



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.:	IECEX BAS 15.0102X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2018-07-31)
Date of Issue:	2023-09-06		Issue 2 (2017-03-01)
Applicant:	Federal Signal Corporation 2645 Federal Signal Drive University Park Illinois 60484 United States of America		Issue 1 (2016-10-12)
Equipment:	Global Series Modular Visual LED		Issue 0 (2015-12-09)
Optional accessory:			
Type of Protection:	Flameproof, increased safety, optical radiation, dust protected		
Marking:	Ex db op is IIC T6 Gb or Ex db eb op is IIC T6 Gb (T_{amb} = -55°C to +58°C) Ex op is tb IIIC T85°C Db IP66 (T_{amb} = -55°C to +58°C) Ex db op is IIC T5 Gb or Ex db eb op is IIC T5 Gb (T_{amb} = -55°C to +70°C) Ex op is tb IIIC T100°C Db IP66 (T_{amb} = -55°C to +70°C)		

Approved for issue on behalf of the IECEx
Certification Body:

R S Sinclair

Position:

Technical Manager

Signature:
(for printed version)

Date:
(for printed version)

6/9/2023

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 www.iecex.com or use of this QR Code.



Certificate issued by:

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





IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 15.0102X**

Page 2 of 4

Date of issue: 2023-09-06

Issue No: 4

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

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

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 equipment 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 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with 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 Reports:

[GB/BAS/ExTR15.0130/00](#)
[GB/BAS/ExTR18.0180/00](#)

[GB/BAS/ExTR16.0277/00](#)
[GB/SGS/ExTR23.0026/00](#)

[GB/BAS/ExTR17.0045/00](#)

Quality Assessment Report:

[US/UL/QAR06.0012/12](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 15.0102X**

Page 3 of 4

Date of issue: 2023-09-06

Issue No: 4

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Global Series Modular Visual LED is rated for 24 Vdc, 300 mA or 110-240 Vac at 120-70 mA and is afforded ingress protection rating IP66. The optical irradiance is less than 5 mW/mm² at the surface of the glass dome.

The Global Series Modular Visual LED comprises a non-metallic flameproof LED array enclosure, which may be used with optional increased safety terminal enclosures.

The flameproof LED 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 has an integral glass dome, covered by a metallic guard. An optional non-metallic clear or coloured lens may be fitted which is not covered by this certificate.

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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

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

2. The Modular Visual LED 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. The metallic guard has a capacitance of 18 pF. See the manufacturer's instructions for further information.



IECEX Certificate of Conformity

Certificate No.: **IECEX BAS 15.0102X**

Page 4 of 4

Date of issue: 2023-09-06

Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 4.1

To assess the equipment against IEC 60079-0:2017 Edition 7.0 and IEC 60079-7:2017 Edition 5.1.

Variation 4.2

To include the correct version of drawing 850000302.

Variation 4.3

To amend the nameplates to accommodate UKEX certificate numbers

ExTR: **GB/SGS/ExTR23.0026/00**

File Reference: **23/0127**