

YD

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

YD/T 777-2006

**Inversion equipment for telecommunications
(English Translation)**

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Foreword

This Standard replaces YD/T 777-1999 Inversion equipment for telecommunications.

Compared with the YD/T 777-1999, this Standard has the following major changes.

- This Standard is drafted according to the format requirements specified in the GB/T 1.1-2000.
- DELETE the reference to the GB 7260.
- ADD the definition "3.7 Peak factor".
- REVISE "4.1.3.1" of the original version. ADD "1.5" and "4" to this Standard.
- REVISE "5.2" of the original version. MODIFY the allowable variation range of the input voltage to 40 ~ 57.6V.
- DELETE "5.2.2" of the original version.
- REVISE the contents in the "5.4.2" of the original version. MODIFY the

"power factor 0.7" to "power factor 0.8" in Note 2 of the table. DECREASE the AC output current rating.

- REVISE the contents in the "5.4.8" of the original version. STIPULATE the AC output frequency rating as 50Hz. SEE 5.4.7 of this version.
- REVISE "5.4.9" of the original version. CANCEL the restriction of "2MHz". SEE 5.4.8 of this version.
- REVISE the headline of the "5.4.12" of the original version. MODIFY the "conversion mode" to the "conversion time". SEE 5.4.11 of this version.
- REVISE the contents in the "5.4.13" of the original version. ADD the input requirements for inrush starting current. SEE 5.4.12 of this version.
- REVISE "5.4.14" of the original version. MODIFY the sentences. SEE

5.4.13 of this version.

- REVISE the contents in the "5.4.15" of the original version. MAKE the grading rules for overload capacity. SEE 5.4.14 of this version.
 - DELETE the requirements for temperature rise specified in the "5.4.16"
- Inversion equipment for telecommunications

1 Scope

This Standard specifies the technical conditions, test methods, and inspection rules of the DC-AC sine wave inversion equipment for telecommunications (hereinafter referred to as "inversion equipment"), which are required for accommodating the special requirements for communication equipment. This Standard applies to the sine wave inversion equipment providing power supply for the communication equipment.

2 Normative references

The provisions in the following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrections) or revisions do not apply to

this Standard. However, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest versions apply to this Standard.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 2423.1-2001 Environmental testing for electric and electronic products

- Part 2. Test methods - Tests A. Cold

GB/T 2423.2-2001 Environmental testing for electric and electronic products

- Part 2. Test methods - Tests B. Dry heat

GB/T 2423.9-2001 Environmental testing for electric and electronic products

- Part 2. Test methods - Test Cb. Damp heat, steady state, primarily for equipment

GB/T 2829-2002 Sampling procedures and tables for periodic inspection by attributes (Apply to inspection of process stability)

GB/T 3047.1 Series of basic dimensions of panels, rack and cabinets for vertical increment of 20mm

GB/T 3859.2 Semiconductor convertors - Application guide

GB/T 3873 General specifications for products packaging of communication equipment

3.7 Peak factor

It refers to the ratio OF the peak value of the periodic load current TO its effective value, which is generally used for measuring the inversion equipment's ability of carrying non-linear loads.

3.8 Total harmonic distortion (THD)

It refers to the percentage OF the root mean square value of the distortion content TO that of the fundamental component in the AC quantity.

3.9 Harmonic content

It refers to the value obtained after the fundamental component is subtracted

from the AC quantity.

Note: Harmonic content can be expressed as time functions or root mean square values.

4.1.1 Product types

- a) Single-phase sine wave inversion equipment;
- b) Three-phase sine wave inversion equipment;
- c) Redundant single-phase or three-phase sine wave inversion equipment in parallel.

4.1.2 Input voltage rating series

SELECT 48V from the following numerical values as the DC input voltage rating of inversion equipment.

Note: After the user puts forward the requirement and negotiates with the manufacturer, the products

beyond the above numerical values can also be produced.

4.1.3.1 Single-phase sine wave inversion equipment or single-phase

sine wave inverter unit

0.5, 1, 1.5, 2, 3, 4, 5 and 10.

Note: After the user puts forward the requirement and negotiates with the manufacturer, the products

from the heat sources.

5.1.2 Special operating conditions

If it is necessary to use the inverter under the conditions which are different from the normal operating conditions specified in the Section 5.1.1, the user shall put forward when placing orders, and shall make an agreement with the manufacturer. For instance.

- a) The inversion equipment used in abnormal mechanical stress, such as vehicular communication;
- b) The inversion equipment operating in tropical climates with high humidity and high temperature;