



MARINE DIVISION

Certificate number: 14778/B0 BV

File number: AP3697

Product code: 4501H

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

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

ABB STOTZ KONTAKT GmbH

Heidelberg - GERMANY

for the type of product

PROGRAMMABLE LOGIC CONTROL UNITS

Advant controller 31, Basic units of type: 07KT98 R0120, 07KT98 R0160 & 07KT98 R0162

Requirements:

BV Rules for the Classification of Steel Ships.

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: 08 Mar 2016

For BUREAU VERITAS,

At BV HAMBURG, on 08 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:

The basic units of type: **07KT98 R0120, 07KT98 R0160, 07KT98 R0162** works either as bus master or slave in the decentralized automation system Advant Controller 31, or as stand alone unit.

1.1 Range of application:

User program	1 MB
User Data	1MB + 256 kB RETAIN + 128kB (Flash EPROM)
Digital inputs	24, electrically isolated
Digital outputs	16 transistor outputs, electrically isolated
Digital inputs/outputs	8, electrically isolated
Analog inputs	8, individually configurable to 0...10 V, 0...5 V, +/-10 V, +/- 5 V, 0...20 mA, 4...20 mA, Pt100 2-wire or 3-wire
Analog outputs	4, individually configurable to 0...10 V, 0...20 mA, 4...20 mA
Serial interfaces	COM 1, COM 2 as MODBUS interfaces
System bus interface	CS31
Integrated couplers	R0120: Profibus, R0160: ARCNET R0162: ARCNET and Profibus
Power supply	24 V DC, Lithium battery for back-up RAM contents

Software Version: V5.03

2. DOCUMENTS AND DRAWINGS:

ABB STOTZ-KONTAKT Catalogue:

- Hardware. Advant Controller 31, Intelligent Decentralized Automation System, Basic Unit 07 KT098 R0160, issued on 07.2000.
- Advant Controller 31 - Serie 90. Dezentrale, intelligente Automatisierung, Bestelldaten - pages: 7/8 to 7/13.
- Advant Controller 31, Hardware, System Data and System Configuration, issued on 10.99.

3. TEST REPORTS:

- EMV Rhein - Necker GmbH test report N° 3893-346 dated 09.12.2002.
- PACONSULT test report N° 90/02 dated 12.11.2002.

4. APPLICATION / LIMITATION:

- 4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**
- 4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.
- 4.5 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.
- 4.6 - The machinery protection based on data processing techniques is to be duplicated by another and different system.
- 4.7 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- 4.8 - In order to lower the radiated emissions, the equipment listed in clause I shall be fitted in appropriate shielded cabinets and used with screened cables.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The basic units are 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
Eppelheimer Str. 82
69123 Heidelberg
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark,
- 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 STOTZ KONTAKT GmbH, Heidelberg - 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.

7.2 - This certificate supersedes the Type Approval Certificate N° 14778/A0 BV issued on 05 Aug 2005 by the Society.

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