System Description

Advant Controller 31
Intelligent Decentralized Automation System

General Part

ABB Schalt- und Steuerungstechnik
Regulations
Concerning the Setting up of Installations

Apart from the basic "Regulations of the Setting up of Power Installations" DIN VDE*0100 and for "The Rating of Creepage Distances and Clearances" DIN VDE 0110 Part 1 and Part 2 the regulations "The Equipment of Power Installations with Electrical Components" DIN VDE 0160 in conjunction with DIN VDE 0660 Part 500 have to be taken into due consideration.

Further attention has to be paid to DIN VDE 0113 Part 1 and Part 200 in case of the control of working and processing machines. If operating elements are to be mounted near parts with dangerous contact voltage DIN VDE 0106 Part 100 is additionally relevant.

If the protection against direct contact according to DIN VDE 0160 is required, this has to be ensured by the user (e.g. by incorporating the elements in a switch-gear cabinet). The devices are designed for pollution severity 2 in accordance with DIN VDE 0110 Part 1. If higher pollution is expected, the devices must be installed in appropriate housings.

The user has to guarantee that the devices and the components belonging to them are mounted following these regulations. For operating the machines and installations, other national and international relevant regulations, concerning prevention of accidents and using technical working means, also have to be met.

Devices of Advant Controller 31 Series (AC31) are designed according to IEC 1131 Part 2. Meeting this regulation, they are classified in overvoltage category II which is in conformance with DIN VDE 0110 Part 2.

For the direct connection of AC31 devices, which are powered with or coupled to AC line voltages of overvoltage category III, appropriate protection measures corresponding to overvoltage category II according to IEC-Report 664/1980 and DIN VDE 0100 Part 1 are to install.

Equivalent standards:

DIN VDE 0110 Part 1 ⇔ IEC 664
DIN VDE 0113 Part 1 ⇔ EN 60204 Part 1
DIN VDE 0660 Part 500 ⇔ EN 60439–1 ⇔ IEC 439–1

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* VDE stands for "Association of German Electrical Engineers".

ABB Schalt- und Steuerungstechnik GmbH Heidelberg
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To support project planning, commissioning, and operating of Advant Controller 31 control systems

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offers customer training. If desired, training can also be performed at customer sites.

For detailed information on this training please refer to our "Seminal catalogue", which can be requested over the above mentioned address, over all other ABB service centers or all ABB Schalt- und Steuerungstechnik representatives.

The enrolment is to be done by directly contacting ABB Schalt- und Steuerungstechnik or via our regional offices.

The following seminars can be attended:
Basic knowledge and programming
Knowledge of the different hardware components of the decentralized intelligent automation systems, basic knowledge of the Advant Controller control systems (AC31) and the 907 PC 33 programming system.

Practical training with the programming software at the automation systems. Exercises with different tasks at the 07 KR 91 / 07 KT 92 / 07 KT 93 / 07 KT 94 basic units.

Bus systems at AC31 control systems
Knowledge of the CS31 system bus. Start-up of the networking between different ABB automation systems via ZB20, ARCNET, Pdnet and MODBUS. Getting knowledge of the possibilities for communication between automation systems via the telephone network or via dedicated lines with RCOM. Exercises with the mentioned items.

Process visualization with AC31 control systems
Knowledge of the process visualization by means of process visualization software packages. Training of man-machine communication. Exercises to the items at the model plant "Liquid-level control".

AC31-S, the safety-related automation system
Knowledge of the hardware and software components of the safety-related automation system. Programming and commissioning of the AC31-S. Exercises at the model plant "3-axes model".

Customer-specific seminars
Upon request, seminars can also be arranged as desired by the customer. Depending on the requirements, seminars can be held in Heidelberg or in another place.

Concerning the automation systems ABB Procontic s-plus, e, b, K200, T200, T300, CS31, Axumerik m and the positioning of axes, we also offer seminars. Based on your requirements, we gladly arrange an individual seminar for you.

AC31 maintenance seminars
Getting knowledge of the programming language and the hardware components, possible combinations, start-up of a model plant including trouble shooting in the automation system, in the area of the process interface level and in the model plant itself.

AC31 project planning seminars
Project planning, programming and commissioning of model plants. Principles of networking and the data exchange via serial interfaces (process control). Practical training at the automation systems.

AC31-S, the safety-related automation system
Knowledge of the hardware and software components of the safety-related automation system. Programming and commissioning of the AC31-S. Exercises at the model plant "3-axes model".
## Maintenance Service

We operate a qualified service department, so we can help you to solve even difficult problems.

- Advice by telephone (Help line)
- Trouble shooting and fault recovery of the machine and plant
- Support in case of program development
- Training of the personnel in the factory
- Renting of programming tools

In case of service support we ask you to do the according preparations depending on the desired service e. g.:

- Making available the complete documentation
- Free access to the machine/plant
- Assignment of operating personnel etc.

Inquiries and orders are to address to:

ABB Schalt- und Steuerungstechnik GmbH
Abteilung SST/TE, Hotline Control Engineering
Eppelheimer Straße 82
D-69123 Heidelberg
Postfach 10 50 09
D-69040 Heidelberg
Telephone  +49 6221/777-444
Telefax  +49 6221/777-361

## Support

The range of support provides for the following:

- Delivery of spare equipment
- Repairing of faulty units and systems

Inquiries and orders are to address to:

ABB Schalt- und Steuerungstechnik GmbH
Abteilung SST/OL
Eppelheimer Straße 82
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Postfach 10 50 09
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4 Applications Department

Our modular programmable control system Advant Controller 31 provides you with a wide range of high-performance modules and standard software to master all your applications.

The applications department helps you select the appropriate system for solving your particular tasks. We are also in a position to develop your special user- or problem-oriented user program.

In this way you can make use of ABB’s know-how in the field of 'factory automation'.

In particular the applications department offers:

- Cooperation during specification of control tasks and defining of the most suitable system configuration
- Developing of user programs such as PLC instruction lists or sequential function charts for the Advant Controller 31 system
- Commissioning

Precondition for this is that a time schedule is agreed and progress of work supervised continuously by a project engineer to be appointed by the user.

For assistance please contact the Applications Department:

ABB Schalt- und Steuerungstechnik GmbH
Projekte, Applikationen, Engineering
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5  Customer Support and Addresses

You can consult competent ABB employees worldwide under the following addresses, and they will be pleased to advise you:

**Germany**

**HelpLine** Control Engineering:
Technical information, advising assistance by telephone

- **Telephone** + 49 6221 777–444
- **Telefax** + 49 6221 777–382

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