(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 03ATEX0183X**

(4) Equipment or protective system:

CONTROL, COMMAND AND JUNCTION BOX FOR MOTORIZED VALVE TYPE LEF 730....-..-..-.

(5) Manufacturer: **LEF INDUSTRIES**

(6) Address: ZI de Lannugat
F –29177 DOUARNENEZ

(7) This equipment or protective system 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 23rd March 1994, certifies that this equipment or protective system 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 P51751/03.

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

- conformity with:

EN 50 014	of June	1997 + Amendments 1 and 2
EN 50 018	of November	2000 + Amendment 1
EN 50 019	of July	2000
EN 50 028	of February	1987
EN 50 281-1-1	of September	1998 + Amendment 1
EN 13463-1	of November	2001

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

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Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Senlis B 381 984 921- Siret 381 984 921 00019 - APE 743B

(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.

(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 protective system will have to contain:

Ex II 2 G **EEx e II or ed IIC or emd IIC T6 or T5**

or

Ex II 2 GD **EEx e II or ed IIC or emd IIC T6 or T5 IP66 T85°C or T100°C**

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

Verneuil-en-Halatte, 2004 11 01

C. PETITFRERE

Engineer at the Laboratory for Certification of ATEX Equipment

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

(13) # ANNEX

(14) EC TYPE EXAMINATION CERTIFICATE N°INERIS 03ATEX0183X

(15) **DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM**

The control, command and junction box for motorized valve type LEF 730 has either an increased safety enclosure of a certified type or a light alloy enclosure type LC1, LC3 or LP3.

According to the alternative of realization, the box can contain terminals EEx e , one or more switches EEx d, one or two solenoids EEx m and one pneumatic distributor.

A bushing with guided axis in rotation can also be installed on the box for the recopy of the position of the valve.

The connection to external electrical circuits is ensured by cable entries of certified type.

If a cable entry is not used, the corresponding hole is closed by a stopper plug of a certified type.

The electrical apparatus can comprise the Ex components and materials of a certified type defined in the descriptive documents.

PARAMETERS RELATING TO THE SAFETY

Terminals :

- maximum voltage : 250 V
- maximum current : 5 A

Switches :

- maximum voltage : 250 V
- maximum current : 5 A
- maximum power : 1 W

Solenoids :

- supplying in direct current :
  . nominal voltage : 12 to 110 V
  . power : 4 W
- supplying in alternative current :
  . nominal voltage : 24 to 230 V
  . power : 3 W
  . frequency : 50/60 Hz

Maximum inlet pressure of pneumatic distributor : 6 bar

Maximum temperature of the compressed air : 40°C

MARKING

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

- LEF INDUSTRIES
  ZI de Lannugat
  F -29177 DOUARNENEZ
- LEF 730....-..-..-.
- INERIS 03ATEX0183X
- (serial number)
- (Year of construction)
- T°amb : -20°C or -10°C to +40°C or +60°C according to the variant
  (obligatory marking when different of -20°C to +40°C)

1. Box only fitted with terminals :

- Ex II2G EEx e II T6

or

- Ex II2GD EEx e II T6 IP65 or IP66 or IP66/67 T85°C
- *(nominal voltage and current)*
- DO NOT OPEN WHEN ENERGIZED

2. Box only fitted with terminals and switches :

- Ex II2G EEx ed IIC T6

or

- Ex II2GD EEx ed IIC T6 IP65 or IP66 or IP66/67 T85°C
- *(nominal voltage and current)*
- DO NOT OPEN WHEN ENERGIZED

3. Box fitted with terminals, switches and solenoids :

- Ex II2G EEx emd IIC T5

or

- Ex II2GD EEx emd IIC T5 IP65 or IP66 or IP66/67 T100°C
- *(nominal voltage and current)*
- DO NOT OPEN WHEN ENERGIZED

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

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

ROUTINE EXAMINATIONS AND TESTS

Each exemplar of the apparatus, hereabove defined, must have undergone successfully prior to delivery, in accordance with 7.1 of EN 50 019 a dielectric strenght according to the appropriate standards.

(16) DESCRIPTIVE DOCUMENTS

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

- Instructions DQ.37.E (1 page)	of December 2003
- Descriptive notice LEF 730 ATEX/0305/JYF (12 pages)	of December 2003
- Drawing no LEF 730 0000-128-012-.	of July 1997
- Drawing no LEF 730 00x8-x32-xNN	on 1998.11.05
- Drawing no LEF 730-00-32-110-00-21	of July 1997
- Drawing no LEF 730 12-32-114-12-. 2 folios	of July 1997
- Drawing no 148 issue D	on 2003.05.16
- Drawing no 148/01 issue D	on 2003.05.12
- Drawing no 148/02 issue E	on 2002.05.12
- Drawing no 151 issue C	on 2003.05.14
- Drawing no 155 issue D	on 2003.05.15

These documents are signed on December 2003.

- Drawing no 342 issue C	on 2004.09.01
- Drawing no 343 issue C	on 2004.09.01

These documents are signed on October 2004.

(17) SPECIAL CONDITIONS FOR SAFE USE

Each solenoid should have an adapted protection against short-circuits, as defined in their respective instructions, located upstream and out of hazardous area.

Cable entries, of a certified type, should have the minimum degrees of protection IP65 or IP66 or IP66/67 according to the alternatives of realization defined in the descriptive documents of the manufacturer.

(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 50 019, EN 50 028, EN 50281-1-1 and EN 13 463-1.
- the whole of the provisions adopted by the manufacturer and described in the descriptive documents.

ADDITION

(3) **INERIS 03ATEX0183X/01**

(4) **CONTROL, COMMAND AND JUNCTION BOX FOR MOTORIZED VALVE TYPE LEF 730....-..-..-.**

(5) **Made by LEF INDUSTRIES**

(15) **PURPOSE OF THE ADDITION**

- Application of European standards :

  EN 60079-0 : 2006
  EN 60079-1 : 2004
  EN 60079-7 : 2007
  EN 60079-18 : 2004
  EN 61241-0 : 2006
  EN 61241-1 : 2004
  EN 13463-1 : 2009

- Add of new box LC4 in plastic material.
- Add of stainless steel new boxes BARTEC and RITTAL of a certified type.
- Add of box LC5.
- Modification of possible variants of LEF730 box defined descriptive documents of manufacturer.

PARAMETERS RELATING TO THE SAFETY

The parameters relating to the safety are modified as follow:

Junction terminals:

- Maximum voltage : 250 Vac
- Maximum current : 5 A

Proximity sensor type PT..,PF.., PL.. :

- Maximum voltage : 60 Vdc
- Maximum current : 0.4 A
- Maximum power : 12 VA

Proximity sensor PSS..:

- Maximum voltage : 60 Vdc
- Maximum current : 0.1 A
- Maximum power : 3 VA

Switches:

- Maximum voltage : 250 V
- Maximum current : 5 A
- Maximum power : 1 W

Solenoid Parker Lucifer:

- Direct current supply voltage :

  Maximum voltage : 12 to 110 Vdc
  Maximum power : 3 W

- Alternative current supply voltage :

  Maximum voltage : 24 to 230 Vac
  Maximum power : 3 W
  Frequency : 50/60 Hz

Solenoid Asco Joucomatic:

1. Metallic body

- Direct current supply voltage :

  Maximum voltage : 12 to 110 Vdc
  Maximum power : 2.8 W at Tamb : 80°C (class T5

- Alternative current supply voltage :

  Maximum voltage : 24 to 230 Vca
  Maximum power : 3.6 W at Tamb : 80°C (class T4)
  Frequency : 50/60 Hz

2. Plastic body

- Direct current supply voltage :

  Maximum voltage : 12 to 110 V
  Maximum power : 4.9 W at Tamb : 80°C (class T4)

- Maximum pressure of compressed air : 10 bar
- Maximum temperature of compressed air : 40°C

MARKING

The marking is modified as follows:

- LEF Industries
- F - 29177 DOUARNENEZ
- LEF 730 ....-..-..-.
- INERIS 03ATEX0183X
- (Serial number)
- (Year of construction)
- Ⓔx II 2 G or Ⓔx II 2 GD*
- Ex e II or Ex e d IIC or Ex e mb d IIC T6, T5 or T4*
- Ex tD A21 IP65 or IP66 or IP66/67 T85°C, T100°C or T135°C*
- from -40°C to 0°C ≤ Ta ≤ from 40°C to 60°C*
- WARNING : DO NOT OPEN WHEN ENERGIZED

* The marking is made in function of the final assembly the LEF 730 box.

ROUTINE EXAMINATIONS AND TESTS

The routine examinations and tests are modified as follows:

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

(16) DESCRIPTIVE DOCUMENTS

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

- File DC730/av01 dated and signed on 2010.06.29

(17) SPECIAL CONDITIONS FOR SAFE USE

The special conditions for safe use are modified as follows:

Cable entries, of a certified type, should have the minimum degrees of protection according to the alternatives of realization defined in the descriptive documents of the manufacturer.

Each solenoid should have an adapted protection against short-circuits, as defined in their respective instructions, located upstream and out of hazardous area.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

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

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

Verneuil-en-Halatte, 2011.01.27

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

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