



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

GB/T 50312-2016

Code for engineering acceptance of generic cabling system

综合布线系统工程验收规范

(English Translation)

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1 General provisions

1.0.1 This Code is formulated, to unify the technical requirements for construction

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quality inspection, on-site inspection, completion acceptance of generic cabling system projects for buildings and building complexes.

1.0.2 This Code is applicable to the acceptance of generic cabling system projects for newly built, expanded, renovated buildings and building complexes.

1.0.3 During the construction process, the construction organization shall comply with the requirements on construction quality inspection. The building organization shall strengthen on-site quality inspection, through construction site representatives or project supervisors; organize the inspection, signoff, certification work of concealed work in a timely manner.

1.0.4 Self-test and completion acceptance test shall be carried out, before acceptance of the generic cabling project.

1.0.5 In addition to complying with this Code, the acceptance of generic cabling system projects shall also comply with the provisions of relevant national standards.

2 Abbreviation

ACR-F. Attenuation to Crosstalk Ratio at the Far-end ACR-N. Attenuation to Crosstalk Ratio at the Near-end d.c.. Direct Current Loop Resistance ELTCTL. Equal Level TCTL FEXT. Far End Crosstalk Attenuation (loss) IL. Insertion Loss NEXT. Near End Crosstalk Attenuation (loss) OLT. Optical Line Termina1 OLTS. Optical Loss Test Set OTDR. Optical Time Domain Reflectometer PS NEXT. Power Sum Near End Crosstalk Attenuation (loss) PS AACR-F. Power Sum Attenuation to Alien Crosstalk Ratio at the Far-end PS AACR-Favg. Average Power Sum Attenuation to Alien Crosstalk Ratio at the Far-end PS ACR-F. Power Sum Attenuation to Crosstalk Ratio at the Far-end PS ACR-N. Power Sum Attenuation to Crosstalk Ratio at the Near-end PS ANEXT. Power Sum Alien Near-End Crosstalk (loss) PS ANEXTavg. Average Power Sum Alien Near-End Crosstalk (loss) PS FEXT. Power Sum Far End Crosstalk RL. Return Loss TCL. Transverse Conversion Loss TCTL. Transverse Conversion Transfer Loss

3 Environment examination

3.0.1

The building environment examination of work areas, telecommunications rooms, equipment rooms, etc. shall comply with the following requirements.

- 1 The civil works in the work area, telecommunications room, equipment room, user unit area shall be completed. The floor of the building shall be flat and smooth; the height and width of the door shall comply with the requirements of design document.
- 2 The location, quantity, size of embedded trough boxes, concealed conduits, holes, shafts in the building shall comply with the requirements of design document.
- 3 Where the raised floor is laid, the anti-static measures and earthing of the raised floor shall comply with the requirements of design document.
- 4 The height -- from the bottom of the information socket box, which is concealed or exposed on the wall or column to the ground -- should be 300 mm.
- 5 The height -- from the bottom of the information socket box, which is installed on the side partition of the workbench to the adjacent wall -- should be 1000 mm.
- 6 The CP assembly point box and multi-user information socket box should be installed on the inlet side of the duct, as well as on columns and load-bearing walls, which are easy for

maintenance. The height of the bottom edge of the box, above the ground, should be 500 mm. When installed on the upper part of the wall or column OR when installed in a suspended ceiling, the height from the ground should not be less than 1800 mm.

4 Examination of equipment and test instrumentation

4.0.1

Equipment inspection shall comply with the following requirements.

- 1 The brand, model, specification, quantity, quality of cables and equipment, which is used in the project, shall be inspected before construction. They shall comply with the requirements of the design documents. They shall have corresponding quality documents or certificates. If there are no exit-factory inspection certification materials, quality documents, or those that do not conform to the design, they shall not be used in the project;
- 2 Imported equipment and materials shall have certificates of origin and commodity inspection certificates;
- 3 Inspected equipment shall be recorded. Unqualified equipment shall be stored separately, for verification and treatment;
- 4 The cables and equipment used in the project shall be consistent with the order contract or retained product samples, in terms of specifications, models, grades;
- 5 Spare parts, spare components and various documents shall be complete.

4.0.2

The examination of profiles, pipes, iron parts shall comply with the following requirements.

- 1 For the examination of equipment used in underground communication pipelines and manholes (hand holes) and the inspection of outdoor pipelines, it shall comply with the relevant provisions of the current national standard "Code of construction and acceptance for communication conduit engineering" GB 50374;
- 2 The materials, specifications, models of various profiles shall comply with the requirements of the design documents; the surface shall be smooth and flat, without deformation or breakage;
- 3 The surface coating or plating of metal conduits, bridges, wiring protection boxes, junction boxes, etc. shall be uniform and complete, without deformation or damage;
- 4 When metal conduits or plastic conduits are used as indoor pipes, the pipe shall be smooth without scars; the pipe hole shall not be deformed; the hole diameter and wall thickness shall comply with the requirements of design document;
- 5 Metal pipe troughs shall be galvanized or otherwise anti-corrosion treated, according to the requirements of the engineering environment. Plastic pipe troughs shall be

flame-retardant pipe troughs; the outer walls shall have flame-retardant markings;

6 The materials and specifications of various metal parts shall meet the quality requirements; there shall be no skew, twist, burr, break or damage;

7 The surface treatment and plating of metal parts shall be uniform and complete; the surface shall be smooth, without defects such as falling off or blisters.

5 Examination of equipment installation

5.0.1

The specifications, capacity, location of cabinets, wiring boxes and other equipment shall comply with the requirements of the design documents. The installation shall comply with the following requirements.

1 The vertical deviation shall not be greater than 3 mm;

2 The various parts on the cabinet must not fall off or be damaged; the paint surface shall not be peeled off or scratched; the various marks shall be complete and clear;

3 When installing wiring boxes in public places, the distance -- from the bottom edge of the wall-embedded box to the ground -- should not be less than 1.5 m. The distance -- from the bottom edge of the wall-hang box to the ground -- should not be less than 1.8 m;

4 The opening and closing of the door lock shall be flexible and reliable;

5 Cabinets, wiring boxes, bridges and other equipment shall be installed firmly.

When there are seismic requirements, they shall be reinforced according to seismic design.

5.0.2

The installation of various wiring components shall comply with the following requirements.

1 All components shall be complete, installed in place; the marking shall be complete and clear;

2 The mounting screws shall be tightened; the panel shall remain on a flat surface.

5.0.3

The installation of information socket modules shall comply with the following requirements.

1 The installation position and height of the information socket bottom box, multi-user information socket, assembly point wiring box, user unit information wiring box shall comply with the requirements of design document.

2 When installed in the raised floor or on the ground, it shall be fixed in the junction box. The socket panel shall be upright or horizontal. The junction box cover can be opened and shall be waterproof, dustproof, pressure-resistant. The junction box cover shall be flush with