

TYPE APPROVAL CERTIFICATE

Certificate No: **TAE0000DF** Revision No: **2**

This is to certify:

That the Fused Switch

with type designation(s) **OS315 - 1250**

Issued to

ABB Oy, Protection and Connection VAASA, Finland

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft IEC 60947

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until 2022-12-31.

Issued at Høvik on 2018-02-14

DNV GL local station: Turku

Approval Engineer: Nicolay Horn

for **DNV GL**

Digitally Signed By: Andreas Kristoffersen Location: DNV GL Høvik, Norway

Andreas Kristoffersen Head of Section

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 1 of 3

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: **262.1-006128-5** Certificate No: **TAE00000DF**

Revision No: 2

Product description

Fused switch-disconnector OS315 -1250.

Technical data:

| reclifical data. | | | | | |
|--|--------------|-------|-------|-----------------|--|
| | | OS315 | OS400 | OS600/ OS630 | |
| Rated insulation voltage Ui (V) | | 1000 | 1000 | 1000 | |
| Rated impulse voltage Uimp (kV) | | 12 | 12 | 12 | |
| Rated operation current AC21A (A) | ≤ 500V | 315 | 400 | 630 | |
| | 690V | 315 | 400 | 630 | |
| Rated operation current AC22A (A) | ≤ 500V | 315 | 400 | 630 | |
| | 690V | 315 | 400 | 630 | |
| Rated operation current AC23A (A) | ≤ 500V | 315 | 400 | 630 | |
| | 690V | 315 | 400 | 630 | |
| Rated breaking capacity AC23A (A) | ≤ 500V | 3200 | 3200 | 6400 | |
| | 690V | 3200 | 3200 | 6400 | |
| Rated short circuit withstand current Icw | 690 / 1 sec. | 14 | 14 | 18 | |
| Rated short circuit making capacity Icm (kA) | 690V | 28 | 28 | - | |

| | | OS800 | OS1200 | OS1250 |
|--|--------------|-------|--------|--------|
| Rated insulation voltage Ui (V) | | 1000 | 1000 | 1000 |
| Rated impulse voltage Uimp (kV) | | 12 | 12 | 12 |
| Rated operation current AC21A (A) | ≤ 500V | 800 | 1200 | 1250 |
| | 690V | 800 | 1200* | 1250* |
| Rated operation current AC22A (A) | ≤ 500V | 800 | 1200 | 1250 |
| | 690V | 800 | 1200* | 1250* |
| Rated operation current AC23A (A) | ≤ 500V | 800 | 1000 | 1000 |
| | 690V | 800 | 1000* | 1000* |
| Rated breaking capacity AC23A (A) | ≤ 500V | 6400 | 8000 | 8000 |
| | 690V | 6400 | 8000 | 8000 |
| Rated short circuit withstand current Icw | 690 / 1 sec. | 18 | 40 | 40 |
| Rated short circuit making capacity Icm (kA) | 690V | _ | _ | _ |

^{*} Categories AC21B, AC22B & AC 23B

Application/Limitation

Ingress protection IP20. To be installed inside switchboard / enclosures.

Installation procedures according to the manufacturer's instructions to be followed.

Type Approval documentation

Technical info:

ABB Oy catalogue "Low Voltage Products – Fusegear Switch fuses OS" (parts)

Test reports:

TRC test report nos. TA2014 - 52 dated 2015 - 01 - 14 & TA2008-93 dated 2008-12-19, ABB test report nos. L15 - 001 dated 2015 - 01 - 07 & L09-011 dated 2009-05-04. Fimco test reports nos. 240963-1 dated 2006-02-01, 247302-1 & 2 dated 2007-06-08. SGS test reports nos. 255542 - 1 dated 2009 - 06 - 23, 256423 - 1 dated 2009 - 10 - 26, 260380 - 5 dated 2010,-06-30, 260380-3 dated 2010-06-09, 256421-1 dated 2009-10-28, 255382-1 dated 2009-06-18, 26380-4 dated 2010-06-09, 255399-1 dated 2009-06-22 and 256422-1 dated 2009-10-30.

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 2 of 3

Job Id: **262.1-006128-5** Certificate No: **TAE00000DF**

Revision No: 2

Tests carried out

Type tests in accordance with IEC 60947-3. Environmental tests in accordance with DNV CN 2.4.

Marking of product

ABB Oy - Disconnecting switch - 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 assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests 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 at renewal.

END OF CERTIFICATE

Form code: TA 1411a Revision: 2015-05 www.dnvgl.com Page 3 of 3