INERIS
INSTITUT NATIONAL DE L'ENVIRONNEMENT INDUSTRIEL ET DES RISQUES

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(2) **Equipment and protection 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 02ATEX0081 X**

(4) Protective system or equipment :

ACTUATOR SERIES ICON2000 TYPE ICON--.../..-...
(The type is completed by numbers and/or letters corresponding to alternatives of execution)

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

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

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

(8) The INERIS, notified body and identified under number 0080, in accordance with article 9 of Council Directive 94/9/EC of the 23rd March 1994, certifies that this protection system or equipment fulfils the Essential of Health and Safety Requirements relating to the design and construction of equipment and protection 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 N°16040/02.

(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
EN 50 020	of August	1994
EN 50 281-1-1	of September	1998 + A1

- 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 protection system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.

(11) 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 protection system will have to contain:

⟨Ex⟩ II 2 GD **EEx d IIC T4 or EEx d ia IIC T4**
IP68 T135°C

Verneuil-en-Halatte, 2002 12 16

X. LEFEBVRE

Engineer at the Laboratory of Certification of Materials ATEX

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

ATMOSPHERES EXPLOSIVES
ORGANISME NOTIFIE
INERIS
NOTIFIED BODY
EXPLOSIVE ATMOSPHERES

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N° INERIS 02ATEX0081 X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTION SYSTEM

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

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 60529.

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°C (maximum - 55°C).

PARAMETERS RELATING TO THE SAFETY

For using in ambient temperatures inferior to -20°C (-55°C maxi), the manufacturing is previewed by the manufacturer under his responsibility.

Type test have been performed under ambient temperature required by standards

Electrical parameters

Supply voltage	:	from 230 to 480 V
Frequencies	:	50/60 Hz
Power of motors	:	from 0,071 kW to 1,764 kW

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 probe characteristic equipping the motors :

Limit of release	:	140 °C ± 5°C.

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 02ATEX0081 X
- (Serial number)
- (year of construction)
- ⟨Ex⟩ II 2 GD
- EEx d IIC T4
- T.Amb : **(*)**
- IP68 T135°C
- Δ T cable : 5 K **(**)**
- DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

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

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

(**) Indication if ambient temperature is higher than 65°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 02ATEX0081 X
- (Serial number)
- (year of construction)
- ⟨Ex⟩ II 2 GD
- EEx d ia IIC T4
- T.Amb : (*)
- IP68 T135°C
- Δ T cable : 5 K **(**)**
- DO NOT OPEN ANY COVER WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(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.

(**) Indication if ambient temperature is higher than 65°C.

On the compartment containing the intrinsic safety circuit :
EEx ia IIC T4 - IP66

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

The protection 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 16.1 of standard EN 50 018, each example of the flameproof enclosure defined above must have successfully passed before delivery an overpressure test, of a period comprised between 10 and 60 secondes, under 18 bar.

(16) DESCRIPTIVE DOCUMENTS

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

-Technical note DT-1403	rev.2	of 2002.10.24	signed on 2002.10.24
-Instruction manual MAN 618	rev.2	of 2002.10.24	signed on 2002.10.24
-Plan n° 50080-2	rev.5	of 2002.11.07	signed on 2002.11.07
-Plan n° 50080-11	rev.3	of 2002.11.07	signed on 2002.11.07
-Plan n° 50080-10		of 2002.12.28	signed on 2000.12.28
-Plan n° PC4736-4		of 2000.12.06	signed on 2002.12.06
-Plan n° PC4736-3		of 2000.12.06	signed on 2002.12.06
-Plan n° PC4736-2		of 2000.12.06	signed on 2002.12.06
-Plan n° PC4736-1		of 2000.12.06	signed on 2002.12.06
-Plan n° DE4736		of 2000.12.06	signed on 2002.12.06
-Plan n° PC4750		of 2000.12.06	signed on 2002.12.06
-Plan n° DE4750-1		of 2000.12.06	signed on 2002.12.06

(17) SPECIAL CONDITIONS FOR SAFE USE

- The actuator variations are intended to be used in an ambient temperatures range of -55°C to 85°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/mm2.
- All the certified elements equipping the actuators, in particular the cables entries, could be put on the market until June 30 2003. The actuators put on the market after this date will be equipped with elements in conformity with Directive 94/9/EC.

For use in potentially explosive atmospheres due to combustible dust:

- The surface of the differents 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.

These special conditions are defined in instruction notice.

(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 50 020 and EN 50 281-1-1
- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.

ADDITION

INERIS 02ATEX0081X/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 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-1403	rev.0	du 2006.01.12
- 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° 50080-11	rev.4	du 2006.01.12
- 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 were signed on 2006.02.08

(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, 2006 02 08

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

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 02ATEX0081X/02

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

(5) Made by BIFFI ITALIA srl

(15) PURPOSE OF THE ADDITION

- Application of standards :

EN 60079-0	: 2006	EN 60079-1	: 2004	EN 60079-11 : 2007.
EN 61241-0	: 2006	EN 61241-1	: 2004.	
IEC 60079-0	: 2004	IEC 60079-1	: 2003	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.
- Extension of motor supply voltage to 690 V

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are unchanged except the indication of the range of ambient temperature and the maximum suply voltage which becomes 690 volts.

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 02ATEX0081X
(Serial number)
(Year of construction)
Ex II 2 GD
Ex d IIC T4
Ex tD A21 IP68 T135°C
T.Amb : (**)

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 02ATEX0081X
(Serial number)
(Year of construction)
Ⓔx II 2 GD
Ex d ia IIC T4
Ex tD A21 IP68 T135°C
T.Amb. : (**)

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.

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 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 secondes, under 18 bar.

(16) DESCRIPTIVE DOCUMENTS

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

- Descriptive notice DT_1403_2	rev.0	of 2010.05.20	signed on 2010.06.28
- Instructions MAN_618_Addendum 2	rev.0	of 2010.05.18	signed on 2010.06.28
- Drawing n°50080-2	rev.6	of 2010.05.20	signed on 2010.06.28
- Drawing n°50080-11	rev.5	of 2010.05.20	signed on 2010.06.28
- Drawing n°50080-10	rev.1	of 2004.07.07	signed on 2010.06.28
- Drawing DE5713	rev.00A	of 2005.08.26	signed on 2010.06.28
- Drawing DE5700 sh.1/2+sh.2/2	rev.03B	of 2009.08.31	signed on 2010.06.28
- Drawing DE_5713L sh.1/2+sh.2/2	rev.00A	of 2010.05.18	signed on 2010.06.28
- Drawing DE_5700L sh.1/2+sh.2/2	rev.03B	of 2010.05.20	signed on 2010.06.28

(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^2.
- The equipment is intended to be used in an operating temperature range from -20°C to 60°C.
- 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 29

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

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

COMPLEMENT

(3) **INERIS 02ATEX0081X/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.
- Incorporation de nouveaux moteurs type TM.

PARAMETRES RELATIFS A LA SECURITE

Les paramètres relatifs à la sécurité sont complétés comme suit :

Les différents paramètres, facteur de marche, couple, et nombre de démarrage sont définis dans les documents descriptifs, les tensions et puissances sont inchangées.

Caractéristiques de la sonde thermique équipant les moteurs type TM :

Seuil de déclenchement : 160°C ± 5°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 02ATEX0081X
(Numéro de série)
(Année de construction)
Ex II 2 GD
c Ex d IIC T4 Gb
c Ex tb IIIC T135°C Db IP66/68

T.Amb : (**)
T.câble : (***)
POUR LES DIMENSIONS DES ENTREES DE CABLE VOIR INSTRUCTIONS

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

(*) Le type ICON2000-010 ou ICON2000-020 est complété par des chiffres et/ou des lettres correspondant aux variantes d'exécution.

(**) Une des gammes de températures ambiantes suivantes :
- de -20°C à +65°C ou +85°C avec joints NBR.
- de -60°C à +65°C ou +85°C avec joints Fluorosilicone.

(***) 90°C quand la température ambiante est supérieure à 65°C.

B) <u>Actionneur avec élément de sécurité intrinsèque</u>:

BIFFI ITALIA s.r.l
I - 29017 Fiorenzuola d'Arda (PC)
ICON (*)
INERIS 02ATEX0081X
(Numéro de sérier)
(Année de construction)
Ex II 2 GD
Ex d ia IIC T4 Gb
Ex tb IIIC T135°C Db IP66/68
T.Amb : (**)
T.câble : (***)
POUR LES DIMENSIONS DES 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 ICON2000-010 ou ICON2000-020 est complété par des chiffres et/ou des lettres correspondant aux variantes d'exécution.

(**) Une des gammes de températures ambiantes suivantes :
- de -20°C à +65°C ou +85°C avec joints NBR.
- de -60°C à +65°C ou +85°C avec joints Fluorosilicone.

(***) 90°C quand la température ambiante est supérieure à 65°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 de la modification apportée au matériel et faisant l'objet du présent complément :

-	Notice descriptive DT 1403	rév.3	du 2012.10.08
-	Annexe 1 DT_2001	rév.0	du 2012.10.12
-	Instructions MAN 618 Addendum C	rév.0	du 2012.09.26
-	Plan n°50080-2	rév.6	du 2012.09.25
-	Plan n°50080-11	rév.6	du 2012.09.25
-	Plan n°50080-10	rév.2	du 2012.09.25
-	Plan n°380000023W		du 2012.09.27

Tous ces documents sont signés du 2012.09.29

(17) CONDITIONS SPECIALES POUR UNE UTILISATION SURE

Les conditions spéciales sont remplacées par :

- La visserie utilisée pour l'assemblage des différentes parties d'enveloppes antidéflagrantes doit être de qualité supérieure ou égale à 450 N/mm^2.
- Ce matériel est prévu pour une gamme de température d'utilisation de -60°C à 85°C.
- Les interstices et jeux diamétraux sont inférieurs aux valeurs spécifiées dans le tableau de la norme EN/CEI 60079-1.
- La longueur des joints antidéflagrants est supérieure à celle indiquée 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, 2012.11.27

Dominique CHARPENTIER
Responsable
Pôle Certification

ATMOSPHERES EXPLOSIVES – ORGANISME NOTIFIE – INERIS – NOTIFIED BODY – EXPLOSIVE ATMOSPHERES

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