

**ELECTRICAL EQUIPMENT FOR MEASUREMENT,
CONTROL AND LABORATORY USE –
EMC REQUIREMENTS –**

**Part 3-2: Immunity requirements for safety-related
systems and for equipment intended to perform
safety-related functions (functional safety) –
Industrial applications with specified
electromagnetic environment**

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65.

The text of this interpretation sheet is based on the following documents:

ISH	Report on voting
65A/632/ISH	65A/644/RVD

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

Introduction

IEC 61326-3-2:2008 gives immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) in industrial applications with specified electromagnetic environment. The actual immunity levels, test parameters and applicable basic standards are listed in Table 1a to Table 1f of that standard.

In case of the phenomenon “Conducted r.f.” the basic standard IEC 61000-4-6:2004 shall be applied. The frequency range under consideration in IEC 61326-3-2:2008 is from 10 kHz to 80 MHz though the basic standard IEC 61000-4-6:2004 lists calibration parameters for the frequency range from 150 kHz to 80 MHz only. This lack in having some information concerning the calibration was the reason for having introduced footnote c in Table 1b (and for the identical footnotes regarding this phenomenon in the other tables).

However, footnote c in Table 1b leaves some space for interpretation as it is not entirely clear whether it applies to the entire calibration situation for all types of injection methods or to that one of CDNs only, as in the first case some information would be missing for the situation of testing via clamp injection.

Interpretation:

Footnote c in Table 1b shall be interpreted as follows:

The basic standard IEC 61000-4-6:2004 allows different injection methods, and their selection shall be done according to the rules for selecting injection methods and test points (see 7.1 of IEC 61000-4-6:2004).

In case the CDN injection method is applied the impedance of the CDN in the frequency range 10 kHz up to 150 kHz has to comply with the asymmetric impedance requirements of IEC 61000-4-6:2004 at 150 kHz. Calibration shall be performed in accordance with IEC 61000-4-6:2004. Sufficient decoupling can be demonstrated if the impedance criterion is met both with the AE port short-circuited and then open-circuited.

In case the clamp injection is applied the procedures of 7.3 or 7.4 of the basic standard IEC 61000-4-6:2004 are applicable in the frequency range from 10 kHz to 150 kHz as well.

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