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

GB/T 18039.9-2013

**Electromagnetic compatibility -- Environment -- Compatibility
levels for low-frequency conducted disturbances and signaling
in public medium-voltage power supply systems**

电磁兼容 环境 公用中压供电系统低频传导骚扰及信号传输的兼容水平

(English Translation)

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Foreword

GB/T 18039 "Electromagnetic Compatibility Environment" currently includes the following components.

--- EMC environment Classified GB/Z18039.1-2000 electromagnetic environment;

--- GB/Z18039.2-2000 EMC environment power supply of industrial frequency conducted emission levels in the assessment;

--- GB/T 18039.3-2003 electromagnetic compatibility environment utility voltage power supply system frequency conducted disturbances and signaling and Tolerance level;

--- GB/T 18039.4-2003 electromagnetic compatibility environment facility frequency conducted disturbances compatibility level;

--- GB/Z18039.5-2003 electrical frequency conducted disturbances and signaling in public low-voltage power supply electromagnetic compatibility environment system Magnetic environment;

--- GB/Z18039.6-2005 electromagnetic compatibility environment of low frequency magnetic fields in various environments;

--- GB/Z18039.7-2011 electromagnetic compatibility environment the public power supply system voltage dips, short interruptions and measurement statistics result;

--- GB/T 18039.8-2012 electromagnetic compatibility environment altitude nuclear electromagnetic pulse (HEMP) environment is conducted disturbances;

Tolerance levels.

This is Part 9 GB/T 18039 of.

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

This section uses the translation method is equivalent to using the international standard IEC 61000-2-12:2003 "Electromagnetic compatibility - Environment - Part 2-12. Common Medium voltage power supply systems compatible horizontal frequency conducted disturbances and signaling transmission. " Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- GB 311 Insulation Coordination (all parts) [IEC 60071 (all parts)];

--- GB 311.1-2012 insulation with the first part. Definitions, principles and rules (IEC 60071-1:2006, IDT);

--- GB/T 18039.3-2003 electromagnetic compatibility environment utility voltage power supply system frequency conducted disturbances and signaling and Tolerance level (IEC 61000-2-2:1990, IDT);

--- GB/T 18039.4-2003 electromagnetic compatibility environment facility frequency conducted disturbances compatibility level (IEC 61000-2-4.

1994, IDT);

Measurement --- GB/T 17626.7-2008 Electromagnetic compatibility - Testing and measuring technology for power supply systems and equipment connected harmonics, inter-harmonics Quantity measuring instruments and guidelines (IEC 61000-4-7:2002, IDT).

Electromagnetic Compatibility This part of the National Standardization Technical Committee (SAC/TC246) and focal points.

This section is drafted. Shanghai Electric Apparatus Research Institute, China Electric Power Research Institute, State Grid Electric Power Research Institute, Shanghai-based Industrial Electronic Co., Ltd.

1 Scope

This section GB/T 18039 relates to a frequency range of 0kHz ~ 9kHz and extended to 148.5kHz grid signal transmission system EC conducted disturbances.

This section gives a level of electromagnetic compatibility nominal voltage of 1kV ~ 35kV, 50Hz nominal frequency of medium voltage AC power distribution system (See GB/T 156).

The purpose of this section is to give a public medium-voltage power supply system may appear compatible with all types of electromagnetic disturbance level for guidance.

- a) set limits on the utility grid produces electromagnetic disturbance (including planning level defined 3.1.5);
- b) the relevant provisions of equipment Standardization Technical Committee public power supply systems conducted disturbances immunity levels.

Harassment considered in this section include.

- Voltage fluctuation and flicker;
- 50 times and 50 times less harmonics;
- 50 times less interharmonic;
- High frequency (above 50th harmonic) voltage distortion;
- Voltage dips and short interruptions;
- Voltage imbalance;
- Transient overvoltage;
- Variation of power frequency;
- DC component;
- Grid signal transmission.

Most of harassment described in GB/Z18039.5 section. Even failed to identify compatible level, but also gives some information.

The pressure system covered by this section refers to the public distribution system, applies to.

- a) directly or through a transformer connected to the user device; or
- b) to the public low-voltage power distribution system substation.

Compatible with the provisions of this section apply to the level and point of common coupling medium voltage substation port, see Chapter 4.

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.

IEC 60071 Insulation Coordination (all sections) (Insulationco-ordination) IEC 60071-1
Insulation coordination - Part 1. Definitions, principles and rules
(Insulationco-ordination-Part 1. Defini-tions, principlesandrules) IEC 61000-2-2
Electromagnetic compatibility - Part 2-2. Environmental Public voltage power supply system
frequency conducted disturbances and signaling and Tolerance level
(Electromagneticcompatibility (EMC) -Part 2-2. Environment-Compatibilitylevelsforlow-