

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Miniature Circuit Breaker**with type designation(s)
BH-P (plug in type)

Issued to

Mitsubishi Electric Corporation Fukuyama Works
Fukuyama City, HIROSHIMA, Japan

is found to comply with

DNV GL 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 GL.**Issued at **Høvik** on **2020-02-25**This Certificate is valid until **2024-11-16**.DNV GL local station: **Kobe**for **DNV GL**Approval Engineer: **Nicolay Horn**

Marta Alonso Pontes
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.



Name and place of manufacturer

Mitsubishi Electric Dalian Industrial Product Co., Ltd.
Dalian, China

Product description

Miniature circuit breakers with the following characteristics:

Type BH-P (plug-in type):

Number of Poles:	2P
Rated current In [A]:	10 – 50*
Rated operational voltage Ue [V]:	250 AC
Rated insulation voltage Ui [V]:	250 AC
Rated short circuit capacity Icu [kA]:	5
Rated short circuit capacity Ics [kA]:	5

Short circuit current limiting: None

Automatic tripping device: Thermal, magnetic

Application/Limitation

Temperature class: A
Humidity class: B
Vibration class: A

Only to be installed in climate control cabinets, where no temperatures above 45°C will occur.

*Ratings given for ambient temperature of 30°C. De-rating according to manufacturer's documentation for 45°C.

Type Approval documentation

Tests carried out

Type tests according to IEC 60947-2 Edition 5.0 (2016) + Amendment 1 (2019). Environmental tests in accordance with GL Guidelines for Performance of Type Approvals, Chapter 2 – Test Requirements for Electrical / Electronic Equipment and Systems (VI-7-2), Edition 2012.

Marking of product

MCB – type – voltage – rated current and trip characteristic – rated short circuit capacity

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, 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