



Flameproof enclosures



Features

BARTEC TECHNOR's cylindrical Ex d/de certified enclosures, manufactured in stainless steel 316L/CF-3M, are more cost efficient than traditional Ex d enclosures. The design makes the unit easy to install and use, and also allows for simple solutions within numerous different applications. The enclosures can be delivered empty with U-component certificate or supplied fully assembled according to clients demands.

- Flexible product range with several standard sizes.
- Ingress protection to meet harsh environment with IP66 as standard.
- Suitable for demanding environments.
- Wide temperature range (-50°C to +60°C).
- Several cable entry possibilities.
- Several earthing alternatives.
- May be used with an Ex e/i connection box.
- Window in front may be fitted, as well as a dome for some of the sizes
- High operational reliability and reduced lifetime maintenance costs.

General specification

Material	Stainless steel 316L/CF-3M
IP Rating	IP66 (IP67 and IP68 upon request)
Temperature	Various, max: -50°C to +60°C
Approvals	
- ATEX, Empty enclosure	DNV-2003-OSL-ATEX-0436U
- ATEX, complete enclosure	DNV-2004-OSL-ATEX-0115
Standards	EN/IEC: 60079-0, 60079-1, 60079-7 EN 50281
Ex-Code for empty enclosure:	⊕ II 2 G, Ex d/de IIC
Ex-Code for complete enclosure:	⊕ II 2 G / D, Ex d/de IIC Option: Ex dem ia/ib [opis] T6-T4
Entries	Ex e glands and Ex d bushings, or Ex d glands only
Gland Size Ex e	M25
Gland Size Ex d	According to specification
Bushings Ex d	Max M42, number and core size acc. to spec.
Earthing between Ex d and Ex e enclosures	Through the flange assembly

Applications

The TNXCD range of enclosures are designed to meet the harsh environments of the North Sea, and are ideal for Petrochemical and Marine applications as well as for all kind of industry where an explosive atmosphere may be present.

Thousands of BARTEC TECHNOR enclosures have been installed on- and offshore. If you should have a particular need our sales staff will be pleased to advise.

- CCTV systems
- Zenerbarriers
- PLC
- Charging units
- Counters
- Clocks
- Alarm status
- Warning/Signalling
- Marking lights
- Printed Circuit Boards (PCB)



TNXCD Ex d enclosures allow for utilization of standard electrical components. Subsequent replacement and maintenance of installed components is thus easy. The Ex d enclosures and components are designed, built and delivered in full compliance with current specifications and standards. The client receives a complete system including user manual, part list, wiring diagram and an EC-Declaration of Conformity. We can also deliver empty enclosures with U-component certificate.

The client performs installation of electrical equipment and subsequently applies to the Certifying Authority (Notified Body) for full Certificate of Conformity according to ATEX 94/9 EC directive.

TNXCD enclosures are manufactured in the following standard diameters: 100, 130, 155 and 195 mm. Enclosure lengths are according to measurement table.

The enclosures can be delivered with or without an inspection window in the front, or a dome.

Ex d enclosures normally are delivered in combination with an Ex e/Ex i connection box. Incoming and outgoing cables are terminated in the connection box. Standard TNXCD connection boxes are available in several sizes. If there is a need for a bigger connection box, all Ex approved BARTEC TECHNOR TNCN boxes can be used.

If required, it is also possible to have a direct entry by use of Ex d glands. In this case the Ex d enclosure is delivered without a connection box.



Hazardous area information & terminology

ATEX Directive

The ATEX Directive, derived from the French “AT mosphères EXplosibles” and formally known as 94/9/EC, contains the ESR (Essential Safety Requirements) to which electrical equipment and protective systems used within potentially explosive atmospheres must conform.

The new ATEX Directive currently in place within the European Union was made mandatory on 1st July 2003. Primarily intended for manufacturers of hazardous area equipment for use in the presence of flammable gases, vapours, fumes or dusts, the new directive requires a quality management system to be implemented.

Procedures for the design, manufacture and verification of products are to be approved by a notified body (i.e. DNV, NEMKO, etc.) and all equipment conforming to the new directive will feature CE and Ex Marking.

Zone Classification with the presence of GAS

Zone 1 (Category 2)	An area in which explosive gas is likely to be present during normal operation of the plant.
Zone 2 (Category 3)	An area in which explosive gas is not continuously present, but may exist for a short period of time.

Applicable EX protection

Ex d Protection

Parts, which can ignite a potentially explosive atmosphere, are surrounded by an enclosure, which are designed to withstand the pressure of an internal explosion and to prevent the propagation of the explosion to the atmosphere surrounding the enclosure.



Ex e Protection

for electrical components that do not spark under normal working conditions but where measures are applied to prevent high temperatures and the occurrence of arcs and sparks internally.

