



MARINE DIVISION

Certificate number: 14777/B0 BV

File number: ACE2/17/12

Product code: 2633H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ABB STOTZ KONTAKT GmbH
Heidelberg - GERMANY

for the type of product

CIRCUIT BREAKERS (LOW VOLTAGE)

Motor Protection Circuit Breaker type MS116 with accessories

Requirements:

BV Rules for the Classification of Steel Ships.
IEC 60947-1, IEC 60947-2, IEC 60947-4-1, IEC 60947-5-1

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 mentioned above.

This certificate will expire on: 03 Mar 2016

For BUREAU VERITAS,

At BV HAMBURG, on 03 Mar 2011,

Dirk Hoepfner



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 available on the internet site www.veristar.com. 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:

Motor Protection Circuit Breaker type MS116 with additional modules.

1.1 Range of application:

Type	Operational current range I _e [A]
MS 116 - 0.16	0.1 - 0.16
MS 116 - 0.25	0.16 - 0.25
MS 116 - 0.4	0.25 - 0.4
MS 116-0.63	0.4 - 0.63
MS 116 - 1.0	0.63 - 1.0
MS 116 - 1.6	1.0 - 1.6
MS 116 - 2.5	1.6 - 2.5
MS 116 - 4.0	2.5 - 4.0
MS 116 - 6.3	4.0 - 6.3
MS 116 - 10.0	6.3 - 10.0
MS 116 - 12.0	8.0 - 12.0
MS 116 - 16.0	10.0 - 16.0

1.2 Motor Protection Circuit Breaker type MS116 additional modules:

Motor Protection Circuit Breaker	MS 116	
Auxiliary Switch Modules	HKF1-11 HK1-11 HK1-20 HK1-02	1 normally open, 1 normally closed contact 1 normally open, 1 normally closed contact 2 normally open contacts 2 normally closed contacts
Signal Contact Modules	SK1-11 SK1-20 SK1-02	1 normally open, 1 normally closed contact 2 normally open contacts 2 normally closed contacts
Undervoltage Tripping Modules	UA1-24 UA1-48 UA1-60 UA1-110 UA1-208 UA1-230 UA1-400 UA1-415	24 V, 50 Hz 48 V, 50 Hz 60 V, 50 Hz 110 V, 50 Hz / 120 V, 60 Hz 208 V, 60 Hz 230 V, 50 Hz / 240 V, 60 Hz 400 V, 50 Hz 415 V, 50 Hz / 480 V, 60 Hz
Undervoltage Tripping Modules with auxiliary switches	UA1-HK-24 UA1-HK-48 UA1-HK-60 UA1-HK-110 UA1-HK-208 UA1-HK-230 UA1-HK-400 UA1-HK-415	24 V, 50 Hz 48 V, 50 Hz 60 V, 50 Hz 110 V, 50 Hz / 120 V, 60 Hz 208 V, 60 Hz 230 V, 50 Hz / 240 V, 60 Hz 400 V, 50 Hz 415 V, 50 Hz / 480 V, 60 Hz
Current Working Tripping Modules	AA1-24 AA1-110 AA1-230 AA1-400	20 - 24 V, 50 / 60 Hz 110 V, 50 / 60 Hz 200 - 240 V, 50 / 60 Hz 350 - 415 V, 50 / 60 Hz

2. DOCUMENTS AND DRAWINGS:

ABB Catalogue N° 2CDC001002C0101 " ABB Motorschutzschalter Typenreihe MS bis 45kW (400 V AC), Schienensystem smissline-S."

3. TEST REPORTS:

- PACONSULT test report N° 90/02 dated 11.11.2002.
- ABB STOTZ Kontakt Test Report N° 4483/08 dated 02.07.2008

4. APPLICATION / LIMITATION:

BV Rules for the Classification of Steel Ships.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The **Circuit Breaker type MS116** is to be manufactured, examined and tested by **ABB STOTZ KONTAKT GmbH** 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 STOTZ KONTAKT GmbH** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **ABB STOTZ KONTAKT GmbH** has declared to Bureau Veritas that the type of product described in this certificate may be manufactured at the following production site:

**ABB STOTZ KONTAKT GmbH
D-69123 Heidelberg,
GERMANY**

6. MARKING OF PRODUCT:

According to IEC 60947

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 STOTZ KONTAKT GmbH, Heidelberg, GERMANY**, will accept the responsibility for informing shipbuilders 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° 14777/A0 BV issued on 05/08/2005 by the Society.

*** END OF CERTIFICATE ***