DNV·GL

Certificate No:
TAA00001GM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Transmitter

with type designation(s)
LMK 457, DX14-LMK 457, LMK 457H, DX15-LMK 457H, LMK 458, DX14A-LMK 458, LMK 458H, DX15A-LMK 458H, EP 500, EP 500-500

Issued to
BD SENSORS GmbH
THIERSTEIN, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
LMK …	D	B	B	B	D
EP 500, EP 500-500	B	B	A	B	-

Issued at **Hamburg** on **2017-12-12**
This Certificate is valid until **2022-12-11**.
DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-001960-9**
Certificate No: **TAA00001GM**

Product description
Electronic Level Transmitters: LMK 457, LMK 457H, LMK 458, LMK 458H, EP 500, EP 500-500
Ex versions: DX14-LMK 457, DX15-LMK 457H, DX14A-LMK 458, DX15A-LMK 458H

Approval conditions
The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval, by inclusion in an instrument list, by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems

Application/Limitation
Ex installations to be approved in each case according to the Rules and Ex-Certification / Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL		
Equipment	**Certified**	**Certificate No.**
DX14-LMK 457	Ex II 1G, II 1/2G or II 2G EEx ia IIC/IIB T4 Ex II 1D, II 1/2D or II 2D IP 6X T 85ºC	IBExU 05 ATEX 1070X incl. suppl. 1
DX15-LMK 457 H	Ex II 1GD EEx ia IIB/IIC T4 T 85ºC	FTZU 06 ATEX 0018X
DX14A-LMK 458	Ex II 1G Ex ia IIC T4 T from -20 to +60ºC	IBExU 07 ATEX1180X dated 2009-03-11
DX15A-LMK 458H	Ex II 1G Ex ia IIB T4 Ex II 1D Ex iaD 20 T85 °C	IBExU 10 ATEX 1186X dated 2010-12-21

Tests carried out
Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product
Manufacturer: BD Sensors GmbH
Model name: As listed under Product description
Serial number: Unique for each delievered item

Periodical assessment
The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:
- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.
END OF CERTIFICATE