



RDW

Vehicle Technology Division

THE NETHERLANDS  
(N E D E R L A N D)



EEC TYPE-APPROVAL CERTIFICATE

Communication concerning the:

- granted of type-approval
- extension of type-approval
- refusal of type-approval
- withdrawal of type-approval

of a type of vehicle/component/separate technical unit with regard to 72/245/EEC Directive as last amended by 95/54/EC Directive.

Type-approval N° : e4\*72/245\*95/54\*0692\*00

Reasons for extension : ---

Approval mark : e 4  
020692

SECTION I

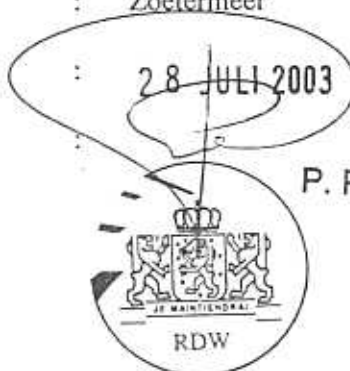
- 0.1. Make (trade name of manufacturer) : FEDERAL SIGNAL
- 0.2. Type and general commercial description(s) : SIGNAL MASTER CONTROLLER  
SMC5 SIGNAL MASTER CONTROLLER  
SMC16 SIGNAL MASTER CONTROLLER
- 0.3. Means of identification of type, if marked on the vehicle/component/separate technical unit : See technical documentation
- 0.3.1. Location of that marking : See technical documentation
- 0.4. Category of vehicle : ---
- 0.5. Name and address of manufacturer : FEDERAL SIGNAL CORPORATION  
2645 Federal Signal Drive  
University Park, IL 60466-3195 U.S.A.
- 0.7. In the case of components and separate technical units, location and method of affixing of the approval mark : See technical documentation
- 0.8. Address(es) of assembly plant(s) : FEDERAL SIGNAL CORPORATION  
2645 Federal Signal Drive  
University Park, IL 60466-3195 U.S.A.



Type-Approval Number : e4\*72/245\*95/54\*0692\*00

## SECTION II

1. Additional information (where applicable) : See appendix
2. Technical service responsible for carrying out the tests : IDIADA AT  
L'Albornar, P.O. Box 20  
E-43710 Santa Oliva (Tarragona)  
SPAIN
3. Date of test report : 05.12.2002
4. Number of test report : 0211271
5. Remarks (if any) : See appendix
6. Place : Zoetermeer
7. Date : 28 JULI 2003
8. Signature



9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

- Test report: see section II item 4 (Pages 5)
- Technical documentation (Pages 13)

Type-Approval Number : e4\*72/245\*95/54\*0692\*00

**Appendix to Type-Approval Communication Form N° e4\*72/245\*95/54\*0692\*00  
Concerning the Type-Approval of a Vehicle with regard to Directive 72/245/EEC as last amended  
by Directive 95/54/EC**

1. Additional information (where applicable)
- 1.1. Electrical system rated voltage : 12V, negative ground
- 1.2. This ESA can be used on any vehicle type with the following restrictions : ---
- 1.2.1. Installation conditions, if any : ---
- 1.3. This ESA can be used only on the following vehicle types : The use of this ESA is strictly reserved to the priority vehicles legally authorised
- 1.3.1. Installation conditions, if any : See technical documentation
- 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were : Free-field; 20 – 1000 MHz
- 1.5. Approved/accredited laboratory responsible for carrying out the tests : IDIADA AT  
L'Albornar, P.O. Box 20  
E-43710 Santa Oliva (Tarragona)  
SPAIN
5. Remarks (if any) : ---



**REPORT N° 0211271**

**DIRECTIVE 72/245/EEC AND 95/54/EC RELATING TO  
ELECTROMAGNETIC COMPATIBILITY**

Page 1/5

Applicant : FEDERAL SIGNAL VAMA, S.A.  
Manufacturer : FEDERAL SIGNAL CORPORATION  
2645 Federal Signal Drive  
University Park, IL 60466-3195 U.S.A.  
Trade mark : FEDERAL SIGNAL  
Type : Signal Master Controller  
Commercial descriptions : SMC5 Signal Master Controller,  
SMC16 Signal Master Controller,  
Place and date of issued the test report : IDIADA AT, 5 December 2002

**IDIADA**  
Exp.n 0211271

**CONCLUSIONS:** This Electrical/electronic sub-assembly (ESA) FULFILS the prescriptions about electromagnetic compatibility, in application to Directive 72/245/EEC, last amended by Directive 95/54/EC, as detailed in the annex to this report.

Performed by:



M.J. Martínez Pérez  
TEST ENGINEER

INSTITUTO DE INVESTIGACION  
APLICADA DEL AUTOMOVIL

9 - 12 - 2002

SALIDA N° 6123

Revised by:



R. Santafé i Guju  
HOMOLOGATION MANAGER

- THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE .
- THE PARTIAL REPRODUCTION OF THIS REPORT WITHOUT THE PERMISSION OF IDIADA IS COMPLETELY FORBIDDEN.

**ANNEX TO THE REPORT**

1. ELECTRICAL/ ELECTRONIC SUB-ASSEMBLY CHARACTERISTICS

1.1 Electrical/electronic sub-assembly

Mark : FEDERAL SIGNAL  
Type : Signal Master Controller  
Commercial descriptions : SMC5 Signal Master Controller,  
SMC16 Signal Master Controller  
Power supply : 12 V  
Sample reception date : December 2001

**IDIADA**  
Exp n 0211271 -

2. ELECTROMAGNETIC RADIATION TEST

2.1 Broadband electromagnetic radiation test

Test method : According to Annex VII of Directive 95/54/EC  
Frequencies' Range : 30 – 1000 MHz  
Test Results : See page 3 (SMC5)  
See page 4 (SMC16)

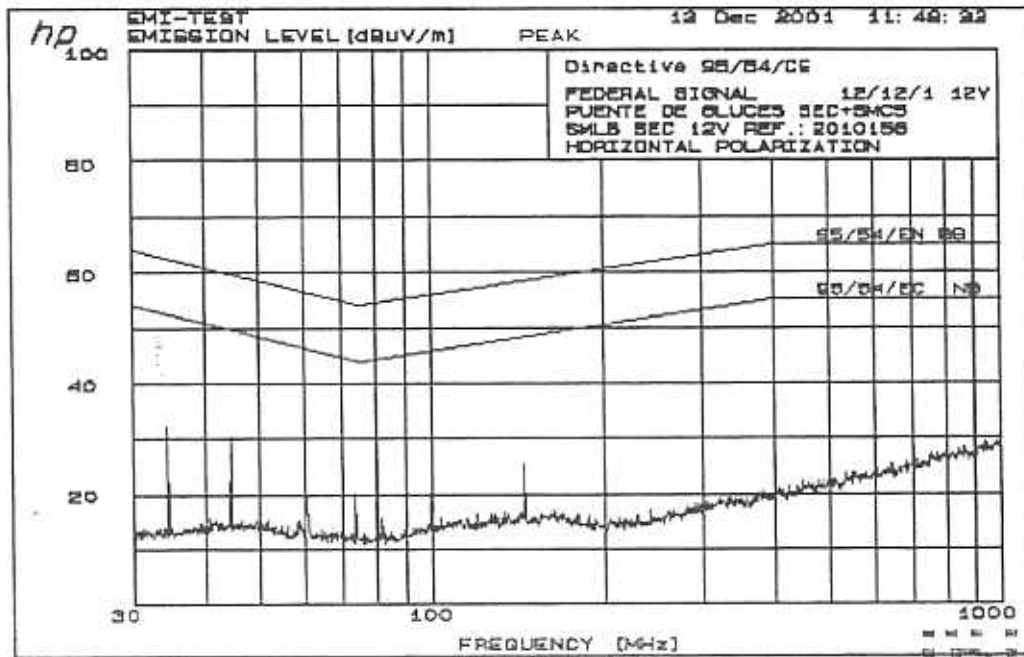
**CORRECT / NOT-CORRECT**

2.2 Narrowband electromagnetic radiation test

Test method : According to Annex VIII of Directive 95/54/EC  
Frequencies' Range : 30 – 1000 MHz  
Test Results : See page 3 (SMC5)  
See page 4 (SMC16)

**CORRECT / NOT-CORRECT**

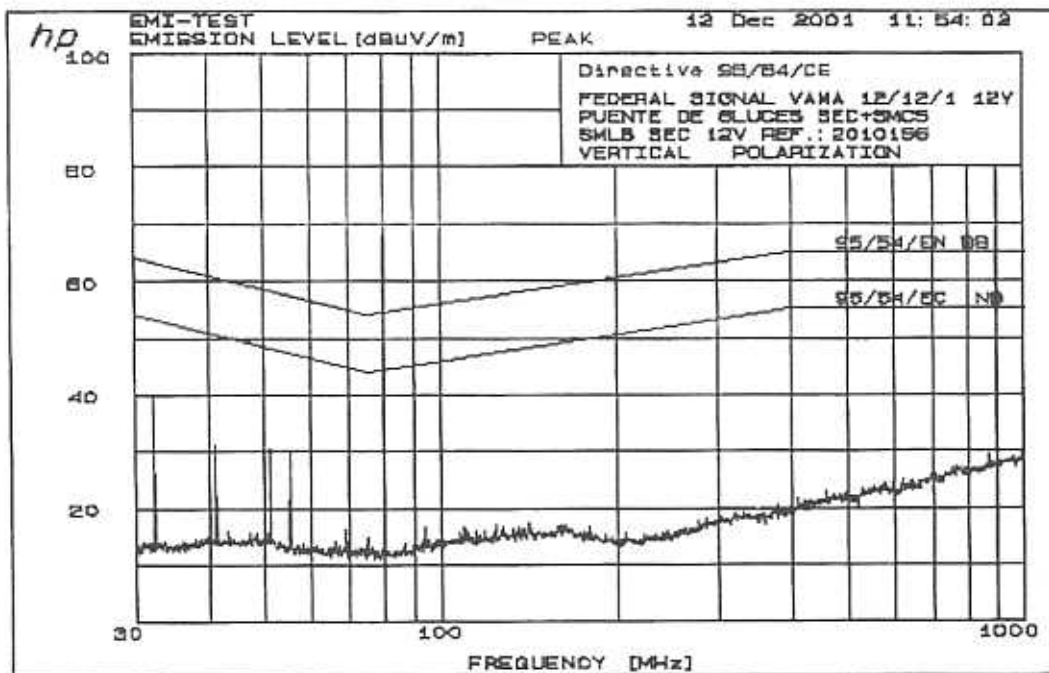
**Broadband and Narrowband - Horizontal Polarisation (SMC5)**



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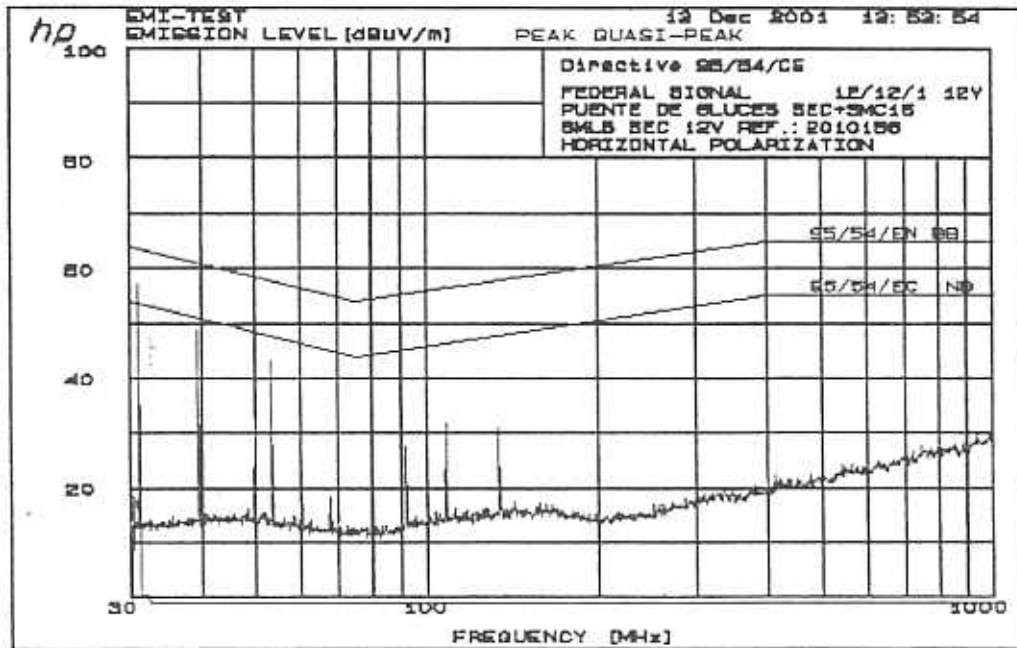
Exp. 0211271 -

**Broadband and Narrowband - Vertical Polarisation (SMC5)**



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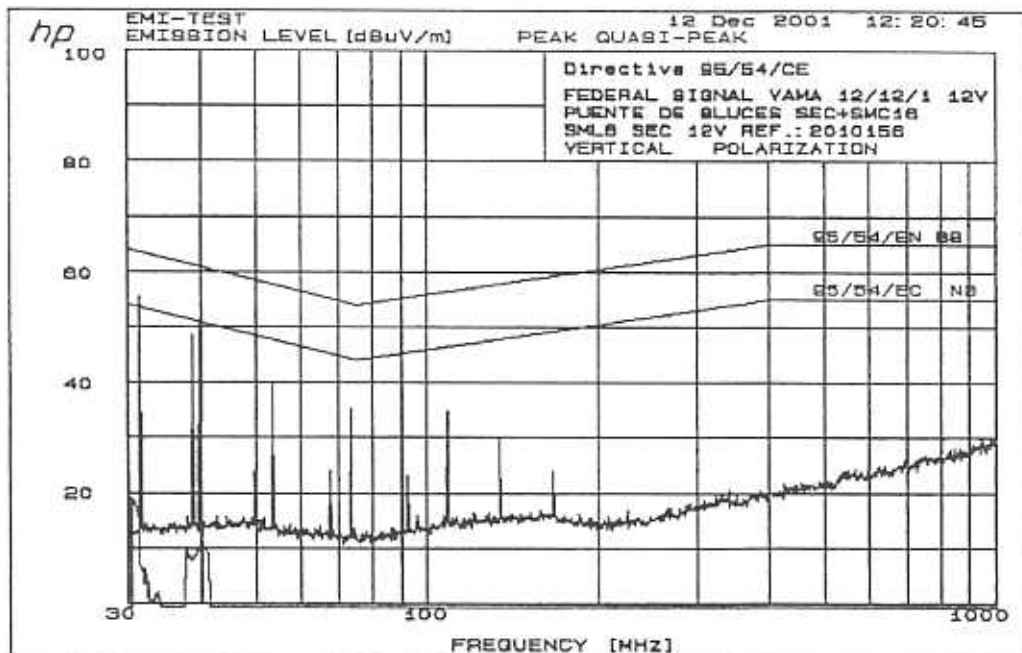
**Broadband and Narrowband - Horizontal Polarisation (SMC16)**



Note: The electromagnetic emissions have been discriminated like broadband emission

**IDIADA**  
EXP. N° 0211271 -

**Broadband and Narrowband - Vertical Polarisation (SMC16)**



Note: The electromagnetic emissions have been discriminated like broadband emission

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3. ELECTROMAGNETIC IMMUNITY TEST

Configuration of test : According to Annex IX of Directive 95/54/EC.  
Frequency range : 20 MHz – 1000 MHz  
Polarisation : Horizontal and Vertical

CORRECT / NOT CORRECT

**IDIADA**

Exp.n 0211271 -

Test place: LGAI, Barcelona (SPAIN)  
Test date: December 2001, January 2002



TEST ENGINEER

- THE PRESENTED RESULTS REFER ONLY TO THE TESTED SAMPLE .
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