



# 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.: IECEx NEM 13.0044X

Issue No: 2

Certificate history:

[Issue No. 2 \(2017-07-24\)](#)

[Issue No. 1 \(2014-08-25\)](#)

[Issue No. 0 \(2014-05-12\)](#)

Status: **Current**

Page 1 of 4

Date of Issue: **2017-07-24**

Applicant: **Kongsberg Maritime AS**  
Subsea Division  
Strandpromenaden 50  
3191 Horten  
**Norway**

Equipment: **Transponder**

*Optional accessory:*

Type of Protection: **Ex d**

Marking:  
Ex d IIB T6 Gb

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

Asle Kaastad

*Position:*

Certification Manager

*Signature:  
(for printed version)*

*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](#).

Certificate issued by:

**NEMKO**  
Gaustadalleen 30  
Oslo N-0314  
Norway





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Date of Issue: **2017-07-24** Page 2 of 4

Manufacturer: **Kongsberg Maritime AS**  
Subsea Division  
Strandpromenaden 50  
3191 Horten  
**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 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:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:6

*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:

[NO/NEM/ExTR14.0012/01](#) [NO/PRE/ExTR17.0030/00](#)

### Quality Assessment Report:

[NO/NEM/QAR13.0015/00](#) [NO/NEM/QAR13.0015/01](#) [NO/NEM/QAR13.0015/02](#)



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Date of Issue: 2017-07-24

Page 3 of 4

## Schedule

### EQUIPMENT:

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

#### General product information:

Sub-Sea Transponder cNODE Maxi 31 Exd is flameproof enclosure intended for underwater acoustic positioning. After raising from the bottom it can enter to the hazardous area. The transponder is equipped with special battery pack as power source and it is always turn-on. There is no any cable entry. Transponder consist of Main tube, Bottom End Cap, Top End Cap (in two versions: 90 elbow and flat) with Housing TD80V, fixed together by special fasteners. Minimum yield stress of screws is 550 MPa. The Main Tube is made from Stainless steel, Caps and Housing are made from Titanium grade.

Special battery pack contains 12 batteries made of 48 primary cells. Each battery is protected by both current fuse and non-resettable thermal protective device. Cells in each battery are protected against polarity reversal or reverse charging and against the inadvertent charging.

#### Rating and principal characteristics:

Voltage (battery pack): 14.4 V DC  
Current (battery pack): 18 A DC  
Average power consumption: 3.6 W

#### Type Designation:

cNODE Maxi 31 Exd

#### Applicable models:

cNODE Maxi 31-80V-Exd  
cNODE Maxi 31-80V-90-Exd

**Ambient temperature range:** -20°C to +55°C

#### Warning sign:

" DO NOT OPENT WHEN AND EXPLOSIVE GAS ATHMOSPHERE IS PRESENT "  
" USE ONLY REPLACEABLE BATTERY PACK Kongsberg P/N 355324 "

#### Important Conditions of use

1. For maintaining the explosion protection, the manual that accompany the products shall be considered.
2. Keep and storage at -30°C to +70°C.
3. Operational depth: up to 1000 m.

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

1.  $-20 \leq T_{amb} \leq +55^{\circ}\text{C}$
2. Titanium content exceeded limit, more than 7.5%, avoid the ignition hazard due to impact or friction.
3. Transponder must be earthed (by Installer). Fit the transponder to the brackets, at least one part of bracket must be metal in direct contact with transponder tube. Keep the equipment connected to equipotential bonding facility when operate in hazardous area.



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Certificate No: IECEX NEM 13.0044X

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Date of Issue: 2017-07-24

Page 4 of 4

**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

Minor design and descriptive documentation change.