

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Enclosure for Electrical Equipment**

with type designation(s)

8150/1 ..., 8150/2 ..., 8150/5 ...

Issued to

**R. STAHL Schaltgeräte GmbH
Waldenburg, 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.**

Type	Degree of protection	Vibration class
8150/1 ...	IP66	A
8150/2 ...	IP66	A
8150/5 ...	IP66	A

Issued at **Hamburg** on **2020-06-22**This Certificate is valid until **2025-06-21**.for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Maik Gagern**

**Arne Schaarmann
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.

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.



Product description

Terminal and Control Boxes

8150/1.. , 8150/2..., 8150/5...

Size	Width	Height	Depth
min	100mm	100mm	60mm
max	800mm	800mm	300mm
Ingress protection	IP 66		
Material	stainless steel		
Ambient temperature	- 60°C - +85°C (+135°C) * depending on gasket and (ex)temperature classes		

Degree of explosion protection as per certificates IECEx PTB 09.0048/49

Marking depending on the product*:

Ex d e ia ib mb IIC, IIB, IIA T6, T5, T4, T3 Gb	8150/1.., 8150/2..
Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C Db	8150/1.., 8150/2..
Ex d e ia/ib [ia Ga] mb op pr/op is q IIA, IIB, IIC T6, T5, T4, T3 Gb	8150/5..
Ex tb IIIA, IIIB, IIIC T80°C, T95°C, T130°C Db	8150/5..

Environmental Category

Temperature:	C
Humidity:	B
Vibration:	A
EMC:	B

Additional approval of control and monitoring equipment in type 8150/5 installations may be required depending on the application.

Application/Limitation

This certificate is issued on the basis of DNV GL Class Programme DNVGL-CP-0338, Edition 2018-09. Operating instructions of the manufacturer to be observed.

*Note: All details about electrical explosion protection mentioned in this certificate are for information only. For relevant binding information the corresponding Certificate of Conformity with regard to electrical explosion protection, issued by a recognised Authority, shall be observed.

Type Approval documentation

Tests carried out

DNV GL Class Guideline DNVGL-CG-0339, Edition 2016-11

Marking of product

Maker's trademark

Type designation

Electrical explosion protection: Type of protection and marking according to the applicable Certificate of Conformity *

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.



Job Id: **262.1-032030-1**
Certificate No: **TAE0000405**

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and 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