IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx BAS 15.0104X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2015-10-23** Page 1 of 3	

Applicant: **Federal Signal Corporation**
2645 Federal Signal Drive
University Park
Illinois
60484
United States of America

Electrical Apparatus: **Global Series Modular Audible Device**
Optional accessory:

Type of Protection: **Flameproof, increased safety, dust protected**

Marking: **Ex db IIB T5 Gb or Ex db e IIB T5 Gb**
Ex tb IIIC T100°C Db IP66 (T_{amb} = -50°C to +49°C)
Ex db IIC T4 Gb or Ex db e IIC T4 Gb
Ex tb IIIC T135°C Db IP66 (T_{amb} = -50°C to +60°C)

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)

Date: 23/10/15

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 15.0104X

Date of Issue: **2015-10-23** Issue No.: **0**

Manufacturer: **Federal Signal Corporation**
2645 Federal Signal Drive
University Park
Illinois
60484
United States of America

Additional Manufacturing location (s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
GB/BAS/ExTR15.0132/00

Quality Assessment Report:

US/UL/QAR06.0012/06

IECEx Certificate of Conformity

Certificate No.: IECEx BAS 15.0104X

Date of Issue: **2015-10-23** Issue No.: **0**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Global Series Modular Audible Device comes in three forms: an Audible Sounder, an Audible Amplified Speaker and an Audible Loudspeaker. The devices have an ingress protection rating of IP66 and have an electrical rating as per the table below:-

Audible Sounder	24Vdc 460mA	110Vac 140mA	240Vac 80mA
Audible Amplified Speaker	24Vdc 370mA	110Vac 60mA	240Vac 40mA
Audible Loudspeaker		70Vac 160 mA	100Vac 110mA

The Global Series Modular Audible Device comprises a non-metallic flameproof Audio Device enclosure, which may be used with optional increased safety terminal enclosures.

The flameproof Audible Device enclosure is in two parts, that are screwed together to form a threaded flameproof joint. Entry to the internal electronics is via this threaded joint, which is additionally retained by a hexagon socket set screw. The bottom half of the enclosure has two entry holes to provide electrical connections. The top half of the enclosure is an audible cap with an integral sinter at the base to allow for the emergence of sound from the respective electrical Audible Device inside the flameproof enclosure.

When the optional increased safety terminal enclosures are used, a line bushing to IECEx EPS 11.0004X is fitted to provide conductor egress from the flameproof enclosure for connection inside the increased safety enclosure. Component certified terminals to IECEx PTB 05.0003U or IECEx PTB 08.0048U are used.

Cable entry holes are provided as specified in the certification drawings for the accommodation of cable entry devices, with or without the interposition of a thread adaptor. Unused entries are to be fitted with certified stopping plugs.The cable entry devices, thread adapters and stopping plugs shall be suitable for the equipment, the cable and the conditions of use and shall be certified as Equipment (not a Component).

When used in a potentially explosive dust atmosphere, the cable entry devices shall maintain the ingress protection of the enclosure.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The Modular Audible Device enclosure incorporates a sinter and the volume is greater than 100cm^3, therefore the use of the Modular Audible Device in carbon disulphide gas atmospheres is not permitted.

2. The Modular Audible Device has external non-metallic surfaces which may provide a potential electrostatic charging hazard. See the manufacturer's instructions for further information.

3. The Modular Audible Device has metallic components in the non-metallic walls of the enclosure which can store electrical charge and therefore may provide a potential electrostatic charging hazard. The metallic brass inserts have a capacitance of 14 pF. See the manufacturer's instructions for further information.