connecting hardware (see 6.1.2 of this Edition);
- Add the labeling of terminal box contents (see 6.1.3 of this Edition);
- Add the content of the conductor cross-section coverage of separatable connectors in the approved scope (see Clause 7 of this Edition);
- Add outdoor terminal immersion test (see Table 2 of this Edition);
- Modify the axial force data of the operating ring test in the test procedure for screened dead-break connectors (see Table 5 of this Edition; Table 7 of the 2008 Edition);
- Add the constant voltage load cycle test in air for additional tests of minimum and maximum conductor cross-sections (see Table 9 of this Edition);
- Modify the number of constant voltage load cycles in the additional tests for approval of different types of cable insulation shields and from round conductors to formed conductors (see Table 10 of this Edition; Table 11 of the 2008 Edition);
- Add moisture test for unscreened dead-break connectors (see Table 13 of this Edition).

This Part used redrafting method to modify and adopt IEC 60502-4:2010 Power Cables with Extruded Insulation and Their Accessories for Rated Voltages from 1kV ($U_m = 1.2\text{kV}$) up to 30kV ($U_m = 36\text{kV}$) - Part 4. Test Requirements on Accessories for Cables with Rated Voltages

from 6kV ($U_m = 7.2\text{kV}$) up to 30kV ($U_m = 36\text{kV}$).

Compared with IEC 60502-4:2010, this Part mainly made the structural changes as follows.

- According to the requirements of GB/T 1.1-2009, the tables are numbered in the order in which they are mentioned. Starting from Table 2, the correspondence between the tables in this Part and the IEC 60502-4:2010 tables is that Table 2 corresponds to Table 5; Table

3 corresponds Table 6; Table 4 correspond to Table 7; Table 5 corresponds to Table 8;

Table 6 corresponds to Table 9; Table 7 corresponds to Table 10; Table 8 corresponds to Table 2; Table 9 corresponds to Table 11; Table 10 corresponds to Table 12, and Table 11 corresponds to Table 3; Table 12 corresponds to Table 4; Table 13 corresponds to Table 13; and Table 14 corresponds to Table 14;

--- Add Subclause 7.9.

Compared with IEC 60502-4:2010, the major technical differences and their causes between

this Part and IEC 60502-2:2010 are as follows.

--- Regarding normative references, this Part has been adjusted with technical differences to

adapt to China's technical conditions. The adjustments are reflected in Clause 2

"Normative References". The specific adjustments are as follows.

* Add reference to GB/T 2900.10 (see Clause 3);

* Replace IEC 60502-2:2005 with GB/T 12706.2, which is modified to adopt international standards (see Clause 1, Clause 5 and 6.1.1);

* Add reference to GB/T 12706.3 (see Clause 1, 5.1, 5.2 and 6.1.1);

* Replace IEC 61442:2005 with GB/T 18889-2002, which is modified to adopt international standards (see Tables 1 ~ 10 and Table 12);

* Replace IEC 60183 with JB/T 8996, which has a non-equivalent degree of consistency with international standards (see 5.1);

* Delete IEC 61238-1.

--- In order to adapt to China's technical requirements, add the 35kV voltage level (see Clause 1);

--- In order to adapt to China's technical requirements, add the description and test requirements for internally tapered plug-in type separable connectors (see 3.11 and Clause 8);

--- Delete the term "wide range attachment terms" (see Clause 3);

--- In order to adapt to China's technical requirements, add the description and test requirements for internally tapered plug-in type separable connectors (see 3.11 and Clause 8);

--- In order to adapt to China's technical requirements, add the description of "6/6kV, 8.7/10kV, 21/35kV, 26/35kV" (see Table 14).

This Part also made the following editorial modifications.

--- In order to adapt to China's technical standard system, change the standard name into Power Cables with Extruded Insulation and Their Accessories for Rated Voltages from 6kV ($U_m = 7.2\text{kV}$) up to 35kV ($U_m = 40.5\text{kV}$) - Part 4. Test Requirements on Accessories for Cables with Rated Voltages from 6kV ($U_m = 7.2\text{kV}$) up to 35kV ($U_m = 40.5\text{kV}$).

--- Add the Bibliography; list the non-normative reference GB/T 9327 into the Bibliography.

This Part was proposed by China Electrical Equipment Industry Association.

This Part shall be under the jurisdiction of National Technical Committee on Wire and Cables

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The historical editions replaced by this Part are as follows.