



Choose certainty.
Add value.

Technical Report

for

NFPA79 Listing

of the Extension Modules EM4F-DO, EM4/8F-RO and EM-8DI

Applicant

Siemens AG

Werner-von-Siemens-Str. 48

D-92220 Amberg

Germany

Manufacturer

Siemens AG

Werner-von-Siemens-Str. 48

D-92220 Amberg

Germany

Report no. 717503395

Revision: 1.0, Date 10.09.2010

Test and Certification body

TÜV SÜD Rail GmbH

Rail Automation

D-80339 Munich

This technical report may be represented only in complete wording. The use for promotion needs written permission. It contains the result of a unique investigation of the product being tested and places no generally valid judgment about characteristics out of the running fabrication. Official translations of this technical report are to be authorized by the test and certification agency.



Revision history

Revision	Date	Author	Status	Modifications
1.0	2010-09-10	M. Ramold	Initial	-

Table 1: Revision history

Content

Revision history	2
Content	2
List of Tables	2
1 Target of Evaluation (ToE)	3
2 Purpose of the Document	3
3 Basis of Testing	3
4 Documents provided for testing of EM4F-DO, EM4/8F-RO and EM-8DI	3
5 Performance and result of tests	4
5.1 Test reports	4
5.2 Description of the assessment	4
6 Summary	5

List of Tables

Table 1: Revision history	2
Table 2: Documentation	4
Table 3: Test results	4



1 Target of Evaluation (ToE)

Subject of the approval are the safety-related Extension Modules EM4F-DO, EM4/8F-RO and EM-8DI listed in [D2] from Siemens AG according to NFPA79. The Project No. related to this Technical Report was as follows: 717503395.

2 Purpose of the Document

This report presents the approval results related to an IEC 61508:2001 certified product. Therefore the assessment is restricted to the auxiliary requirements demanded by NFPA 79. The underlying test documentation is listed in section 4, the regarded standards in section 3.

3 Basis of Testing

The regulations and guidelines which form the basis of the type testing are listed below.

No.	Standard	Title
[L1]	NFPA79:2007	Electrical Standard for Industrial Machinery

4 Documents provided for testing of EM4F-DO, EM4/8F-RO and EM-8DI

Following documents were provided by Siemens AG to be checked and evaluated by the test house.

No.	Title	Document-No./ File identifier	Revision	Date
[D1]	Zertifikat	44 781 09 555251 000	-	2009-10-29
[D2]	Anlage 1 zum Zertifikat	44 781 09 555251 000	-	2009-10-29
[D3]	Nachweis Beständigkeit Typenschild	Typschild_Best %C3%A4ndigkeit_BG.pdf	-	2009-03-13
		Best%C3%A4ndigkeit_Etik etten.pdf		1999-11-22
[D4]	Untersuchungsbericht Sinus-Vibrations- und Schocktest	Nr.: E4.965TeilB	-	2009-06-29



No.	Title	Document-No./ File identifier	Revision	Date
[D5]	Produktdatenblatt Sirius MSS Erweiterungsmodule	GWA 4NEB 926 2585-30 DS 04	-	2010.04.22
[D6]	Modulares Sicherheitssystem 3RK3 Systemhandbuch 10/2009	926 2530-01 DS 02	-	2009-10
[D7]	Umweltprüfbericht	Test Report No. 09025TEk	-	2009-05-13
[D8]	EMC measurements	09-E003863-BM-B01	-	2009-07-02
[D9]	EMC measurements	09-E003863-BM-A01	-	2009-07-02

Table 2: Documentation

5 Performance and result of tests

5.1 Test reports

Following test reports were issued by TÜV SÜD Rail GmbH or other accredited test laboratories.

No.	Title	Document-No./ File identifier	Revision	Date
[R1]	Technical Report	717503395	1.0	2010-09-10
[R2]	Checkliste NFPA79	Checkliste nfpa79_2007.doc	1.1	2010.09.08

Table 3: Test results

5.2 Description of the assessment

Based on the Checklist for NFPA compliance ([R2]) TÜV SÜD Rail GmbH has assessed the test documents [D1] - [D9] for the Extension Modules EM4F-DO, EM4/8F-RO and EM-8DI.

Result:

The results and completeness of the tests performed and documented by the customer have been verified and compared with the requirements of NFPA79. The necessary tests for an approval in accordance to NFPA 79:2007 have been performed and documented adequately.



6 Summary

The Extension Modules EM4F-DO, EM4/8F-RO and EM-8DI comply with the relevant requirements of NFPA 79, if the conditions and restrictions of the related user manuals are met.

Application specific requirements of NFPA 79 which are not part of this assessment shall be regarded for the safety instrumented system on site.

A handwritten signature in black ink, appearing to read 'Peter Weiß'.

i.V. Peter Weiß

Reviewer

A handwritten signature in black ink, appearing to read 'M. Ramold'.

i.A. M. Ramold

Project Manager