DNV·GL

Certificate No:
TAE00003B8

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Bus Bar

with type designation(s)
ERIFLEX insulated braided conductor IBSADV and IBSBADV

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**

Digitally Signed By: Alonso Pontes, Marta

Location: DNV GL Høvik, Norway

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.

Job Id: **262.1-024834-1**
Certificate No: **TAE00003B8**

Name and Place of manufacturer
ERICO France SARL, Rue Charles Dalliére BP31,
42161 Andrézieux Bouthéon Cedex, France.

Product description

nVent ERIFLEX IBS and IBSB Advanced Flexible single-phase insulated braided conductor, insulation voltage 1000 VAC/1500 VDC, flammability in accordance to UL 94 V0. Insulation material: Low smoke and Halogen free Thermoplastic elastomer.

Type name	Description	Current* (A)	Joule-integrale*** (A^2s)	Rated short-circuit peak I_{pk}*** (kA)
IBSADV 25	IBS ADV 25-230 to IBS ADV 25-1030	125	$2.27x10^7$	14
IBSBADV 50	IBSB ADV 50-230 to IBSB ADV 50-1030	250	$8.17x10^7$	30
IBSBADV 70	IBSB ADV 70-230 to IBSB ADV 70-1030	300	$1.58x10^8$	30
IBSBADV 100	IBSB ADV 100-230 to IBSB ADV 100-1030	350	$3.31x10^8$	70
IBSBADV 120	IBSB ADV 120-230 to IBSB ADV 120-1030	400	$4.67x10^8$	70
IBSBADV 185	IBSB ADV 185-230 to IBSB ADV 185-1030	500	$8.81x10^8$	70
IBSADV 240	IBSB ADV 240-230 to IBSB ADV 240-1030	630	$1.52x10^9$	80

* 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 Advanced 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. nVent ERIFLEX Advanced 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: Drawing "For types IBS ADV, IBSB ADV drawing no. PC-0160" dated 2018-06-26.

Test reports: RATP Report "Fire behaviour of product Isolated ERIFLEX ADVANCED / ERIFLEX ADVANCED No. 17.0501 dated 2017-04-20.
SGS Test Report no. SHIN1705029620PS dated 2017-06-08.

Tests carried out

Short-circuit test and voltage after IEC 61439-1. Flame retardance test after UL 94 V0.

Marking of product

nVent ERIFLEX IBSADV /IBSBADV

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)
- 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