

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00002M1
Revision No:
1

This is to certify:

That the fixed oxygen analysis and gas detection equipment

with type designation(s)
Polytron® 7000

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	D
Humidity	B
Vibration	A
EMC	B
Enclosure	C (IP66/67)

Issued at **Hamburg** on **2020-11-17**

This Certificate is valid until **2025-02-09**.

DNV GL local station: **Hamburg – CMC North/East**

Approval Engineer: **Dariusz Lesniewski**



for **DNV GL**
Digitally Signed By:
Papanuskas, Joannis

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.



Job Id: **262.1-005441-7**
Certificate No: **TAA00002M1**
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Product description

Stationary, continuously monitoring fixed installed gas detection transmitter with electrochemical sensing element measuring combustible/toxic gases and vapours and oxygen

Gas concentration can be measured within e.g. tanks, void spaces, rooms adjacent to cargo storage tanks and handling systems.

2-wire connection

Connection to central device with 2-wire cable, 0.5 (AWG 20) to 2.5 mm² (AWG 13).

This certificate covers following sensors for detecting oxygen and toxic gases:

Dräger Sensor O₂, CO, H₂S, NH₃ and CL₂

Component	Part No.
P3U (Polytron 7000, 4-20mA)	8317610
P3U (Polytron 7000, 4-20mA, HART)	8317710
P3FB (Polytron 7000, fieldbus ¹⁾)	8319440
P3U (Polytron 7000, 4-20mA, relay module)	8317636
P3U (Polytron 7000, 4-20mA, HART, relay module)	8317776
P3FB (Polytron 7000, fieldbus ¹⁾ , relay module)	8319428
Docking Station	8317990
Remote Sensor	8317275
Remote Adapter	8317999
Relay Module	8317360
DrägerSensor O ₂	6809720
DrägerSensor O ₂ LS	6809630
DrägerSensor CO	6809605
DrägerSensor CO LS	6809620
DrägerSensor H ₂ S	6810435
DrägerSensor H ₂ S LC	6809610
DrägerSensor NH ₃	6809680
DrägerSensor CL ₂	6809665

¹⁾Field bus interface for maintenance communication

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 the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

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

Type Approval documentation

Test Reports:

Treo no. 147-16 dated 13.07.2016, no. 200-16 dated 09.11.2016

Treo no. 246-17 dated 10.10.2017, no. 291-17 dated 10.10.2017

Treo no. 270-20 dated 02.11.2020

CEcert #417.141.1 Rev.0 dated 15.09.2017

CEcert #417.141.2 Rev.0 dated 15.09.2017

CEcert #417.141.6 Rev.0 dated 15.09.2017

CEcert #420.250.1 Rev.0 dated 14.10.2020

Dräger no. 315030501 dated 28.05.2020

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Drawings: SE20487, SE20548, SE20549, SE20068-07
9023763, Installation Instruction, Relay Module, Ed. 2 (2017.10)
9023758, Operation Instruction, Dräger Polytron 7000, Ed. 11 (2019.09)

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019

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
- 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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE