DNV·GL

Certificate No:
TAE00001A4

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Power Switch Board with Bus Bar

with type designation(s)
Blokset MB301M

Issued to
Schneider Electric Industries SAS
GRENOBLE, France

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Type approval regards system design principle only.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Rated voltage (V)	**690**
Rated current (A)	**up to 7300**
Rated freq. (Hz)	**50 - 60**

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

Issued at **Høvik** on **2016-09-01**
DNV GL local station: **Shanghai** for **DNV GL**

Approval Engineer: **Nicolay Horn**

Trond Sjåvåg
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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Job Id:
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Product description

Blokset MB301M. Low voltage power switchboard for circuit and motor protection and control.

Type:	**MB 301M**
Rated insulation voltage voltage Ui:	1000 V AC
Rated operation voltage Ue:	690 V AC
Rated current at 45 °C ambient:	
Main busbar:	Up to 7300 A [1)]
Vertikal busbar:	Up to 3300 A
Rated frequency:	50-60 Hz
Enclosure class:	IP22 / 32 /44
Short-circuit current main bus bar: [2)]	
Peak withstand Ipk:	Up to 330 kA
Withstand 1 sec. Icw:	Up to 150 kA
Short-circuit current vertical bus bar: [2)]	
Peak withstand Ipk:	Up to 220 kA
Withstand 1 sec. Icw:	Up to 100 kA
Internal arc withstand:	65 kA / 0.3 sec

1) For front access solution the max. I = 4480 A
2) See comments to short circuit currents under Application/limitation.

External dimensions: H: 2200 mm
W: 600 - 1400 mm
D: 500 - 1300 mm

The power switchboard to be installed /mounted according to manufacturer's installation instructions.

List of parts: See applicable drawings.

Application/Limitation

The type approval covers system design principle in accordance with IEC 61439-1 only. The manufacturing process is not included.

Equipments as circuit breakers etc. are not covered by this type approval.

Documents and drawings for the actual application as stated in the Rules Pt.4, Ch.8, Sec. 1, Table 2 except E150, shall be submitted for approval in each case by the end manufacturer.

Vertical bus bars 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, but not less than 60 % of the rating for the main bus bar and only for single outgoing consumers protected by a fuse or short-circuit limiting breaker without time delay.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 60439-1 / 61439-1/2, internal arc test in accordance wirh IEC TR 61641, vibration test.

Marking of product

Manufacturers name plate with type and key data in accordance with DNV Rules Pt.4, Ch.8, Sec.4, A 108.

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.

Assessment is to be performed at least every second year.

END OF CERTIFICATE