

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Safety Relays**

with type designation(s)
SR3C..., SR3D..., SK3D...

Issued to

H. Zander GmbH & Co. KG
Aachen, Nordrhein-Westfalen, 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.

Issued at **Hamburg** on **2019-06-11**

This Certificate is valid until **2024-06-10**.

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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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.



Product description

SR3C..., SR3D... Emergency Stop Safety Relays
SK3D... Safety Coupling Relays

Type:	SR3C..., SR3D...
Ratings:	
Operating voltage	AC 230 V, AC 115 V, AC/DC 24 V*, AC: 50-60 Hz
Safety contacts 3 NO	AC: 250 V, 2000 VA, 8 A for AC-12 250 V, 3 A for AC-15
	DC: SR3C: 40 V, 320 W, 8 A for DC-12 SR3D: 30 V, 240 W, 8 A for DC-12 24 V, 3 A for DC-13
Auxilliary contacts 1 NC	AC: 250 V, 500 VA, 2 A for AC-12 250 V, 3 A for AC-15
	DC: SR3C: 40 V, 80 W, 2 A for DC-12 SR3D: 30 V, 60 W, 2 A for DC-12

Type:	SK3D...
Ratings:	
Operating voltage	AC 230 V, AC 115 V, DC 24 V, AC: 50-60 Hz
Safety contacts 3 NO	AC: 250 V, 2000 VA, 8 A for AC-12 250 V, 5 A for AC-15
	DC: 30 V, 240 W, 8 A for DC-12 24 V, 4 A for DC-13
Auxilliary contacts 1 NC	AC: 250 V, 500 VA, 2 A for AC-12
	DC: 30 V, 60 W, 2 A for DC-12

Safety category 4, PL e acc. to EN ISO 13849-1 and SILCL 3 according IEC 62061 / IEC 61508

Further ratings acc. manufacturer documentation.

Application/Limitation

Location Classes:

Temperature: B, Humidity: B, Vibration: A

* Insulating transformer acc. to EN60742 must be used.

Operating instruction of the manufacturer to be observed

Type Approval documentation

Tests carried out

IEC60204-1:2016, Cold, dry heat, damp heat, vibration.

Job Id: **262.1-031008-1**
Certificate No: **TAE00003JF**

Marking of product

H. Zander - Type designation - Main data.

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- 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