



- (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 08ATEX0004X**

- (4) Equipment or protective system:

TEMPERATURE TRANSMITTER TYPE TiXo1

- (5) Manufacturer: **REGULATEURS GEORGIN**

- (6) Address: **14-16 rue Pierre Sémard
F - 92320 CHATILLON**

- (7) This equipment or protective system 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) 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 annex II of the Directive.

The examinations and the tests are consigned in confidential report No LEEA020441/08.


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

- conformity with:

EN 60079-0 of july 2006
EN 60079-11 of january 2007
EN 60079-26 of december 2004
EN 61241-0 of december 2006
EN 61241-11 of december 2006

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

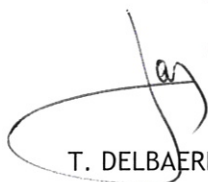
- (10) Sign X, when it is placed following the Number of the EC type examination certificate, indicates that this equipment and protective system is subjected to the special conditions for safe use, mentioned in the annex of this certificate.
- (11) This EC type examination certificate relates only to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

 II 1 GD

Ex ia IIC T6/T5/T4

Ex iaD 20 T85 °C/T100 °C/T135 °C

Verneuil-en-Halatte, 2008 03 13


T. DELBAERE

Project Manager at the ATEX
Equipment Evaluation Laboratory





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

(13)

ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 08ATEX0004X

(15)

DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

Temperature transmitter TiXo1 is destined to convert signal coming from a 4/20 mA RTD100 sensor. The equipment is protected with intrinsic safety.

PARAMETERS RELATING TO THE SAFETY

Input characteristics are :

Plugs	Ui	Ii	Pi	Ci	Li
+ and -	28 V	0.1 A	0.7 W	0 µF	0 mH

Output characteristics are :

Plugs	Uo	Io	Po	Co	Lo
1-2-3 and 4	28 V	27.2 mA	190.5 mW	83 nF	28 mH

The power cable of the equipment must have a 20 mH maximal inductance.

MARKING

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

GEORGIN


F - 92320 CHATILLON

TiXo1

INERIS 08ATEX0004X

(Serial number)

(Year of construction)

 II 1 GD

Ex ia IIC T *

Ex iaD 20 T **

Tamb : -40°C to Tmax ***

With :

Tmax ***	50°C	65°C	85°C
T *	T6	T5	T4
T **	T85°C	T100°C	T135°C

The marking may be reduced to :

GEORGIN
 TiXo1
 INERIS 08ATEX0004X
 Ex ia IIC
 Ex iaD

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

None.

(16) DESCRIPTIVE DOCUMENTS

The descriptive documents quoted hereafter constitute the technical documentation of the equipment, subject of this certificate.

- Fabrication file TPX 3400 D (2 pages) signed on 2008.02.04
- Descriptive note (5 pages) signed on 2008.02.04
- Instructions (2 pages) signed on 2008.02.04

(17) SPECIAL CONDITIONS FOR SAFE USE

For an installation in zone 0, 1 or 2, the equipment must be mounted in a box which insures a minimal protection level IP20 with materials in accordance to the EN60079-0 standard.

For an installation in zone 20 or 21, the equipment must be mounted in a box which insures a minimal protection level IP60 with materials in accordance with EN61241-0 standard.

For an installation in zone 22, in case of conductive dust, the equipment must be mounted in a box which insures a minimal protection level IP60 with materials in accordance with EN61241-0 standard.

For an installation in zone 22, in case of non-conductive dust, the equipment must be mounted in a box which insures a minimal protection level IP50 with materials in accordance with EN61241-0 standard.

The other conditions are stipulated in the instructions.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

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

- Conformity to the standards EN 60079-0:2006, EN 60079-11:2007, EN60079-26 :2004, EN 61241-0:2006 and EN 61241-11:2006.
- All provisions adopted by the manufacturer and defined in the descriptive documents.

ADDITION

(3) **INERIS 08ATEX0004X/01**

(4) **TEMPERATURE TRANSMITTER TYPE TiXo.**

(5) **Made by REGULATEURS GEORGIN**

(15) **PURPOSE OF THE ADDITION**

- Possible modification of electronics components of the apparatus TiXo1,
- Introduction of a new model type TiXo2 in the temperature regulator series type TiXo.

PARAMETERS RELATING TO THE SAFETY

For the TiXo1 apparatus, the parameters relating to the safety are unchanged.

For the TiXo2 apparatus, the parameters relating to the safety are modified as follows :

The input characteristics are :

Terminals	Ui	Ii	Pi	Ci	Li
+ and -	28 V	0.1 A	0,7 W	0 µF	0 mH

The output characteristics are :

Terminals	Uo	Io	Po	Co	Lo
P1- P2- P3-P4	7.14 V	4.28 mA	7.63 mW	14.2 µF	100 mH

MARKING

The marking is modified as follows:

REGULATEURS GEORGIN


F - 92320 CHATILLON

TiXo2

INERIS 08ATEX0004X

(Serial number)

(Year of construction)

 II 1 GD

Ex ia IIC T *

Ex iaD 20 T **

Tamb : -40°C to + Tmax ***

With :

Tmax ***	50°C	65°C	85°C
T *	T6	T5	T4
T **	T85°C	T100°C	T135°C

The marking may be reduced to :

GEORGIN
 TiXo2
 INERIS 08ATEX0004X
 Ex ia IIC
 Ex iaD

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

None.

(16) DESCRIPTIVE DOCUMENTS

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

- Additive n°01 to the descriptive note TPX3400 D (2 pages) dated on 2008.07.09
- Manufacturer file n°TPX 3401 E comprising 25 rubrics dated on 2008.07.31

These documents were signed on 2008.08.11

(17) SPECIAL CONDITIONS FOR SAFE USE

For the apparatus type TiXo1, the special conditions are unchanged.

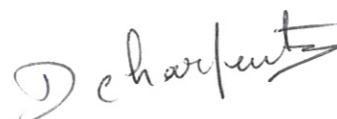
For the apparatus type TiXo2, the special conditions are:

- For an installation in zone 0, 1 or 2, the equipment must be mounted in a box which insures a minimal protection level IP54 with materials in accordance to the EN60079-0 standard.
- For an installation in zone 20, 21 or 22, the equipment must be mounted in a box which insures a minimal protection level IP60 with materials in accordance with EN61241-0 standard.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is unchanged.

Verneuil-en-Halatte, 2008.08.13



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



Dominique CHARPENTIER
Directeur Adjoint
Direction de la Certification

ADDITION

(3) INERIS 08ATEX0004X/02

(4) TEMPERATURE TRANSMITTER TYPE TiXo.

(5) Made by REGULATEURS GEORGIN

(15) PURPOSE OF THE ADDITION

- Modification of electronic components from type TiXo1 apparatuses.
- Modification of electronic components from type TiXo2 apparatuses.
- Modification commercial referencies TiXo.
- Introduction of a new model type TiXo3 in the temperature regulator series type TiXo.

PARAMETERS RELATING TO THE SAFETY

For the TiXo1 and TiXo2 apparatuses, the parameters relating to the safety are unchanged.
For the TiXo3 apparatus, the parameters relating to the safety are modified as follows :

The input characteristics are :

Terminals	Ui	Ii	Pi	Ci	Li
+ and -	28 V	0.1 A	0,7 W	0 μ F	0 mH

The output characteristics are :

Terminals	Uo	Io	Po	Co	Lo
P1- P2- P3-P4	7,14 V	3 mA	5.4 mW	14,2 μ F	100 mH

MARKING

The marking is completed as follows:

REGULATEURS GEORGIN


F - 92320 CHATILLON

TiXo3

INERIS 08ATEX0004X

(Serial number)

(Year of construction)

 II 1 GD

Ex ia IIC T *

Ex iaD 20 T **

Tamb : -40°C to + Tmax ***

With :

Tmax ***	50°C	65°C	85°C
T *	T6	T5	T4
T **	T85°C	T100°C	T135°C

The marking may be reduced to :

GEORGIN

TiXo3

INERIS 08ATEX0004X

Ex ia IIC

Ex iaD

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

None.

(16) DESCRIPTIVE DOCUMENTS

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

For TiXo1 product:

- Additive note n° 2 to TPX 3400 file rev. D dated on 2008.09.23
- Additive note n° 3 to TPX 3400 file rev. D dated on 2008.11.21

For TiXo2 product:

- Additive note n° 1 to TPX 3401 file rev. E dated on 2008.11.21
- Additive note n° 2 to TPX 3401 file rev. E dated on 2009.04.09

For TiXo3 product:

Manufacturer file n° TPX 3403 rev. B comprising 27 rubrics dated on 2010.04.30

These documents were signed on 30th april 2010.

(17) SPECIAL CONDITIONS FOR SAFE USE

For the apparatus type TiXo1 and the apparatus type TiXo2, the special conditions are unchanged.

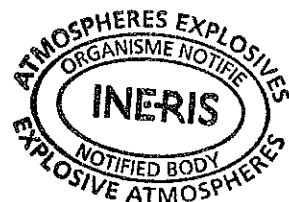
For the apparatus type TiXo3, the special conditions are:


- For an installation in zone 0, 1 or 2, the equipment must be mounted in a box which insures a minimal protection level IP54 with materials in accordance to the EN60079-0 standard.
- For an installation in zone 20, 21 or 22, the equipment must be mounted in a box which insures a minimal protection level IP60 with materials in accordance with EN61241-0 standard.

(18) ESSENTIAL SAFETY AND HEALTH REQUIREMENTS

The respect of the Essential Health and Safety Requirements is unchanged.

Verneuil-en-Halatte, 2010 05 31




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