

MARINE DIVISION

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Certificate number: 09927/B1 BV

File number : ACE 02/010/10

Product code : 2633H

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 SACE S.p.A.

Bergamo - ITALY

for the type of product

CIRCUIT BREAKERS (LOW VOLTAGE)

EMAX E2L16 and E3L25.

Regulations and standards :

BV Rules for the Classification of Steel Ships.
IEC 60947-2.

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 : 19 Oct 2011

At Paris la Défense, on : 10 Oct 2007

For **BUREAU VERITAS**,
By order of the Secretary

Approval office

Local office : BV GENOA
Surveyor : G. Pirovano

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 :

Three pole Air-break independent operation, withdrawable circuit-breaker with rear terminals.

	Iu 40°C)	Umax	Ics	Icu
E2L16	1250-1600 A	690/440/415 V	65/110/130 kA	85/110/130 kA
E3L25	2000-2500 A	690/440/415 V	65/110/130 kA	85/110/130 kA

2. DOCUMENTS AND DRAWINGS :

2.1 - According to ABB SACE catalogue 649253/012 - June 1997.

2.2 - According to ABB SACE catalogue titled "PR111, PR112 and PR113 Microprocessor-based overcurrent releases", ref. 604019/011A - dated December 1999.

2.3 - According to ABB SACE catalogue 1SDC200006D0204.

3. TEST REPORTS :

3.1 - According to test reports: LOVAG-ACAE 98.001-97.090-97.091 (E2L16) & 98.002-98.003-98.005 (E3L25).

3.2 - Test report ABB SACE n° LBRP 5145 dated 31.08.2001.

3.3 - Test report ABB SACE TMS n° 20995 dated 13.11.2000 & 23.11.2000.

3.4 - Test report ABB SACE ref.: modR020/lab-edB dated 12.11.2001.

4. APPLICATION / LIMITATION :

4.1 - All above circuit breakers are equipped with the microprocessor - based releases type: PR 111, PR 112, PR 113, PR 121, PR 122 and PR 123.

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

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above circuit breakers, are to be manufactured, examined and tested by **ABB SACE S.p.A.**, 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 SACE S.p.A.** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **ABB SACE S.p.A.** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

ABB SACE S.p.A.
Via ENRICO FERMI 14
03100 FROSI NONE
ITALY

6. MARKING OF PRODUCT :

- Maker's name or trade mark.
- Serial number of the units.
- Equipment type or model identification under which it was type-tested.

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 SACE S.p.A., Bergamo - Italy**, 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 supersedes the Type Approval Certificate N° 09927/B0 BV issued on 19/10/2006 by the Society.

*** END OF CERTIFICATE ***