

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Overcurrent- and Short-Circuit Relay

with type designation(s)
3RN20

Issued to

Siemens AG
Amberg Bayern, 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 **2017-04-06**

This Certificate is valid until **2022-04-05**.

DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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Duy Nam Le
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

Thermistor Motor Protection 3RN2...		
For monitoring the motor winding temperature using temperature-dependent resistors that are directly installed in the motor winding by the manufacturer		
Type:		
Compact units	3RN2000	
Compact/Standard units	3RN2010	
Bistable unit	3RN2012-.BW31	
Standard unit with ATEX approval	3RN2011, 3RN2012-...30, 3RN2013	
Standard unit with ATEX approval and 2 sensor circuits, warning/disconnection	3RN2023	
Accessories of 3RN2		
Coding pin	3ZY1440-1AA00	
Push in lug	3ZY1311-0AA0	
Ratings		
Insulation voltage U_i	300V	
Impulse withstands voltage U_{imp}	4kV	
Degree of protection	IP20	
Sensor	PTC Type A	
Frequency (Hz)	50/60Hz /dc	
Rated control supply voltage U_s	24 ... 240V AC/DC	0.85 ... 1.1 x U_s
	24V AC/DC	0.85 ... 1.2 x U_s [DC]
		0.85 ... 1.1 x U_s [AC]
Aux. Contacts		
Conventional thermal current I_{th}	5A	
Rated operational current I_e (40°)	AC-15	250V / 3A
	DC-13	24V / 1A
		125V / 0,22A
		240V / 0,11A
Further ratings and kind of evaluation units according manufacturer documentation		

Application/Limitation

Location Classes:

Temperature: C, Humidity: B, Vibration: A, Enclosure: IP20, EMC: A

Type Approval documentation

Tests carried out

IEC 60947-5-1:2009-07, IEC 60947-8:2006-11+AM2:2011-08, cold, dry heat, damp heat, vibration, flame retardancy, EMC

Job Id: **262.1-025008-1**
Certificate No: **TAE00001U3**

Marking of product

Manufacturer name and Type designation.

Name and place of manufacturer

Siemens AG, GWA
Werner-von-Siemens-Str. 48
92220 Amberg
Germany

Siemens AG, GWA
Werner-von-Siemens-Str. 29
93413 Cham
Germany

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