

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Misc. detector**

with type designation(s)

**RC 12; RC 13,5; RC 15; RC 23; RC 60; RC 2580; RC M 14; RC M 20; RC Si M 30; 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.**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>N/A</b>
<b>Enclosure</b>	<b>Required protection according to the DNV GL rules shall be provided upon installation on board</b>

Issued at **Hamburg** on **2018-11-26**for **DNV GL**This Certificate is valid until **2023-07-03**.DNV GL local station: **Essen**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

RC 12; RC 13,5; RC 15

Contact types: 1NC,1NO or 1CO contact  
Switching frequency: max . 50Hz  
Switching Voltage: 250 V

RC 23

Contact types: 1 CO contact  
Switching frequency: max . 50Hz  
Switching Voltage: max. 90 VAC/ 125 VDC

RC 60

Contact types: 1NO, 1CO or bistable contact  
Switching frequency: max . 50Hz  
Switching Voltage: 250 V

RC 2580

Contact types: 1CO contact  
Utilistion Category: AC-12; DC-12  
Switching Voltage: 250 V

RC M 14

Contact types: 1NO or 1CO contact  
Switching frequency: max . 50Hz  
Switching Voltage: 250 V

RC M 20

Contact types: 1NO or 1CO contact, bistable or bistable CO contact  
Switching frequency: max . 50Hz  
Switching Voltage: 250 V

RC Si M 30; RC Si 56

Contact types: 1NC/1NO or 2 NC contacts  
Switching frequency: max . 5Hz  
Switching Voltage: max. 30 VDC

## 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.

## Type Approval documentation

**Test Report:** Paconsult No. 11-3891, dd. 2012-05-14  
Paconsult No. 13-4940, dd 2013-04-05  
EXAM No. VB5847, dd. 2004-04-02  
Q-Berichte 12-1433,-1412,-1413,-1418,-1419,-1431,-1432,-1434,13-1584,-1585,-1586

**Datasheets:** Ex RC 12, Ex RC 13,5, RC 15, RC 60, Ex RC M 14, Ex RC M 20,  
RC Si M 30, RC Si 56, RC 23, RC 2580, Ex RC 2580

**Type Approval Assessment Report 2018-11-15**

Job Id: **262.1-028394-1**  
Certificate No: **TAA00001XA**

## 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