



- (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 15ATEX0052X**

- (4) Equipment or protective system:

EXPLOSION PROTECTED LIGHT TYPE BC5401-□□□□

- (5) Manufacturer: **Zhejiang Tormin Electrical Co., Ltd.**

- (6) Address: **No.35 Qingjiang Road, High-tech District, Wenzhou,
Zhejiang Province, China**

- (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, and accredited by COFRAC under number 5-0045 for certification of products and services (scope of accreditation available on the website www.cofrac.fr) 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 report No 030640/15.

The rules of certification are available on the website www.ineris.fr.


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

- conformity with:

EN 60079-0	:	2012/A11:2013
EN 60079-1	:	2007
EN 60079-7	:	2007
EN 60079-28	:	2007
EN 60079-31	:	2014

- 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 2GD

Verneuil-en-Halatte, 2015.10.30

Dominique Charpentier
Certification Division
Manager



The Chief Executive Officer of INERIS
By delegation

(13)

ANNEX

(14)

EC TYPE EXAMINATION CERTIFICATE N° INERIS 15ATEX0052X

(15) DESCRIPTION OF THE EQUIPMENT OR THE PROTECTIVE SYSTEM

The explosion protected light types BC5401-□□□□ are made of two flameproof illuminant chambers and two increased safety junctions enclosures, the connection are done by brass bushing in junction enclosures bases. Material of enclosure is ADC12 aluminum alloy (or ADC 12). The light-transmitting parts, made of toughened glass, are sealed on the main enclosure. Connections in junction enclosures are done with certified terminals, certificate number SIRA 01ATEX3248U.

This equipment gets the degree of protection IP66, according to EN/IEC 60529 standards.

Type designation:

BC□ - □ □ □ □ :

(1) (2) (3)(4)(5)

BC : Fixed installation explosion Protected light

(1) : Design code: 5401

(2) : Illuminant type: L: LED; Y: fluorescent lamp

(3) : Numbers of illuminant: 2

(4) : Rated power: 10, 14, 16, 18, 20, 25, 28

(5) : Light type: A: side entry; B: top entry

PARAMETERS RELATING TO THE SAFETY

Electrical ratings for BC5401-L□□□ :

Input voltage : AC 90~264 V,

Rated voltage : AC 110 V, AC 120 V, AC 127 V, AC 220 V, AC 230 V, AC 240 V,

Rated frequency : 50 / 60 Hz,

Rate power : (2×25) W, (2×20) W, (2×18) W, (2×16) W, (2×10) W.

Electrical ratings for BC5401-Y□□□ :

Input voltage : AC 220~240 V, AC 110 V,

Rated voltage : AC 110 V, AC 220 V, AC 230 V, AC 240 V,

Rated frequency : 50 / 60 Hz,

Rate power : (2×28) W, (2×14) W.

MARKING

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

For LED types:


Zhejiang Tormin Electrical CO., LTD
No.35 Qingjiang Road, High-tech District, Wenzhou,
Zhejiang Province, China

BC5401-L □□□

INERIS 15ATEX0052X

(Serial number)

(Year of construction)

 II 2 GD

Ex d e op is IIC T5 Gb

Ex op is tb IIIC T95°C Db IP66

Tamb = -40°C to +55°C

WARNINGS : DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC HAZARD (SEE INSTRUCTION)

For fluorescent lamp types:


Zhejiang Tormin Electrical CO., LTD
No.35 Qingjiang Road, High-tech District, Wenzhou,
Zhejiang Province, China

BC5401-Y □□□

INERIS 15ATEX0052X

(Serial number)

(Year of construction)

 II 2 GD

Ex d e IIC T6 Gb

Ex tb IIIC T80°C Db IP66

Tamb = -40°C to +55°C

WARNINGS : DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC HAZARD (SEE INSTRUCTION)

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

Each apparatus defined above has to have successfully passed; before delivery:

- In accordance with clause 16.1 of the EN 60079-1 standard, an overpressure test of a period comprised between 10 and 60 seconds under 22 bar for the flameproof chambers.
- In accordance with clause 7.1 of the EN 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards, the supply voltage shall be applied during one minute.

(16) DESCRIPTIVE DOCUMENTS

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

- | | |
|---|---------------------|
| - Product drawings BC5401-00.1~30 Ver.:2.0 (74 pages) | dated on 2015.03.22 |
| - Instruction Manual BC5401 No.:TM20150315002 Ver.:1.0 (10 pages) | dated on 2015.03.15 |
| - Product description BC5401 No.:TM20150315001 Ver.:1.0 (5 pages) | dated on 2015.03.15 |
| - Material document No. JS20150702004 | dated on 2015-07-02 |
| - Material document No. JS20121021002 | dated on 2012-10-21 |
| - Test procedure No. JS20120321003 | dated on 2012-10-21 |
| - Material document No. JS20121021005 | dated on 2012-10-21 |
| - Material document No. JS20120521005 | dated on 2012-05-21 |
| - Material document No. JS20130115004 | dated on 2013-06-20 |
| - Material document No. JS20150702002 | dated on 2015-07-02 |
| - Material document No. JS20150702001 | dated on 2015-07-02 |
| - Material document No. JS20150702003 | dated on 2015-07-02 |
| - Encapsulation procedure document No. TM/GY-0211 Ver.:3.0 | dated on 2014-06-15 |
| - Test procedure JS20150702005 | dated on 2015-07-02 |
| - Material document No. JS20150702006 | dated on 2015-07-02 |
| - Material document No. JS20150702007 | dated on 2015-07-02 |
| - ATEX certificate of MK3/3 | |
| - Test report of DMC | |

(17) SPECIAL CONDITIONS FOR SAFE USE

- The width of flameproof joints is more than the values specified in the tables of the EN 60079-1 standard.
- The gap of flameproof joints is less than the values specified in the table 2 of the EN 60079-1 standard.
- The screws used for the assembly of the various parts of explosion-proof enclosures must have a yield stress higher or equal to 450 MPa.
- For the risk from electrostatic discharge, the user will have to read the instructions.

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 quoted in clause (9).
- All provisions adopted by the manufacturer and defined in the descriptive documents.