1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3	EC - Type Examination Certificate Number:	**Baseefa10ATEX0096X**
4	Equipment or Protective System:	**PAGASYS Loudspeaker**
5	Manufacturer:	**Federal Signal Corporation**
6	Address:	**2645 Federal Signal Drive, University Park, Illinois, 60466-3195,USA**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No.
GB/BAS/ExTR10.0088/00 & GB/BAS/ExTR09.0245/00

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0: 2009 EN60079-1:2007 EN 60079-7: 2007 EN 60079-18: 2004 IEC 60079-31: 2008

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

See Schedule

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **5121**

Project File No. **06/1019**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

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Registered in England No. 4305578. Registered address as above.

13 **Schedule**

14 **Certificate Number Baseefa10ATEX0096X**

15 Description of Equipment or Protective System

The PAGASYS Loudspeaker is a 100Vrms line powered loudspeaker with several user-selectable audio power levels from 0.2W to 25W.

The equipment comprises of a flameproof speaker driver unit, encapsulated into a horn housing along with a transformer and transient protection PCB. The exposed surface of the encapsulation is located within a terminal enclosure at the rear of the assembly. Also located in the terminal enclosure is a replaceable encapsulated fuse assembly and user screw terminals for external and power selection connections. The PAGASYS loudspeaker is approximately 320mm in length and 230mm in diameter.

User connections enter the terminal enclosure via suitably certified cable glands and terminate on the screw terminals provided.

The flameproof speaker driver unit has been separately assessed as Ex d in GB/BAS/ExTR09.0245/00. The encapsulation of the transient protection PCB and fuse assembly meet the requirements of Ex mb. The terminal enclosure and transformer meet the requirements of Ex e. The screw terminals are separately certified Ex e terminals.

Rated Voltage: 100Vrms @ 1kHz

The marking of the equipment shall include the following:

Model P-LS2B
Ex d e mb IIB + H2 T6 Gb (-50°C ≤ Ta ≤ +55°C)
or
Ex d e mb IIB + H2 T5 Gb (-50°C ≤ Ta ≤ +70°C)

Model P-LS2C
Ex d e mb IIC T6 Gb (-50°C ≤ Ta ≤ +55°C)
Ex tb IIIC IP66 T85°C Db (-50°C ≤ Ta ≤ +55°C)
or
Ex d e mb IIC T5 Gb (-50°C ≤ Ta ≤ +70°C)
Ex tb IIIC IP66 T100°C Db (-50°C ≤ Ta ≤ +70°C)

16 Report Number

GB/BAS/ExTR10.0088/00 & GB/BAS/ExTR09.0245/00

17 Special Conditions for Safe Use

1. Except when shown in a certificate as being internal wiring of apparatus, not more than one single or multiple strand lead shall be connected into either side of any terminal, unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped boot lace ferrule.
2. Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat.
3. All terminal screws, used and unused, shall be tightened down to between 0.5 Nm and 0.7 Nm.

4. Where the prong of an insulating comb is used in a terminal way, a further single conductor of 1 mm^2 minimum cross-sectional area may be connected to the same terminal way on top of the prong.

5. The terminals shall never be exposed to temperatures outside of the range –50°C to +130°C. In addition, they shall only be installed and wired with cable in a temperature range of –10°C to +80°C.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
259287A	1 of 1	7	2/17/10	PAGASYS Loudspeaker General Arrangement
259288A	1 of 1	5	12/10/09	Driver Housing Assembly
259289A	1 of 1	4	2/16/10	Transformer, Audio, 100V, 25W
259290A	1 of 1	3	11/13/09	Fuse Module, Encapsulated
259291A	1 of 1	7	4/15/10	Certification Labels, PAGASYS Loudspeaker
259292A	1 of 1	1	01/22/10	Transformer Assy, Audio, 25W, 100V
259294A	1 of 1	2	10/15/09	Wiring Schematic 100V Loudspeaker
259295A	1 of 1	2	11/09/09	PCBA, Transient Protection
259300A	1 of 1	5	03/19/10	PAGASYS Loudspeaker Encapsulation Procedures