



Certificate no.:
TAE00004W0

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Circuit Breaker

with type designation(s)
HGV

issued to
HD Hyundai Electric Co., Ltd.
Ulsan, Korea, Republic of

is found to comply with
DNV 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.

Rated voltage (V) 7.2k/ 12k
Rated current (A) 1250 / 2000

Issued at **Busan** on **2024-07-04**

This Certificate is valid until **2029-07-03**.

for **DNV**

DNV local unit: **Seoul**

Approval Engineer: **Eun Jin Lee**

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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Form code: TA 251

Revision: 2023-09

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Product description

Withdrawable vacuum circuit breaker

	HGV1151/2C	HGV2151/2C	HGV1154F	HGV2154F
Rated voltage U_r (kV) :	7.2	12	7.2	12
Rated frequency (Hz) :	50/60		50/60	
Rated normal current I_r (A) :	630/1250		2000	
Power frequency withstand voltage U_d (kV) :	20	28	20	28
Impulse withstand voltage U_p (kV) :	60	75	60	75
Rated short circuit breaking current I_{sc} (kA):	31.5		31.5	
Rated short time withstand current(3s) I_k (kA):	31.5		31.5	
Rated short circuit making current I_p (kA) :	82		82	

Application/Limitation

Location classes:

Temperature : B, Humidity : B, Vibration : B, EMC : A

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 62271-100 Ed 2.2(2021)

Environmental tests in accordance with class guideline DNV-CG-0339, August 2021

Marking of product

The products to be marked with :

- Manufacturer name
- Model name
- Rating

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) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall 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.