

Scope : USER MANUAL TNCD EXD EMPTY ENCLOSURE ATEX / IECEx				BARTEC	
Date: 04.04.2022	Rev. J	Checked by : S.Gr.	Approved by E.T.	Page : 1 of 4	Document no. : 10-CDX-5

Manufacture address :
Bartec Technor AS
Vestre Svanholmen 24
NO-4313 Sandnes
Po.Box. 418, 4067 Stavanger
Norway

Further technical information is available on www.bartec.com

Note on instructions

When working in hazardous areas, the safety of personnel and equipment depends on compliance with the relevant safety regulations. The people in charge of installation and maintenance bear a special responsibility and it is essential that they have knowledge of the applicable rules and regulations. These instructions provide a summary of the most important safety measures and must be read by everyone working with the product. The instructions to be kept for future reference and must be available throughout the expected life of the product.

Technical specifications


The equipment listed in this manual is certified according to the latest requirements of the ATEX Directive.


II 2 GD Ex db IIC T4 to T6 Gb Ex tb IIIC T85°C to T135°C Db
T.amb. -52 – +60 Degr. C IP-66

The certificate numbers are :

NEMKO 03ATEX263U

IECEX NEM 10.0001U

Type: TNCD	BARTEC TECHNOR N-4313 SANDNES STAVANGER NORWAY	
0470 	II 2G Ex db	IIC T Gb NEMKO 03ATEX 263U
Ex db	IIC T Gb	IECEX NEM 10.0001U
T.amb	IP	
S.No./Year		
EMPTY ENCLOSURE WITH Ex COMPONENT CERTIFICATE SEE INSTALLATION INSTRUCTION DOCUMENT		

Type: TNCD	BARTEC TECHNOR N-4313 SANDNES STAVANGER NORWAY	
0470 	II 2D Ex tb IIIC T85°-135°C Db	NEMKO 03ATEX 263U
Ex tb IIIC T85°-135°C Db	IECEX NEM 10.0001U	
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Applicable standards

EN IEC 60079-0 : 2018	IEC 60079-0 : 2017
EN 60079-1 : 2014	IEC 60079-1 : 2014
EN 60079-31 : 2014	IEC 60079-31 : 2013

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Description

Our range of explosion proof enclosures is available in many sizes. They are machined stainless steel 316L. Each is expected to receive electrical components inside, making it easy for replacement and maintenance. They can also be customized to meet each individual specific need. If necessary, multiple enclosures can be assembled on a frame with separate or common junction boxes and / or switching coupled or separated.

Empty enclosures are supplied with a partial certification (certificate with U extension) to be used as basis for certification of an Equipment or Protective system certification.

The enclosure may be equipped with:

- internal hinges
- glass window in lid, walls and bottom of enclosure
- cemented polycarbonate dome in cover of TNCD282815-TNCD282827
- threaded holes in lid, walls and bottom side of enclosure

TYPE CODE: TNCD XX YY ZZ

XX: Dimension of box, width in cm, 19 to 57

YY: Dimension of box, height in cm, 19 to 57

ZZ: Dimension of box, depth in cm, max 38

Material: CD = Stainless Steel AISI 316L/CF-3M

Safety instructions

The device must be installed, used and maintained in accordance with the following standards:

EN/IEC 60079-14 (electrical installations in explosive gas atmosphere)

EN/IEC 60079-17 (inspection and maintenance in hazardous areas)

EN/IEC 60079-31 (protection of equipment against dust ignition by enclosure "t")

- It is forbidden to change components, installation, wiring etc. without the prior consent of Bartec Technor AS.
- We cannot accept any responsibility for failure to observe these regulations.
- Make sure of the compatibility between the information on the nameplate, the explosive atmosphere present, the area of use and ambient temperatures and surfaces.
- Any damage of the device can cause ineffective in the explosion-proof protection.
- The installation of the enclosure must be performed only by qualified, competent and empowered personnel.
- Abnormal use as well as the non-compliance with the instructions of the present document will the guarantee and our responsibility.
- Manufactures traceability is ensured only at the first known delivery destination.

Transport, storage

Check that the product has not been damaged during transport. If any damages, do the statutory reserves to the carrier. **Do not put damaged products into service!**

Packaging	Location storage	Duration storage
Open	In a covered location, clean (without contact with external substances) and closed with temperature a constant humidity (-52°C < T < +70°C). Shielded from important temperature variations	2 years and more with regular inspection (cleanness and mechanical damage)

Installation / Dismantling

When mounting the enclosure ensure that the mounting support is able to take the full weight of the enclosure. If any twisting or bending is likely, use washers or packing plates before the screws or nuts are tightened.

Do not open the lid before the enclosure is securely fastened! Check the datasheet for weight of the lid and act accordingly.

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When removing the enclosure, the same precautions apply as those observed when mounting the enclosure.

Putting into service

When connecting cables, ensure that the incoming cables/wires are isolated from all sources of power. Installation to be performed according standard EN / IEC 60079-14 (NEK 420) and/or the requirements for the actual installation site.

NOTE! Always read the requirements in the certificate and in the documentation for the enclosure (wiring diagram etc.), before connecting the enclosure to power source and other equipment intended for the enclosure.

It is the company installing the enclosure that is responsible that the technical data for the enclosure match the technical data to which the enclosure is connected. Special attention to be made on the Ex and safety aspects.

All entries to the enclosure must be of Ex d-approved types and all other openings blinded with an ATEX and / or IECEx Ex d approved blindplug. The quantity and size/type of entries is defined in packing list and / or the drawing for the enclosure.

Apply GLEITMO 165 (black) to lid threads, bolt threads and tapered holes, etc.

Not to exceed the authorized maximal temperature, appropriate cables must be used and take particular care when installing them.

Before starting

- Make sure the unit has been correctly mounted and not damaged in any way.
- Make sure the wiring and the tightening of the terminal screws have been performed properly (See tightening torque for terminals in manufacturers descriptive documents).
- The cable gland(s) must be securely tightened (See gland torque for glands in manufacturers descriptive documents).
- The device shall not include any objects and that no part is damaged.
- Perform the dielectric test with. During the test no electrical arcing shall occur.
- Ensure after completion that the enclosure have been certified as Equipment.

Maintenance

We recommend that maintenance is performed in accordance with the IEC / EN 60079-17/60079-1 (NEK420) standards.

If the flamepaths have evidence of wearing, corrosion or other damages, Bartec Technor to be contacted.

The maintenance and repairs works on enclosure(s) must only be performed by authorized and trained persons for that purpose.

Before any work the devices must be switched off, in addition:

- Prevent and avoid any formation of layers of dusts: make a periodic cleaning with a wet cloth.

The following checks should be made once a year:

- The exterior of the equipment, the external components and the surfaces are free of damages.
- The cable entries and blanking plugs are securely tightened.
- Check tightness of the connections, rewire if necessary.

Do not take apart the command and control units (push buttons, pilot light, etc.)!

Prior to closing, check the cleanliness of the flame path (machined part of the cover in contact the machined part of the box). Grease the flamepath GLEITMO 165 (black) before closing.

If polycarbonate dome is mounted cleaning shall be with soap and water only.

Technical features

Number of cable entries:

Cable glands or conduit entries certified Ex db can be used and installed according to EN / IEC 60079-14.

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Schedule of Limitations for Utilization of the Component

- The maximum number of apertures are 92, the maximum size is M42.
- The detailed specifications for each enclosure size can be found in the following drawings as listed in Technical documentation:
 - CDX-102-4
 - CDX-103-4
 - CDX-104-4
 - CDX-105-4
 - CDX-106-4
 - CDX-107-4
 - CDX-108-4
- Ambient temperature range:
 - Enclosures without glass window and cemented joint: -52°C to +60°C
 - Enclosures with glass window (cemented joint): -50°C to +60°C
- Oil-filled circuit-breakers, contactors and rotating machines shall not be used.
- The content of the Ex component enclosure equipment may be placed in any arrangement provided that an area of at least 40 % of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12,5 mm.
- When windows are used the temperature on the cementing/window shall not exceed +80°C.
- The temperature on the polycarbonate dome shall not exceed +100°C.
- When polycarbonate dome is mounted in the enclosure, the box to is to carry a warning label with text:
WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- No high pressure water to be applied in the connection between lid and enclosure.