



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 07.0038 issue No.:3

Status: **Current**

Date of Issue: **2013-07-26** Page 1 of 4

Certificate history:
Issue No. 3 (2013-7-26)
Issue No. 2 (2012-11-16)
Issue No. 1 (2008-9-11)
Issue No. 0 (2007-9-6)

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

Electrical Apparatus: **Series 2000 Beacon**
Optional accessory:

Type of Protection: **Ex d, Ex tb, Ex de**

Marking: **With Xenon or Fluorescent lamps :-**
Ex d IIB T4 Gb, Ex tb IIIB T135°C Db (-40°C ≤Ta ≤+70°C) IP66
or if fitted with the increased Safety terminal box :-
Ex de IIB T4 Gb, Ex tb IIIB T135°C Db (-40°C ≤Ta ≤+70°C) IP66
With LED lamp :-
Ex d IIB T6 Gb, Ex tb IIIB T85°C Db (-40°C ≤Ta ≤+55°C) IP66
or if fitted with the Increased Safety terminal box :-
Ex de IIB T6 Gb, Ex tb IIIB T85°C Db (-40°C ≤Ta ≤+55°C) IP66

Approved for issue on behalf of the IECEx Certification Body:

pp R S Sinclair *M. Downey*

Position: General Manager

Signature:
(for printed version)

M. Downey

26/7/13

Date:

- 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](http://www.iecex.com).

Certificate issued by:

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





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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 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	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/ExTR07.0081/00

GB/BAS/ExTR08.0168/00

GB/BAS/ExTR13.0153/00

Quality Assessment Report:

US/UL/QAR06.0012/05



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 2000 Series Beacon is rated at up to 240V a.c. and comprises a base and cover from aluminium alloy. The cover is provided with a cemented wellglass, the cover is secured to the base via four grade A2-70 stainless steel screws.

The beacon may be provided with up to four Xenon Lamps up to a maximum power of 60VA which flash at a maximum rate of 95 flashes a minute, or up to four florescent lamps up to a maximum power of 36W, or light emitting diodes (LEDs) rated at up to 9W; in this form the unit is Exd.

Alternatively the base can be drilled and the holes fitted with line bushings terminated within an increased safety terminal box attached to the side of the beacon which also contains increased safety terminals; in this form the unit is Exde.

To obviate the risk from internal hotspots associated with the 2000 Series Beacon the enclosure must not be opened even when isolated, when a flammable atmosphere is present. A label stating this information is fitted externally to each and every enclosure.

Cable entry holes are provided as specified on the certified drawings for the accommodation of flameproof cable entry devices, with or without the interposition of a flameproof thread adapter. Unused entries are to be fitted with certified flameproof 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).

Internal and external earthing facilities are provided.

CONDITIONS OF CERTIFICATION: NO

Empty box for conditions of certification.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 3.1

The equipment covered by this certificate has been reviewed against the additional design and test requirements of IEC 60079-0: 2011, IEC 60079-1: 2007 and IEC 60079-31: 2008 (superseding IEC 61241 for dust hazards), and compliance is confirmed.

The units with Xenon or Fluorescent lamps may be marked with the following amended coding :-

Ex d IIB T4 Gb, Ex tb IIIB T135°C Db (-40°C ≤Ta ≤+70°C) IP66

or if fitted with the Increased Safety terminal box :-

Ex de IIB T4 Gb, Ex tb IIIB T135°C Db (-40°C ≤Ta ≤+70°C) IP66

The units with LED lamps may be marked with the following amended coding :-

Ex d IIB T6 Gb, Ex tb IIIB T85°C Db (-40°C ≤Ta ≤+55°C) IP66

or if fitted with the Increased Safety terminal box :-

Ex de IIB T6 Gb, Ex tb IIIB T85°C Db (-40°C ≤Ta ≤+55°C) IP66

ExTR: GB/BAS/ExTR13.0153/00

File Reference: 13/0116