

MARINE DIVISION
17 Bis Place des Reflets - La Défense 2
92400 Courbevoie - France
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Certificate N°:
04814/E0 BV
The attached Schedule forms part of the certificate
File Number : ACE 02/014/14
Product Code : 2634I



CERTIFICATE OF TYPE APPROVAL

This is to certify that the product identified below was found to be in compliance with the relevant hereunder stated Regulations & standards

CONTACTORS (LOW VOLTAGE)

Type: BC

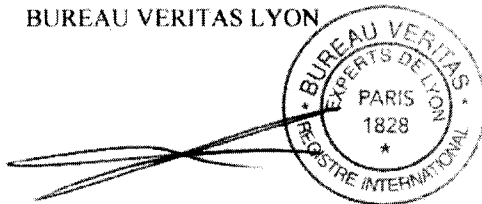
MANUFACTURED BY:

ABB ENTRELEC, Division Contrôle (Etablissement de Chassieu)
Chassieu - FRANCE

SPECIFIED REGULATIONS & STANDARDS :
BV Rules for the Classification of Steel Ships.
IEC 60947 series.

The Approval is valid until : 06/01/2008

BUREAU VERITAS LYON



At Paris la Défense, on : 06/01/2003

J.BENOIT
For the Secretary

This Certificate remains valid until the date stated on, hereunder, unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory into service
This Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested
This Certificate is not valid without the stamp of the above mentioned by BUREAU VERITAS Inspection Center
The manufacturer should notify BUREAU VERITAS of any modification or changes to the equipment in order to obtain a valid Certificate
The latest published Regulations or Standards referred to, above, and the Marine Division General Conditions are applicable.



**BUREAU
VERITAS**
MARINE DIVISION

File Number : ACE 02/014/14

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Product Type	Number of poles	Rated Voltage (V)	Maximum operating current (A)	Breaking capacity (A)	Remarks
CONTACTORS			thermal t ≤ 40°C	AC 3	Characteristics according to IEC 60947-1 and 4
BC 9	3-4	660/690	26	9/380/400V	
	3-4	660/690	28	12/380/400V	
BC 16	3-4	660/690	28	16/380/400V	
BC 18					
BC 25	3-4	660/690	45	25/380/400V	
BC 30 (accessories)	3-3+1	660/690	65	30/380/400V	
Auxiliary contact block					Ith: 16A
CA5...	1-4	690			

2. DESIGN DRAWINGS and/or SPECIFICATIONS

Drawings: FPL141-3001 (BC9)
FPL181-3001 (BC16)
GJL241-3001 (BC25)
GJL281-3001 (BC30).

Manufacturer's catalogue : - 1SBC100122C0201 .

3. TYPE TEST REPORTS / LABORATORY RECOGNITION STATUS

- Type test reports N°s: G03-89-07 of 24-02-89 (BC9)
G03-89-08 of 24-02-89 (BC16)
G03-90-02 of 14-12-90 (BC25)
G03-90-04 of 14-12-90 (BC30)

- Test reports N°s: 79796-EX1 of 16-04-97
16998-01 of 26-03-98
80696-EX1 of 12-11-97
80596-EX1 of 21-04-97.

Tested by Association de Stations d' Essais Françaises d' Appareils Electriques (ASEFA), France.

- SEMKO test report N° 200637-1 filed in ACE 02/014/14.

4. MATERIALS and/or COMPONENTS REQUIRED TO BE TYPE APPROVED

Nil.

5. OTHER MATERIALS and/or COMPONENTS

Nil.

6. APPLICATION / LIMITATION OF USE

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

7. PRODUCTION SURVEY REQUIREMENTS

Arrangement should be made for a Society's Surveyor to inspect equipment of the type referred to in this certificate which is intended for use on BUREAU VERITAS registered ships at the Manufacturer's works.

8. ON BOARD INSTALLATION & MAINTENANCE REQUIREMENTS

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

9. MARKING FOR IDENTIFICATION

According to IEC 60947 specifications.

10. OTHERS

10.1 - 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 Entrelec, Division Contrôle (Etablissement de Chassieu), Chassieu - France**, 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.

10.2 - This certificate supersedes the Type Approval Certificate n° 04814/D1 BV issued on 22/06/1999 by the Society.

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