

MARINE DIVISION

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Certificate number: 08812/C0 BV

File number : ACE 02/106/04

Product code : 2635H

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

TYPE APPROVAL CERTIFICATE

This certificate is issued to

ABB OY Low Voltage Products

Vaasa - FINLAND

for the type of product

DISCONNECTORS (LOW VOLTAGE)

ABB and/or STRÖMBERG -SWITCH DISCONNECTORS - Type OT...-

Regulations and standards :

Bureau Veritas Rules for the Classification of Steel Ships, IEC 60947-1 - IEC 60947-3

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 : 05 Jan 2014

At Neuilly, on : 05 Jan 2009

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV HELSINKI
Surveyor : T. Andersson

L. COURREGELONGUE



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 :

SWITCH DISCONNECTORS: OT##F_, OT##FT_, OT##M_, OT##ML_, OT##A_ and OT##AT_

M/ML models differ from F/E/A models by colour. M/ML models are light grey and F/E/A models are grey.

PRODUCT TYPE	Number of Poles	Rated Voltage Max. (V)	Maximum Operating Current (A)	Short Circuit (kA)		Remarks
				Icw	Icm	
OT 16 F-...	3 / 4	690	16	0.5	/ 0.7	Characteristics as per IEC 60947-3
OT 25 F-...	3 / 4	690	25	0.5	/ 0.7	
OT 40F-...	3 / 4	690	40	0.5	/ 0.7	
OT16M...	3 / 4	690	16	0.5	/ 0.7	
OT25M...	3 / 4	690	25	0.5	/ 0.7	
OT40M...	3 / 4	690	40	0.5	/ 0.7	
OT 63F-...	3 / 4	690	63	1	/ 1.4	"
OT 80F OT 63 ML...	3 / 4	690	80	1	/ 1.4	"
OT 100 F-...	3 / 4	690	100	2.5	/ 3.6	"
OT 125 F/M-...	3 / 4	690	125	2.5	/ 3.6	"
OT 125 A/ML-...	3 / 4	690	125	4	/ 12	"
OT 160 E/M -...	3 / 4	690	160	4	/ 12	"

* OT63... 160M/ML models are similar to OT80... 160F/E, except the colour of frame.

2. DOCUMENTS AND DRAWINGS :

- IEC 60947 Series.
- Drawings and Specifications in document OT-OETL 1GB 02-04.
- OT-M 22 GB 03-01 (brochure).

3. TEST REPORTS :

3.1 - CB Test certificates and Test Reports N°s:

- 3.1.1 - FI 2196, FI 2197, FI 2198, FI 2199 issued by SGS Fimko Ltd on August, 28 2002.
- 3.1.2 - FI 4854, FI 4855, FI 4856, 248219-1, FI 4857, FI 4858, FI 4859, 248218-1, FI 4860, FI 4861, 249883-1 issued by SGS Fimko Ltd on Feb. 2008

3.2 - Test have been carried out at ABB STRÖMBERG's in house Laboratory.

4. APPLICATION / LIMITATION :

4.1 - According to BV Rules for the Classification of Steel Ships.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be manufactured, examined and tested by **ABB OY Low Voltage Products** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV-products. To this end **ABB OY Low Voltage Products** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 **ABB OY Low Voltage Products** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production sites :

ABB OY Low Voltage Products
Muottitie 2 A
FI-65320 VAASA, FINLAND

6. MARKING OF PRODUCT :

According to IEC 60947 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 Switch Disconnectors at any time and that **ABB OY Low Voltage Products, Vaasa - Finland**, will accept full responsibility for informing shipbuilders or their sub-contractors of the proper methods of use and general maintenance of the Equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate n° 08812/B0 BV issued on 07/05/2003 by the Society.

***** END OF CERTIFICATE *****