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

YD/T 2341.1-2011

**Field-mountable optical fiber connectors - Part 1: Mechanical
type**

现场组装式光纤活动连接器 第1部分：机械型

(English Translation)

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1 Scope

This Part specifies the requirements, measurement and testing, quality assessment procedures, inspection rules, markings, packaging, transportation, storage of mechanical type field-mountable optical fiber connectors (also known as mechanical optical fiber quick connectors, hereinafter referred to as mechanical field-mountable connectors).

This Part applies to mechanical type field-mountable fiber optical connectors.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB/T 2421.1-2008 Environmental testing for electric and electronic products

- General and guidance

GB/T 2828.1-2003 Sampling procedures for inspection by attributes - Part 1.

Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 5169.16-2008 Fire hazard testing for electric and electronic products -

Part 16. Test flames - 50W horizontal and vertical flame test methods

3 Terms and definitions

The terms and definitions, as defined in YD/T 1272.1-2003, YD/T 1272.3-2005, YD/T 1272.4-2007, as well as the following terms and definitions, apply to this document.

3.1

Field-Mountable Optical Fiber Connector (FMC)

An optical fiber connector, which can be directly assembled on the sheath of the optical fiber or optical cable, at the construction site, referred to as FMC.

3.2

Mechanical Field-Mountable Optical Fiber Connector

A field-mountable optical fiber connector, which is directly assembled by simple tools and mechanical connection technology, without the need for a thermal fusion splicer.

4.1.1.3 Classification by applicable optical fiber or cable type

According to the matching optical fiber or optical cable, it can be divided into the following two types.

4.1.1.4 Classification by the number of connection points

According to the number of connection points, it can be divided into the following two types.

4.3 Material requirements

The materials, which are used in the field-mountable optical fiber connector, shall meet the grade V-0 flame retardant requirements, in GB/T 5169.16-2008.

4.4.1 Appearance and structure requirements

The assembled field-mountable optical fiber connector shall be smooth, clean, free of oil and burrs, free of scars and cracks, bright in color, sound in consistency. All parts and components shall be flatly assembled. The insertion and pull-out of the adapter shall be smooth and easy; the clamping is tight.

5.1.1 Test environment

The measurement shall be carried out, under the standard atmospheric pressure conditions, which are specified in GB/T 2421.1-2008. The accuracy of the instruments, which are used for the measurement, shall meet the requirements AND be calibrated regularly.

5.1.4 Preparation before measurement

Before the measurement, it shall use lint-free fiber paper or absorbent cotton, to wipe and clean the ferrule and the end surface as well as the inner surface of the adapter sleeve. If necessary, use absolute ethanol to scrub it.

5.1.5 Specimen

The samples for mechanical performance test and environmental performance test are all samples that have passed the field assembly test and passed the insertion loss and return loss tests.

5.2.5 Test results

The average assembly time and assembly success rate shall meet the requirements in clause 4.5.

5.3 Appearance and size inspection

Check the assembled mechanical field-mountable connector, by visual inspection. The appearance shall meet the requirements in clause 4.4.1.

5.4.1 Measurement of insertion loss of field assembled optical fiber

connector plug

The insertion loss of the field assembled optical fiber connector plug is measured, according to the following method.

6.1 Classification of quality assessment procedures

The quality assessment procedure includes appraisal approval procedure AND quality consistency inspection.

6.2.1 Initial manufacturing stage

The initial manufacturing stage of mechanical field-mountable connectors is the manufacturing stage, of assembling parts into saleable units AND packaging them.

6.2.3 Appraisal approval requirements

The appraisal approval requirements are as follows.

6.2.4.1 Appraisal using a fixed sample procedure

The fixed sample appraisal procedure consists of samples, which meet the requirements of this clause a), AND the test procedures of this clause b).

6.3.2 Periodic inspection

The periodic inspection includes the group C inspection and group D inspection, in Table 6, on the samples. The inspection cycles shall be maintained with each other, so that the group D inspection will replace the group C inspection, during the period of the group D.

7.1 Inspection classification

The inspection of mechanical field-mountable connectors is divided into two categories. Exit-factory inspection (handover inspection) and type inspection.

7.2.1 Daily inspection

All products leaving the factory shall undergo 100% inspection of their appearance, in accordance with the test methods, which are specified in clause

5.3 of this Part. Meanwhile, it shall meet the requirements of clause 4.4.1 of this Part.

7.3 Type inspection

When mechanical type field-mountable connectors have one of the following conditions, the type inspection is generally carried out. The type inspection is carried out, according to the requirements of the fixed sample quality assessment procedure.

8.1.1 Color

The outer parts of single-mode PC and UPC mechanical field-mountable connectors are generally blue. The outer parts of single-mode APC mechanical field-mountable connectors are generally green. The outer parts of multi-mode

PC and UPC mechanical field-mountable connectors are generally gray.

8.2 Packaging and transportation

Mechanical field-mountable connectors shall be equipped with dust caps.

Each mechanical field-mountable connector shall be individually packaged.

Each packaging box shall be accompanied by an operation manual, for field assembly of the connector; AND list the general or special construction tools, which are necessary for