



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

Certificate No.: IECEx LCI 11.0008X issue No.: 0 Certificate history:

Status: Current

Date of Issue: 2011-04-11 Page 1 of 4

Applicant: **A.T.X.**
E.I.N 35 rue André DUROUCHEZ
CS 98017
80084 AMIENS Cedex 2
France

Electrical Apparatus: Increased safety enclosure
Optional accessory:

Type of Protection: d, e, ia, ib and tD

Marking: **A.T.X. – APPLETON**
Address :...
Type : JBe (1)
For gas use: Ex ... (2) ... T (3)
For Dust use: Ex tD A21 IP66 T... °C (see temperature table)
IECEx LCI 11.0008X
(1): completed by the model
(2): mode of protection and gas group from the combination of components permitted per temperature class
(3): according to certified component fitted inside the enclosure listed in the attachment
WARNING – DO NOT OPEN WHEN ENERGIZED

Approved for issue on behalf of the IECEx
Certification Body:

Marc GILLAUX

Position:

Ex certification Manager

Signature:
(for printed version)

Date:

11 AVR. 2011

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.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France



LCIE



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Manufacturer: **A.T.X.**
E.I.N 35 rue André DUROUCHEZ
CS 98017
80084 AMIENS Cedex 2
France

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 electrical 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:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

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:

FR/LCI/ExTR11.0008/00

Quality Assessment Report:

FR/LCI/QAR07.0008/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

These enclosures are divided in 24 models (depending on enclosure's size).

These enclosures can be joined together or with other increased safety enclosures (or certified flameproof enclosures) which provided an assembly with a minimum IP54 as defined in manufacturer's documents.

All models shall be used as a junction box (with Ex e II compliant terminals or with terminals blocks in compliance with intrinsic safety mode of protection) or wiring accessories boxes (the enclosure could be equipped with control and signal auxiliaries (see tables in attachment))

Junction box (Un max = 1000V): Enclosures shall be equipped with certified terminals Ex e II.

Intrinsic safety junction box : Enclosures shall be equipped with terminals/terminal blocks, usually blue, certified or recognised for this use.

CONDITIONS OF CERTIFICATION: YES as shown below:

- In any case, for all fitted elements, the maximum values of the electrical parameters defined in the manufacturer descriptive documents shall not be over passed.
- The installation of intrinsically safe certified elements Ia or Ib concerns the relevant EC type examination certificates and the intrinsic safety installation rules shall be respected according manufacturer's documents
- For a selected temperature ambient, the operating temperature of components to be fitted shall not be over passed. (see attachment : IECEx LCI 11.0008X Issue 00-Attachment n°1 Issue n°0.pdf)
- Characteristics of materials shall be adapted in order not to exceed permitted maximal dissipated power. All these elements, as well as enclosures' assemblies conditions are indicated in attachment: IECEx LCI 11.0008X Issue 00-Attachment n°1 Issue n°0.pdf.



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EQUIPMENT(continued):

Wiring accessories boxes

Enclosures could be equipped with control and signal auxiliaries:

Type	Name of equipment/component	Operating temperature
CVe	Contact and Pilot light	-40°C up to +75°C
FU40	Fuse holder	-40°C up to +40°C
TCe	Operator	-40°C up to +60°C
TSN/TSCN	Transformer	-20°C up to +80°C
07-3331-...	Switch	-20°C up to +40°C
IT20	Switch	-20°C up to +80°C
IT40U	Circuit breaker and switch	-20°C up to +60°C
CBU	Control or protection device	-20°C up to +55°C
IT63	Control or protection device	-30°C up to +60°C
IT160	Control device	-20°C up to +55°C
8008/2	Control and load interrupter switch	-55°C up to +40°C
PCX/EN	Flush mounting sockets	-40°C up to +55°C

Temperature table

Temperature classes following combinations of contents	Surface temperature for Dust use
T6	80°C
T5	95°C
T4	130°C
T3	195°C

Specific parameters

Maximum operating voltage: 11 000 V

Maximum current: 1600A

Intrinsically safe parameters concerns the relevant Ec type examination certificates.

Routine tests:

Each single enclosure, regarding to increased safety elements, shall be submitted to dielectric strength test according to paragraph 7.1 of IEC 60079-7 standard.

TABLE N°1 OF COMPONENTS USED IN « e » ENCLOSURES JBe TYPE FOR Ta max = +40°C

COMPONENTS		T° rating of enclosure depending on max. dissipated power																								Disipated power (W)	Type	Characteristics / Operating temperatures																										
		T° rating																																																				
		Max. dissipated power (W)																																																				
	(4)	CVe	JBe10 (120X120X95)																								6	JBe20 (120X180X95)	JBe30 (180X180X95)	JBe35 (180X180X200) JBe40 (180X370X95) JBe36 (220X260X150)								JBe45 (180X370X200) JBe46 (220X370X200) JBe50 (370X370X95)								JBe47 (260X370X200) JBe60 (370X560X95)								T° rating
			T6																																																			
			11																																																			
			16																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
	(1)	FU40	T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																								500V max. -20°C to +40°C																											
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
	(2)	Operators (4)	T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																								-40°C to +60°C																											
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
	(4)	CVe	T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																								P = 500V max. S=24,48,110,220V 20°C to +80°C																											
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
	(4)	CVe	T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																								16A max. 400V max. -40°C to +75°C																											
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
	(4)	CVe	T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																								400V max. -20°C to +40°C																											
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			
			T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6 T3 T4 T5 T6																																																			

TABLE N°1 OF COMPONENTS USED IN « e » ENCLOSURES JBe TYPE FOR Ta max = +40°C

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			JBe10 (120X120X95)	JBe20 (120X180X95)	JBe30 (180X180X95)	JBe35 (180X180X200) JBe40 (180X370X95) JBe36 (220X260X150)			JBe45 (180X370X200) JBe46 (220X370X200) JBe50 (370X370X95)			JBe47 (260X370X200) JBe60 (370X560X95)			T° rating																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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COMPONENTS		Disipated power (W)	T° rating of enclosure depending on max. dissipated power																		Characteristics / Operating temperatures	
			T° rating																			
			JBe10 (120X120X95)	JBe20 (120X180X95)	JBe30 (180X180X95)	JBe35 (180X180X200) JBe40 (180X370X95) JBe36 (220X260X150)			JBe45 (180X370X200) JBe46 (220X370X200) JBe50 (370X370X95)			JBe47 (260X370X200) JBe60 (370X560X95)										
		T6	T6	T6	T3	T4	T5	T6	T3	T4	T5	T6	T3	T4	T5	T6	T° rating	Max. dissipated power (W)				
BI + Diff.	≤ 16A	7																	-20°C to +55°C			
	≤ 20A	7																				
	≤ 25A	8																				
	≤ 32A	11																				
	≤ 40A	15																				
	≤ 63A	14																				
	≤ 16A	10																690V max.				
Tri / Tetra	≤ 20A	12																-20°C to +55°C				
	≤ 25A	14																				
	≤ 32A	17																				
	≤ 40A	26																				
	≤ 63A	22															690V max.					
	16A ≤ 50V	0,42																		16A max. 500V max. -40°C to +55°C		
	16A > 50V	0,42																				
	32A > 50V	1,27																32A max. 500V max. -40°C to +55°C				
Terminal blocks		(3)																(3)				

(1) Obligatory association with thermal protection of the engine

(2) Obligatory protection with circuit breaker

(3) Terminal blocks

TABLE N°2 OF COMPONENTS USED IN « e » ENCLOSURES JBe TYPE FOR Ta max = +40°C

COMPOSANTS/ COMPONENTS		(W)	T° rating of enclosure depending on max. dissipated power												Characteristics / Operating temperatures						
			JBe55 (370X370X200) JBe70 (370X750X95)						JBe56 (370X370X300) JBe65 (370X560X200) JBe75 (370X750X200)							JBe66 (370X560X300) JBe76 (370X750X300) JBe77 (560X560X200) JBe78 (560X560X300) JBe79 (560X750X200) JBe80 (560X750X300) JBe85 (750X1130X200) JBe86 (750X1130X300)					
			T3	T4	T5	T6	T3	T4	T5	T6	T3	T4	T5	T6							
 (4)	 (1)	Type													P max. dissipee / max. dissipated power (W)						
		CVe																			
		≤5A gI																			
		8A-10A gI																			
		16A gI																			
 (2)	 (1)	FU40																			
			≤ 40A aII																		
			neutral (depending on caliber)																		
 (4)	 (1)	TCa																			
		TSN																			
		TSCN																			
		100 VA																			
		160 VA																			
 (4)	 (1)	CVe																			
		11 to 16A																			
		20A																			
		4X32A																			
		4X63A																			
 (4)	 (1)	IT63																			
		4X63A																			
		IT160																			
		4X160A																			

TABLE N°2 OF COMPONENTS USED IN « e » ENCLOSURES JBe TYPE FOR Ta max = +40°C

[illegible]

TABLE N°2 OF COMPONENTS USED IN « e » ENCLOSURES JBe TYPE FOR Ta max = +40°C

COMPOSANTS/ COMPONENTS			Type	Dissipated power (W)	T° rating of enclosure depending on max. dissipated power												Characteristics / Operating temperatures
					JBe55 (370X370X200)			JBe56 (370X370X300)			JBe66 (370X560X300)						
					JBe70 (370X750X95)			JBe65 (370X560X200)			JBe77 (560X560X200)			JBe78 (560X560X300)			
					JBe75 (370X750X200)			JBe79 (560X750X200)			JBe80 (560X750X300)			JBe85 (750X1130X200)			
	16A ≤ 50V	PCX / EN	0,42	T3	T4	T5	T6	T3	T4	T5	T6	T3	T4	T5	T6	T° rating	
	16A > 50V		0,42	55	55	55	85	85	85	85	85	85	125	125	125	P max. dissipated / max. dissipated power (W)	
	32A > 50V		1,27													16A max. / 500V max. -40°C to +55°C	
	Terminal blocks															32A max. / 500V max. -40°C to +55°C	
(3)																	

(1) Obligatory association with thermal protection of the engine

(2) Obligatory protection with circuit breaker

(3) Terminal blocks

Operating T° > +40°C (except (4)), T rating will be T5 instead of T6, T4 instead of T5, T3 instead of T4, T2 instead of T3.