

**INERIS**

- (2) **Equipment and protective systems intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(3) Number of the EC type examination certificate: **INERIS 03ATEX0217X**

(4) Protective system or equipment:

**ACTUATOR SERIES ICON2000 TYPE ICON--.../...-**

(The points are replaced by numbers and/or letters corresponding to manufacturing variation)

(5) Manufacturer: **BIFFI ITALIA s.r.l**

(6) Address: **Loc. Caselle S.Pietro  
29017 Fiorenzuola d'Arda (Pc)  
ITALY**

(7) This protective system or equipment and any other acceptable alternative of this one are described in the appendix of this certificate and the descriptive documents quoted in this appendix.

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23<sup>rd</sup> March 1994, certifies that this protective system or equipment fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in appendix II of the Directive.

The examinations and the tests are consigned in official report No P47597/03

(9) The respect of the Essential Health and Safety Requirements is ensured by:

- conformity with:

EN 50 014	of June	1997 + A1 and A2
EN 50 018	of November	2000 + A1
EN 50 019	of July	2000
EN 50 020	of June	2002
EN 50 281-1-1	of September	1998 + A1
EN 13 463-1	of November	2001

- specific solutions adopted by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

(10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

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Folio 1 / 6


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Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921 - Siret 381 984 921 00019 - APE 743B

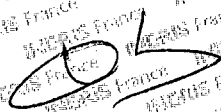
(1) This EC type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system, these are not covered by this certificate.

(12) The marking of the equipment or the protective system will have to contain:

 **Ex II 2 GD**

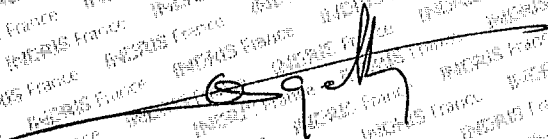
**EEx de ia IC T4 or EEx de ia IC T4  
IP68 T135°C**

Verneuil-en-Halatte, 2004 04 26

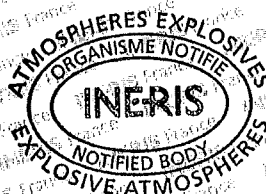


**X. LEFEBVRE**

Engineer at the Laboratory of Certification of ATEX  
Equipment



Director of the Certifying Body,  
By delegation  
**B. RIQUETTE**  
Deputy manager of Certification



(13)

## ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 03ATEX0217X

(15)

### DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The enclosure made in light alloy, is intended to receive mainly an electric motor and an electronic part. A version is intended with a compartment containing an intrinsic safety element fitted with a battery, this compartment is inside the terminal board.

The terminal board is protected by increased safety.

The motor is fitted with an internal thermal probe put in winding.

The enclosure presents the degrees of protection IP68 according to the European standard EN 60 529 ; The verification of the degree of protection IPX 8 corresponds to an immersion under 15 meters of water during 90 hours.

The actuators can be used at an ambient temperature lower than  $-20^{\circ}\text{C}$  (maximum  $-25^{\circ}\text{C}$ ).

### PARAMETERS RELATING TO THE SAFETY

For using in ambient temperatures less than  $+20^{\circ}\text{C}$  ( $-25^{\circ}\text{C}$  maxi), the manufacturing is previewed by the manufacturer under his responsibility.

Type test have been performed under ambient temperature required by standards

#### Electrical characteristics of motors:

Supply voltage : from 230 to 690 V

Frequencies : 50/60 Hz

Power of motors : from 0,03 kW to 4,042 kW

#### Operating rate

Motor serie SM : S2-15 minutes and S4-25% 60 starts/hour maximum

Motor serie TM : S2-30 minutes and S4-25% 600 starts/hour maximum

The maximum power of motors varies according to the type of the motor and the electric characteristics.

The various powers are specified in the descriptive documents.

#### Thermal switch characteristic equipping the motor :

Limit of release :  $140^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for actuator with motor serie SM.

Limit of release :  $160^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for actuator with motor serie TM.

**MARKING**

Marking must be readable and indelible; it must comprise the following indications:

**A) Actuator without intrinsic safety element**

BIFFI ITALIA s.r.l.  
Loc. Caselle S. Pietro  
29017 Fiorenzuola d'Arda (Pc)  
ITALY

ICON ---/--- (1)  
INERIS 03ATEX0217X  
(Serial number)  
(year of construction)

⊕ II 2 GD  
EEx de TIC T4  
T. Amb. (\*)  
IP68 T 135°C

DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

On the terminal board cover protected by increased safety :

The code "e"  
(rated voltage and rated current and/or rated power)

On the control cover and motor cover:

The code "d"  
(1) Type is completed by numbers and/or letters corresponding to alternatives of execution;

(\*) Indication of ambient temperature range when it is different from -20°C to 40°C.

**B) Actuator with intrinsic safety element :**

BIFFI ITALIA s.r.l.  
Loc. Caselle S. Pietro  
29017 Fiorenzuola d'Arda (Pc)  
ITALY

ICON ---/--- (1)  
INERIS 03ATEX0217X  
(Serial number)  
(year of construction)

⊕ II 2 GD  
EEx de ia IIC T4  
T. Amb. (\*)  
IP68 T 135°C

DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

On the terminal board cover protected by increased safety :

The code "w"

(rated voltage and rated current and/or rated power)

On the control cover and motor cover :

The code "w"

(1) Type is completed by numbers and/or letters corresponding to manufacturing variation.

(\*) Indication of ambient temperature range when that it is different from -20°C to 40°C.

On the compartment containing the intrinsic safety circuit :

Ex ia IIC T4

The whole of marking can be carried out in the language of the country of use.

The protective apparatus or system must also carry the marking normally envisaged by the standards of construction which relate to it.

**ROUTINE EXAMINATIONS AND TESTS**

According to 7.1 of standard EN 50 018, each sample of the flameproof enclosure defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 seconds, under 30,8 bar.

According to 7.1 of standard EN 50 019, each sample of the increased safety part of the equipment must undergo a dielectric strength test, carried out in accordance with 6.1 of standard EN 50 019.

**(16) DESCRIPTIVE DOCUMENTS**

The report is composed of the documents quoted hereafter, constituting the descriptive file of the apparatus, object of this certificate.

- Technical note DT-1444 rev.1 of 2003.12.03
- Instruction manual MAN 618 rev.4 of 2003.09.10
- Drawing n° 50080-15 rev.1 of 2004.03.15
- Drawing n° 50080-16 rev.1 of 2004.03.15
- Drawing n° 50080-14 of 2002.08.28
- Drawing n° PC4736-4 of 2000.12.06
- Drawing n° PC4736-3 of 2000.12.06
- Drawing n° PC4736-2 of 2000.12.06
- Drawing n° PC4736-1 of 2000.12.06
- Drawing n° DE4736 of 2000.12.06
- Drawing n° PC4750 of 2000.12.06
- Drawing n° DE4750-1 of 2000.12.06

These documents were signed on 2004.03.15

**(17) SPECIAL CONDITIONS FOR SAFE USE**

The actuator variations are intended to be used in an ambient temperatures range of -25°C to 65°C.

The screws used for the assembly of the various parts of explosion-proof enclosures must be of quality higher or equal to 450 N/mm<sup>2</sup>.

For use in potentially explosive atmospheres due to combustible dust:

The surface of the different gaps shall be covered with grease, for example silicone and cable entries shall be of a degree of protection at least IP6X.

User shall perform a regular cleaning of material to limit dust layers on the material sides.

**(18) ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH**

The respect of the Essential Health and Safety Requirements is ensured by:

conformity to the European standards EN 50 014, EN 50 018, EN 50019, EN 50 020, EN 50 281-1-1 and EN 13463-1,

the whole of the provisions adopted by the manufacturer and described in the descriptive documents,

## ADDITION

### INERIS 03ATEX0217X/01

ACTUATOR SERIES ICON2000 TYPE ICON-.../...-...

Manufactured by BIFFI ITALIA srl

#### (15) - PURPOSE OF THE ADDITION

- Replacement of existing battery pack by the battery pack constituted by 3 LS 14250 SAFT cells
- Change of infallible components fuse, resistance included in the battery compartment

#### PARAMETERS RELATING TO THE SAFETY

The battery pack to be used is SAFT LS14250 - 9V - 1,0 Ah

The other parameters relating to the safety stipulated by the basic certificate are unchanged.

#### MARKING

On the compartment containing the intrinsic safety circuit, the marking becomes :

EEx ia IIC T4 up to Tamb 65°C - IP66

Or EEx ia IIC T3 up to Tamb 85°C - IP66

" DO NOT OPEN IN PRESENCE OF EXPLOSIVE GAS ATMOSPHERE "

#### ROUTINE EXAMINATIONS AND TESTS

The routine tests stipulated by the basic certificate are unchanged.

#### (16) - DESCRIPTIVE DOCUMENTS

The documents referred to below, constitute the file describing the modifications of the apparatus and forming the subject of the present addition.

- Descriptive note DT-1444	rev.0	du 2005.11.28
- Drawing DE5713	rev.1	du 2005.08.26
- Drawing PC 5713-1	rev.1	du 2005.10.12
- Instruction Manual MAN 618	rev.7	du 2005.10.10
- Drawing n° 50080-16	rev.2	du 2005.11.28
- Interface circuit DE5700	rev.1	du 2005.10.12
- Printed circuit PC 5700-1	rev.1	du 2005.10.12
- Printed circuit PC 5700-2	rev.1	du 2005.10.12

- Printed circuit PC 5700-3 rev.1 du 2005.10.12
- Printed circuit PC 5700-4 rev.1 du 2005.10.12

These documents are signed on 2005.12.01

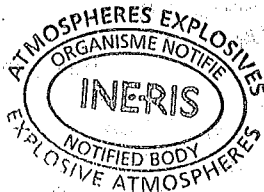
(17) - **SPECIAL CONDITIONS FOR SAFE USE**

The special condition, defined in the basic certificate are unchanged.

(18) **ESSENTIAL REQUIREMENTS OF SAFETY AND HEALTH**

The respect of the Essential Health and Safety Requirements defined in the basic certificate is unchanged.

Verneuil-en-Halatte, 2005 12 05



T. DELBAERE

Engineer at the Laboratory of Certification of  
ATEX Equipment

Director of the Certifying Body,  
By delegation  
B. PIQUETTE  
Deputy manager of Certification

## ADDITION

(3) INERIS 03ATEX0217X/02

(4) ACTUATOR SERIES ICON2000 TYPE ICON--.../...-...

(5) Made by BIFFI ITALIA srl

(15) PURPOSE OF THE ADDITION

- Application of the following standards:

EN 60079-0	: 2006	EN 60079-1	: 2004	EN 60079-7: 2007	EN 60079-11: 2007
EN 61241-0	: 2006	EN 61241-1	: 2004		
EN 13463-1	: 2001	EN 13463-5	: 2003		
IEC 60079-0	: 2004	IEC 60079-1	: 2003	IEC 60079-7: 2006	IEC 60079-11: 2006
IEC 61241-0	: 2004	IEC 61241-1	: 2004		

- Reduction of the range of the ambient temperature at -20°C +60°C.

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are unchanged except for the indication relative to the range of ambient temperature.

MARKING

The marking is modified as follows:

A) Actuator without intrinsic safety element :

BIFFI ITALIA s.r.l

I - 29017 Fiorenzuola d'Arda (PC)

ICON--.../...-... (\*)

INERIS 03ATEX0217X

(Serial number)

(Year of construction)

⊕ Ex II 2 GD

c Ex d e IIC T4

c Ex tD A21 IP68 T135°C

T.Amb : (\*\*)

FOR CABLE ENTRIES DIMENSIONS SEE INSTALLATION MANUAL

**WARNINGS:**

DO NOT OPEN WHEN ENERGIZED

DO NOT OPEN ANY COVER IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

B) Actuator with intrinsic safety element :

BIFFI ITALIA s.r.l


I - 29017 Fiorenzuola d'Arda (PC)

ICON-.../...-... (\*)

INERIS 03ATEX0217X

(Serial number)

(Year of construction)

 II 2 GD

c Ex d e ia IIC T4

c Ex tD A21 IP68 T135°C

T.Amb. : (\*\*)

FOR CABLE ENTRIES DIMENSIONS SEE INSTALLATION MANUAL

**WARNINGS:**

DO NOT OPEN WHEN ENERGIZED

DO NOT OPEN ANY COVER IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

On the compartment containing the intrinsic safety circuit, the marking:

Ex ia IIC T4

(\*) Type is completed by numbers and/or letters corresponding to alternatives of execution.

(\*\*) Indication of the range of temperature ambient if it is different from -20°C to 40°C: -20°C to 60°C.

Marking may be carried out in the language of the country of use.

The protective system or equipment has also to carry the marking normally stipulated by its construction standards.

**ROUTINE EXAMINATIONS AND TESTS**

The routine tests are modified as follow:

In accordance with clause 16.1 of IEC/EN 60079-1 standard, each sample defined above, must have successfully passed before delivery, an overpressure test, of a period comprised between 10 and 60 seconds, under 30.8 bar.

In accordance with clause 7.1 of the IEC/EN 60079-7 standard, each apparatus defined above has to have successfully passed before delivery a test of dielectric strength on each of the different circuits of the connection units, performed according to the relevant standards, the test voltage being applied during one minute.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation describing the modifications of the equipment, subject of this present addition.

- |                                   |         |               |                      |
|-----------------------------------|---------|---------------|----------------------|
| - Descriptive notice DT_1444_2    | rev.0   | of 2010.05.27 | signed on 2010.06.22 |
| - Instructions MAN_618_Addendum 3 | rev.0   | of 2010.06.16 | signed on 2010.06.22 |
| - Drawing n° 50080-15             | rev.2   | of 2010.05.27 | signed on 2010.06.22 |
| - Drawing n° 50080-16             | rev.3   | of 2010.05.27 | signed on 2010.06.22 |
| - Drawing n° 50080-14             | rev.1   | of 2010.05.27 | signed on 2010.06.22 |
| - Drawing DE5713                  | rev.00A | of 2005.08.26 | signed on 2010.06.22 |
| - Drawing DE5700 sh.1/2+sh.2/2    | rev.03B | of 2009.08.31 | signed on 2010.06.22 |
| - Drawing DE_5713L sh.1/2+sh.2/2  | rev.00A | of 2010.05.18 | signed on 2010.06.22 |
| - Drawing DE_5700L sh.1/2+sh.2/2  | rev.03B | of 2010.05.20 | signed on 2010.06.22 |

(17) SPECIAL CONDITIONS FOR SAFE USE

The special conditions are replaced by the following:

- The screws used for the assembly of the various parts of explosion-proof enclosures must be with yield strength higher or equal to 450 N/mm<sup>2</sup>.
- The gap and diametrical clearances are less than the values specified in the table 2 of the standard IEC/EN 60079-1.

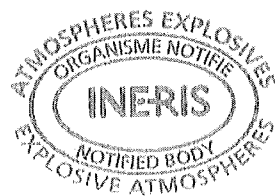
The other conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is completed as follows:

- Conformity to the standards quoted on page 1, clause (15).
- All provisions adopted by the manufacturer and defined in the descriptive documents.

Verneuil-en-Halatte, 2010.06.28



Director of the Certifying Body,  
By delegation  
T. HOUeix  
Certification Officer  
Certification Division

## COMPLEMENT

(3) INERIS 03ATEX0217X/03

(4) ACTIONNEUR SERIE ICON2000 TYPE ICON---.../...-...

(5) Construit par BIFFI ITALIA srl

(15) **OBJET DU COMPLEMENT**

- Application des normes :

EN 60079-0	: 2009	CEI 60079-0	: 2011
EN 60079-1	: 2007	CEI 60079-1	: 2007
EN 60079-11	: 2012	CEI 60079-11	: 2011
EN 60079-31	: 2009	CEI 60079-31	: 2008
EN 13463-1	: 2009	EN 13463-5	: 2003

- Modification de la gamme de température ambiante.

- Ajout du degré de protection IPX6 en accord avec la norme EN/CEI 60529.

**PARAMETRES RELATIFS A LA SECURITE**

Les paramètres relatifs à la sécurité sont inchangés sauf pour l'indication relative à la gamme de températures. Ces actionneurs peuvent être utilisés dans une gamme de températures ambiantes de -25°C à 60°C.

**MARQUAGE**

Le marquage est modifié comme suit :

**A) Actionneur sans élément de sécurité intrinsèque :**

BIFFI ITALIA s.r.l


I - 29017 Fiorenzuola d'Arda (PC)

ICON---.../...-... (\*)

INERIS 03ATEX0217X

(Numéro de série)

(Année de construction)

 II 2 GD

c Ex d e IIC T4 Gb

c Ex tb IIIC Db IP66/68 T135°C

T.Amb : (\*\*)

POUR ENTREES DE CABLE VOIR INSTRUCTIONS


**AVERTISSEMENTS :**

NE PAS OUVRIR SOUS TENSION

NE PAS OUVRIR SI UNE ATMOSPHERE EXPLSOIVE PEUT ETRE PRESENTE

**B) Actionneur avec élément de sécurité intrinsèque :**

BIFFI ITALIA s.r.l  
I - 29017 Fiorenzuola d'Arda (PC)  
ICON--.../...-... (\*)  
INERIS 03ATEX0217X  
(Numéro de série)  
(Année de construction)

 II 2 GD

c Ex d e ia IIC T4 Gb  
c Ex tb IIIC Db IP66/68 T135°C  
T.Amb. : (\*\*)

POUR ENTREES DE CABLE VOIR INSTRUCTIONS

**AVERTISSEMENTS :**

NE PAS OUVRIR SOUS TENSION  
NE PAS OUVRIR SI UNE ATMOSPHERE EXPLSOIVE PEUT ETRE PRESENTE

Sur le compartiment renfermant le circuit de sécurité intrinsèque le marquage :

"ia"

- (\*) Le type est complété par des chiffres et/ou des lettres correspondant aux variantes d'exécution.
- (\*\*) L'indication de la gamme de températures ambiantes lorsque celle-ci est différente de -20°C à 40°C : -25°C à 60°C.

L'ensemble du marquage peut être réalisé dans la langue du pays d'utilisation.

L'appareil ou le système de protection doit aussi porter le marquage normalement prévu par les normes de construction qui le concernent.

**EXAMEN ET ESSAIS INDIVIDUELS**

Les examens et essais individuels sont inchangés.

**(16) DOCUMENTS DESCRIPTIFS**

Les documents descriptifs cités ci-après, constituent la documentation technique des modifications apportées au matériel et faisant l'objet du présent complément :

- |                                   |       |               |
|-----------------------------------|-------|---------------|
| - Notice descriptive DT_1444_2    | rév.2 | du 2012.10.08 |
| - Instructions MAN_618_Addition D | rév.0 | du 2012.09.26 |
| - Annexe 1 DT_2001                | rév.0 | du 2012.10.12 |
| - Plan n° 50080-15                | rév.3 | du 2012.09.25 |
| - Plan n° 50080-16                | rév.4 | du 2012.09.25 |
| - Plan n° 50080-14                | rév.2 | du 2012.10.08 |

Tous les documents sont signés du 2012.10.29

**(17) CONDITIONS SPECIALES POUR UNE UTILISATION SURE**

Les conditions spéciales sont complétées comme suit :

- La longueur des différents joints antidéflagrants est supérieure aux valeurs spécifiées dans les tableaux de la norme EN/CEI 60079-1.

**(18) EXIGENCES ESSENTIELLES DE SECURITE ET DE SANTE**

Le respect des Exigences Essentielles de Sécurité et de Santé est modifié comme suit :

- La conformité aux normes listées au paragraphe (15).
- L'ensemble des dispositions adoptées par le constructeur et décrites dans les documents descriptifs.

Verneuil-en-Halatte, 2012.11.28

**Dominique CHARPENTIER**  
Responsable  
Pôle Certification



Le Directeur Général de l'INERIS,  
Par délégation  
T. HOUEIX  
Délégué Certification ATEX

