

ICS 29.140.99

CCS K 74



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

GB 19510.210-2013

Replacing GB 19510.11-2004

**Lamp controlgear -- Part 2-10: Particular requirements for
electronic invertors and convertors for high-frequency
operation of cold start tubular discharge lamps (neon tubes)**

灯的控制装置 第2-10部分：高频冷启动管形放电灯（霓虹灯）用电子换流器和变
频器的特殊要求

(English Translation)

Issued on: December 31, 2013

Implemented on: July 1, 2015

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

1 Scope	1
2 Normative references	1

Foreword

All technical content in this section is mandatory.

GB 19510 "Lamp control" is divided into 14 parts.

- Part 1. General requirements and safety requirements;
- Part 2. starting devices (other than glow starters) - Particular requirements;
- Part 3. Tungsten with AC/DC buck converter electronic Particular requirements;
- Part 4. Particular requirements for the exchange of electronic fluorescent ballasts;
- Part 5. Particular requirements for dc supplied electronic ballasts for general lighting of;
- Part 6. Public transport lighting Particular requirements for dc electronic ballasts;
- Part 7. DC electronic ballasts for aircraft lighting Particular requirements;
- Part 8. DC electronic ballasts for emergency lighting Particular requirements;
- Part 9. Particular requirements for ballasts for fluorescent lamps;
- Part 10. discharge lamps (excluding fluorescent lamps) with the special requirements of the ballast;
- Part 2-10. high-frequency cold start tubular discharge lamps (neon) Specific requirements for electronic exchange and the frequency converter;
- Part 12. Particular requirements for lighting and miscellaneous electronic circuits associated with;
- Part 13. discharge lamps (excluding fluorescent lamps) or AC supplied electronic ballasts for special requirements;
- Part --- Article 14. LED module with special requirements for dc or ac electronic control device.

This is Part 2-10 GB 19510's.

This section should be used with GB 19510.1, which is after the corresponding provisions of GB 19510.1 supplement or modify the development and

Into.

This section drafted in accordance with the rules of GB/T 1.1-2009 and GB/T 20000.2-2009 given.

This Part replaces GB 19510.11-2004 "Lamp control - Part 11. High-frequency cold start tubular discharge lamps (neon) with

Electronic inverter and inverter special requirements ", compared with GB 19510.11-2004 main differences are as follows.

--- Modify the original definition of the expression, increases. "Note. For a sine wave form, is divided by the RMS RMS or peak 2 for its

He waveforms or RMS is mathematically derived from the peak RMS "(see 32, 2004 edition." 3.2 ");

--- Add "NOTE. Open protection by detecting the increase or other suitable means to the output voltage operation" (see 3.6);

--- 3.8 heading "output line" to "high voltage output line" (see 38, 2004. Version 3.8.);

--- Increase "IEC 60598-1 Table 10.2 applies to stand-alone converter or inverter" (see Chapter 12);

--- According to IEC 61347-2-10.2008, modify the title of Chapter 9 of this part of the "grounding" for the "protection grounding" (see

Chapter 9);

--- Appendix B is amended as (see Appendix B, 2004 edition Appendix B) "IEC 61347-1 Appendix B requirements do not apply.";

--- Added "or" [see I.3.1.1 in a) and I.3.3.1 in b)];

--- Amend Appendix I of "earth fault current" to "earth leakage current" (see I.3.3).

This section uses the translation method identical with IEC 61347-2-10.2009 "- Part 2-10 control Lamp. High frequency cold start tubular

Discharge lamps (neon) electronic converter and special requirements "of the inverter;

Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- Part 1 GB 19510.1-2009 lamp control apparatus. General and safety requirements (IEC 61347-1.2007,

IDT).

This part is proposed by the China National Light Industry Council.

This part of the National Electric lighting Standardization Technical Committee (CSBTS/TC224) centralized.

The drafting of this section. China Quality Certification Center, Hangzhou-high in Hong lighting Electric Co., Ltd., Hangzhou Yuan Tak Industrial Co.,

Division, Beijing Institute of electric light.

Drafters of this section. Liwei Quan, Duan Yan Fang, solution Zhijun, Luohai Ou, Xu Jianguang, Zhao Xiurong, Jiang Shan.

This section was first released in 2004, this edition is the first revision.

Introduction

This section and constitute the various parts of IEC 61347-2-1 ~ IEC 61347-2-13 requirements of IEC 61347-1 when referring to any provision

The terms of the scope and implementation of the order of the trial, but also provides the necessary additional requirements. IEC 61347-2-1 ~ IEC 61347-

Each part 2-13 is independent, and do not refer to each other.

If this section by "in accordance with the requirements of IEC 61347-1 an article," this sentence to refer to a provision of the requirements of IEC 61347-1,

The meaning of this statement is in accordance with all the requirements of the provision, but obviously does not apply to the IEC 61347-2-1 ~ IEC 61347-2-13

Except for the content of said control means a specific type of lamp.

Part 2-10 control Lamp. High frequency cold

Start tubular discharge lamps (neon) electronic converter

And special requirements of the inverter

1 Scope

GB 19510 of the provisions of this part of the tubular high-frequency operation of cold cathode discharge lamps with electronic inverter and converter of special requirements, such

AC inverter and converter for signal-emitting device and discharge device, and directly connected to the 50Hz or less 60Hz1000V

Work on the stream or 1000V DC power supply voltage, the output voltage is 1000V ~ 10000V.

Note 1: In Japan, the output voltage can be 15000V.

The following sets forth two types of inverters and converters, A Class and Class B requirements.

--- A class inverter or converter. the frequency range within the 20kHz ~ 50kHz, (between terminal) output voltage (peak value) is not

Exceeds 5000V, the maximum output current of 35mA (rms) and the inverter or variant under 50mA (peak) working conditions

Frequency, power supply voltage does not exceed 50Hz or 60Hz 250V or DC voltage 250V.

Note 2: Due to the current and frequency range restrictions, A class inverter or inverter output current can be regarded as not cause a shock hazard.

Note 3: In Japan, output voltage up to 15000V.

--- Class B inverter or converter. refers to a no-load output voltage does not exceed 5000V, a no-load output voltage between terminals is not

More than 10000V, at 10kHz ~ 100kHz frequency range as well as 200mA (rms) and 400mA (peak)

The maximum output current of the inverter to work or drive.

Note 4: Class B converter or inverter output lines need additional protection.

Note 5: In Japan, the Class B converter or inverter current should not exceed 50mA, the secondary winding is not grounded.

In order to test the security of the flow transducer or frequency converters, should examine their performance. However, because there is no standard neon features,

This section specifies the base load will be to ensure that test results can be repeated.

Tw rated maximum operating temperature of the windings do not apply to this section.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein

Member. For undated references, the latest edition (including any amendments) applies to this document.

This part of IEC 61347-1 is given in Chapter 2 of the following normative references and normative references.

IEC 61347-1 Part 1 lamp control devices - General requirements and safety requirements (Lampcontrolgear-Part 1.

Generalandsafetyrequirements)