



# Explosion Protection

## Certificate of Conformity

Certificate No. GYJ12.1482X

The drawing and technical documentation of the product,

Manufactured by Topworx Incorporated  
(Address: 3300 Fern Valley Road, Louisville, Kentucky 40213, USA)

Name of Product: Proximity Switch  
Model Number/Specifications: **7abc5dNef**  
Explosion-Protection Marking: **Ex d II C T3/T4/T6 Gb DIP A21 T<sub>A</sub>, T3/T4/T6 IP66**  
Product Standard /  
Drawing Number: See the attachment to this certificate

have been reviewed, and its sample has been inspected; it is hereby confirmed that the above product conforms to the **GB 3836.1-2010** and **GB 3836.2-2010** standards. This Certificate is hereby issued.

Valid period of this certificate: November 8, 2012 to November 7, 2017.

- Remarks:
1. Precautionary matters regarding safe use are specified in the attachment to this certificate.
  2. The symbol "X" placed after the certificate number denotes specific conditions for safe use, whose content is specified in the attachment to this certificate.
  3. Please see the attachment to this certificate for the description of model and specifications.

Director: (signature illegible)  
National Supervision and Inspection Centre  
for Explosion Protection and Safety of Instrumentation  
[seal]: National Supervision and Inspection Centre for  
Explosion Protection and Safety of Instrumentation  
Issuing Date: November 8, 2012

This certificate is valid for the product whose approval document is consistent with the sample.

No. 103, Caobao Road  
Shanghai 200233

<http://www.nepsi.org.cn>  
Email: [info@nepsi.org.cn](mailto:info@nepsi.org.cn)

Tel.: +86 21 64368180  
Tax: +86 21 64844580

Edition 05

National Supervision and Inspection Center for  
Explosion Protection and Safety of Instrumentation

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(GYJ12.1482X)

(Attachment I)

Attachment I to GYJ12.1482X Explosion Protection Certificate

The **7abc5dNef** series Proximity Switch delivered for inspection by Topworx Incorporated has been inspected by National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation (NEPSI) and found to conform to:

- GB3836.1-2010 Explosive Environment Part 1: General Requirements for Equipment
- GB3836.2-2010 Explosive Environment Part 2: Equipment Protected by Explosion Shield “d”
- GB12476.1-2000 Electrical Equipment Used in Combustible Dust Environment, Part 1:  
Section 1 of Electrical Equipment Protected by Casing and Limiting Surface  
Temperature: Technical requirements for electrical equipment.

Section 1 Explosion-Protection Marking: Ex d II C T3/T4/T6 Gb DIP A21 T<sub>A</sub>, T3/T4/T6 IP66,  
Explosion Certificate No.: GYJ12.1482X.

See the following table for temperature groups and their corresponding relationship to the ambient temperature range for use:

Temp groups	Temperature range of the environment for use (°C)
T6	-40-+50
T4	-40-+100
T3	-40-+150

Model and specifications of the product certified by this certificate: **7abc5dNef**

Of which, **a** means body type, whose code can be: 3, 3M, 5, 5M, 7, G, GM, I;  
**b** means contact point type, whose code can be: 1, 2;  
**c** means sensing distance, whose code can be: 3, 4, 5;  
**d** means casing material, whose code can be: 2, 3, 4, 6;  
**e** means cable type, whose code can be: A, B, F, H;  
**f** means cable length, whose code can be: 2, 3, 4.

The drawing numbers corresponding to the product certified by this certificate are:  
GERT-ES-02038-1; GERT-ES-02039-1; GERT-ES-02050~02052-1; ES-01464-1; ES-01465-1;  
ES-01466-1; S-70-7001-A; S-70-7005-A; S-70-7001-A-A; S-70-7008~7011-A; S-70-7040-A;  
S-7G-7001~7004-A; S-7I-7001-A; S-A70-0340~0342; CERT-ES-02873-1; CERT-ES-  
03146~03144-1.

### I. Special conditions for product safe use

The symbol "X" placed after the certificate number means that there are special conditions for the safe use of the product: for the maintenance of the connecting surface of the explosion shield, you must contact the product manufacturer.

### II. Precautionary matters regarding product use

1. The installation site must be free from harmful gas that is corrosive to the product's casing.
2. When installing and using the product, the user must ensure that the product is properly grounded.
3. The user must not replace any part of this product on their own and must work with the manufacturer in solving problems during the product's operation so as to prevent damage to the product.
4. The capacity of this product's contact point is 2A/240VAC; 5A/24VDC; see the User Manual for detailed information regarding the various electrical parameters.
5. For the installation, use and maintenance of the product, you must concurrently follow the pertinent regulations of the product's User Manual; Part 13 of GB3836.13-1997 "Using Electrical Equipment in an Explosive Gas Environment: The Inspection and Repair of Electrical Equipment Used in an Explosive Environment"; GB3836.15-2000, Part 15 of "Using Electrical Equipment in an Explosive Environment: Electrical Installation at Dangerous Sites (excluding coal mines)"; Part 16 of GB3836.16-2006 "Using Electrical Equipment in an Explosive Gas Environment: The Inspection and Maintenance of Electrical Equipment (excluding coal mines)"; GB15577-2007 "Safety Procedures for Dust Explosion Protection"; Part 1 of GB12476.2-2006 "Using Electrical Equipment in a Combustible Dust Environment: Section 2 of Electrical Equipment Protected by Casing and Limiting the Surface Temperature: Selection, Installation, and Maintenance of Electrical Equipment"; and GB50257-1996 "Installation Projects of Electrical Equipment in Explosive and Fire-Prone Environments: Procedures of Construction and Inspection for Acceptance for Electrical Equipment."

### III. Responsibilities of manufacturer

1. The product's manufacturer must include the foregoing precautionary matters in the User Manual of **7abc5dNef** Series Proximity switch;
2. The manufacturer must manufacture the product strictly in accordance with the documentation and information approved by NEPSI;
3. The metal plate on the product must include at least the following contents:
  - a. Marking approved by NEPSI (see the Explosion Protection certificate)
  - b. Explosion Protection marking for the product
  - c. Certificate number of the Explosion Protection certificate
  - d. Ambient temperature range

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation

[seal]: National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

November 8, 2012