# GB

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# Electrical equipment of industrial machines - Electromagnetic compatibility - Emission limits

工业机械电气设备 电磁兼容 发射限值

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# Electrical equipment of industrial machines - Electromagnetic compatibility - Emission limits

## 1 Scope

This standard specifies the EMC emission limits for industrial mechanical, electrical and electronic equipment and control systems (hereinafter referred to as "equipment").

This standard applies to industrial machinery electrical, electronic equipment, control systems or components of electrical (electronic equipment) and control systems, whose rated power supply voltage does not exceed AC 1000 V or DC 1500 V, meanwhile the rated frequency does not exceed 200 Hz.

If there are related special products or product-type electromagnetic compatibility (EMC) emission standards, the product standards or product-type standards will take precedence over this standard, in all aspects.

The electromagnetic emission limits and measurement methods, which are stipulated in this standard, reflect the basic electromagnetic compatibility requirements. After selection, it can ensure that the electromagnetic disturbance, which is generated by equipment working normally in industrial places, will not hinder the normal operation of other equipment.

This standard specifies test requirements for each type of port considered.

Note 1: When the equipment is used, within 30 m from the receiving antenna of a radio or television receiver, the limits specified in this standard may not adequately protect them from interference.

Note 2: In special cases, such as when highly sensitive devices are used nearby, in order to avoid interference with them, it may be necessary to adopt additional attenuation measures to the equipment, in order to further reduce electromagnetic emissions to lower than the specified limits.

## 2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the

or intrude.

# 4 Measurement conditions

Unless otherwise specified in the basic standard, the equipment shall be measured under the specified working conditions of the equipment and under the working state, that can produce the maximum electromagnetic emission.

Note 1: The term "basic standard" is used, due to lack of a more precise vocabulary. The referenced standards (GB 4343.1-2003, GB 4824, GB 9254-2008, GB 17799.3-2001, etc.) are only a single equipment standard related to electromagnetic compatibility. References to "basic standards" are limited to those parts, which state the emission limits, measurement methods, measurement arrangements of the standard.

According to the requirements of the basic standards, the layout and working status of the equipment under test shall be changed, to maximize the emission of the equipment under test.

If the device under test is part of the system, OR is connected to auxiliary equipment, the device under test shall be equipped with a minimum of auxiliary equipment, during measurement, so as to use the port, according to the provisions similar to those described in GB 9254-2008.

The arrangement and working status of the equipment under test, during the measurement, shall be properly recorded in the inspection report.

If the equipment has many similar ports or some ports have many similar connectors, then a sufficient number of ports and connectors shall be selected, to simulate actual working conditions, to ensure coverage of all different types of ports.

# 5 Product documentation

## 5.1 Product documents to be provided by the supplier

Unless the equipment complies with the provisions of GB 17799.3-2001, the supplier shall expressly indicate, in written warning, that this equipment is not suitable for residential, commercial, light industrial environments.

If special measures are taken to meet the requirements of this standard, such as the use of shielded cables or special cables, the supplier shall indicate in writing.

## 5.2 Documents available upon request of the buyer or user

A list of auxiliary equipment, which is connected to the equipment under test and complying with the emission limit requirements of this standard.

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