



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

Certificate No.: IECEx UL 10.0002X

Issue No: 6

Certificate history:

Issue No. 6 (2019-07-17)  
Issue No. 5 (2017-01-31)  
Issue No. 4 (2016-01-19)  
Issue No. 3 (2014-10-15)  
Issue No. 2 (2011-12-21)  
Issue No. 1 (2010-10-27)  
Issue No. 0 (2010-08-27)

Status: **Current**

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Date of Issue: **2019-07-17**

Applicant: **Guardian Electric Manufacturing Company**  
1425 Lake Avenue  
Woodstock, IL 60098  
**United States of America**

Equipment: **Solenoid, Models A420-068485-00 and A420-068485-01**

*Optional accessory:*

Type of Protection: **Flameproof "db" and Non-sparking "nA"**

Marking:

Model A420-068485-00:

Ex db IIC T3 Gb

Ex nA IIC T3 Gc

-20°C ≤ Ta ≤ +82°C

Model A420-068485-01:

Ex db IIB T2 Gb

Ex nA IIC T2 Gc

-20°C ≤ Ta ≤ +130°C

Approved for issue on behalf of the IECEx  
Certification Body:

Andrew Moffat

Position:

Project Engineer

Signature:  
(for printed version)

Date:

2019-07-17

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:

**UL LLC**  
333 Pfingsten Road  
Northbrook IL 60062-2096  
United States of America





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Manufacturer: **Guardian Electric Manufacturing Company**  
1425 Lake Avenue  
Woodstock, IL 60098  
**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 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-15 : 2010</b> Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*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:

[US/UL/ExTR10.0002/06](#)

Quality Assessment Report:

[US/UL/QAR10.0005/06](#)



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## Schedule

### EQUIPMENT:

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

The solenoid Models A420-068485-00 and A420-068485-01 are magnetically operated consisting of a bobbin, core tube, coil, spacer and ring, gasket, plug, plunger extension and enclosure. The enclosure is constructed out of steel, having a rectangular and round end flange welded onto the tube body. The plug is press-fitted into the rectangular end flange and the plunger extension forms a cylindrical joint with the plug. The round end flange forms a flat joint with the cap of the solenoid. Models A420-068485-00 and A420-068485-01 share the same enclosure and differ only in the coil assembly that is installed inside, the rated gas groups for method of protection Ex d and the maximum ambient temperature.

**Please see Annex for additional information.**

### SPECIFIC CONDITIONS OF USE: YES as shown below:

- Dimensions of flameproof joints are other than the relevant minimum or maximum specified in Table 1 (for model A420-068485-01) and Table 2 (for model A420-068485-00) of IEC 60079-1, Ed. 7.
- Solenoids are marked with an "X" and Drawing Nos. 104-990291-00, 002-160132-00 and A074-400284-00 detail the dimensions of the flameproof joints



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

Issue 1: New drawings for some parts of the solenoid that have been revised for ease of machining only and do not affect the type "d" and "nA" protection.

Issue 2: Ambient temperature range changed from -20°C to +60°C to -20°C to +82°C.

Issue 3: Product was evaluated to assure compliance with the latest versions of IEC 60079-0 and IEC 60079-15.

Issue 4: Additional models and drawing changes.

Issue 5: Update to nameplate label and drawings.

Issue 6: Added Division 1 to marking label and updated IEC 60079-1 from 6<sup>th</sup> to 7<sup>th</sup> Edition.

## Annex:

[Annex to IECEx UL 10.0002X Issue 6.pdf](#)



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## TYPE DESIGNATION

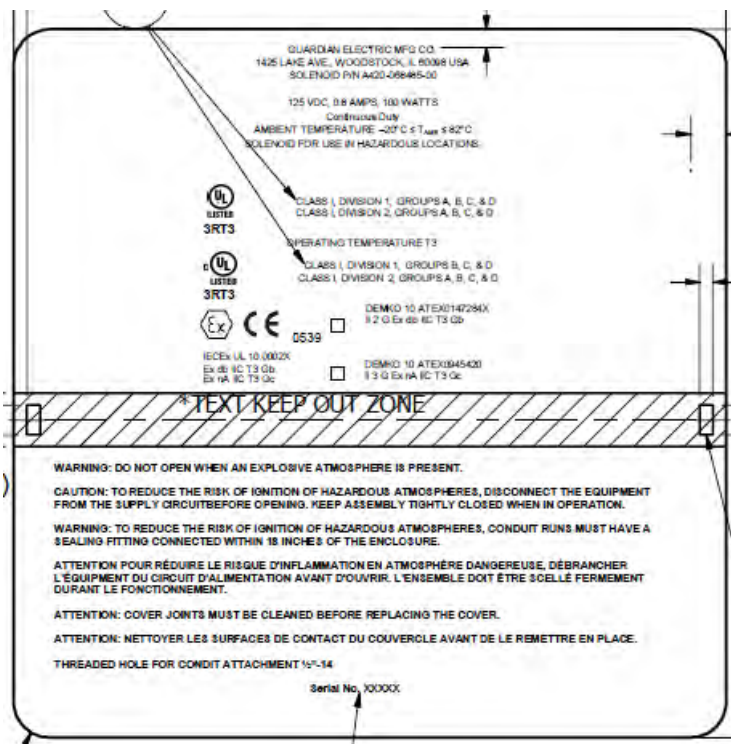
The solenoid Models A420-068485-00 and A420-068485-01 are magnetically operated consisting of a bobbin, core tube, coil, spacer and ring, gasket, plug, plunger extension and enclosure. The enclosure is constructed out of steel, having a rectangular and round end flange welded onto the tube body. The plug is press-fitted into the rectangular end flange and the plunger extension forms a cylindrical joint with the plug. The round end flange forms a flat joint with the cap of the solenoid. Models A420-068485-00 and A420-068485-01 share the same enclosure and differ only in the coil assembly that is installed inside, the rated gas groups for method of protection Ex d and the maximum ambient temperature.

## PARAMETERS RELATING TO THE SAFETY

125 V dc, 0.8 A, 100 Watts

## MARKING

Model A420-068485-00:

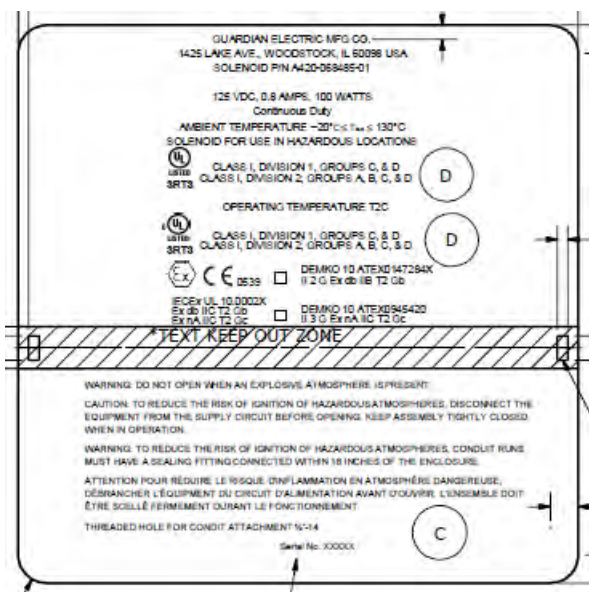


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Model A420-068485-01:



## ROUTINE EXAMINATIONS AND TESTS

Routine tests are performed on the solenoids according to IEC 60079-1, Ed. 7 cl. 16 and IEC 60079-15, Ed. 4 cl. 23.2.1. The hydrostatic test pressure is 11.38 bar (165 psi).