

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Power Switch Board with Bus Bar**with type designation(s)  
**atlant'IS Marine low voltage power switchboard**

Issued to

**SOREEL**  
**Cholet CEDEX, France**

is found to comply with

**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****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) up to 690**  
**Rated current (A) up to 6300**  
**Rated freq. (Hz) 50-60**This Certificate is valid until **2021-11-02**.Issued at **Høvik** on **2016-11-03**DNV GL local station: **Saint Nazaire**Approval Engineer: **Hanwee Low**for **DNV GL**

---

**Andreas Kristoffersen**  
**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.

## Product description

atlant'IS Marine low voltage power switchboard for circuit and motor protection and control.

| Type:                                                 | atlant'IS Marine |
|-------------------------------------------------------|------------------|
| Rated insulation voltage $U_i$ :                      | Up to 1000 V AC  |
| Rated operation voltage $U_e$ :                       | Up to 690 V AC   |
| Rated current 35 °C ambient: *                        |                  |
| Main busbar:                                          | Up to 6300 A     |
| Vertical busbar:                                      | Up to 1900 A     |
| Rated frequency:                                      | 50/60 Hz         |
| Enclosure class:                                      | IP31/IP54        |
| Short-circuit current main bus bar: <sup>1)</sup>     |                  |
| Peak withstand $I_{pk}$ :                             | 286 kA           |
| Withstand 1 sec. $I_{cw}$ :                           | 130 kA           |
| Withstand 3 sec. $I_{cw}$ :                           | 80 kA            |
| Short-circuit current vertical bus bar: <sup>1)</sup> |                  |
| Peak withstand $I_{pk}$ :                             | 154 kA           |
| Withstand 1 sec. $I_{cw}$ :                           | 70 kA            |
| Withstand 3 sec. $I_{cw}$ :                           | 40 kA            |

\* Data given at ambient temperature of 35 °C and IP31. To be modified for ships application and ambient temperature of 45 °C, according to derating tables (Document no.: atlant'IS technical & commercial documentation, Section 3.2, pg.32).

External dimensions:    Height :        2350 mm  
                                 Width :        2300 mm  
                                 Depth :        550 mm  
                                 Weight :       1320 kg

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 / 2 (edition 2.0:2011). Equipment as circuit breakers etc. are not covered by this type approval.

This type approval certificate does not replace the requirement for a DNVGL product certificate for complete switchboard as required in DNVGL rules Pt.4 Ch.8 Sec.1 2.3. Documents and drawings for the actual application as bus-bar currents, short-circuit ratings, single line diagram, layout, functional description and schematics 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 (edition 2.0:2011) 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 61439-1 / 2 (edition 2.0:2011), High voltage test, short-circuit withstand test, temperature rise test, lightning impulse test, protections degree, vibration test in accordance with IEC 60068-2-8/64:2008, temperature and humidity test.

## Marking of product

Manufacturers name plate with type and key data in accordance with IEC 61439-1 / 2 (edition 2.0:2011) and DNVGL Rules Pt.4 Ch.8 Sec.4 1.1.7.

## 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.

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