

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pressure Transmitter**

with type designation(s)

**DMP/DMK 457, DX13-DMP/DMK 457, DX19-DMK 457, DX19-DMP 457, DMK 457-KRO,
DX19-DMK 457-KRO, DMP 457-SOL, DMK 456, DX14A-DMK 456, DMK 458, DX14A-DMK458**

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:**

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	D

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

**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.



Product description

Pressure Transmitters: DMP 457, DMP 457-SOL, DMK 456, DMK 457, DMK 457-KRO, DMK 458
Ex versions: DX13-DMP 457, DX19-DMP 457, DX13-DMK 457, DX14A-DMK 456, DX19-DMK 457,
DX19-DMK 457-KRO, DX14A-DMK 458

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.
DX13-DMP 457 DX13-DMK 457	⊕ II 1G EEx ia IIC T4 resp. II 1 D T 85°C	TÜV 03 ATEX 2006X dated 2003-03-05 incl. suppl. 1 and 2 and 3
DX14A-DMK 458	⊕ II 1G Ex ia IIC T4 T from -20 to +60°C	IBExU 07 ATEX1180X dated 2009-03-11
Sensor Module DSK 701C	⊕ II 1G Ex ia IIC	IBExU 08 ATEX 1062U dated 2008-06-10
DX19-DMK 457-KRO	⊕ II 1G Ex ia IIB T4	IBExU 10 ATEX 1068X dated 2010-08-31
DX19-DMK 457	⊕ II 1G Ex ia IIB T4 Ga ⊕ II 1D Ex iaD 20 T85 °C	IBExU 10 ATEX 1068X dated 2010-08-31
DX19-DMP 457	⊕ II 1G Ex ia IIB T4 Ga ⊕ II 1D Ex iaD 20 T85 °C	IBExU 10 ATEX 1068X dated 2010-08-31
DX14A-DMK 456	⊕ II 1G Ex ia IIC T6	IBExU 07 ATEX 1180X

Type Approval documentation

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 delivered 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



Job Id: **262.1-001960-9**
Certificate No: **TAA00001GR**

- 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