TYPE APPROVAL CERTIFICATE

Certificate No:
TAE00004F2
Revision No:
1

This is to certify:

That the Monitoring Relay

with type designation(s)
TeSys Giga - LR9G

Issued to
Schneider Electric Industries S.A.S.
Rueil Malmaison, Hauts de Seine, France

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2022-03-01**

This Certificate is valid until **2027-02-17**.
DNV local station: **France CMC**

Approval Engineer: **Nicolay Horn**

for **DNV**
Digitally Signed By: Sjåvåg, Trond
Location: DNV Høvik, Norway

Trond Sjåvåg
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.

Place of manufacturer

Schneider Shanghai Apparatus Parts Manufacturing Co,
Ltd Putuo branch, Putuo district,
Shanghai, China

Product description

3 poles electronical type thermal overload relays of the differential Type (Phase loss sensitive) with two integrated auxiliary contacts of an integrated aux. relay (1 NO, 1NC), with the following settings :

- Ir setting: 64 positions from Irmin to Irmax.
- Trip class: Class 5E, 10E, 20E and 30E
- Protection enable/disable, manual/auto reset

Main function of product are:

- Current Overload Protection (done electronically,)
- Phase loss sensitive (in case of phase loss the tripping occurs with lower currents)
- Ground fault protection CI-A type (acc.to IEC standard)
- Auto Reset function
- Pre-alarm indication (LED)
- Current flowing indication (LED)
- Phase imbalance protection IEC 60947-1 Annex T 5.5

Commercial Reference	Electronic Overload relay Setting range (A)	Frame	Trip Class	Aux Terminal Type 95-96, 97~98
LR9G115	28…115	5	5E, 10E, 20E, 30E	Spring
LR9G225	57…225	5		
LR9G500	125…500	6		
LR9G630	160…630	7		
LR9G115C	28…115	5		Screw
LR9G225C	57…225	5		
LR9G500C	125…500	6		
LR9G630C	160…630	7		

Rated impulse withstand voltage U_{imp}: 8 kV
Rated insulation voltage U_i: 1000 V AC
Rated frequency: 50/60 Hz

Application/ Limitation

For installation inside switchboards/ enclosures onboard ships and offshore units.

Temperature class : D
Humidity class : B
Vibration class: A
EMC Class: A

Referred to DNV-CG-0339 (2021-08) Table 1 Location classes

Type Approval documentation

Documentation and test reports:

TeSys Control - Giga REIays	Catalogue 2022
Overload Relays TeSys G Sizes 5-7	Product Identification File Overload Relays OLR Fr 5-6-7 - Marine
2011990047	Test report IEC 60947-4-1 dated 2021-03-17
2011990050	Test report IEC 60947-4-1 dated 2021-05-11
2011990051	Test report IEC 60947-4-1 dated 2021-05-17
2011996005	Test report IEC 60947-4-1 dated 2021-11-16
2011990050 Amendment no. 1	Test report IEC 60947-4-1 dated 2021-10-28
2011990051 Amendment no. 1	Test report IEC 60947-4-1 dated 2021-11-06
2111930124	CNAS Environmental Test report dated 2021-10-05
2111930125	CNAS Environmental Test report dated 2021-10-05
2111930126	CNAS Environmental Test report dated 2021-10-05

Tests carried out

Type tests in accordance with IEC 60947-4-1 (2018) and IEC 60947-5-1 (2016), Environmental tests in accordance with DNV-CG-0339, August 2021 (Power supply variation, Power supply failure, Vibration, Dry heat, Damp heat, Cold Inclination)

Marking of product

Schneider Electric – Type designation – Manufacturing place

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.

The main elements of the survey to be dealt with:

- Ensure that type approved documentation is available.
- Ensure that materials used comply with type approved documents and/or referenced material specifications.
- Review design, materials, performance and production process with respect to possible changes, in order to ensure compliance with the type approved documentation and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV Type Approval Certificate.

Assessment to be performed at 2 and 3,5 years and at renewal.

END OF CERTIFICATE