DNV·GL

Certificate No:
TAA00001S9

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Automatic Gas Detection System

with type designation(s)
Regard 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	**B**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**A**

Issued at **Hamburg** on **2018-04-17**
This Certificate is valid until **2023-04-16**.
DNV GL local station: **Hamburg**

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: **262.1-026291-1**
Certificate No: **TAA00001S9**

Product description

Scalable gas monitoring and alarm system REGARD 7000
In connection with 4-20 mA gas transmitters the system is suitable for measurement of flammable gases, toxic gases and vapours, oxygen.

The system may consist of the following components:

System component:	**Software-/ Firmware-Version:**
Docking Station 8-Slot	N/A
Docking Station 4-Slot	N/A
Advanced Dashboard 6RU	1.00.xx - 1.03.xx
Advanced Dashboard PM	1.00.xx - 1.03.xx
Standard Dashboard 3RU	1.03.xx
Adv Dashboard 6RU Basic Unit	1.00.xx - 1.03.xx
Adv Dashboard PM Basic Unit	1.00.xx - 1.03.xx
Std Dashboard 3RU Basic Unit	1.03.xx
4-20 mA Input Module	1.00.xx - 1.01.xx
4-20 mA Input Module / HART	1.01.xx
Digital Input Module	1.00.xx
Relay Module 24 V DC	1.00.xx
Relay Module 240 V AC	1.00.xx
Relay Module 24 V DC complex	1.00.xx
Relay Module 240 V AC complex	1.00.xx
Bridge Module	1.00.xx
Modbus RTU Gateway Set	1.00.xx
Long Distance Gateway Set	N/A
PROFIBUS DP Gateway Set	≥1.00.06
PROFINET Gateway Set	≥1.00.06
Slotcover	N/A
Terminal Block 24 pole AC	N/A
Terminal Block 24 pole DC	N/A
Terminal Block 2 pole	N/A
Terminal Block 16 pole	N/A
Terminal Block 16 pole res	N/A
REGARD 7000 Configuration Software	>=1.02.xx
REGARD 7000 PC-Software Key	N/A

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

System components to be installed in a metal cabinet.
System to be powered by the type approved power supply unit.
Dashboard not for installation on the bridge.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
EN 60079-29-1:2016; EN 50104:2010; EN 45544-1:2015; EN 45544-2: 2015; EN 45544-3:2015
EN 50271:2010

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number

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