



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 SIR 13.0099X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 8	Issue 7 (2019-02-04)
Date of Issue:	2022-07-26		Issue 6 (2018-09-12)
Applicant:	Banner Engineering Corporation 9714 Tenth Avenue North Minneapolis MN 55441 United States of America		Issue 5 (2018-04-24)
Equipment:	Type K30L and K50L LED Indicator Lights		Issue 4 (2017-07-11)
Optional accessory:			Issue 3 (2017-03-06)
Type of Protection:	Type nA, Encapsulation and Dust Protection by Enclosure		Issue 2 (2015-07-16)
Marking:	Ex mb IIC T4 Gb Ex ta IIIC T ₂₀₀ 135°C Da Ta = -40°C to +50°C or Ex nA IIC T4 Gc Ex tc III C T135°C Dc Ta = -40°C to +50°C		Issue 1 (2014-02-24)
			Issue 0 (2013-09-10)

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Director Operations, UK & Industrial Europe

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

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United Kingdom

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Issue No: 8

Manufacturer: **Banner Engineering Corporation**
9714 Tenth Avenue North
Minneapolis
MN 55441
United States of America

Manufacturing
locations:

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 60079-15:2010](#) Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

[IEC 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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

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/SIR/ExTR13.0218/01](#)
[GB/SIR/ExTR17.0132/00](#)
[GB/SIR/ExTR19.0025/00](#)

[GB/SIR/ExTR15.0196/00](#)
[GB/SIR/ExTR18.0065/00](#)
[GB/SIR/ExTR22.0065/00](#)

[GB/SIR/ExTR17.0036/00](#)
[GB/SIR/ExTR18.0156/00](#)

Quality Assessment Report:

[GB/FME/QAR13.0015/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Type K30L and K50L LED Indicator Lights comprise LEDs mounted on a printed circuit board, all encapsulated within a plastic housing with a translucent dome. The Type K50L is physically larger than the K30L having more LEDs mounted on the PCB than the K30L. The indicator lights have either a screw on plug and socket connector or an integral cable fitted for the electrical connections. The Ex m version uses only the integral cable option.

The equipment has the following electrical parameters:

V_{max} = 30 V

I_{max} = 25 mA

SPECIFIC CONDITIONS OF USE: YES as shown below:

The Specific Conditions of Use associated with the 'mb' and 'ta' certification

1. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
2. Ex ta requires that the prospective short circuit current of the supply must not exceed 10kA.
3. The equipment has been evaluated to IEC / EN 60079-0 Table 15, Resistance to Impact, as a low risk of mechanical damage. If the installation has a high risk of impact, the user must take suitable precautions to provide protection from impact.

The Specific Conditions of Use associated with the 'nA' and 'tc' certification

1. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
2. The 30 V rated supply shall be protected such that transients are limited to a maximum of 42 V.
3. The connector must be protected when installed, to maintain IP6X ingress protection in accordance with IEC 60079-0:2017 / EN IEC 60079-0: 2018.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 8, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007 Ed.6 & IEC 60079-18:2014 Ed. 4 were replaced by IEC 60079-0:2017 Ed.7 & IEC 60079-18:2014/A1:2017 Ed. 4.1. Where applicable, the markings were updated accordingly to recognise the new standards.
2. Drawing/Documentation update.
3. Update of Specific Condition of Use 3) relating to the ingress protection of connector when installed to clarify the requirements of IEC 60079-0:2017 must be met.

Annex:

[IECEX SIR 13.0099X Issue 8 Annex.pdf](#)

Annexe to: IECEx SIR 13.0099X Issue 7

Applicant: Banner Engineering Corporation

Apparatus: Type K30L and K50L LED Indicator Lights



Conditions of Manufacture

1. The manufacturer shall undertake the following routine tests on 100% of all production in accordance with the appropriate clauses of IEC 60079-18: 2014/A1:2017 Ed 4.1 / EN 60079-18:2015/A1:2017:
 - Visual inspection in accordance with clause 9.1.
 - Electric strength test in accordance with clause 9.2.

Full certificate change history

Issue 1 - this Issue introduced the following changes:

1. As a consequence of modifications to the Free Ref. Report, ExTR No. GB/SIR/ExTR13.0218/00 was replaced by GB/SIR/ExTR13.0218/01.
2. The reference to an inappropriate QAR was removed.

Issue 2 - this Issue introduced the following change:

1. The specification of the material used for the K30 and K50 LED indicator covers was changed, one of the options being removed.

Issue 3 - this Issue introduced the following changes:

1. A number of editorial changes to the documentation.
2. Replace drawing 126905 with drawing 164906.
3. Replace drawing 133593 with drawing 164905.
4. Remove document 173494 from the drawing list.

Issue 4 – this Issue introduced the following changes:

1. The use of an alternative encapsulation material was approved.
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079 31:2008 Ed 1 was replaced by IEC 60079-31:2013 Ed 2; and IEC 60079-18:2009 Ed 3 by IEC 60079-18:2014 Ed 4.

Issue 5 – this Issue introduced the following changes:

1. The recognition of minor drawing modifications; these amendments do not affect the aspects of the product that are relevant to explosion safety.

Issue 6 – this Issue introduced the following change:

1. Drawing 173292 has been revised from rev A to rev B to update the cable details for the LED Indicator lights.

Issue 7 – this Issue introduced the following change:

1. A number of editorial changes not affecting compliance have been made to drawings for the LED Indicator lights.

Issue 8 – this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2007 Ed.6 & IEC 60079-18:2014 Ed. 4 were replaced by IEC 60079-0:2017 Ed.7 & IEC 60079-18:2014/A1:2017 Ed. 4.1. Where applicable, the markings were updated accordingly to recognise the new standards.
2. Drawing/Documentation update.
3. Update of Specific Condition of Use 3) relating to the ingress protection of connector when installed to clarify the requirements of IEC 60079-0:2017 must be met.

Date: 26 July 2022

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