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 13.0020X**

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Issue No: 8

Certificate history:
Issue 7 (2019-02-04)
Issue 6 (2018-09-12)
Issue 5 (2018-04-24)
Issue 4 (2017-07-11)
Issue 3 (2017-03-06)
Issue 2 (2015-07-16)
Issue 1 (2014-02-24)
Issue 0 (2013-07-12)

Status: **Current**

Date of Issue: 2022-07-26

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

Equipment: **Type K30L and K50L LED Indicator Lights**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: Ex ia IIC T4 Ga
Ex ia IIIC T_{200} 130°C Da
Ex ia I Ma

Ta = -40°C to +40°C
(Pi = 3.4W for EPL Ga & Ma and Pi = 2.7W for EPL Da)

Ta = -40°C to +50°C
(Pi = 2.8W for EPL's Ga & Ma and Pi = 2.2W for EPL Da)

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)

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:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

BANNER P/N
1809 REV. G

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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

Manufacturing locations: **Banner Engineering Corporation**
9714 Tenth Avenue North
Minneapolis
MN 55441
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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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/ExTR13.0143/01
GB/SIR/ExTR15.0196/00
GB/SIR/ExTR17.0036/00
GB/SIR/ExTR17.0132/00
GB/SIR/ExTR18.0065/00
GB/SIR/ExTR18.0156/00
GB/SIR/ExTR19.0025/00
GB/SIR/ExTR22.0065/00

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 and encapsulated within a plastic housing with a transparent dome. The Type K50L is physically larger than the K30L having more LEDs than the K30L. The indicator lights have either a screw on plug and socket connector or an integral cable fitted for the electrical connections.

Ui = 30V Ii = 1A P_i – Dependent on Equipment Protection Level (EPL) & Ambient Temperature – See Table Below
Ci = 0 Li = 0

P_i Rating:

EPL Ga & Ma P_i = 3.4 W @ 40°C ambient temperature
P_i = 2.8 W @ 50°C ambient temperature

EPL Da P_i = 2.7 W @ 40°C ambient temperature
P_i = 2.2 W @ 50°C ambient temperature

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. In certain extreme circumstances, the non-metallic enclosure of these LED Indicator Lights could generate an ignition-capable level of electrostatic charge. Therefore, the user/installer shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which are conducive to creating a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should only be done with a damp cloth. This condition is particularly important if the equipment is used in a zone 0 or zone 20 applications or when installed in dust environments where it is likely to be regularly cleaned.
2. When more than one intrinsically safe supply (e.g. two or three barriers) is connected to an LED Indicator the combined electrical parameters of the supply must remain intrinsically safe.
3. The user/installer shall install these LED Indicator Lights taking into account the following ambient temperature ranges:
   Ta = -40°C to +40°C (Pi = 3.4W for EPL Ga & Ma installations & Pi = 2.7W for EPL Da installations)
   Ta = -40°C to +50°C (Pi = 2.8W for EPL Ga & Ma installations & Pi = 2.2W for EPL Da installations)

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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 was replaced by IEC 60079-0:2017 Ed.7. Where applicable, the markings were updated accordingly to recognise the new standards. As a result of the assessment, reduced P_i parameters have been derived for the equipment when installed in an explosive dust atmosphere, Equipment Protection Level (EPL) Da. The previous stated P_i parameters are still applicable for explosive gas and mining atmospheres, EPL's Ga & Ma.
2. Drawing/Documentation update.

Annex:

IECEx SIR 13.0020X Issue 8 Annexe.pdf

Annexe to: **IECEx SIR 13.0020X Issue 8**

Applicant: **Banner Engineering Corporation**

Apparatus: **Type K30L and K50L LED Indicator Lights**

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/ExTR13.0143/00 was replaced by GB/SIR/ExTR13.0143/01.
2. The associated QAR reference was changed.

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 change:

1. The use of an alternative encapsulation material was approved.

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.
2. Compliance with IEC 60079-26 is no longer required for Ex ia Ga equipment, therefore this standard has been removed from the certificate.

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 was replaced by IEC 60079-0:2017 Ed.7. Where applicable, the markings were updated accordingly to recognise the new standards. As a result of the assessment, reduced P_i parameters have been derived for the equipment when installed in an explosive dust atmosphere, Equipment Protection Level (EPL) Da. The previous stated P_i parameters are still applicable for explosive gas and mining atmospheres, EPL's Ga & Ma.
2. Drawing/Documentation update.

Date: **26 July 2022**

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