

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Gas Transmitter**with type designation(s)
GTR 210 EX MED, GTR 210 MED

Issued to

**Ados GmbH
Aachen, 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, D*
Humidity	B
Vibration	A
EMC	B
Enclosure	C

Issued at **Hamburg** on **2020-06-15**This Certificate is valid until **2025-06-14**.
DNV GL local station: **Essen**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.



Product description

Gas transmitters type GTR 210 EX MED are used for measuring of combustible or toxic gases and vapours or oxygen.

Models:

Type	Measuring range	Gas
GTR 210 EX MED VQ (Pellistor)	0...100%LEL	alkanes (methane to hexane), hydrogen, ethanol
GTR 210 EX MED IR (infrared)	0...100%LEL	methane, propane
GTR 210 EX MED TOX (electro-chemical)	0...25Vol%	O ₂
GTR 210 EX MED IR (infrared)	0...5000ppm	CO ₂
GTR 210 EX MED TOX (electro-chemical)	0...50ppm H ₂ S	H ₂ S
GTR 210 MED IR (infrared, no EX)	0...2000ppm	R134a

Power supply: 24V DC

Output: 4...20mA

Display: graphical LC-display, background red/green/yellow, LED Power/Fault/MainFailure/Inhibit
Operating keys

Degree of protection: IP66/IP67

Software version: V3.08

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

*Location class temperature reduced to 'C' for detector with range 0...50 ppm H₂S

Type Approval documentation

Test report: DEKRA No. 2229259.0501-EMC, dated 2018-10-05

Test report: DEKRA No. 2229259.0502-EMC, dated 2018-10-05

Test report: DEKRA No. 2175818.0501-EMC, dated 2015-02-25

Test report: DEKRA No. 2238857.0501-EMC, dated 2019-08-05

Test report: DEKRA No. 2233104.50, dated 2019-05-20

Test report: PFG.No. 41300212P NIV, dated 2020-05-19

Test report: NL/DEK/ExTR11.0106/03, dated 2019-10-02

Ex-Certificate: DEKRA 11 ATEX 0257 X issue no. 3

Ex-Certificate: BVS 12 ATEX G 001X (Supplement 04)

Operating instruction: GTR 210 (1.22)

Drawings: Circuit diagram, PCB Lay-outs

Validation results of functional tests FlexADOS 914 MED and GTR 210 EX MED, dated 2020-01-16

Type approval assessment report issued at Essen on 2020-01-16

Tests carried out

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

Job Id: **262.1-025039-1**
Certificate No: **TAA00002JG**

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

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the fixed oxygen analysis and gas detection equipment

with type designation(s)
GTR 210 EX MED

Issued to
Ados GmbH
Aachen, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397**,
item No. MED/3.54. SOLAS 74 as amended, Regulation II-2/4 & VI/3 and FSS Code 15

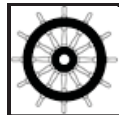
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-06-14**.

Issued at **Hamburg** on **2020-06-15**

DNV GL local station:
Essen

Approval Engineer:
Dariusz Lesniewski



Notified Body
No.: **0098**



for **DNV GL SE**
Digitally Signed By: Mydlak-Röder, Christine

Location: DNV GL Hamburg, Germany
on behalf of

Gerhard Aulbert
Head of Notified Body

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-010321-2**
Certificate No: **MEDB00006EV**

Product description

Gas transmitters type GTR 210 EX MED are used for measuring of combustible gases and vapours or oxygen.

Type	Measuring range	Gas
GTR 210 EX MED VQ (Pellistor)	0...100%LEL	alkanes (methane to hexane), hydrogen, ethanol
GTR 210 EX MED IR (infrared)	0...100%LEL	methane, propane
GTR 210 EX MED TOX (electro-chemical)	0...25Vol%	O ₂

Power supply: 24V DC

Output: 4...20mA

Display: graphical LC-display, background red/green/yellow, LED Power/Fault/MainFailure/Inhibit
Operating keys

Degree of protection: IP66/IP67

Software version: V3.08

Type Examination documentation

Test report: DEKRA No. 2229259.0501-EMC, dated 2018-10-05

Test report: DEKRA No. 2229259.0502-EMC, dated 2018-10-05

Test report: DEKRA No. 2175818.0501-EMC, dated 2015-02-25

Test report: DEKRA No. 2238857.0501-EMC, dated 2019-08-05

Test report: DEKRA No. 2233104.50, dated 2019-05-20

Test report: PFG. No. 41300212P NIV, dated 2020-05-19

Test report: NL/DEK/ExTR11.0106/03, dated 2019-10-02

Ex-Certificate: DEKRA 11 ATEX 0257 X issue no. 3

Ex-Certificate: BVS 12 ATEX G 001X (Supplement 04)

Operating instruction: GTR 210 (1.22)

Drawings: Circuit diagram, PCB Lay-outs

Validation results of functional tests FlexADOS 914 MED and GTR 210 EX MED, dated 2020-01-16

Tests carried out

IEC 60092-504:2016

IEC 60533:2015

EN 50104:2010

EN 60079-0:2012 incl. A11:2013

EN 60079-29-1:2016

*IMO MSC.1/Circ.1370 (not applicable)

Marking of product

The products to be marked with:

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

QS - CERTIFICATE OF ASSESSMENT - EC (MODULE E)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Quality System for the products

with type designation(s) as specified in the Appendix to this Certificate

Issued to

Ados GmbH
Aachen, Germany

is found to comply with the applicable requirements.

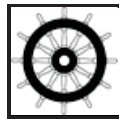
The quality system has been assessed with respect to the procedure of conformity assessment described in Annex II, Module E in the directive 2014/90/EU and regulation (EU) 2019/1397.

This Certificate is valid until **2025-06-14**.

Issued at **Hamburg** on **2020-06-15**

DNV GL local station:
Essen

Approval Engineer:
Dariusz Lesniewski

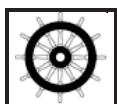


Notified Body
No.: **0098**



for **DNV GL SE**
Digitally Signed By: Mydlak-Röder, Christine
Location: DNV GL Hamburg, Germany
on behalf of

Gerhard Aulbert
Head of Notified Body



0098/yyyy

0098: Notified Body number undertaking quality surveillance
yyyy: The year in which the mark is affixed

The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate authorizes the manufacturer in conjunction with the valid EC Type Examination (Module B) Certificate(s) of the equipment listed before to affix the Mark of Conformity (wheelmark) to the product described herein. This certificate loses its validity if the manufacturer makes any changes to the approved quality system, which have not been notified to, and agreed with the notified body named on this certificate. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. The Manufacturer has to apply for periodical audits to verify the maintenance and application of the quality system every 12 months.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **344.1-010322-1**
Certificate No: **MEDE0000022**

APPENDIX

Item no. MED/3.54 Fixed oxygen analysis and gas detection equipment

Type designation	EC Type-Examination Certificate No.	Expiry date	Notified Body No.	USCG approval number
FlexADOS 914 MED ¹	MEDB00006DG	2025-06-14	0098	N/A
GTR 210 EX MED ¹	MEDB00006EV	2025-06-14	0098	N/A

Places of production

1. Ados GmbH, Trierer Str. 23-25, Aachen, Germany