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Electromagnetic compatibility - Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16A and ≤75A per phase

(IEC 61000-3-12:2004, Electromagnetic compatibility (EMC) - Part 3-12:

Limits - Limits for harmonic currents produced by equipment connected to
public low-voltage systems with input current
>16A and ≤75A per phase, IDT)

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Foreword

GB 17625 *Electromagnetic compatibility - Limits* currently consists of the following parts:

GB 17625.1-2012 *Electromagnetic compatibility - Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

GB 17625.2-2007 *Electromagnetic compatibility (EMC) - Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase*

GB/Z 17625.3-2000 *Electromagnetic compatibility - Limits - Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16A*

GB/Z 17625.4-2000 *Electromagnetic compatibility - Limits - Assessment of emission limits for distorting loads in MV and HV power systems*

GB/Z 17625.5-2000 *Electromagnetic compatibility - Limits - Assessment of emission limits for fluctuating loads in MV and HV power systems*

GB/Z 17625.6-2003 *Electromagnetic compatibility - Limits - Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16A*

GB/T 17625.7-2013 *Electromagnetic compatibility - Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤ 75 A and subject to conditional connection*

GB/T 17625.8-2015 *Electromagnetic compatibility - Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase*

This Part is the 8th part of GB 17625 *Electromagnetic compatibility - Limits*.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part uses translation method to make it identical with IEC 61000-3-12:2004 *Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase*.

The Chinese documents which have consistency with the international normative reference in this Part are as follows:

- GB/T 156-2007 Standard voltage (IEC 60038:2002, MOD)
- GB/T 4365-2003 Electrotechnical terminology - Electromagnetic compatibility [IEC 60050(161):1990, IDT]
- GB/T 18039.3-2003 Electromagnetic compatibility - Environment - Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems (IEC 61000-2-2:1990, IDT)
- GB/T 18039.4-2003 Electromagnetic compatibility - Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances (IEC 61000-2-4:1994, IDT)
- GB 17625.1-2012 Electromagnetic compatibility - Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2:2009, IDT)
- GB/T 17626.7-2008 Electromagnetic compatibility - Testing and measurement techniques - General guide on harmonics and interharmonics measurements and instrumentation for power supply systems and equipment (IEC 61000-4-7:2002, IDT)

This Part makes the following editorial changes:

- the name of this Part is modified as *Electromagnetic compatibility - Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase*;
- IEC 61000-3-12:2004 is the 12th part of IEC 61000-3 series standards; according to the sorting order of national standard No. of *Electromagnetic compatibility - Limits*, this Part is corresponding to Part 8 of this Standard;
- deleted the foreword and introduction of IEC 61000-3-12:2004 English version.

This Part was proposed by and shall be under the jurisdiction of National Technical Committee on Electromagnetic Compatibility of Standardization Administration of China (SAC/TC 246).

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Electromagnetic compatibility - Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current $>16\text{A}$ and $\leq 75\text{A}$ per phase

1 Scope

This part deals with the limitation of harmonic currents injected into the public supply system.

- a) equipment's requirements and emission limits;
- b) type test and simulation method.

NOTE 1 Tests according to this Part are type tests of complete pieces of equipment.

NOTE 2 Conformity with this Part can also be determined by validated simulations.

The limits given in this Part are applicable to electrical and electronic equipment with a rated input current exceeding 16 A and less than and including 75 A per phase, intended to be connected to public low-voltage a.c. distribution systems of the following types:

- a) nominal voltage less than and including 220 V, single-phase, two or three wires;
- b) nominal voltage less than and including 380 V, three-phase, three or four wires;
- c) nominal frequency 50 Hz.

This Part applies to equipment intended to be connected to low-voltage systems interfacing with the public supply at the low-voltage level. It does not apply to equipment intended to be connected only to private low-voltage systems interfacing with the public supply only at the medium- or high-voltage level.

NOTE 1 The scope of this Part is limited to equipment connected to public low voltage systems because emissions from equipment installed in private low voltage systems can be controlled in aggregate at the MV point of common coupling using procedures defined in IEC/TR 61000-3-6 and/or by means of contractual agreements between the distribution

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