



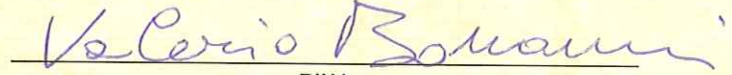
TYPE APPROVAL CERTIFICATE
No. ELE364109CS



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>	AC31
<i>Applicant</i>	ABB STOTZ-Kontakt GmbH Eppelheimer str. 82, Heidelberg GERMANY
<i>Manufacturer</i>	ABB STOTZ-Kontakt GmbH
<i>Place of manufacture</i>	Eppelheimer str. 82, Heidelberg GERMANY
<i>Reference standards</i>	Rules for the classification of ships.- Part C - Machinery, systems and fire protection. - Ch.3, Sect. 6, Table 1.

Issued in **Genoa** on **August 31, 2009**. *This Certificate is valid until* **August 31, 2014**


RINA
Valerio Bonanni

This certificate consists of this page and 1 enclosure



TYPE APPROVAL CERTIFICATE
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AC31

Description:

Programmable logic controller type AC31 comprising:

Extensible stand-alone central units	Description
07 KR 91 230Vac/24Vdc power supply (30kByte instruction)	20 isolated digital inputs 24Vdc, in three groups and 12 relay outputs 250Vac -2A , in three groups 1 serial interface Com1 + CS31 System bus
07 KT 92 24Vdc power supply (60kByte instruction)	12 isolated digital inputs 24 Vdc and 8 transistor outputs 24 Vdc - 0.5A with 4 analog inputs and 2 analog outputs interface for programming or ASCII or MODBUS communication , with or without ARCnet communication (BNC)
07 KT 93-S 24Vdc power supply (30kByte instruction)	24 isolated digital inputs 24Vdc and 16 transistor output 24Vdc-0.5A with security automation
07 KT 93 24Vdc power supply (60 kByte instruction)	24 isolated digital inputs 24Vdc, in three groups and 16 transistor outputs 24Vdc-0.5A in two groups 2 Serial interface Com.1- Com2 + CS31 System Bus interface for programming or ASCII or MODBUS communication, with or without ARCnet communication (BNC)
07 KT 94 24Vdc power supply (240 kByte instruction)	24 isolated digital inputs 24Vdc, in three groups and 16 digital transistor outputs 24Vdc-0.5A , 2 groups 8 individually configurable analog inputs in one group, 0-10V, 0/5V, ±10V, ±5V, 0/20mA, 4/20mA, PT100 2-3 wire, differential input. The analog inputs are also individually configurable as digital inputs. 4 individually config. analog out. ±10V, 0/20mA, 4/20mA - 1 group 8 digital input/outputs , 1group 2 Serial interface Com1- Com2 + CS31 System Bus . interface for programming or ASCII or MODBUS communication, with or without ARCnet communication (BNC)
07 KT 95 24Vdc power supply (480 kByte instruction)	12 digital inputs 24Vdc and 8 digital transistor outputs 4 current and voltage analog inputs, 2 voltage analog output. 2 Serial interface Com1 Com2 + CS31 system bus.
07 KT 96 24Vdc power supply (480 kByte instruction)	24 digital inputs 24Vdc and 16 Transistor output 224Vdc-0.5A 2 Serial interface Com1.Com2+ CS31 System bus. Optional Profibus-DP and ARCnet
07 KT 97 24Vdc power supply (480 kByte Instruction) 07 KT 98 24Vdc power supply (1000 kByte Instruction)	24 digital inputs 24Vdc and 16 digital transistor outputs 8 individually configurable input / output 4 analog output (current and voltage) 8 analog inputs (current, voltage, Temp.) configurable as digital I/O 2 Serial interface Com.1 Com.2 + CS31 System bus Optional with Profibus-DP and ARCnet integrated

Safety remote units to be used with 07 K/93-S	Description
07 DI 90-S 24Vdc power supply	8 digital inputs 24 Vdc
07 DO 90-S 24Vdc power supply	8 transistor outputs 24Vdc-0.5 A
07 AI 90-S 24Vdc power supply	4 analog inputs 4-20 mA res. 12 bits electrically isolated from the CS31 System bus



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Digital remote I/O modules	Description
07 DI 92 24Vdc power supply	32 digital input 24Vdc, isolated in four groups
07 DC 91 24Vdc power supply	16 digital input in two groups and 8 configurable Input/Output, 24Vdc 0.5 A transistor outputs in one group
07 DC 92 24Vdc power supply	32 individually configurable digital Input/Output, 24Vdc 0.5A transistor outputs, isolated in 4 groups .

Digital remote I/O modules with IP 67 protection	Description
07 DI 93-I 24Vdc power supply	16 digital inputs 24Vdc
07 DO 93-I 24Vdc power supply	8 transistor outputs 24Vdc 2A
07 DK 93-I 24Vdc power supply	8 digital inputs 24Vdc and 4 transistor outputs 24Vdc 2A

Analogue remote I/O modules	Description
07 AI 91 24Vdc power supply	8 inputs configurable for temperature sensors or voltage input: Pt100, Pt 1000, T/C (J,K,S), or $\pm 10V$, $\pm 5V$, $\pm 500mV$, $\pm 50mV$, (4-20mA with ext. 250 ohm resistor) 12 bits res.
07 AC 91 24Vdc power supply	16 input/output configurable for $\pm 10V$, 0/10V, 0/20mA 8/12 bits

Communication Modules	Description
07 KP 90 24Vdc power supply	RCom protocol master/slave interface + Serial interface Console+ Networking interface to AC 31 central unit
07 KP 92 24Vdc power supply	"C" programmable, configurable serial interfaces RS232 or RS422 or RS485 Com.3, Com.4 Serial interface RS232 Com.5 and Com.6 + Networking interface to AC 31 central unit
07 KP 93 24 Vdc power supply	Two Serial MODBUS protocol RS232/RS422 or RS485 interfaces slave/slave, master/slave, master /slave Com.3/Com.4 Networking interface to AC31 central unit.
07 MK 92 24Vdc power supply	"C" programmable , configurable serial interface RS232 or RS422 or RS485 Com.3 and Com.4 Serial interface RS232 Com 5 and Com 6 + Networking interface to AC31 central unit

Documentation:

Technical Manual ADVANT CONTROLLER 31 40 & 50 Series , doc. n° 1 SBC 260400 R 1001-C

Technical Manual AC 31 - Intelligent Automation solution doc. n° 03.02 -3- GKD

System Description ADVANT CONTROLLER 31 Intelligent Decentralized Automation System, doc. n° 07.99

Documentation for Monovent Communication Device (2002/08)

Remark:

For installation on bridge areas , equipment are to be in compliance with conducted and radiated emissions limits as requested on the IEC Standard 60945 in force.

Genoa August 31, 2009

RINA Società per azioni
Via Corsica, 12 - 16128 Genova
Tel +39 010 53851
Fax +39 010 5351000