

# TYPE APPROVAL CERTIFICATE

---

**This is to certify:**

**That the Electric Bus Bar**

with type designation(s)  
**ERIFLEX insulated braided conductor IBSHY**

Issued to  
**ERICO Europe BV**  
**Tilburg, Noord-Brabant, Netherlands**

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.**

This Certificate is valid until **2024-01-07**.

Issued at **Høvik** on **2019-01-08**

DNV GL local station: **Rotterdam**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

---

**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

ERICO France SARL, Rue Charles Dallière BP31,  
42161 Andrézieux Bouthéon Cedex, France

## Product description

nVent ERIFLEX IBSHY: Flexible single-phase insulated braided conductor, insulation voltage 1000 V, flammability in accordance to UL 1581-2001 rev.8 VW-1 Flame. Insulation material: Halogen free glass fiber coated silicon.

Type name	description	Current* (A)	Joule-integrale*** (A <sup>2</sup> s)	Rated short-circuit peak I <sub>pk</sub> *** (kA)
IBSHY 32	IBSHY 32-230 to IBSHY 32-830	125	8.1x10 <sup>7</sup>	15

\* Connection: Busbar to electrical component. Air temperature around bus-bar 45 °C.

\*\* Joule-integrale is based on testing one conductor per phase with a 1 s duration.

\*\*\* Rated Short-Circuit Peak of the conductor from 1 s duration tests.

## Application/Limitation

To be used inside switchboards/enclosures onboard ships.

nVent ERIFLEX Insulated Braided Conductor used for one outgoing circuit may be rated on the basis of the reduced short-circuit stress occurring on the load side of the respective short-circuit productive device as stated in IEC 61439-1 item 8.6.1 part 1 while nVent ERIFLEX Insulated Braided Conductor used as a connection from the main bus-bar to a dropper with several outgoing circuits shall be designed in accordance with the requirements 61439-1 item 8.6.1 part 2.

To be installed in accordance with the manufacturer's instruction. Max. 630 mm between the supports.

## Type Approval documentation

Data sheet: ERIFLEX "Insulated Braided Conductor for Compact Circuit Breakers dated 2017.  
ERIFLEX "IBS/IBSB/IBSBR/IBSHY Short circuit withstand strength"  
ERICO Information Source doc no. SLEEVE000014 dated 2015-05-05

Test reports: NEFI Report of Performance No 2795 dated 2017-09-27.  
ERIFLEX Test Report TR 13042016 IBS 32mm<sup>2</sup> dated 2016-04-14.  
SGS Test Report No. SHIN165020963PS dated 2016-05-13.

## Tests carried out

Short-circuit test and voltage after IEC 61439-1. Flame retardance test after UL 1581-2001 rev.8 VW-1 Flame.

## Marking of product

nVent ERIFLEX IBSHY

## 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)



Job Id: **262.1-024834-1**  
Certificate No: **TAE00003B7**

- 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.

Assessment to be performed at 2 and 3.5 year and renewal.

END OF CERTIFICATE