



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-9046
This Certificate consists of 3 pages

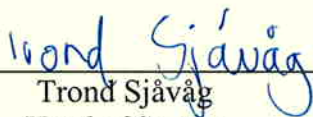
This is to certify that the
Fused Switch
with type designation(s)
OESA

Manufactured by
ABB OY, LOW VOLTAGE PRODUCTS
VAASA, Finland

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det
Norske Veritas' Offshore Standards
IEC 60947-1 (2007-06)
IEC 60947-3 (2005-06)

Application
For installation inside switchboards/enclosures onboard ships and offshore units.

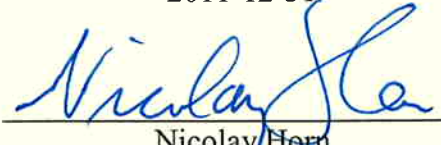

Place and date
Høvik, 2008-06-17
for DET NORSKE VERITAS AS


Trond Sjøvåg
Head of Section



Local Office
DNV Helsinki

This Certificate is valid until
2011-12-31


Nicolay Horn
Surveyor 

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million in this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Product description

Front or side operated switch fuse in 3 or 4 – pole version, type OESA_.

Rated insulation voltage, U_i 1000 V

Rated impulse withstand voltage, U_{imp} 12 kV

Type	Amp. (According to IEC 60947-1 and 60947-3 ²⁾)							
	AC Volts:	AC 21A	AC 22A	AC 23A	DC Volts:	DC 21A	DC 22A	DC 23A
OESA 00-32 & OESA 32	Up to 500	32	32	32	110 – 220 440	32 32	32 32	32 -
OESA 00-63 & OESA 63	Up to 500 690 ¹⁾	63 63	63 63	63 40	110 – 220 440	63 63	63 63	63 -
OESA 00 & OESA 100	Up to 500 690 ¹⁾	125 125	125 125	100 50	110 – 220 440	125 125	125 100	125 100
OESA 00-160 & OESA 160	Up to 500 690 ¹⁾	160 160	160 135	100 50	110 – 220 440	160 160	160 100	160 100
OESA 200	Up to 500 690	200 200	200 200	200 200	Up to 750 1000	200 200	200 200	200 -
OESA 250	Up to 500 690	250 250	250 250	250 250	Up to 750 1000	250 250	250 250	250 -
OESA 315	Up to 500 690	315 315	315 315	315 315	Up to 750 1000	315 315	315 315	315 -
OESA 400	Up to 500 690	400 400	400 400	400 400	Up to 750 1000	400 400	400 400	400 -
OESA 630	Up to 500 690	630 630	630 630	630 630	Up to 750 1000	630 630	630 630	630 630
OESA 800	Up to 500 690	800 800	800 800	720 720	Up to 750 1000	800 800	800 800	800 800

1) AC-21B, AC-22B and AC-23B.

2) Current ratings are given for an ambient temperature of 40 °C in open air. Derating to be performed for actual installation / use in accordance with instructions from ABB.

Application/Limitation

Current rating to be derated with minimum 5% to fulfill the requirements for an ambient operating temperature of 45°C, for higher ambient temperatures derating to be performed in accordance with instructions from ABB.



Cert. No.: E-9046
File No.: 823.40

Type Approval documentation

Technical documents:

OS_OESA1GB 01_09 (page 59 to 63)

Test reports:

9 AFX90-224, dated 1993-12-01	9 AFX93-182, dated 1993-12-01
9 AFX93-175, dated 1993-12-01	9 AFX93-183, dated 1993-12-01
9 AFX93-176, dated 1993-12-01	9 AFX93-184, dated 1993-12-01
9 AFX93-177, dated 1993-12-01	9 AFX94-34, dated 1994-01-31
9 AFX93-178, dated 1993-12-01	224199-1, dated 2002-08-27
9 AFX93-179, dated 1993-12-01	224199-2, dated 2002-08-27
9 AFX93-180, dated 1993-12-01	224199-3, dated 2002-08-27
9 AFX93-181, dated 1990-12-05	224199-4, dated 2002-08-27

Tests carried out

Type tests according to IEC 60947-1 and IEC 60947-3.

Marking of product

Product marking: ABB OESA, type designation.

Certificate retention survey

The scope of the retention/renewal survey 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 survey 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.

Survey to be performed at least every second year.

END OF CERTIFICATE