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

GB/T 43229-2023

**Communication protocol between road traffic signal controller
and vehicle detectors**

交通信号控制机与车辆检测器间通信协议

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the Ministry of Public Security of the People's Republic of China. This document is under the jurisdiction of the National Road Traffic Management Standardization Technical Committee (SAC/TC576). This document was drafted by: Traffic Management Research Institute of the Ministry of Public Security, Wuxi Huatong Intelligent Transportation Technology Development Co., Ltd., Qingdao Hisense Network Network Technology Co., Ltd., Shenzhen Xinchuang Zhongtian Information Technology Development Co., Ltd., Nanjing Huiershi Intelligent Technology Co., Ltd., Nanjing Blue THAI TRANSPORTATION FACILITIES LIMITED. The main drafters of this document. Liu Dongbo, Shu Aibing, He Guangjin, Yang Guang, Xu Leng, Liu Chengsheng, Chen Weiqiang, Shen Biao, Zhou Changjun, Chen Junde. Between traffic signal controller and vehicle detector letter of agreement

1 Scope

GB/T 43229-2023 specifies the communication protocol between a road traffic signal controller and its vehicle detectors. Every adaptive junction in the country depends on this link: the loop, radar or video detector reports presence, count and occupancy, and the controller extends or terminates a green phase on that basis. The detectors and the

controllers are made by different companies and replaced on different cycles, so a city that cannot mix them is locked to one supplier for the life of its network. The standard sets the general provisions, the information format, the communication procedures and the message content, with normative annexes giving the communication procedure and the information format in full. It took effect on 1 April 2024.

This document specifies the general principles, information format, communication procedures and message content for communication between road traffic signal control machines and vehicle detectors. This document applies to the communication between road traffic signal control machines and motor vehicle detectors and non-motor vehicle detectors. Road traffic signal control machines The communication between the controller and the pedestrian detector is implemented as a reference.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated reference documents, Only the version corresponding to the date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document. document.

GB/T 2260 Administrative division code of the People's Republic of China

GB/T 2312 Basic set of Chinese coded character sets for information exchange

GB/T 31418 Road traffic signal control system terminology

GB/T 35789.1-2017 General specifications for electronic identification of motor vehicles
Part

3 Terms and definitions

The terms and definitions defined in GB/T 31418 apply to this document.

4 Abbreviations

The following abbreviations apply to this document. IP. Internet Protocol (InternetProtocol)

5 General rules

5.1 Communication model A four-layer model is adopted, including physical layer, network layer, transport layer and application layer.