

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gas Detector

with type designation(s)
X-am 2500, X-am 5000, X-am 5600

Issued to
Dräger Safety AG & Co. KGaA
Lübeck, 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	C
Humidity	B
Vibration	n/a
EMC	B
Enclosure	D

Issued at **Hamburg** on **2018-02-12**

This Certificate is valid until **2023-02-11**.
DNV GL local station: **Hamburg**

Approval Engineer: **Dariusz Lesniewski**



Digitally Signed By: Rinkel, Marco

for **DNV GL**

Location: Hamburg - On behalf of

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

Portable Gas Detector Dräger X-am 2500 (MQG 001*), X-am 5000 (MQG 00**), X-am 5600 (MQG 01**)

Main characteristic:

- Simultaneously measuring of combustibile and toxic gas concentrations of vapours and oxygen.
- X-am 2500, X-am 5000, sensor types: catalytic (XDS 00xx) and electrochemical XXS Sensors
- X-am 5600, sensor types: infrared (IDS 03xx) and electrochemical XXS Sensors
- Battery operated
- Accessory external X-am Pump, DNV GL type approved

Software version: 7.x

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to DNV GL Rules and Ex-Certification / Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Test Report: Treo No. 197-17, issue 3 dated 11.12.2017

Test Report: Treo No. 316-17, issue 3 dated 13.12.2017

Test Report: CEcert No. 408.336.1A, dated 17.07.2009

Test Report: CEcert No. 410.203.1, dated 15.09.2010

Test Report: CEcert No. 414.261.2 Rev.0, dated 16.03.2015

Test Report: DEKRA No. 41300108P N9, dated 01.08.2017

DEKRA Certificate No. PFG 10 F 001 X, 5th Supplement

DEKRA Certificate No. PFG 10 G 001 X, 3rd Supplement

EU Type Approval Certificate BVS 10 ATEX E 080 X (Amendment 7)

Drawings: SE20370-16, SE20421-05, SE20547-05, SE20553-02

Drawings: SE20555-07, SE20888-01, SE20889-01, SE20890-01

Instruction for Use "Dräger X-am 2500 (MQG0011), Software 7.n (≥ 7.0)", Edition 12

Instruction for Use "Dräger X-am 5000 (MQG0010), Software 7.n (≥ 7.0)", Edition 06

Instruction for Use "Dräger X-am 5600 (MQG0100), Software 7.n (≥ 7.0)", Edition 11

Insert 9033890, Edition 01

Assessment Report issued at Hamburg on 2017-07-05

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
ISO 1981-1:2017

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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: **262.1-026290-1**
Certificate No: **TAA00001N7**

- 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