

MARINE DIVISION

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Certificate number: 05047/D0 BV

File number : ACE 02/106/02

Product code : 2631H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

ABB OY Low Voltage Products

Vaasa - FINLAND

for the type of product

SWITCHES (LOW VOLTAGE)

Switch - Disconnecter - Fuse, Types: MINI OS, OESA, Power Line OESA.

Regulations and standards :

BV Rules for the Classification of Steel Ships.
IEC 60947-1 & 3.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 22 Sep 2011

At Paris la Défense, on : 22 Sep 2006

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV HELSINKI
Surveyor : T. Andersson



J. BENOIT



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

<i>Product Type</i>	<i>Number of poles</i>	<i>Rated voltage (V)</i>	<i>Maximum operating current (A)</i>	<i>Breaking capacity (Ka)</i>	<i>Remarks</i>
Switch - Disconnecter - Fuse		Rated insulation voltage Ui	Rated thermal current Ith	see manufacturer technical notices : -OESA1A GB 99-07 - OS_OESA1GB06_04	Characteristics following: IEC 60947-1 and 3
Types: MINI OS					
OS 20--	3 and 4	1000	20		"
OS 25--	3 and 4	1000	25		"
OS 32--	3 and 4	1000	32		"
Types: OESA					
OESA 32--	3 and 4	750	32		"
OESA 63--	3 and 4	750	63		"
OESA 125--	3 and 4	750	125		"
OESA 160--	3 and 4	750	160		"
Types: Power Line OESA					
OESA 200--	3 and 4	1000	200		"
OESA 250--	3 and 4	1000	250		"
OESA 315--	3 and 4	1000	315		"
OESA 400--	3 and 4	1000	400		"
OESA 630--	3 and 4	1000	630		"
OESA 800--	3 and 4	1000	800		"

2. DOCUMENTS AND DRAWINGS :

- 2.1- According to Manufacturer's catalogue N° OESA 1A GB 99-07 and OS_OESA1GB06_04
2.2- Above documents are filed in ACE 02/106/02.

3. TEST REPORTS :**3.1- KEMA Test reports N°s:**

9AFX93-174, 9AFX93-175, 9AFX93-176, 9AFX93-177,
9AFX93-178, 9AFX93-179, 9AFX93-180, 9AFX93-181,
9AFX93-182, 9AFX93-183, 9AFX93-184 and dated 1994-01-17.

3.2- CB Test certificates N°s :

- FI 2168 , (OS MINI)
- FI 2219 , (OESA200...250)
- FI 2220 , (OESA315...400)
- FI 2221 , (OESA630)
- FI 2222 , (OESA800)

Issued by SGS Fimko Ltd

4. APPLICATION / LIMITATION :

4.1 BV Rules for the Classification of Steel Ships and IEC 60092 series.

4.2 Approval also valid for ships to be granted with the notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 Arrangements shall be made for a Society's Surveyor to carry out, on a periodic basis, visits of the Manufacturer's premises and product audits.

5.2 Each equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT :

- According to IEC 60947-1&3 specifications.

7. OTHERS :

7.1 This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time, and that **ABB OY Low Voltage Products (Vaasa - FINLAND)** , will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 This certificate cancels and replaces the previous one issued by the Society on 06/08/2001, under ref. N° 05047/C0 BV.

7.3 Production site(s): **ABB STRÖMBERG CONTROL LTD. (VAASA - FINLAND)** .

*** END OF CERTIFICATE ***