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IEC 61000-4-4 (Second Edition) Corrigendum 2

(1) Preface

We inform you of the issue of the Corrigendum 2 of the IEC-61000-4-4 (Second edition-2004), which was issued in June 2007 and this Corrigendum 2 is effective retroactive to the issue date of the IEC 61000-4-4 (July, 2004). In general, the corrigendum is to be issued to rectify the erroneous descriptions or complement the interpretations.

(2) The contents of the IEC 61000-4-4 (Second Edition) Corrigendum 2

In the Corrigendum 2, the method of verifying the characteristic of CDN (Coupling Decoupling Network) has been modified.

[Deleted description]

The waveform shall be verified at the common mode output of the coupling/decoupling network with a single 50-ohm termination.

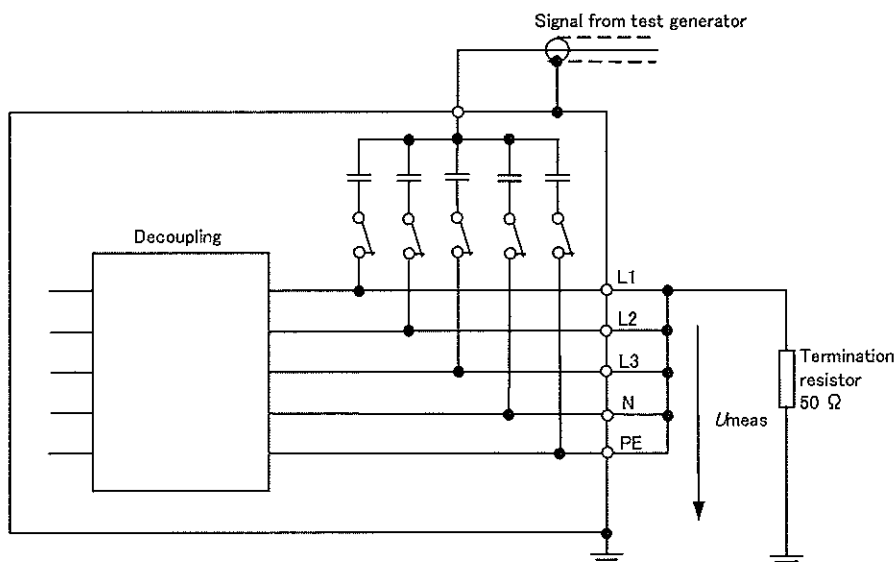
The functionality verification of each single coupling/decoupling path is recommended.

[Added description]

The waveform shall be verified at the common mode output of the coupling/decoupling network with all outputs tied together and a single 50-ohm termination as shown in Figure 14. In addition to verification of the waveform at the common mode output of the coupling/decoupling network, it is recommended that each individual output be checked to ensure that all outputs are functional.

[Added figure] Figure 14:

Verification of the waveform at the common mode output of the coupling/decoupling network



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(3) About our Fast Transient Burst Simulators FNS-AX3-A16/B50 and other models

The current Fast Transient Simulators Model: FNS-AX3-A16 and FNS-AX3-B50 are expected to conform to the Corrigendum 2 though a verification of the waveform in compliant manner with the Corrigendum 2 shall be done to ensure that each unit really conform to it.

The following table will show you how our Fast Transient Simulators conform (or does not conform to) the Corrigendum 2.

Models	Situations	Remarks
FNS-AX3-A16	FNS-AX3-A16 <u>conforms to the Corrigendum 2 as is.</u> A verification is necessary to ensure that your FNS-AX3-A16 conforms to the Corrigendum 2.	The current model
FNS-AX3-B50	The FNS-AX3-B50 <u>conforms to the Corrigendum 2 if a correction through output voltage settings is performed by hand.</u> (*) A verification is necessary to ensure that your FNS-AX3-B50 conforms to the Corrigendum 2. In the new method, verifying the characteristics of CDN with connecting all lines of it together, the peak voltage value of the output waveform from the CDN is lowered, compared with the value measured with the former method, in which the characteristics of the CDN was verified line by line, and becomes lower than the lower limit of the tolerance prescribed in the standard. Please refer to the attached sheet regarding "How to apply Corrigendum 2 of IEC 61000-4-4 (Second edition-20004) to your test."	The current model
FNS-AXII-A16 FNS-AXII-B50	These models <u>do not conform to the Corrigendum 2.</u>	Discontinued models
FNS-2002	This model <u>does not conform to the Corrigendum 2.</u>	Discontinued model

(*) Test results might vary with or without the correction. So we ask customers to make a decision on whether the correction of the output voltage setting should be performed or not.

(4) New Fast Transient Burst Simulator FNS-AX3-A16A/ FNS-AX3-B50A

We are pleased to inform you that we will release our new Fast Transient Burst Simulators FNS-AX3-A16A and FNS-AX3-B50A conforming to the Corrigendum 2 soon. For additional information, please contact our sales agent in your country or contact us.

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FNS-AX3-B50

How to apply Corrigendum 2 of IEC 61000-4-4 (Second edition-2004) to your test

In IEC61000-4-4, the basic standard of EFT/B immunity test, the method of verifying the characteristics of CDN (Coupling Decoupling Network) was modified by "Corrigendum 2" which was issued in June, 2007.

In the new method, verifying the characteristics of CDN with connecting all lines of it together, the peak voltage value of output waveform from CDN is lowered if it is compared with the value measured with the former method, in which the characteristics of CDN was verified line by line, and becomes lower than the lower limit of the tolerance prescribed in the standard.

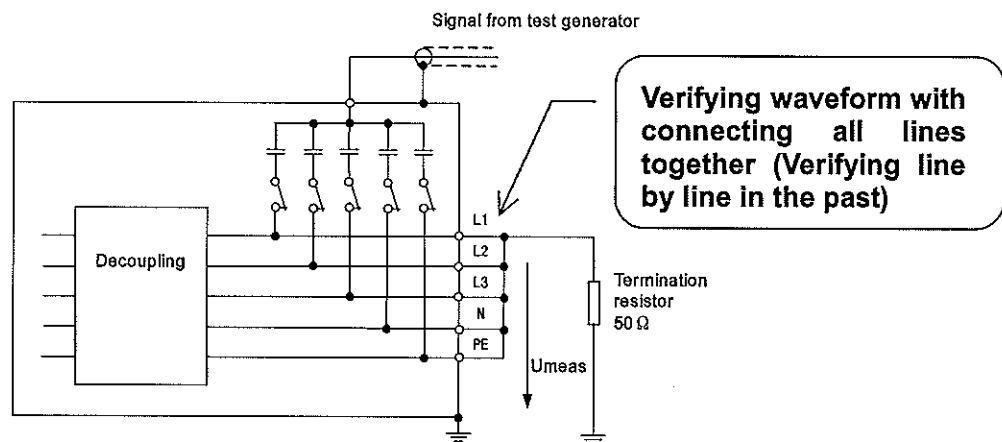


Fig. 1 CDN output verifying method in Corrigendum 2

The fall of the peak voltage value is caused by increase of stray capacitance and inflow of pulses into CDN. Therefore, if the loss in CDN is compensated by setting higher voltage previously, the test with taking the new standard into consideration will be possible. The amount of the loss depends on the number of injection lines. Refer to the table 1 as below and decide the proper set voltage.

Table 1. Test level to power supply port and proper set value

Test level	Test voltage [kV]	Set voltage [V]			
		Single phase three lines L/N/PE	Three phase three lines L1/L2/L3	Three phase four lines L1/L2/L3/N	Three phase five lines L1/L2/L3/N/PE
1	0.5	500	500	550	550
2	1	1000	1000	1100	1100
3	2	2000	2000	2200	2200
4	4	4000	4000	4400	4400
X	Vp	No need to compensate (*)	No need to compensate	Vp × 1.1	Vp × 1.1

(*) No compensation is necessary in the single phase CDN model: FNS-AX3-A16.