

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Overcurrent- and Short-Circuit Relay**with type designation(s)
HGT18/40/65/100/150/265/500/800

Issued to

Hyundai Electric & Energy Systems Co., Ltd.
ULSAN, Republic of Koreais 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 **Busan** on **2020-03-12**This Certificate is valid until **2025-03-05**.DNV GL local station: **Ulsan**for **DNV GL**Approval Engineer: **Eun Sook Kim**

Andreas Kristoffersen
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

Thermal overload relays:

Rated voltage Ue:	690 V
Rated frequency fe:	50/60 Hz
Rated insulation voltage Ui:	750V
Rated impulse withstand voltage Uimp:	6/8 kV
Trip class:	10A

	Setting range	Applied contactors
HGT18	0.12 to 18 A	HGC9, HGC12, HGC18
HGT40	7.0 to 40 A	HGC25, HGC32, HGC40
HGT65	7.0 to 65 A	HGC50, HGC65
HGT100	17 to 100 A	HGC75, HGC85, HGC100
HGT150	48 to 150 A	HGC115, HGC130, HGC150
HGT265	48 to 265 A	HGC185, HGC225, HGC265
HGT500	90 to 400 A	HGC300, HGC400, HGC500
HGT800	378 to 800 A	HGC630, HGC800

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, December 2019 for:

- Temperature: B
- Humidity: A
- Vibration: A

IEC 60947-1(ed.5);am1

IEC 60947-4-1(ed.3);am1

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