

ICS 13.110; 29.260.99
CCS J 09



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

GB 19436.3-2008

**Electrical safety of machinery -- Electro-sensitive protective equipment
-- Part 3: Particular requirements for Active Opto-electronic Protective
Devices responsive to Diffuse Reflection (AOPDDR)
(English Translation)**

Issued on: June 19, 2008

Implemented on: June 1, 2009

**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**

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Foreword

GB 19436 "Electrical safety of machinery - Electro - sensitive protective equipment" is divided into four parts.

--- Part 1. General requirements and tests;

--- Part 2. using active optoelectronic protective devices (AOPD) Special equipment requirements;

--- Part 3. using active optoelectronic protective devices diffuse (AOPDDR) Special equipment requirements;

--- Part 4. Vision-based protective devices Particular requirements.

This section GB of Section 319 436. This section identical with IEC 61496-3.2001 "Safety of machinery - Electro - sensitive protective equipment

Part 3. Active diffuse photoelectric protection device (AOPDDR) the special requirements "first edition (in English).

General requirements. The provisions of this section, see GB/T 19436.1-2004 "electric machinery electrical safety sensitive protective equipment - Part 1 missing

And testing. "

This section is ESPE Electro-sensitiveprotectiveequipment Abbreviation, see GB/T 19436.1-2004

3.1.

This section OSSD is OutputSignalSwitchingDevice Abbreviation, see GB/T 19436.1-2004 3.19.

OSSDs or OSSD (s) of the last letter s, represents a complex, consistent with the IEC standard.

For ease of use, this section made the following editorial changes.

--- Will apply international standards applicable to our presentation to the standard formulation (including punctuation);

--- The IEC 61496-3:2001 standard in the name of "Safety of machinery" Modify oriented part of the standard in the name of "mechanical and electrical safety."

This part of the Appendix A and Appendix B are normative appendix.

This part of the Appendix C, Appendix Appendix AA and BB are informative appendices.

This part is proposed by China Machinery Industry Federation.

The electrical system in part by the National Machinery Industry Standardization Technical Committee (SAC/TC231) centralized.

This section is drafted. Beijing Machine Tool Research Institute, Beijing and advantage Motor Co., Beijing KND CNC Technology Co.,

Zhejiang Kaida Machine Tool Group Co., Ltd.

Introduction

Electro-sensitive protective equipment (ESPE) suitable for mechanical damage to human existence. It in front of people at risk, the mechanical responses to security

The whole state, so as to provide protection.

This part of the widely used general design and performance requirements make provision ESPE. Meet the most basic features of the equipment required by section

Is a fairly safe level of performance and to maintain this level of performance and built-in predetermined periodic function tests/self-test.

This part is GB/T 19436.1 corresponding provisions be supplemented and modified.

As Part 1 of the special provisions in Part 3 does not mention it is reasonable. This part of the "complementary", "modification" or

"Replace" is an alternative content related to Part 1.

This section has the status of a standard product line can be used as a reference to mechanical and electrical safety of products.

Each type of machine has its own specific danger, the purpose of this section is not a recommended way ESPE on any particular machine used

formula. ESPE application is available for parties, between the user and the machine implementing agencies should consult the matter, in this regard, note that domestic and foreign relevant indicators

South, for example, GB/T 15706 (eqv ISO /T R12100).

GB 19436.3-2008/IEC 61496-3:2001

Electrical safety of machinery - Electro - sensitive protective equipment

Part 3. Using Active Opto diffuse

Special requirements for protection devices (AOPDDR) equipment

1 Scope

This section provides sensing using active optoelectronic protective devices diffuse (AOPDDRs), for mechanical safety of electro-sensitive prevention

Additional requirements for protective equipment (ESPE) the design, manufacture and testing. For those who reach the appropriate means to ensure the safety performance requirements given special

s concern. ESPE may include optional safety function, select functional requirements in this section in Appendix A and GB/T 19436.1-

2004 Appendix A are given.

This section is limited to ESPE function, it does not specify the size or the layout and structure of the detection zone in any particular application to hazardous parts,

Nor any provision constitute a dangerous state machinery.

AOPDDR detection device is a two-dimensional detection zone. By the transmitter element emits near infrared radiation detection zone when the light emitted

Encountered an object (such as a human body or partial), part of the radiation reflected by a diffuse way to the receiver, which can be detected in the region

object.

Note: In some cases, the need to consider the limitations of the sensor in use. E.g.

--- Produces specular reflection (special) objects, if its value is less than the predetermined value diffuse "black" test piece, the object may not be detected;

The minimum reflectance --- obstacle detection is based on people's clothing to determine.

When the reflectance is lower than the estimated value of the object of this section, the object is

May not be detected.

This section does not apply to radiation wavelength AOPDDR beyond 820nm ~ 946nm range, and not by its own light emission

Those AOPDDR. For radiation wavelength outside the range of the sensor, this section can be used as a guideline. In addition, the standard

He said detection capabilities beyond 50mm ~ 100mm range AOPDDRs not apply to this section.

This section may be those related to non-human protection applications, such as. protection of machinery or products from mechanical damage. In these applications

, Such as. the need to be detected by the sensing objects have different from the characteristics of the human body and clothing, may also need some additional requirements.

This section does not involve electromagnetic compatibility (EMC) emission requirements.

Who has only one dimension, distance measurement point source optoelectronic devices, such as proximity switches, nor within the scope of this section.

2 Normative references

The following documents contain provisions which, through reference in this Part of GB 19436, constitute provisions of this part. For dated reference documents

Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section

Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this

section.

GB/T 2423.22-2002 Environmental testing for electric and electronic products Part 2. Test methods - Test N. Temperature change

(IEC 60068-2-14. 1984, IDT)

GB/T 2423.55-2006 Environmental testing for electric and electronic products Part 2. Test methods - Test Eh. Hammer tests

(IEC 60068-2-75.1997, IDT)

GB 4208-1993 housing protection (IP Code) (eqv IEC 60529. 1989)