DNV·GL

Certificate No:
TAE000002C

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Electric Bus Bar

with type designation(s)
Smissline TP

Issued to
ABB Switzerland Ltd. Low Voltage Products
SCHAFFHAUSEN, Switzerland

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

For installation inside switchgear and controlgear assemblies. This panel bus bar system is not to be connected directly to main bus bars in the main- and emergency switchboards. If used, separate short-circuit protection is required.

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2015-06-24**

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Andreas Kristoffersen**

Marit Laumann
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.

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Product description

Bus bar system with feeders, adapters and terminals. Without devices as motor starters, circuit-breakers and residual operated circuit-breakers.

Type: Smissline TP

Rated insulation Voltage:	690 V
Rated operating Voltage:	690 V
Ambient air temperature:	55 °C max.
Rated operating Current:	100A, mid feeding 160 or 200 A Auxiliary feeding: 40 A
Degree of Protection:	IP 20B
Rated short time withstand current Icw:	10 kA / 300 ms 4 kA / 50 ms for auxiliary circuit
Rated peak withstand current Ipk:	35 kA
Rated conditional short circuit current (max 160 A):	50 kA
Rated peak fused short circuit current:	105 kA

Type Designation (excerpt)	**Identification No.**
Bus Bar system 3p +N+PE +aux. bars:	ZLS 905Exx
Additional Bus Bar + N+PE:	ZLS 926/28
Bus-bar 100A:	ZLS 200
Standard feeder unit 50mm2:	ZLS 224/5
Feeder unit 95 mm2 L1, L2, L3:	ZLS 250/1/2/3
Adapter 32 A L1, L2, L3, N:	ZLS 180/1/2/3/4
Adapter 63 A L1, L2, L3, N:	ZLS 186/7/8/9
Adapter 100 A L1, L2, L3, N:	ZLS 240/1

Application/Limitation

For installation inside switchgear and control gear assemblies.

The type approval contains parts and accessories as shown in the catalogue together with the parts listed in test reports. An item that is not a part of the test reports is not covered by the type approval.

This panel bus bar system is not to be connected directly to main bus bars in the main- and emergency switchboards. (If used, separate short-circuit protection is required.)

This type approval does not cover installation. Use and installation of the system must always be in accordance with the Rules.

Type Approval documentation
Tests carried out

Dielectric, insulation, temperature rise, short-circuit, voltage impulse, mechanical according to IEC 61439-1 & 2, vibration test according to DNV.

Marking of product

ABB – Smissline TP – type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:
- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and 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 to be performed at least every second year.

END OF CERTIFICATE