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Published on <http://www.veristar.com>

Certificate N°:
03467/D0 BV

The attached Schedule forms part of the certificate

File Number : ACE 02/047/03
Product Code : 2634H

**BUREAU
VERITAS**

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)

DIL R, ER, EM, (00, 0...4)M, (00, 0...4)AM, 3M(80, 85), 4M(115, 145), M(185, 225, 250, 300, 400, 500)

MANUFACTURED BY:

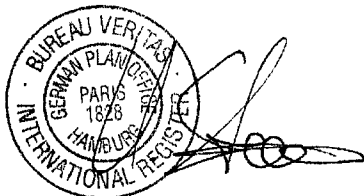
Moeller GmbH
Bonn - GERMANY


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

The Approval is valid until : 27.01.2010

BUREAU VERITAS HAMBURG

At Paris la Défense, on : 27.01.2005




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 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.



THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

CONTACTORS (LOW VOLTAGE)

PRODUC TYPE	NUMBER OF POLES	RATED VOLTAGE (V)	MAXIMUM OPERATING CURRENT (A)	REMARKS
Contactor Relay				
Type: DIL R	4 - 6 or 8	500 AC	16	The produced plastic materials are free of halogen as defined in DIN VDE 0472 part 815
DIL ER	3	500 AC	10	
Contactor:				
DIL EM	3 or 4	690 AC	20	
DIL 00 M	3 or 4	"	20	
DIL 00 AM	3 or 4	"	20	
DIL 0 M	3 or 4	"	35	
DIL 0 AM	3 or 4	"	35	
DIL 1 M	3 or 4	"	55	
DIL 1 AM	3 or 4	"	55	
DIL 2 M	3 or 4	"	90	
DIL 2 AM	3 or 4	"	90	
DIL 3 M	3 or 4	"	100	
DIL 3 M 80	3 or 4	"	100	
DIL 3 AM	3 or 4	"	100	
DIL 3 M 85	3 or 4	"	100	
DIL 4 M	3 or 4	"	160	
DIL 4 M 115	3 or 4	"	160	
DIL 4 AM	3 or 4	"	160	
DIL 4 AM 145	3 or 4	"	160	
DIL M 185	3	500 (690, 1000)	225	
DIL M 225	3	500 (690, 1000)	250	
DIL M 250	3	500 (690, 1000)	300	
DIL M 300	3	230, 400	350	
DIL M 400	3	230, 400	450	
DIL M 500	3	230, 400	550	
DIL EEM	3 or 4	690 AC	20	
DIL EEM-G	3 or 4	690 AC	20	

2. DESIGN DRAWINGS and/or SPECIFICATIONS

- According to the document titled "Innovative Solutions for Switching and Protection up to 450 kW", issued by Moeller GmbH on 1999.
- According to the document titled "Catalogue Supplement - Switching and Protection up to 450 kW", issued by Moeller GmbH on January 2000, ref.: Moeller NK2100+2300-1003GB.
- According to drawings: GZ 2100-0256-0500-01.
ZZ 2100-0255-9800-01.
ZZ 2100-0256-9800-01.

3. TYPE TEST REPORTS / LABORATORY RECOGNITION STATUS

- According to Attestation of Conformity N° 2100-0255-074, issued by Moeller GmbH on 17/12/99 (concerning DILM 185, 225, 250).
- According to Attestation of Conformity N° 2100-0256-074, issued by Moeller GmbH on 14/01/00 (concerning DILM 300, 400, 500).
- According to test report ref.: DILM1.DOC 13.07.99 (type tests)
- According to test report ref.: FO-101-079-199902-1/1 (Vibration test)
- According to temperature tests issued by Wiess Umwelttechnik GmbH on 14/07/99, 19/07/99 and 20/07/99.
- According to EMV tests issued by Moeller GmbH:
 - on 05/10/98, ref. 2100 - 0256 - 022.
 - on 02/12/98, ref. 2100 - 0256 - 035.
 - on 02/12/98, ref. 2100 - 0256 - 033.
 - on 17/11/98, ref. 2100 - 0256 - 030.
 - on 09/11/98, ref. 2100 - 0256 - 026.
 - on 03/11/98, ref. 2100 - 0256 - 024.
 - on 12/11/98, ref. 2100 - 0256 - 027.
 - on 31/10/98, ref. 2100 - 0256 - 025.

Society's witnessing to tests has been carried out.

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

Nil.

5. OTHER MATERIALS and/or COMPONENTS

Nil.

6. APPLICATION / LIMITATION OF USE

BV Rules for the Classification of Steel Ships.

7. PRODUCTION SURVEY REQUIREMENTS

7.1 - 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.

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

8. ON BOARD INSTALLATION & MAINTENANCE REQUIREMENTS

As per requirements of regulations stated on the front page of the certificate.

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 **Moeller GmbH, Bonn - Germany**, 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° 03467/C0 BV issued on 30/03/2000 by the Society.

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