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

GB/T 18858.1-2012

Replacing GB/T 18858.1-2002

**Low-voltage switchgear and controlgear -- Controller-device
interfaces (CDIs) -- Part 1: General rules**

低压开关设备和控制设备 控制器 设备接口(CDI) 第1部分: 总则

(English Translation)

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Foreword

GB/T 18858 "Low-voltage switchgear and control equipment Controller - Device Interface" is divided into three parts.

--- Part 1. General;

--- Part 2. Actuator Sensor Interface (AS-i);

Part --- Section 3. DeviceNet.

This section GB/T 18858 Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 18858.1-2002 "Low-voltage switchgear and control equipment Controller - Device Interface (CDI) Part 1 Score. General ", compared with the GB/T 18858.1-2002, the main changes are as follows.

--- Chapter 2, "Normative References" section updated version of the standard reference;

--- Update Table 1 "Immunity Requirements" part of the test pattern and test level, using the current version of the requirements specified in the standard, including.

a) RFEMS trials increase 1.4GHz ~ 2GHz frequency test range;

b) electrical fast transient burst immunity test explicitly for all cable comprising CDI communication medium, the test level Peak voltage 1kV/repetition frequency 5kHz; for all other cable and port, the test voltage peak level 2kV/repetition frequency 5kHz.

This section identical with IEC 62026-1:2007 "low-voltage switchgear and control - Controller - device interfaces - Part 1.

General. "

This part of IEC 62026-1:2007 compared to the main editorial changes made the following.

--- Remove the IEC 62026-1:2007 Foreword;

--- "This standard" be replaced by "of this section." Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- GB 14048.1-2006 Low-voltage switchgear and control equipment Part 1. General (IEC 60947-1:2007, MOD).

This part is proposed by the China Electrical Equipment Industrial Association.

The low-voltage electrical part by the National Standardization Technical Committee (SAC/TC189) centralized.

This section is responsible for drafting unit. Shanghai Electric Apparatus Research Institute,

Shanghai Electric Technology Co., Ltd. Electric Division.

Participated in the drafting of this section. France and Thailand Electric (Jiangsu) Co., Ltd., Changshu Switch Manufacturing Co., Ltd., Shanghai Electric Co. Shares Companies People's Electric Factory, Shanghai People Enterprise Group Electric Co., Ltd. Wenzhou, Shanghai electrical equipment testing by China Quality Certification Center, Zhejiang Tengen Electric Company.

Introduction

Within the scope of this controller - Device Interface (CDI) range includes control systems, factory automation and process automation with the work Industry CDI.

CDI has expanded the scope of industrial use to meet the special needs of users, but none CDI can meet all the requirements. The formation of multi Kinds of patterns for CDI CDI is due to the physical properties, uses, wide range of information content and structural requirements. In order to meet the distance section Condition number of points and the environment, result in different physical requirements CDI signal line and the regulatory function is also different.

While CDI technology changing, this section specifies the general element, common interface and environmental requirements. Related to the CDI common Standardized regulations can help users seeking technical comparison and selection to meet specific use of the distance, the number of nodes, data processing and the apparatus of claim.

This section through the preparation of a dedicated CDI standard that provides a common structure, and the inclusion of special features and capabilities of the interface, so the CDI Selection process can be simplified. Chapter 1 - Chapter 8 included CDI standard specifies basic requirements for a summary trial provisions included in Chapter 9.

Characteristics of standardized CDI also simplifies the preparation of industrial control system software advanced features (such as management control, operator interface and control strategies Programming software) tasks.

In order to complete this standard and easy to use, require special CDI standards, which have been included in GB/T 18858 series of standards other parts.

Low-voltage switchgear and control equipment Controller - Device Interface (CDI) Part 1. General

1 Scope

This section applies to the interface between the low-voltage switchgear and control equipment and a controller (such as a programmable controller, a personal computer, etc.).

This section does not apply to a higher level of industrial fieldbus communication networks

called by the IEC/SC65C research.

GB/T 18858 provisions of this part of the definition of the rules for industrial CDI, elements and basic performance requirements. On all types of CDI Standard features can be used as the basic requirements included in this section focus.

In determining the various CDI all the requirements and test requires the use of the following two major documents.

- a) of this section, the relevant standards include various types of CDI referred to as "Part 1";
- b) GB/T 18858 series of standards dedicated CDI parts.

If the General NA, CDI-specific criteria may not use, or if the basic requirements are not suitable for special occasions, CDI-specific criteria may of General supplemented, but the content of specific standards should not be contrary to its essential requirements, unless there is sufficient technical justification.

Note: For vehicles equipped with CDI products, the product specific requirements set out in the relevant product standard. In addition to the requirements of this section to the provisions of the relevant product standards shall apply.

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 4824-2004 industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement (IEC/CISPR11.2003, IDT) GB/T 17626.2-2006 Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test (IEC 61000-4-2:2001, IDT) GB/T 17626.3-2006 Electromagnetic compatibility - Testing and measurement techniques RFEMS test (IEC 61000-4-3:2002, IDT) GB/T 17626.4-2008 Electromagnetic compatibility - Testing and measurement techniques - Electrical fast transient burst immunity test (IEC 61000-4-4:2004, IDT) GB/T 17626.5-2008 Electromagnetic compatibility - Testing and measurement techniques - Surge (impact) immunity test (IEC 61000-4-5.

2005, IDT)

GB/T 17626.6-2008 Electromagnetic compatibility - Testing and measurement techniques - conducted disturbances induced by RF field immunity (IEC 61000-4-6:2006, IDT) GB/T 17799.2-2003 Electromagnetic compatibility - Generic standards - Immunity for industrial environments (IEC 61000-6-2:1999, IDT) IEC 60947-1:2007 Low-voltage switchgear and control equipment Part 1. General (Low-voltageswitchgearandcon-torlgear-Part 1.