



TYPE APPROVAL CERTIFICATE
No. ELE361506CS



This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Programmable logic controller
<i>Type</i>	AC500 / S500
<i>Applicant</i>	ABB STOTZ-KONTAKT GMBH Eppelheimer Str. 82 69123 Heidelberg GERMANY
<i>Manufacturer</i>	ABB STOTZ-KONTAKT GMBH
<i>Place of manufacture</i>	Eppelheimer Str. 82 69123 Heidelberg GERMANY
<i>Reference standards</i>	"RINA Rules for the Classification of Ships - Part C, Machinery, Systems and Fire Protection - Chapter 3, Section 6 , table 1"

Issued in **Genoa** on **September 4, 2006**. *This Certificate is valid until* **September 4, 2011**



RINA
Gianluigi Maggi

This certificate consists of this page and 1 enclosure



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AC500 / S500

CPU's

Common features	power supply 25Vdc 2 serial interfaces integrated, RS232/RS485 (SUB-D) configurable - Prog. MODBUS / CS31 display and 8 function keys for diagnosis and status centrally expandable with up to 7 expansion modules up to 4 external communication modules simultaneously optional: SD card for data storage and program backup (128 MB)
PM571	Program memory: 64kB
PM571-ETH	Program memory: 64kB; Ethernet coupler integrated (RJ45)
PM581	Program memory: 256kB;
PM581-ETH	Program memory: 256kB; Ethernet coupler integrated (RJ45)
PM581-ARC	Program memory: 256kB; ARCNET coupler integrated (Coax)
PM591	Program memory: 4096kB
PM591-ETH	Program memory: 4096kB; Ethernet coupler integrated (RJ45)
PM591-ARC	Program memory: 4096kB; ARCNET coupler integrated (Coax)

CPU terminal bases

Common features	for mounting and connecting the CPUs and communication modules 1 to 4 plug-in communication modules connection for communicating coupler integrated in the CPU I/O interface for direct connection of up to 7 expansion modules field-bus-neutral FieldBusPlug-Slave interface connection COM1: 9-pole with pluggable terminal block connection COM2: 9-pole SUB (socket)
TB511	
TB511-ETH	1 coupler slot; connection for coupler integrated in CPU Ethernet RJ45
TB511-ARC	1 coupler slot; connection for ARCNET Coax
TB521	
TB521-ETH	2 coupler slot; connection for coupler integrated in CPU Ethernet RJ45
TB521-ARC	2 coupler slot; connection for ARCNET Coax
TB541	
TB541-ETH	4 coupler slot; connection for coupler integrated in CPU Ethernet RJ45
TB541-ARC	4 coupler slot; connection for ARCNET Coax

Interface modules for decentralized I/Os

DC505-FBP	Field buses: PROFIBUS DP, CANopen, DeviceNet, Modbus RTU (the module itself is field-bus-neutral) Supply voltage: 24Vdc; Input 24Vdc; Output: 24Vdc -0,5A ; 8 DI , 8 DC (configurable)
DC551-CS31	CS-31 fieldbus Supply voltage: 24Vdc; Input 24Vdc; Output: 24Vdc - 0,5A ; 8 DI, 16 DC (config. ch.)

Binary I/O modules

Common features	for central expansion of the AC500 CPUs for decentralized expansion in combination with interface module DC505-FBP or DC551-CS31 Plug-in electronic modules, terminal block TU5xx required DC: channels can be individually configured as input or output
DI524	Supply voltage / Input voltage 24Vdc; 32 DI, isol. module
DC532	Supply voltage / Input voltage 24Vdc; 16 DI, 16 DC (config. DI/DO) - Tr. output 24Vdc 0,5A isol. module
DC522	Supply voltage / Input voltage 24Vdc; 16 config. digital I/O - isol. module
DC523	Supply voltage / Input voltage 24Vdc; 24 config. digital I/O - isol. module
DX522	Supply voltage / Input voltage 24Vdc; 8 DI, -8 relay outputs 230Vac 3A - isol. module
DX531	Supply voltage 24Vdc, 8 digital input 230Vac, 4 relay outputs 230Vac 3A -isol. module



Analog I/O modules

Common features	for central expansion of the AC500 CPUs for decentralized expansion in combination with interface module DC505-FBP or DC551-CS31 Plug-in electronic modules, TU5xx required Range individually configurable for each channel Resolution 12 bits + sign
AO523	Supply voltage 24Vdc; 16 output signals V / I
AI523	Supply voltage 24Vdc; 16 input signals V / I / PT100
AX521	Supply voltage 24Vdc; 4 Input signals 0-10V, +/- 10Vdc, 0-4 /20mA, PT100 /1000 2-3 wire, NI 1000 2-3 wire 4 Output signals +/- 10Vdc, 0-4 /20mA (max 4 current outputs)
AX522	Supply voltage 24Vdc; 8 Input signals 0-10V, +/- 10Vdc, 0-4 /20mA, PT100 /1000 2-3 wire, NI 1000 2-3 wire 8 Output signals +/- 10Vdc, 0-4 /20mA (max 4 current outputs)

Communication coupler

CM572-DP	Profibus -DP master interface up to 12 MBit/s
CM575-DN	DeviceNet interface
CM577-ETH	Ethernet TCP/IP interface
CM578-CN	CANopen interface

Terminal units

TU505 / TU506	FBP interfacel modules - Screw / Spring terminals
TU515 / TU516	I/O module - Voltage supply 24Vdc, Screw / Spring terminal
TU531 / TU532	I/O module - Voltage supply 230Vac, AC relay, Screw / Spring terminal
TU551 / TU552	CS31- Interface modules - Voltage supply 24Vdc, Screw / Spring terminals

Accessory

MC502	Memory card (SD card) 128 MB
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Technical description

System description AC 500 - Scalable PLC for Individual Automation - Introduction to AC500 (08/2005)
Digital I/O modules S500 Overview (06/2006)


Test reports:

PACONSULT GmbH report n° 0790-05 02 June 2005
EMV Rhein-Neckar GmbH report n° 3893-365 26/06/2006

Remarks:

The equipment described on this certificate are not approved for installation on the bridge area of a ship.
Installation on board is to be provided taking into account of the additional requirements listed on the mentioned test reports.
(eg. EMC power supply filtering, shielded enclosure, appropriate grounding)

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