



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:  issue No.:

Status:

Date of Issue: **2013-10-31** Page 1 of 5

Applicant: **BARTEC TECHNOR AS**  
Dusaviukveien 39  
P.O. Box 658  
4003 Stavanger  
Norway

Electrical Apparatus: **Flameproof Enclosure type: TNBCD**  
*Optional accessory:*

Type of Protection: **Ex d, Ex t**

Marking: **Ex d [ia Ga] [ib Gb] [op is Ga] IIB T6-T4 Gb**  
in dependence of equipment used, resp.  
**Ex t [ia Da] [ib Db] IIIB T85°C – T135°C Db**  
in dependence of equipment used, IP 66/67/68  
Temperature class in accordance with Technical Note 53-BCD-5.

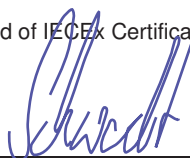
*Approved for issue on behalf of the IECEx  
Certification Body:*

Karl-Heinz Schwedt

*Position:*

Head of IECEx Certification Body

*Signature:  
(for printed version)*

  
\_\_\_\_\_  
2013-11-01

*Date:*

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**TÜV NORD CERT GmbH**  
Hanover Office  
Am TÜV 1  
30519 Hannover  
Germany





# IECEX Certificate of Conformity

Certificate No.: IECEX TUN 12.0014X

Date of Issue: 2013-10-31

Issue No.: 0

Page 2 of 5

Manufacturer: **BARTEC TECHNOR AS**  
Dusaviukveien 39  
O.O. Box 658  
4003 Stavanger  
**Norway**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

##### Test Report:

[DE/TUN/ExTR12.0021/00](#)

##### Quality Assessment Report:

[NO/NEM/QAR07.0003/03](#)



# IECEX Certificate of Conformity

Certificate No.: IECEx TUN 12.0014X

Date of Issue: 2013-10-31

Issue No.: 0

Page 3 of 5

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The TNBCD "d" enclosure is a complete assembly for termination, control and signalling devices and comprises of a SS316 Acid Resistant Stainless steel or CF3M enclosure in various sizes up to (570 x 570 x 380) mm.

Model/type reference: TNBCD xx yy zz

xx: Dimensions of box, width (19 to 57) cm

yy: Dimension of box, height: (19 to 57) cm

zz: Dimension of box, depth: max. 38 cm.

Enclosure type/Maximum window diameter

2625xx 65/100 mm

3233xx 65/100 mm

4535xx 65/100/154 mm

5738xx 65/100/154 mm

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. It's only allowed for the manufacturer to make the finished mounting of the enclosures in accordance to "Technical Note 53-BCD-5, Specification for the completion of TNBCD enclosures".
2. Spacing between internal mounted components must be in accordance with Installation drawing BCD-122-5.
3. The requirements in clause D.4 of EN 60079-1 shall be observed.
4. Ultrasonic sources may not be mounted into the enclosure.
5. Primary or secondary batteries may not be installed.
6. [Ex i] certified components can only be installed if two thermostats are mounted in series for disconnecting the [Ex i] component if the temperature inside the flameproof enclosure exceeds the highest Tamb for the [Ex i] component. Alternatively a full scale test for determination of the surface temperature must be performed.
7. When viewing windows are mounted the temperature of the cementing resp. window shall not exceed :  
Enclosure with window type 190 and cementing DP190, according to drawing CDX-75-4: -50°C to 90°C  
Enclosure with window according to drawing BCD-55-4: -20°C to 70°C  
For other windows the temperature on the cementing/window shall not exceed:- 20°C to 90°C



# IECEx Certificate of Conformity

Certificate No.: IECEx TUN 12.0014X

Date of Issue: 2013-10-31

Issue No.: 0

Page 4 of 5

## EQUIPMENT(continued):

8. Certification with Tamb -50°C is limited to enclosure TNBCD 575738 with lid of stainless steel and with window type 195 according to drawing CDX-75-4.
  9. IP67 and IP68 - 0.4 bar 2 h only for TNBCD, without lamp globe, push buttons and window according to drawing BCD47-02-4.
  10. The maximum number of entries are 18, maximum size are M42. Positions are described on drawing made for each standard size of box. Drawing with a reference number BCD-40-3
  11. IECEx Certified and tested components that are build into the enclosure's walls need to fulfil the requirements of types of explosion protection used as well the IP level shown on the type label.
  12. Bartec Technor's Type TNCN/TNCC Ex e junction box may be used for indirect cable entry.
  13. Rotating machines, or other devices which create turbulence, shall not be incorporated.
  14. Oil-filled circuit-breakers and contactors shall not be used.
  15. The Maximum dissipated power in the TNBCD enclosures have to follow values in the manufacturer's power dissipation tables.
  16. Calculations of inner and surface temperatures must be performed by program: TempCalc-sm Rev. 1.
  17. The Manufacturer has to ensure all maximum temperatures of equipment used inside or in the enclosure walls are lower than its maximal Tamb.
  18. Repairs on flame-proof joints can only be done by Bartec Technor.
- Routine tests:  
Due to a welded construction routine test has to be done with minimum of 12 bar on each types/variants.  
Minimum 14.9 bar on each -50°C product.



# IECEx Certificate of Conformity

Certificate No.: IECEx TUN 12.0014X

Date of Issue: 2013-10-31

Issue No.: 0

Page 5 of 5

## Additional information:

### General product information:

The enclosures are designed for mounting of standard components inside. Equipment to be installed inside TNBCD enclosures in accordance with Technical Note 53-BCD-5: "Specifications for the completion of the TNBCD enclosures" rev. D dated 2012-06-21:

Instruments of measure of electrical parameters.

Electronic thermoregulations units

Radio communication and telephony units, max 3,5 W 80  $\mu$ S, 250  $\mu$ J.

Laser or optical fibre units in accordance with Technical Note 53-BCD-5, section 6

PLC and Multiplexer

Devices for the control and the weight measure: pressure, damp; level; temperature.

Automatic and /or earth leakage circuit breakers.

Switches; on load switches; rotary switches.

Fuses

Contactors; remote control switches

Relays

Electrical and electronic regulation and starting devices.

Time relays

Photocells

Capacitors

Transformers

Anti-condensate heating

Various electronic boards

