



Certificate

of
Approval
of
Components and Systems

Holder of the Approval:

System Sensor Europe
Charles Avenue
GB- Burgess Hill, West Sussex RH15 9UF

Approval No.:	No. of pages:	Valid from:	Valid to:
G 297008	5	18.02.2008	17.02.2012

Subject matter of the Approval:

Sounders
Type EMA 1224FR , EMA 1224FW

Use:

in Automatic Fire Detection Systems

Basis for approval:

DIN EN 54, Part 3 (08/06) - Sounders
VdS 2504 (12/96) - Smoke Detectors, Sect 5.6 (EMV)
VdS 2344 (12/05) - Procedure Guidelines

This approval is valid only for the specified component/system as submitted for the test

- together with the parts listed in enclosure 1
- documented in the technical papers acc. to enclosure 2 (n/a for systems)
- for application in the specified fire protection and security installations. Use of the subject matter of the approval, is subject to the hints/comments of enclosure 3.

The validity of the approval can be extended upon application. Application for extension shall be submitted six months before expiry of the current approval at the latest.

This certificate may only be reproduced in its present form without any modification including all enclosures. All changes of the underlying conditions of this approval shall be reported

by registered mail at once to the VdS Certification Body enclosing the required documentation.

Any advertising with this VdS approved component/system shall reflect the correct contents of the certificate and shall not violate the trade practice rules.

Köln (Cologne), 28.02.2008

Schüngel

Managing Director

i.V. Lüttenberg

Head of the VdS Certification Body

VdS Schadenverhütung GmbH
Zertifizierungsstelle
Amsterdamer Str. 174
D-50735 Köln

A company of the Gesamtverband der Deutschen Versicherungswirtschaft e.V. (German federation of insurance companies)

Accredited by the "Deutsche Akkreditierungsstelle Technik (DATech)" as a certification body for the areas of fire protection and security



DAT-ZE 005/92-32



Enclosure 1

Sheet 1

To Certificate of Approval No. G 297008

Date 28.02.2008

The approved component/system comprises the following parts:

Description of component	Type	Applicant's Registration No.	Approval number of component (only complete for system approval)
Sounder (red) Sounder (white)	EMA 1224FR EMA 1224FW		



To Certificate of Approval No. G 297008

Date 28.02.2008

The approved component/system is described as follows:

Type of document	Manufacturer's identification	Date	Number of Pages
BRE Test Report No. TE 221470 dated 01.03.2006			
VdS Test Report No. BMA 03043 dated 13.08.2003			
VdS Test Report No. BMA 01033 dated 24.04.2001			
Delta Test Report No. No. 28390-1, rev. 1, dated 24.03.1997			
EMA 1224FR , EMA 1224FW:			
Installation Instructions	D 675 Issue 4	---	4
Sounder Performance Data	D 531 Issue 2	---	17
Sounder Mode of Operation	Issue 1	---	1
Label Detail	05/2434 Issue 3	04.05.2005	1
Transducer T71-05-02	01/2037 Issue B	28.06.1996	1
Nose Cap C58-221-00, C58-221-01	01/2016 Issue N	24.08.2000	2
PCB Cover	01/2015 Issue H	31.07.1995	1
Gasket	01/2026 Issue C	27.09.1995	1
Sounder Housing	01/2020 Issue F	21.08.1998	2
Schematic	C37-452-11 Issue B	13.06.2000	1
Artwork	P30-398-11 Issue A	10.03.2000	1
Pin Insertion Assembly	X70-9137-010 Issue A	03.01.2000	1



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Date 28.02.2008

The approved component/system is described as follows:

Type of document	Manufacturer's identification	Date	Number of Pages
VCD Assembly	X70-9138-011 Issue B	13.06.2000	1
Manual Assembly	X70-9139-011 Issue A	10.03.2000	1
Manual Assembly	X70-9140-010 Issue A	03.01.2000	1



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Instructions for the application of the approval component/system (see enclosure 1):

Sounders type EMA 1224FR and EMA 1224FW are approved as alarm devices for the use in automatic fire detection and fire alarm systems.

Both sounders comply with environmental class A and is intended for the use in buildings.

16 different tones may be adjusted at the sounders.

The following tones are tested and approved for the use in fire detection and fire alarm systems:

<u>Tone No</u>	<u>Tone</u>	<u>Frequency</u>
1	Sweep	500/1200Hz 0.015s
2	Continuous	2400Hz
3	Intermittend	1200/0Hz 0.02
4	Whoop	1200/500Hz 0.10s
5	Continuous	800Hz
6	Sweep	500/1200Hz 0.50s
7	Alternating	800/1000Hz 0.05s
8	Intermittend	2400/0Hz 0.5s
9	Sweep	500/1200Hz 0.12s
10	Continuous	2400Hz
11	Intermittend	1200/0Hz 0.5s
12	Whoop	1200/500Hz 1.00s
13	Continuous	800Hz
14	Sweep	500/1200Hz 4.0s
15	Alternating	800/1000Hz 0.50s
16	Intermittend	2400/0Hz 0.50s

	<u>12 V DC</u>	<u>24 V DC</u>
Operating voltage range:	(10 ... 14) V DC	(21 ... 27) V DC
Current consumption:	12 mA	20 mA