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

JT/T 1263-2019

Highway collision avoidance warning device

公路用防撞预警器 清晰版

(English Translation)

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Foreword

This standard is in accordance with GB/T Draft the rules given in 1-2009.

This standard is proposed and managed by the National Technical Committee for Traffic Engineering Facilities (Highway) Standardization (SAC/TC 223).

This standard was drafted. Beijing CCCC Huaan Technology Co., Ltd., Hangzhou Boda Weiye Public Safety Technology Co., Ltd., Jiangxi Province Expressway Investment Group Co., Ltd.

1 Scope

This standard specifies the product composition and model, technical requirements, test methods, inspection rules, and signs, packages, and anti-collision warning devices for highways.

Loading, transportation and storage requirements.

This standard applies to the production, use and inspection of anti-collision early warning devices for highways.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the

latest version (including all amendments) applies to this document.

GB/T 191 Packing, storage and transportation icon GB 5768. 2 Road traffic signs and markings Part 2. Road traffic signs GB/T 3146 LED actively illuminates road traffic signs
JT/T 817 General technical requirements and testing methods for highway electromechanical system equipment

3 Terms and definitions

The following terms and definitions apply to this document.

Anti-collision early warning device for highways collision collection warding deviation
Installed on a specific location on a highway that is prone to collision accidents, and can prompt road users through text, symbols, graphics, sound and light, etc.

Traffic conflict, safety facilities to prevent traffic collision accidents.

4 Product composition and model

4.1

Product composition Anti-collision warning devices for highways (referred to as "anti-collision warning devices") are composed of traffic detectors, controllers, early warning display screens, and chassis, poles, and compact Components such as solid connectors.

- a) traffic detectors to detect the passing of vehicles or pedestrians;
- b) Controller, used for the control of anti-collision warning device, including traffic detector data acquisition and access, traffic conflict judgment, and warning display Control and other functions;
- c) Early warning display, used to convey conflict warning information to road users in text, symbols, graphics, etc .;
- d) a chassis for housing the controller;
- e) Posts and fastening connections are used to install and fix early warning displays.

4.2

Product model

The product model of anti-collision warning device includes 5 items. code, power supply mode, environmental temperature adaptability level, type of detection object, and design code.

See Figure 1.

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Figure 1 Model of anti-collision warning device

Each part of the code is explained as follows.

- a) Power supply mode. "1" means solar power supply, "2" means power supply from the grid, and "3" means other methods;
- b) Ambient temperature adaptation level. "S2" indicates -5 ° C to + 55 ° C, "A" indicates -20 ° C to + 55 ° C, "B" indicates -40 ° C to + 50 ° C;
- c) Detection object type. "P" means only pedestrians can be detected, "V" means only vehicles can be detected, and "D" means both pedestrians and vehicle.

Example. The anti-collision warning device is powered by solar energy, the ambient temperature adaptability level is A, and it supports the dual detection of pedestrians and vehicles. The design code is H, and its model table Shown as FQJQ1YAYDYH.

5 Technical requirements

5.1

Appearance quality

5.1.1

The outer surface of the warning display of the anti-collision warning device, chassis, poles and fastening connections shall be flat and smooth without scratches, rust points, permanent Sexual stains, rounded corners, no burrs, flashes and other defects.

5.1.2

The coating shall be flat and uniform in color, and shall be free from defects such as bubbles, cracks, peeling, and mechanical damage.

5.1.3

The structure should be simple and reliable, meet the requirements for use, and be easy to install and adjust.

5.2

Functional requirements when the anti-collision warning device detects and judges that there is a risk of a collision accident, the warning display of the anti-collision warning device should be within the warning response time range.

Within, text, symbols, graphics, etc. are used to prompt road users with information. The prompt information should conform to GB 5768. Relevant provisions in 2.

5.3

Traffic detector the traffic detector should be able to detect the passing situation of vehicles and pedestrians, and the relative error of the traffic flow is not greater than 5%.

5.4

Early warning display the material, chrominance performance and visual recognition performance of the early-warning display should meet the requirements of GB/T 3144.

5.5

Communication distance the communication distance between the controller and the warning display and the controller and the traffic detector is not less than 300m.

5.6

Early warning time response, adjustment and reset

5.6.1

The response time from the moment the traffic detector detects the traffic flow to the time when the warning display starts to light up is not greater than 0.1s.

5.6.2

The warning display is triggered and the warning time displayed continuously should not be less than 3s, and the warning time length can be adjusted; the warning time is not

6 Test method

6.1

Appearance quality Check visually and feel.

6.2

Functions

6.2.1

Test preparation the test preparation requirements are as follows.

a) One set of anti-collision early warning products used for testing should contain at least one early warning display, one traffic detector, and one controller;

1 tape measure or laser ranging device; 1 dual trace oscilloscope;

b) one minibus and one minivan for testing;

c) Select an open test site. The layout of the collision warning device is shown in Figure 2. The warning display, traffic detector and controller are arranged to provide early warning.

The distance between the display screen and the traffic detector (11) should not be less than 300m, and the width of the traffic detection section (12) should not be less than 8m. The lateral distance from (13) is 1.5m.

Note: See Appendix A for typical application locations of anti-collision warning devices.

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