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**NATIONAL STANDARD OF THE
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GB/T 18759.4-2014

**Electrical equipment of machines-Open numerical control
system-Part 4: Hardware platform**

机械电气设备 开放式数控系统 第4部分：硬件平台

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Foreword

GB/T 18759 "Electrical equipment of machines open CNC system" is divided into the following sections.

- Part 1. General;
- Part 2. Architecture;
- Part 3. bus interface and communication protocols;
- Part 4. hardware platform;
- Part 5. software platform;
- Part 6. network interface and communication protocols;
- Part 7. General requirements;
- Part 8. Test and acceptance. This section GB/T Part of 418,759. This section drafted in

accordance with GB/T 1.1-2009 given rules. 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 responsible for drafting. Shenyang Institute of Computing Technology Co., Ltd., the National Machine Products Quality Supervision and Inspection Center. Participated in the drafting of this section. GSK CNC Equipment Co., Ltd., Beijing KND CNC Technology Co., Ltd., Shenyang high-precision CNC Technology Co., Ltd., Wuhan Huazhong Numerical Control Co., Ltd. Beijing Aerospace CNC system, CNC Dalian Koyo Technology Co., Shanghai Jiaotong University, Beijing University of Aeronautics and Astronautics, Shandong University, Zhejiang University, Shenyang Machine Tool (Group) Co., Ltd., Hangzhou Machine Tool Group Co., Ltd., Beijing Science and Technology Co., Ltd. Yi can cube. The main drafters of this section. in the East, Cho wide Tao Yaodong, Yin Zhenyu, Zhao Qin Zhi, Tong Yang Yong, Yang Hongli, Durui Fang, Wang Jian, Liu Yanjiang, Wang Yu Han, Zhang Chengrui, FENG Dong-qin, of Jubilee, Chen Jianming, Chen Hu, Renqing Rong, Hu Yi, Xuerui Juan. Machinery and electrical equipment Open CNC System Part 4. Hardware platform

1 Scope

GB/T 18759.4-2014 is the Chinese national standard on electrical equipment of machines-open numerical control system-part 4: hardware platform, in the field of electrical engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 3 September 2014 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2015. Classification: ICS 29.020, CCS J07. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section GB/T 18759 specifies the mechanical and electrical equipment construction method of open CNC system hardware platform and hardware modules The connection between norms, aims to provide a reference framework for the analysis, design and implementation of open CNC system hardware platform, ensure that the hardware level Taiwan mechanical and electrical equipment to meet the requirements of open CNC system. This section applies to metal processing machinery, textile machinery, printing machinery, sewing machinery, plastics and rubber machinery, woodworking machinery and other electrical equipment Alternate open CNC system. Open CNC machinery and other industrial equipment can also be used for implementation.

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.

GB 5226.1-2008 Safety of machinery - Electrical machinery and electrical equipment - Part 1. General requirements

GB/T 15629.3-1995 Information processing systems - local area network - Part 3. Carrier Sense Multiple Access with Collision Detection (CS-MA/CD) Access Method and Physical Layer Specifications Inter

GB 15629.11-2003 Information technology - Telecommunications and information exchange between local area networks and metropolitan area networks-specific requirements - Part 11. Wireless LAN Medium Access Control and Physical Layer Specifications

GB/T 18759.3-2009 Electrical equipment of machines open CNC systems - Part 3. Bus Interface and Communication Protocol

GB/T 21067-2007 industrial machinery and electrical equipment Electromagnetic compatibility - Generic immunity requirements

GB 23313-2009 industrial machinery and electrical equipment Electromagnetic compatibility emission limits Functional safety

GB 28526-2012 Electrical safety of machinery safety-related electrical, electronic and programmable electronic control systems

3 Terms, definitions, symbols and abbreviations

3.1 Terms and Definitions The following terms and definitions apply to this document.

3.1.1 Open CNC System opennumericalcontrolsystem Followed application software built on openness, the platform scalability, compatibility on the principle of numerical control system, so that application software can be a Portability, interoperability and mutual consistency of human-machine interface. [GB/T 18759.1-2002,3.1]

3.1.2 Hardware platform hardwareplatform Software platform and the base member applications running at the bottom of the basic architecture. [GB/T 18759.1-2002,3.4]