DNV·GL

Certificate No:
TAA00001XB

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Misc. detector

with type designation(s)
Ex RC 12; Ex RC 13,5; Ex RC 15; Ex RC 23; Ex RC 60; Ex RC 2580 Ex RC M 14; Ex RC M 20; Ex RC Si M 30; Ex RC Si 56

Issued to
steute Technologies GmbH & Co. KG
Löhne, 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.

Temperature	**D**
Humidity	**B**
Vibration	**B**
EMC	**N/A**
Enclosure	**Required protection according to the rules shall be provided upon installaton on board**

Issued at **Hamburg** on **2019-02-05**
This Certificate is valid until **2023-07-03**.
DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Holger Jansen**

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

The magnetic sensors are actuated by an permanent magnet, entering their proximity without any physical contact.

Switching system: Reed Contacts

Ex RC 12; Ex RC 13,5; Ex RC 15

Contact types:	1NC,1NO or 1CO contact
Switching frequency:	max . 50Hz
Switching Voltage:	250 V
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC 23

Contact types:	1CO contact
Switching frequency:	max . 50Hz
Switching Voltage:	max. 90 VAC/ 125 VDC
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC 60

Contact types:	1NO, 1CO or bistable contact
Switching frequency:	max . 50Hz
Switching Voltage:	250 V
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC 2580

Contact types:	1CO contact
Utilisation Category:	AC-12; DC-12
Switching Voltage:	250 V
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC M 14

Contact types:	1NO or 1CO contact
Switching frequency:	max . 50Hz
Switching Voltage:	250 V
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC M 20

Contact types:	1NO or 1CO contact, bistable or bistable CO contact
Switching frequency:	max . 50Hz
Switching Voltage:	250 V
Explosion protection:	II2G Ex mb IIC T6 Gb/ II2D Ex mb IIIC T80°C Db IP67 as per certificate DMT 01 ATEX E 058 X

Ex RC Si M 30

Contact types:	1NC/1NO or 2 NC contacts
Switching frequency:	max . 5Hz
Switching Voltage:	max. 30 VDC
Explosion protection:	II 2G Ex mb IIC T6 Gb / II 2D Ex mb IIIC T80°C Db IP67 as per certificate PTB 05 ATEX 2024X

Ex RC Si 56

Contact types:	1NC/1NO or 2 NC contacts
Switching frequency:	max . 5Hz
Switching Voltage:	max. 30 VDC
Explosion protection:	II 2G Ex mb IIC T6/T5 Gb; II 2D Ex mb IIIC T80°C / T95°C Db IP67 as per certificate PTB 08 ATEX 2027X

Application/Limitation

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.

For the application in hazardous areas the Ex-Certification/Special condition for Safe Use listed in the Ex-Certificate are to be observed.

Type Approval documentation

Tests carried out

Applicable tests according to DNVGL-CG-0339, November 2016.

Place of manufacturer

Steute Technologies GmbH & Co. KG
Brückenstraße 91
32584 Löhne/Germany

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

END OF CERTIFICATE