



# 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 NEP 18.0001X

Issue No: 0

Certificate history:

Issue No. 0 (2018-06-11)

Status: **Current**

Page 1 of 3

Date of Issue: **2018-06-11**

Applicant: **Eaton Electric (Singapore) PTE. Ltd.**  
100G Pasir Panjang Road, #07-08/ #02-09 Interlocal Centre, 118523  
**Singapore**

Equipment: **Explosion-protection distribution boards, Model AGP17 series**

*Optional accessory:*

Type of Protection: **Ex db, eb, ia/ib, mb, [ia/ib], tb**

Marking:

Ex db eb ia/ib mb [ia/ib] IIC T4/T5/T6 Gb

Ex tb IIIC T 80°C Db

IP66

Maximum Ta range: -40°C ≤ Ta ≤ +55°C

*Approved for issue on behalf of the IECEx  
Certification Body:*

Xu Jianping

*Position:*

Managing Director

*Signature:  
(for printed version)*

*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:

**Shanghai Inspection and Testing Institute of Instruments and  
Automatic Systems Co., Ltd. (SITIiAS) / National Supervision and  
Inspection Center for Explosion Protection and Safety of  
Instrumentation (NEPSI)**  
103 Cao Bao Road  
Shanghai 200233  
China



**SITIiAS**  
Worldwide Access



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Certificate No: IECEX NEP 18.0001X Issue No: 0

Date of Issue: 2018-06-11 Page 2 of 3

Manufacturer: **Eaton Electric (Singapore) PTE. Ltd.**  
100G Pasir Panjang Road,#07-08/ #02-09 Interlocal Centre, 118523  
**Singapore**

Additional Manufacturing location(s):

**Cooper Electric (Changzhou) Co. Ltd.**

No.189 Liuyanghe Road, Xinbei District, Changzhou, Jiangsu  
China

**Cooper Korea Ltd**

22-5, Seogu-dong, Hwaseong-si, Gyeonggi-do  
Korea, Republic of

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 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-18 : 2014</b> Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	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:

[CN/NEP/ExTR18.0001/00](#)

Quality Assessment Report:

[GB/BAS/QAR07.0041/08](#)

[GB/BAS/QAR10.0015/05](#)

[GB/BAS/QAR11.0007/05](#)



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Certificate No: IECEx NEP 18.0001X

Issue No: 0

Date of Issue: 2018-06-11

Page 3 of 3

## Schedule

### EQUIPMENT:

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

The distribution boards is suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21 and Zone22. The distribution boards include GRP enclosure assembly, window assembly, certified components, main brackets, DIN rails, earth plates etc.

The GRP enclosure assembly consists of body, cover and O-ring. The body and cover are made of GRP and the material of O-ring is silicone rubber.

The window assembly consists of body, cover, gaskets and hinges. The frame is made of PA66 and cover is made of PC. The material for gaskets is silicone rubber and hinges are made of stainless steel.

Cable gland is not a part of the product.

Due to existing multiple configurations, the Ex marking and ambient temperature may change, so the exact Ex marking and Ta are listed on the label of the distribution boards.

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

1. The external earth connection facility shall be connected reliably.
2. The cable entries have to be connected by means of suitable cable entry devices or plugs separately certified with type of protection of Ex e IIC Gb, Ex tb IIIC Db, IP66.
3. Potential electrostatic charging hazard refer to the instruction.
4. If the components involved are connected with an intrinsic safety circuit, then light blue cables will be necessary for the installation.
5. The minimum temperature of the cable applied with Busbar component is 89°C.

### Annex:

[IECEX NEP 18.0001X Annex.pdf](#)

**1. Enclosure Size:**

All the enclosures include four sizes:

Size 1: 271X134X136	0.5 unit including 0.5 block
Size 2: 271X271X210	high cover 1 unit including 1 block
Size 2: 271X271X136	low cover 1 unit including 1 block
Size 3: 544X271X210	high cover 2 units including 3 blocks
Size 3: 544X271X136	low cover 2 units including 3 blocks
Size 4: 817X271X136	3 units including 4 blocks

**2. Electrical parameters:**

2.1 Rated electrical parameters:

Refer to the document, AGP17 Key Parameters Confirmation Instruction, provided by the manufacturer for detail.

2.2 Intrinsically safe parameters:

The following components with Ex i type are shown in the table below:

No.	Name	Marking
1	GHG 41 Signal Lamp	Ex db ia IIC Gb
2	Switch base type GHG238	Ex db ia/ib IIC Gb
3	Switch base type GHG2	Ex de ib [ia/ib] IIC Gb
4	Switch base type GHG264	Ex de ib [ia/ib] IIC Gb

Maximum input voltage	Ui = 30V DC
Maximum input current	Ii = 120mA
Maximum input power	Pi = 750mW
Maximum internal capacitance	Ci negligible
Maximum internal inductance	Li negligible

**3. The relationship between the permitted dissipation power for per block and maximum ambient temperature is listed as following**

Per Block Dissipation Power (W)			
Without Heatsink			
	T4	T5	T6
40°C	21.3W	12.9W	8.4W
55°C	14.2W	8.4W	
With Heatsink			
40°C	25.7W	16.1W	12.6W
55°C	17.8W	12.6W	