




DET NORSKE VERITAS


EC-TYPE EXAMINATION CERTIFICATE

- [2] **EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DNV-2003-OSL-ATEX-0042**
- [4] Equipment or Protective System: **Junction Box, TNCC**
- [5] Applicant – Manufacturer or Authorized representative: **Technor ASA**
- [6] Address: **Dusavikveien 39, P.O.Box 658, 4001 Stavanger, Norway**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

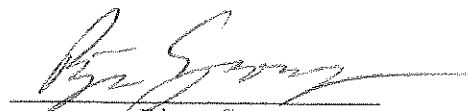
The examination and test results are recorded in confidential report no. **2003-3246**

- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN50014:1997+A1:1999+A2:1999, EN50019: 2000, EN50018, EN50028
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following :
-  **II 2 G, Ex code ref. section 15.1**

Høvik, 10 June 2003
for Det Norske Veritas AS

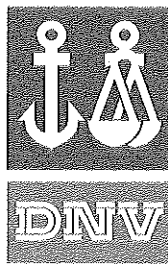

Per Ove Øyberg
Head of Section




Bjørn Spongsveen
Senior Engineer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



15.2 Power dissipation in the various sizes of the enclosure:

The size is indicated in cm W*H*D. Where D is indicated as xx the depth may be 10cm or larger.

Size	Max. dissipated Power	Size	Max. dissipated Power
121009	6 W	5757xx	90 W
1515xx	15 W	5776xx	120 W
2828xx	30 W	7676xx	180 W
2838xx	40 W	7695xx	200 W
3020xx	30 W	9595xx	240 W
3838xx	40 W	76114xx	240 W
3845xx	50 W	95114xx	240 W
3857xx	65 W	95152xx	240 W
		95200xx	240 W

Intermediate sizes between the sizes described in the table may use the dissipated power of the nearest smaller size.

[16] Report No 2003-3246

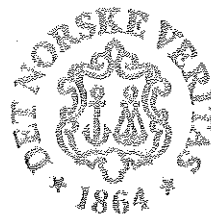
16.1 Descriptive documents:

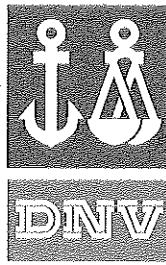
Number	Title	Rev.	Date
53-CNX-5	Procedure for temperature testing	A	2003-03-10
CNX-193-5	Type label for TNCC	A	2003-03-13
54-CNX-5	User manual TNCC Junction Box	A	2003-06-10
51-CNX-5	Document list	A	2003-06-20

[17] Special conditions for safe use: NA

[18] Essential Health and Safety Requirements
See part 9 of this certificate

END OF CERTIFICATE





[13]

Schedule

[14]

EC-TYPE EXAMINATION CERTIFICATE No: DNV-2003-OSL-ATEX-0042

15 Description of Equipment:

- 15.1 The TNCC Junction Box is a complete assembly for termination, control and signalling devices and comprises of a stainless steel enclosure in various sizes up to max 1000x2000xXXX. The installation of equipment is based upon heat dissipation, if values deviate from the samples as described below, manufacture to verify the temperature class. Enclosures can be delivered with screws, hinges and screws, hinges and quick locks. The certification of the enclosure is based upon technical specifications in certificate for TNCN, DNV-2001-OSL-ATEX-0176.

The Ex-code of the TNCC control cabinet is depending of the components used. The following variations are allowed:

Ex-code	Description
EEx e II T5	Junction box with terminals and other Ex-e components
EEx cd IIB/C T5	Control cabinet with control / signalling devices with Ex-code 'd'.
EEx cm II T5	Control cabinet with components of Ex-code 'm'.
EEx edm IIB/C T5	Control cabinet with components code 'm' and control / signalling devices cod 'd'
EEx cd[ia/ib] IIB/C T5	Control cabinet with control / signalling devices with Ex-code 'd', and 'd' Components with IS output.
EEx cm[ia/ib] II T5	Control cabinet with 'm' components including IS outputs.
EEx edm[ia/ib] IIB/C T5	Control cabinet with control /signalling devices code 'd' and components 'm' including IS outputs

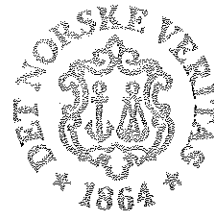
$T_{amb} = -40^{\circ}\text{C}$ to $+40^{\circ}\text{C}$

$T_{amb} = -40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$, Requires use of cable with min. operating temp 100°C .

Degree of protection of enclosures: IP66 / IP67. Silicon gasket also satisfy IP68 (0,2 bar for 30 minutes)

Operating temperature for neoprene gasket - 40°C to $+100^{\circ}\text{C}$.

Operating temperature for silicon gasket -40 to $+200^{\circ}\text{C}$.



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