

# [1] EU-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use  
in Potentially explosive atmospheres  
Directive 2014/34/EU

[3] **EU-Type Examination Certificate Number:** Nemko 13ATEX1576 X Issue 2

[4] **Product:** Transponder  
[5] **Manufacturer:** KONGSBERG MARITIME AS

[6] **Address:** Subsea Division, Strandpromenaden 50  
3191 Horten, Norway

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Nemko AS, notified body number 0470, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products 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. D0001066


[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012, EN 60079-1: 2007.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate

[12] The marking of the product shall include the following:

 II 2 G Ex d IIB T6 Gb

Oslo, 2017-07-24



Geir Hørthe  
Certification Manager

## [13] Schedule

[14] **EU-TYPE EXAMINATION CERTIFICATE No** Nemko 13ATEX1576 X Issue 2

[15] **General Description**

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: maximum 1000 m.

**Routine tests**

None.

[16] Report No. D0001066

### Descriptive Documents

Number	Title	Rev	Date
355320	*Transponder cNODE Maxi 31-80V-90-Exd	B01	2017-04-19
355390	*Transponder cNODE Maxi 31-80V-Exd	B01	2017-04-19
355323	Main Tube cNODE Maxi Exd	C	2014-05-20
355372	Top End Cap cNODE Maxi 31-80V-Exd-90	D	2014-07-22
352114	Top End Cap cNODE Maxi 31-80V-Exd	B	2014-07-22
350555	Bottom End Cap cNODE Maxi 31-Exd	A	2014-08-01
355314	Center Bolt cNODE TD80V-Ex-d	B	2014-07-21
355303	Housing TD80V CNODE Maxi Ex-d	C	2014-03-06
355325	*Battery Pack Li cNODE Maxi Exd	A01	2015-11-11
392626	cNODE Ex Battery warning label ATEX	B	2014-04-23
355396	General assembly drawing 4S12P LSH208 KMEx	A	2014-04-24
355396	Battery Pack Li CNODE Maxi Exd	-	2015-09-21
350409	*Bottom End Cap cNODE Maxi 31-Exd (80V) (name plate)	D	2015-11-11
350444	*Bottom End Cap cNODE Maxi 31-Exd (name plate)	E	2015-11-11
355320	*Product BOM Report BOM– 355320	B01	2017-05-31
355320	*Product BOM Report Spare parts– 355320	B01	2017-04-19
355323	*Product BOM Report – 355323	C	2017-04-19
355324	*Product BOM Report – 355324	A01	2017-04-19
355325	*Product BOM Report – 355325	A01	2017-04-19
355390	*Product BOM Report – 355390	B01	2017-05-31
355320	*Product BOM Report Spare parts– 355390	B01	2017-04-19
355396	Interface 4S12P LSH20BKM Ex	B	2014-04-23

### Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2014-05-12	D0001066	Prime Certificate released
1	2014-08-25	D0001066	Minor design changes
2	2017-07-24	D0001066	Minor design and documentation changes.

### [17] Specific Conditions of Use (“X”)

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.

### [18] Essential Health and Safety Requirements

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9