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 INE 22.0048X**

Page 1 of 5

Certificate history:

Status: **Current**

Issue No: 3

Issue 2 (2023-09-21)
Issue 1 (2023-03-14)
Issue 0 (2022-10-25)

Date of Issue: 2024-05-07

Applicant: **APPLETON Group - ATX**
ZAC des Bornes du Temps 2
190 Rue des Catelets
80470 Saint-Sauveur
France

Equipment: **Control Panel type ECEP*****

Optional accessory:

Type of Protection: **db, eb, mb and tb**

Marking: Ex eb (*) IIC T6...T3 Gb
Ex tb IIIC T45°C...T150°C Db IP66

(*) : The marking could be completed with the type of protection "db" and/or "mb" depending on the Ex-Component(s) fitted on/within the enclosures.

The complete marking is detailed in Annex.

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

Position: **Ex Certification Officer**

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:

INERIS
Institut National de l'Environnement Industriel et des Risques
BP n2 / Parc Technologique ALATA
F-60550 Verneuil-en-Halatte
France

controlling risks for sustainable development

IECEx Certificate of Conformity

Manufacturer:
APPLETON Group - ATX
ZAC des Bornes du Temps 2
190 Rue des Catelets
80470 Saint-Sauveur
France

Manufacturing locations:

APPLETON Group - ATX
ZAC des Bornes du Temps 2
190 Rue des Catelets
80470 Saint-Sauveur
France

Emerson ATX
Balastierei, Nr. 1S (Urbano Industrial Park)
Gilau 407310
Romania

Emerson Hazardous Electrical Equipment (Shanghai) Co., Ltd.
Block A, 3rd Floor
No. 480 Xinmiaosan Road
Song Jiang
Shanghai
201612
China

See following pages for more 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 Edition:7.0 — Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-1:2014 Edition:7.0 — Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

IEC 60079-18:2017 Edition:4.1 — Explosive atmospheres - Part 18: Protection by encapsulation "m"

IEC 60079-31:2022 Edition:3.0 — Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

IEC 60079-7:2017 Edition:5.1 — Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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:

FR/INE/ExTR22.0039/02 FR/INE/ExTR24.0017/00

Quality Assessment Reports:

FR/LCI/QAR07.0008/22 GB/EXV/QAR17.0006/03 NO/PRE/QAR15.0039/08

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The polyester Control Panel type ECEP*** are suitable for use in gas explosive atmosphere of Group IIC and dust explosive atmosphere of Group IIIC.
The enclosures (7 sizes) protected by "eb" and by “tb” are covered by the Ex Component certificate IECEx INE 17.0035U.

The enclosures could be fitted with various types of components (terminals, operating devices..) covered by IECEx Ex Component certificates and with different types of protection as listed in the Table 1. The enclosures are intended to be installed in wall mounting position.
The different possibilities of configurations are defined by a Configurator specified as part of the descriptive documents of the manufacturer. Depending on the size of the enclosures, this Configurator takes into account the manufacturing variations of the enclosure (i.e :type of gaskets), the electrical parameters and the scope of the assessment for each Ex Component to ensure the compliance with the restrictions of uses and to define the temperature classification according to ambient temperature.

These control stations get the degrees of protection IP66 determined as part of the test sequence according to IEC 60529 standard. And the IP64 has been determined as part of the test sequence required by the applicable standards (be preceded by the applicable order of tests detailed in IEC 60079-0 standard).

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex "IECEx INE 22.0048X-02_Annex.pdf"

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
For the issue 01:

- Integration of TRE certified transformers covered by certificate IECEx LCIE 15.0034U

For the issue 02:

- Update of standard version IEC 60079-31: 2013 to IEC 60079-31: 2022
- Integration of extra low Voltage flange socket, manufactured by Stahl, type 8573/15, covered by Certificate IECEx PTB 16.0030U
- Integration of low voltage flange socket, manufactured by Stahl, type 8572/15, covered by Certificate IECEx PTB 16.0028U,
- Integration of low voltage flange socket, manufactured by Eaton, type GHG 5118, covered by Certificate IECEx BVS 15.0088U

For the issue 03:

- Change of the address of the manufacturer.

IECEx Certificate of Conformity

Additional manufacturing locations:

EGS (S) Pte Ltd
Blk 4008
Ang Mo Kio Ave 10
#04-16/17
Techplace 1
569625
Singapore

IECus Solutions
6526 Petropark Drive
Houston TX 77041
United States of America

Annex:

IECEx INE 22.0048X-03_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx INE 22.0048X

Annex: IECEx INE 22.0048X-03_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

The permissible rated current and voltage depend on the configurations of the control panels (size, type and amount of Ex-Components), the range of ambient temperature and the temperature class. These parameters are managed by the Configurator specified in the descriptive documents.

These control stations are intended to be used in the maximum range of ambient temperature from -55°C to +80°C but this range should be reduced depending on the Ex component(s) fitted on the enclosures as specified in the descriptive documents of the manufacturer.

MARKING

Marking has to be readable and indelible; it has to include the following indications:

- APPLETON - A.T.X. and/or EMERSON
- 80470 Saint-Sauveur – FRANCE
- ECEP*** (1)
- IECEx INE 22.0048X
- (Serial number)
- Ex eb (2) IIC T(3) Gb
- Ex tb IIIC T(4) Db
- IP66
- …°C ≤ Tamb ≤ …°C (5)
- T.cable = (7)
- *Rated Current and Rated Voltage (as defined in the manufacturer's documents)*
- **WARNINGS:**
  - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
  - DO NOT OPEN WHEN ENERGIZED
  - WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS (6)

(1) The type is completed by a codification according to the manufacturing variations.

(2) The marking code could be completed by the type of protection "db" and/or "mb", in the alphabetical order, depending on the Ex-Components fitted on/inside the enclosures.

(3) T6 or T5 or T4 or T3 depending on the final configuration as detailed in the descriptive documents of the manufacturer.

(4) From T45°C to T150°C depending on the final configuration as detailed in the descriptive documents of the manufacturer.

(5) Indication of the range of ambient temperature if different from -20°C to +40°C.

(6) Required only when :
- The control panel is fitted with the handle HPPX made in PA66 covered by the Ex-Component IECEx LCIE 18.0032U and/or,
- The control panel is fitted with the window type VAW covered by the Ex-Component IECEx LCIE 16.0021U made in PA66 material.
- The control panel is fitted with flange socket type 8572/15 and 8573/15 covered by the Ex Component IECEx PTB 12.0030U and IECEx PTB 16.0028U

(7) T.cable depending on the final configuration as detailed in the descriptive documents of the manufacturer.

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above must have successfully passed; before delivery:

- In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards.

IECEx Certificate of Conformity

SPECIFIC CONDITIONS OF USE

Specific conditions of use for the "Ex tb" versions:

- For installation in zone 21, when interrupting contacts are present, inside the enclosure the circuit must be protected by breakers or fuses that limit the fault current to maximum 10kA.

Specific conditions of use referring to the enclosure "JBEP…U" covered by the certificate IECEx INE 17.0035U:

- The impact tests have been performed with positive result with an energy of 4 Joules or 7 Joules according with the axial distance planned between the holes (see table in Annex of certificate IECEx INE 17.0035U).
- For enclosures which underwent a low mechanical shock under 4J as stipulated in the table of the Annex of certificate IECEx INE 17.0035U, the user will take into consideration during the installation that this equipment underwent only a shock corresponding to an energy of a low risk.

Specific conditions of use referring to the voltmeter "U2VE" covered by the certificate IECEx LCIE 14.0026U:

- If no external fuse is used with a switching capacity of at least 1500 A the maximum possible short circuit current of the feeding source has to be limited to the breaking capacity of the internal fuse of 100 A.

Specific conditions of use referring to the voltmeter "U2AE" covered by the certificate IECEx LCIE 13.0059U:

- The end user must ensure that the ammeter is protected with over current protection that complies with the maximum short circuit current (Isc).

Specific conditions of use referring to the window "VAW" covered by the certificate IECEx LCIE 16.0021U:

- Only for version -25°C: Potential electrostatic charging hazard. Clean only with a wet cloth (or see instructions).

Specific conditions of use referring to the contact and pilot light "UCVe" covered by the certificate IECEx INE 20.0013U:

- The widths of the flameproof joints are higher than those specified in tables of IEC 60079-1 standard. The gaps of flameproof joints are less than the values specified in the tables of the IEC 60079-1 standard. To contact the original manufacturer for any repairs of the flameproof joints.

Specific conditions of use referring to the control auxiliaries "AUXe" covered by the certificate IECEx LCIE 16.0050U:

- When padlackable handle is in PA12, the component shall be submitted to low mechanical impact only.
- When padlackable handle is in PA12, the handle should be mounted only on an enclosure in vertical position.

Specific conditions of use referring to the enclosure "8M" covered by the certificate IECEx INE 13.0097U:

- The widths of the flameproof joints are superior than those specified in tables of IEC 60079-1 standard. The flameproof joints are not intended to be repaired.
- The gaps and diametrical clearances of flameproof joints are less than the values specified in the tables of the IEC 60079-1 standard.
- The cover is fixed by screws with minimum yield strength of 640 N/mm² and minimum tensile strength of 800 N/mm².

Specific conditions of use referring to the fuse "FU40" covered by the certificate IECEx LCIE 15.0007U:

- The flamepath is specified in the manufacturer drawing.

Specific conditions of use referring to the handle "HPPX covered by the certificate IECEx LCIE 18.0032U:

- When the handle is made of PA66: Potential electrostatic charging hazard. Clean only with a wet cloth (or see instructions).
- When the handle is made of PA12: The handle should be mounted only on an enclosure in vertical position.

Specific conditions of use referring to the transformer "TRE" covered by the certificate IECEx LCIE 15.0034U:

- The connection is done in the factory by means of a terminal Ex "eb" certified for the intended use.

Specific conditions of use referring to the flange socket "8572/15" and "8573/12" covered by the certificates IECEx PTB 18.0028U and IECEx PTB 16.0030U:

- In order to ensure the ingress protection IP, the bayonet ring of the plug must be screwed up to the stop to the socket and the hinged cover of the socket must be closed and screwed up to the stop when the plug is not inserted. The cover of the terminal compartment must be fastened with the appropriate torque.

Specific conditions of use referring to the flange socket "GHG 5118" covered by the certificate IECEx BVS 15.0088U:

- In case of the parts forming the joint shall be replaced or repaired, the information on the dimensions of the flameproof joints must be obtained from the manufacturer, because the gap length of the flameproof joint of this apparatus are in parts longer and the gap width are in parts smaller than required by Table 2 or 3 of IEC 60079-1:2014.

The specific conditions of uses must be completed by those stipulated in the instruction manuals of the control panel ECEP*** and of each Ex Component fitted on the final product.

IECEx Certificate of Conformity

Certificate No.: IECEx INE 22.0048X

Annex: IECEx INE 22.0048X-03_Annex.pdf

TABLES

TABLE 1 : LIST OF Ex COMPONENTS USED IN THIS PRODUCT

Designation	Manufacturer	Type	Certificate	Standards	Service temperature	Ex marking
Enclosures	Appleton Group - ATX	JBEP...U	IECEx INE 17.0035U (Issue 01)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-60°C or -55°C or -40°C ≤ Ts ≤ +90°C or +110°C (4)	eb tb
Voltmeter	Appleton Group-ATX	U2VE	IECEx LCIE 14.0026U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-18:2014/A1:2017	-25°C ≤ Ts ≤ +70°C	eb mb
Ammeter	Appleton Group-ATX	U2AE	IECEx LCIE 13.0059U (Issue 01)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017	-25°C ≤ Ts ≤ +80°C	eb
Window	Appleton Group-ATX	VAW	IECEx LCIE 16.0021U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-55°C or -25°C ≤ Ts ≤ +80°C (4)	eb tb
Contact and pilot light	Appleton Group-ATX	UCVe	IECEx INE 20.0013U (Issue 00)	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2015/A1:2017	-55°C ≤ Ts ≤ +90°C or +110°C (4)	db eb
Actuators (Operator heads)	Appleton Group-ATX	TCe	IECEx LCI 09.0011U (Issue 03)	IEC 60079-0:2011(1) IEC 60079-7:2015(2) IEC 60079-31:2013(3)	-40°C ≤ Ts ≤ +60°C	eb tb
Actuators (Operator heads)	Bartec	05-0003-00..	IECEx CML 14.0005U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-55°C ≤ Ts ≤ +70°C	eb tb
Rotary switch	Appleton Group-ATX	USW16	IECEx EXV 21.0003U (Issue 00)	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2015(2)	-55°C ≤ Ts ≤ +90°C	db eb
Actuators (Control auxiliaries)	Appleton Group-ATX	AUXe	IECEx LCIE 16.0050U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-55°C or -40°C ≤ Ts ≤ +70°C or +90°C or +100°C (4)	eb tb
Enclosure 8 modules	Appleton Group-ATX	8M	IECEx INE 13.0097U (Issue 03)	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2015/A1:2017	-55°C or -40°C ≤ Ts ≤ +100°C (4)	db eb
Flip window	Appleton Group-ATX	FW	IECEx LCIE 19.0037U (Issue 00)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-55°C≤ Ts ≤ +80°C	eb tb
Fuse holder	Appleton Group-ATX	FU40	IECEx LCIE 15.0007U (Issue 01)	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7:2015/A1:2017	-40°C ≤ Ts ≤ +80°C	db eb
Handle	Appleton Group-ATX	HPPX	IECEx LCIE 18.0032U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017 IEC 60079-31:2013(3)	-55°C or -25°C ≤ Ts ≤ +75°C or +80°C (4)	eb tb
Terminals	Weidmuller	WDU-WPE	IECEx ULD 14.0005U (Issue 07)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017	-60°C ≤ Ts ≤ +110°C	eb
Transformer	Appleton Group-ATX	TRE	IECEx LCIE 15.0034U (Issue 02)	IEC 60079-0:2017 IEC 60079-7:2015/A1:2017	-20°C ≤ Ts ≤ +80°C or +90°C (4)	eb
Extra low voltage flange socket	Stahl	8573/15	IECEx PTB 16.0030U	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-31:2013(3) IEC 60079-7:2015(2)	-50 °C ≤ Ts ≤ +80 °C (4)	db eb tb
Low voltage flange socket	Stahl	8572/15	IECEx PTB 16.0028U	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-31:2013(3) IEC 60079-7:2015(2)	-50 °C ≤ Ts ≤ +80 °C (4)	db eb tb
Low voltage flange socket	Eaton	GHG 5118	IECEx BVS 15.0088U	IEC 60079-0: 2017 IEC 60079-1:2014 IEC 60079-31:2013(3) IEC 60079-7:2015/A1:2017	-20 °C ≤ Ts ≤ +60 °C	db eb tb

(1) No impacted by the technical changes up to the standard IEC 60079-0:2017 ed 7.
(2) No impacted by the technical changes up to the standard IEC 60079-7:2017 ed 5.1.
(3) No impacted by the technical changes up to the standard IEC 60079-31:2022 ed 3.
(4) Service temperature range depending on manufacturing variations.