

ControlIT[™] AC31 / S500 automation technology

Technology which adapts to your ideas



IndustrialIT[™]
—enabled™

ABB

Industrial^{IT} for your applications

More productivity for less cost

This requirement is ubiquitous within the industry. Especially over the past few years, the industry has been aiming to reduce general operating costs in order to increase efficiency and remain competitive.

A task of this kind needs intelligent solutions and flexible use components and systems. The way towards further reducing engineering costs is being paved for example by components which are finely tuned to one another or have already been integrated.

It is not only the general efficiency of the system components used, in relation to handling, reliability and ease of service, but also long-term availability as well as the secured future and safe investment of the chosen system that play a decisive role. ABB keeps in permanent dialogue with its customers and end customers in order to satisfy these stringent requirements.

The result of this dialogue is an extensive range of devices which is being continuously extended and optimized. Customer requirements are incorporated in this and then converted into innovative products and systems.



Information management with Industrial^{IT}

Use of Industrial^{IT} for:

- > *production*
- > *storage*
- > *purchasing*
- > *service*
- > *maintenance*
- > *engineering*
- > *planning*
- > *construction*

Informed decisions ...

Information management within a system and – if required – the integration of relevant data in all company processes is also becoming increasingly important for a company to remain competitive.

The provision of all relevant information, prepared in a meaningful way and available at any time – ABB combines this under the term Industrial IT.

... increase the profitability of system integrators, system and machine constructors

New, adaptable machines and system concepts can be very easily realized using the flexible use standard devices produced by ABB. Covering a whole range of products and offering services extending from producing technical specifications to maintenance and servicing, the low-voltage components produced by ABB make engineering, operating and not least the integration of machines and systems simpler and more efficient than ever before.

This brochure gives you an initial overview of real life-focused solutions offered by the intelligent automation system, Advant® Controller 31 (AC31).



AC31 applications

- > *energy management*
- > *water / environmental management*
- > *paper industry*
- > *marine applications*
- > *food and beverage industry*
- > *power surveys: obtaining / optimizing data*
- > *building management*
- > *burner / boiler construction*

– a selection

- > *air conditioning / refrigeration*
- > *wind farms*
- > *textile machines*
- > *printing machines*
- > *crane technology*
- > *special machines*
- > *plastics machines*
- > *underground railway / tunnel construction*

Products finely tuned to one another

Everything for switching and controlling

ABB provides the whole range of low-voltage devices, from programmable controllers to devices for switching and relaying e. g. soft starters, relays, circuit breakers to the standard sensors – and all from one source.

Bus connections

In an ideal situation, the programmable controller and field level are linked by standard field buses. However in addition to this, the new ABB product family of FieldBusPlugs offers a new alternative form of installation in the field sector.

This intelligent plug is the link to a communicative range of switching and automation components which can be very easily combined with standard fieldbus systems. The interesting feature here is that each of the modules or devices belonging to the product family has a fieldbus-neutral interface. A specially assembled connection cable with a bus-specific plug interface forms the communicative connection.



Control level with AC31 devices

Standard fieldbuses are linking



The FieldBusPlug connects:



Softstarter



Wireless proximity switch

Many ABB components are already integrated in this new kind of system concept. Examples of this include the Universal Motor Controller UMC22-FBP for effective motor protection and the especially convenient motor control unit, the dialogue-compatible circuit breaker Tmax T4, T5 and the soft starter PSS.

Other devices with specially co-ordinated functions and fields of application are already being developed or adapted.

Wireless proximity switch

Furthermore, through its innovative wireless proximity switches, ABB is the first manufacturer anywhere in the world to provide this new device system.

In this solution, the sensors, which are energized with the help of an induced magnetic field, transfer their signals in a wireless manner. The input module belonging to the system, which communicates by means of the wireless proximity switch fitted in a production cell, is linked to the central AC31 units via the FieldBusPlug and a standard fieldbus. When combined, these therefore provide highly flexible production solutions.



Industrial^{IT}
enabled™

Fieldbus (depending on choice)



Universal Motor Controller



Power circuit breaker Tmax



Contactors

Advant Controller 31 is part of IndustrialIT

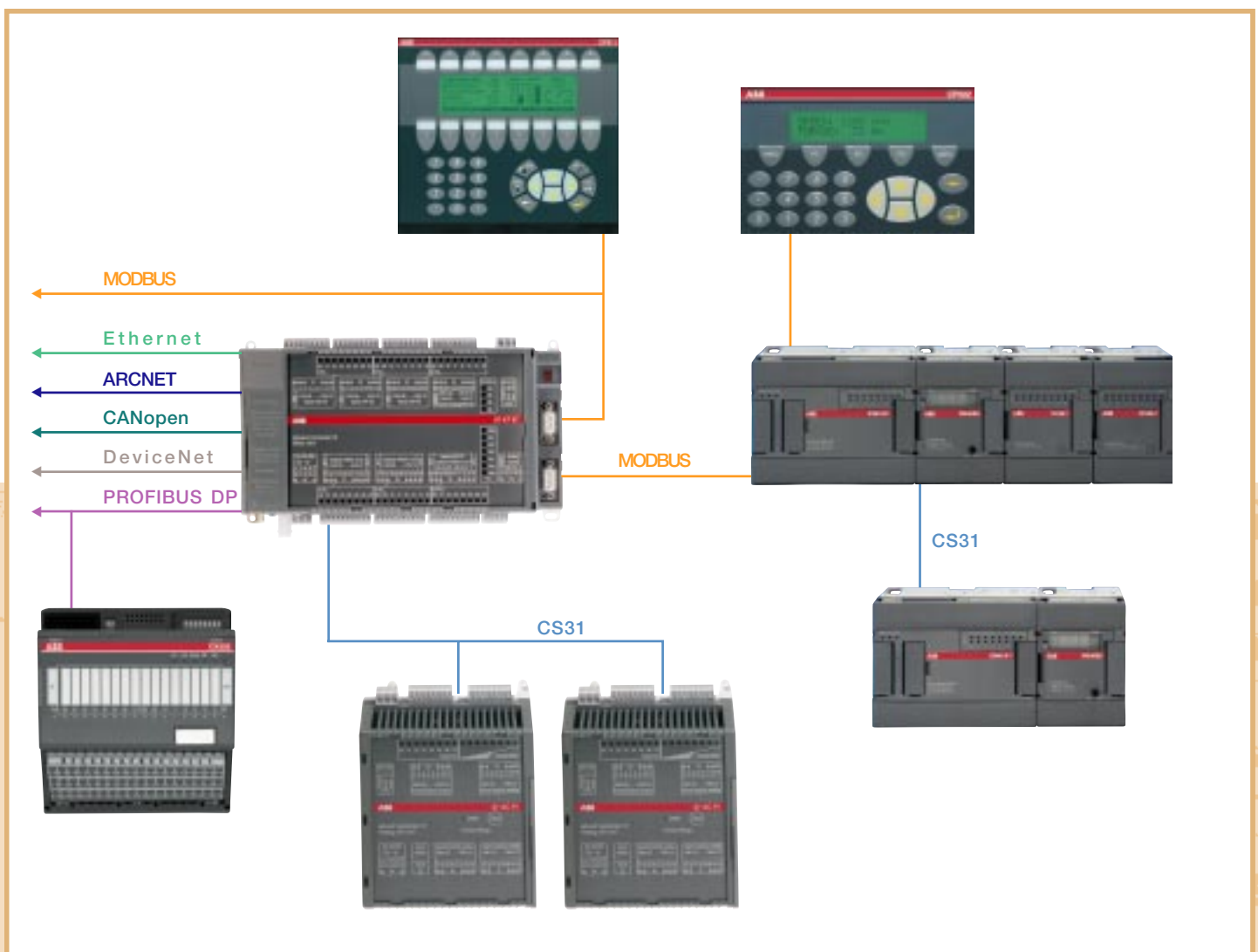
Communication via fieldbus

The ideal automation solution has three components: capable and compact automation devices, user-friendly programming software and appropriate operator devices.

The CS31 fieldbus forms the basis of communication between the AC31 components. Up to 31 bus devices can be integrated in the system via this especially fast RS-485 two-wire bus with interference immunity.

But also other means of communication such as:

- ARCNET
- CANopen
- DeviceNet
- Ethernet
- MODBUS
- PROFIBUS DP
- and RCOM data communication can be used with AC31 components for communication depending on the system environment and prevailing preconditions.



Compatible bus systems for Advant Controller 31

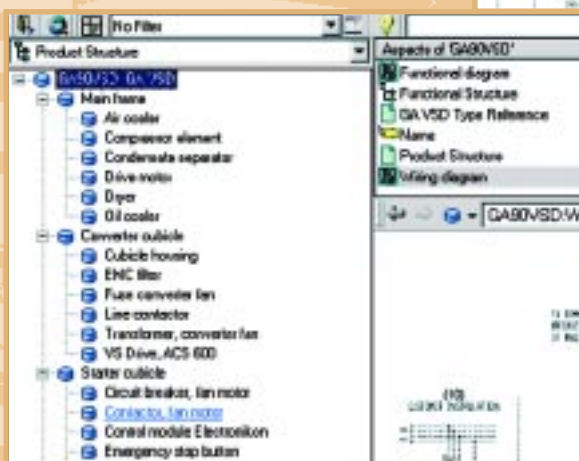
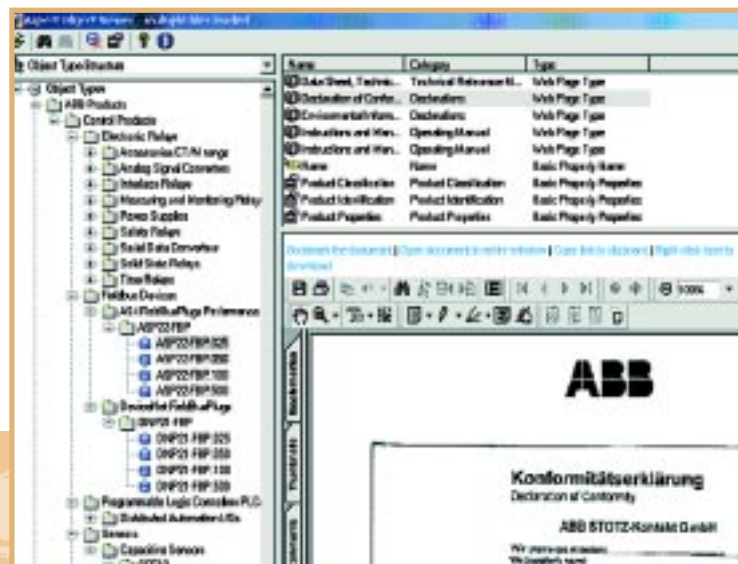
Integrated information management

Automatic added value results from using Industrial IT-certified AC31 components: a wealth of data (aspects) which can be easily integrated in an electronic manner and information relating to the product and security which can be easily integrated in an Industrial IT system. This means that machine and system information is made available in an especially simple and user-friendly manner, e.g. for diagnosis and maintenance.

Aspects are conveniently consolidated in a virtual object (commonly referred to as the Aspect Object). With the help of the

Aspect Integrator Platform from ABB, these aspects only need to be integrated once and then they can be efficiently used in the entire system under a whole range of different system structures. This considerably reduces the complexity of a system.

But even if a certified device is not initially integrated in the Aspect Integrator Platform, users can use the free-of-charge Aspect Object Viewer from ABB to simply display all the associated device information and data on their PCs at the click of a mouse button – a simple and time-saving way of preparing and updating information.



The Aspect Object Viewer

Integration in an information management system

Advant Controller 31 – the software

Programming in accordance with IEC 61131-3

Alongside the relevant hardware, an efficient, user-friendly and convenient engineering tool is a key precondition for project planning, programming, testing and commissioning an automation application.

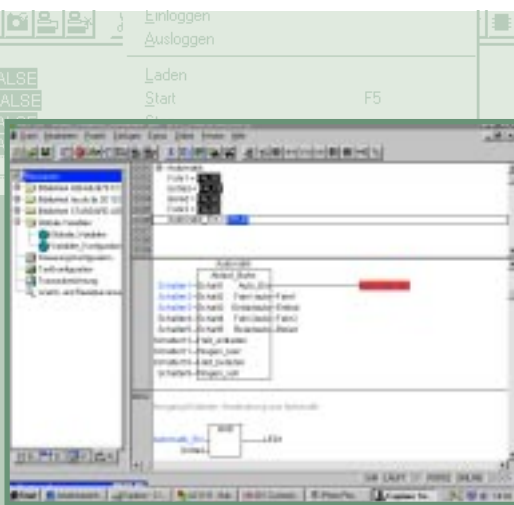
907AC1131 provides the following functions:

- **6 programming languages:** function block (FB), instruction list (IL), ladder diagram (LD), structured text (ST) and the process languages of Sequential Function Chart (SFC) and Continuous Function Chart (CFC).
- **Debugger:** for gradually processing the automation program, including setting break points.

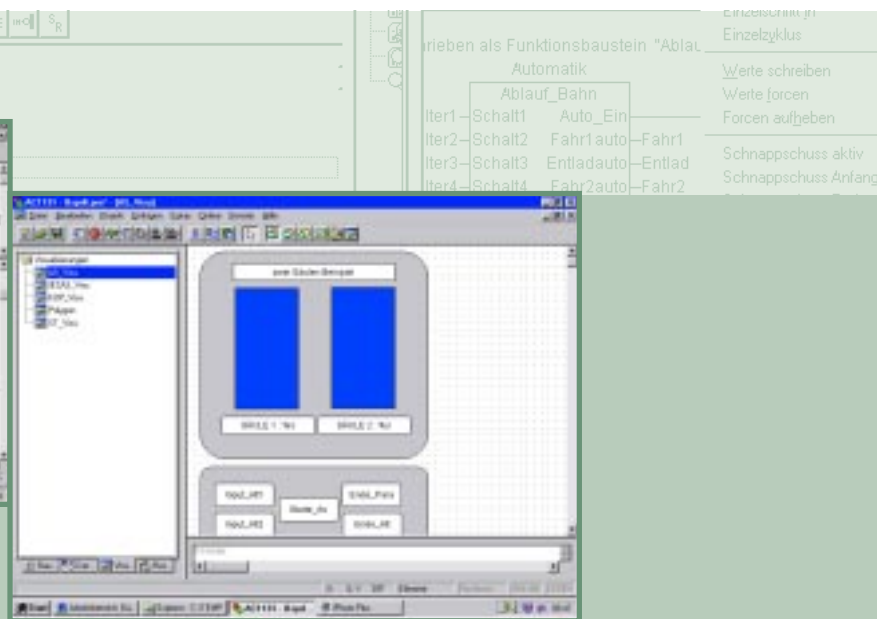
- **Offline simulation:** IEC-61131-3-commands can be simulated for an external automation device, including mistakes. After the program test, your application can be transferred to the automation device.

- **Sampling trace** (temporal depiction of process variables) and a display – with integration of images and graphics and depiction of process variables from the programmable controller.

- **Recipe handling and watch lists:** Values of selected variables are displayed. Variables can be preassigned with certain values and transferred in one to the control unit ('writing recipes'). Current control unit values can in the same way be read into the watch and formula administrator as preassignments and saved ('reading recipe'). These functions are also useful e. g. for setting and recording feedback control parameters.



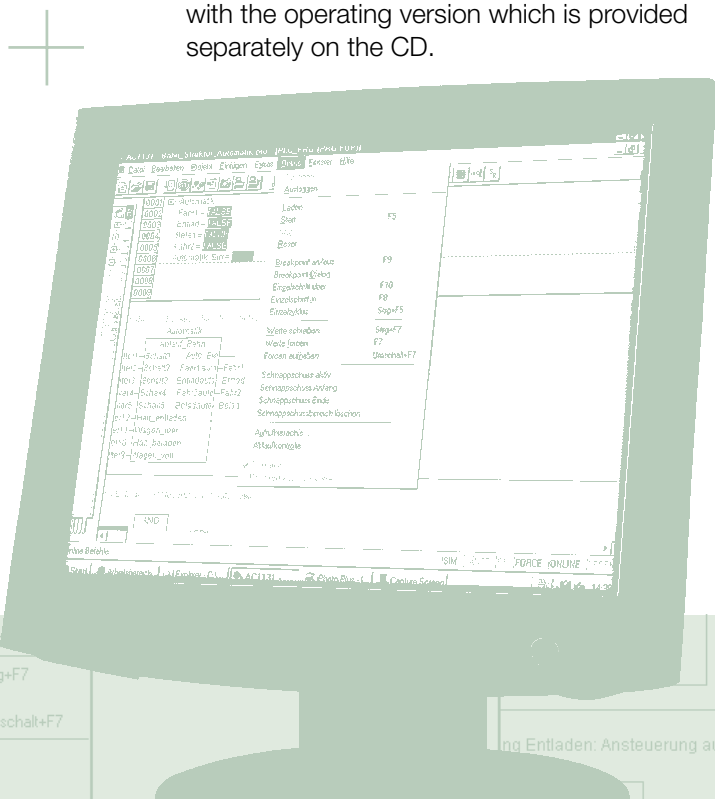
Menu-controlled program writing



Integrated process visualization

- **Visualization** with colour coding, moving elements, bitmap, text display, nominal value input and depiction of process variables from the programmable controller, dynamic bar displays, alarm and event processing, function keys.

The images are produced using the 907AC1311 program package and also run with the operating version which is provided separately on the CD.

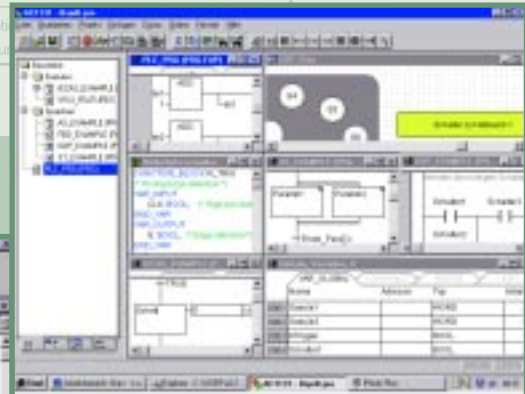


- **Configurators** for PROFIBUS DP, DeviceNet, Ethernet, CANopen.
- **Open interfaces** DDE and OPC.
- **Programming** via ARCNET and Ethernet.
- **Engineering interface** for access from the programming system to an external project database in which the data accumulated during the production of an automation project is administered. Using an external database ensures consistency of the data which can then be commonly used by several users, projects and programs.

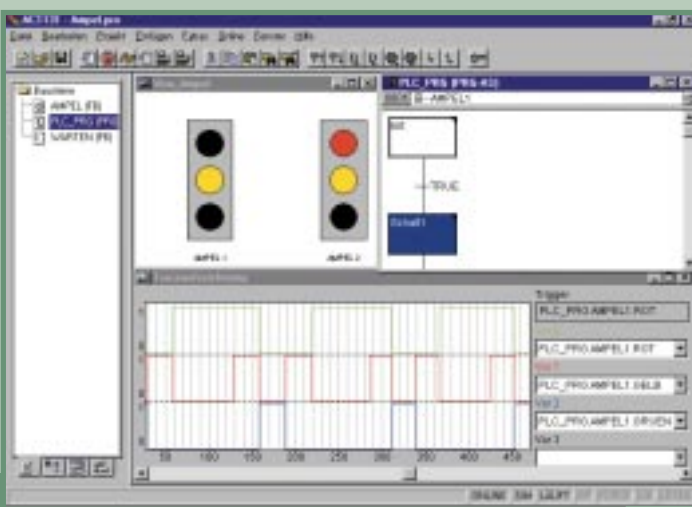
- Extensive libraries.
- Windows 32-bit standard.
- Windows 98, NT, 2000 and XP operating systems.

- **Display package:** program for operating a machine/system. Images which have been produced in the programming software are displayed online.

Aufrufhierarchie...
Ablaufkontrolle
✓ Simulation
Kommunikation



Programming languages in accordance with IEC 61131-3



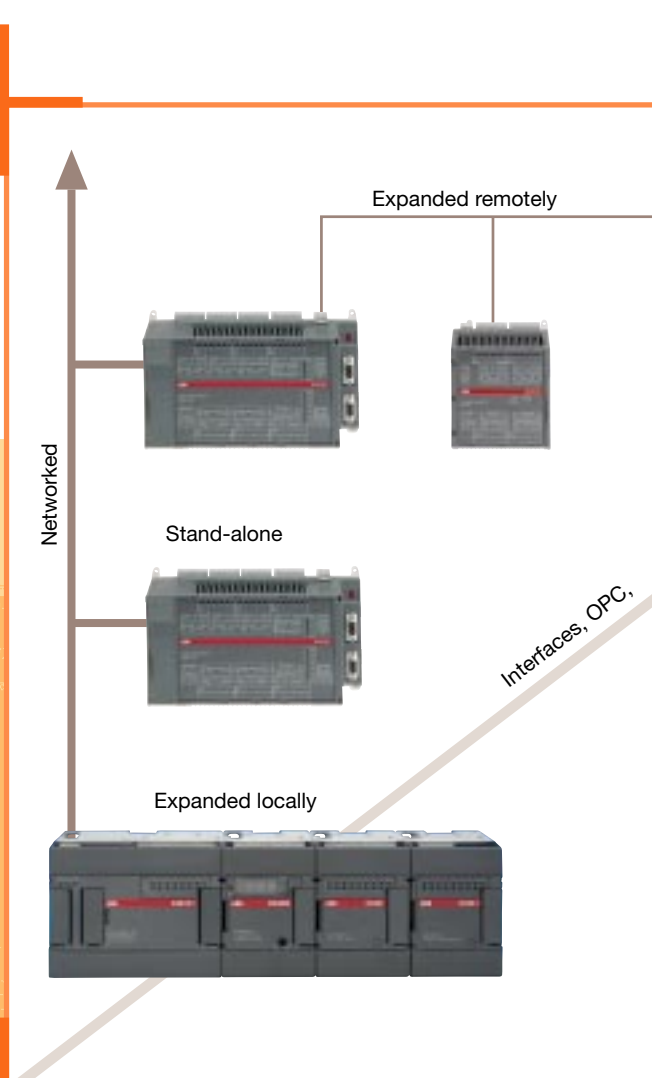
Sampling trace

Advant Controller 31 – the hardware

Economic and efficient

AC31 provides an extensive selection of efficient hardware for both machine and system construction in the form of central units as well as digital and analogue I/O modules. AC31 provides these industries with appropriate solutions in power-related grades which are adapted to different focal points of the application and therefore allow for cost-effective use in all cases.

An AC31 central unit can e. g. be operated as a standalone device as well as a master or slave. And regardless of whether an automation solution covers just a few I/O signals or requires a signal scope of several 100 or 1000 inputs/outputs, the AC31 is always the right choice. Some of the AC31 central units also provide the opportunity of saving user programs or data on a plug-type Smart Media card and loading this in the automation device.



Automation strategies available with Advant Controller 31

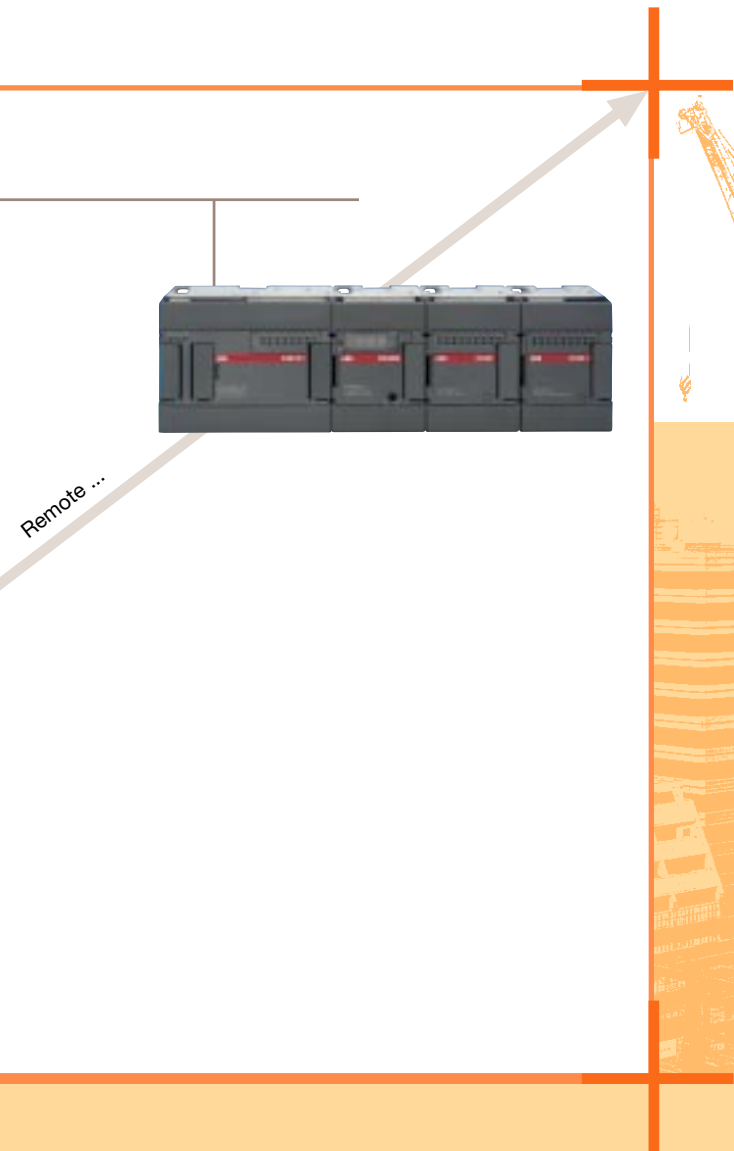
Flexible and extendible

No matter whether tightly squeezed together or gradually extendible, I/O bus modules correspond to the requirement profile – Advant Controller 31 provides both technologies. The configurable digital and analogue input / output devices offer particularly high levels of flexibility for this. System modifications and extensions can be undertaken very easily. Since bus modules can be replaced or added without the supply voltage even having to be disconnected or bus operations having to be interrupted. These are automatically detected by the system whereby actual component identification and addressing takes place on the system bus via the module address.

Depending on the module type used, the setting is undertaken either via an address switch on the I/O devices or via system constants on automation devices. The I/O devices can therefore be addressed directly from the user program. There is no additional outlay for a bus configuration.

Functional and well thought-out

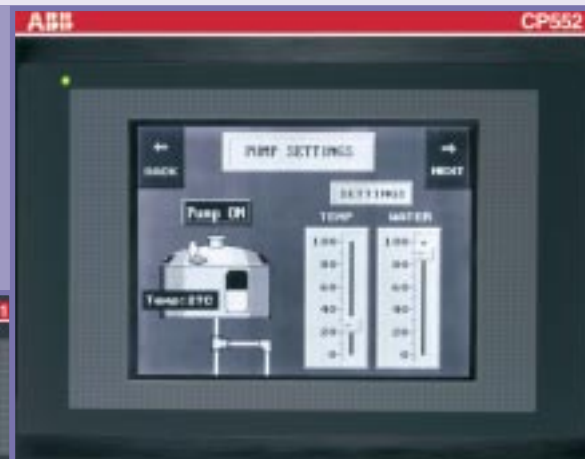
The system technology of Advant Controller 31 provides automatic diagnosis of the CPU, the system bus and the connected I/O devices. Diagnosis functions, such as discontinuity, short circuit and overload, can be interrogated if necessary. All modules of the AC31 system are characterized by excellent ease of assembly. In addition to the Slot programmable controller which is simply inserted in a free PCI slot on a PC, all other devices can be easily clipped on a 35 mm top hat rail or secured on to an assembly plate with screws.



Advant Controller 31 – the control panels

Transparent man-machine communication

Advant Controller 31 also provides a wide range of products for communication between man and machine. Operators can select from a number of displays which can be used depending on the level of intervention required and the density of information involved in the application. Regardless of whether operators opt for a simple device for displaying text, a graphics-compatible device or a touch panel with a colour display from the range of control panels available, all satisfy the requirements for maximum possible clarity and/or efficiency for automation.



Simple handling

The user can use the AC31 central units to communicate via various control panels as well as to access the device data (both reading and writing).

Configuration is undertaken simply and quickly using the same software for all devices. Commands and programming languages are identical for all devices.

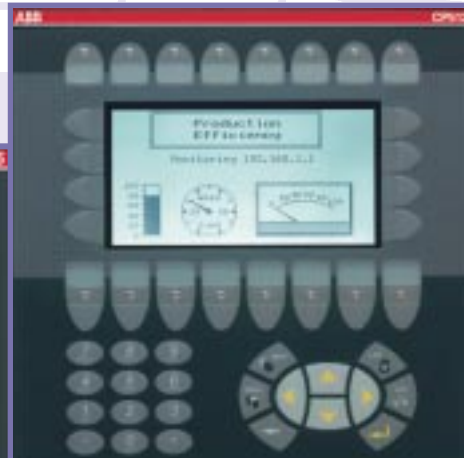
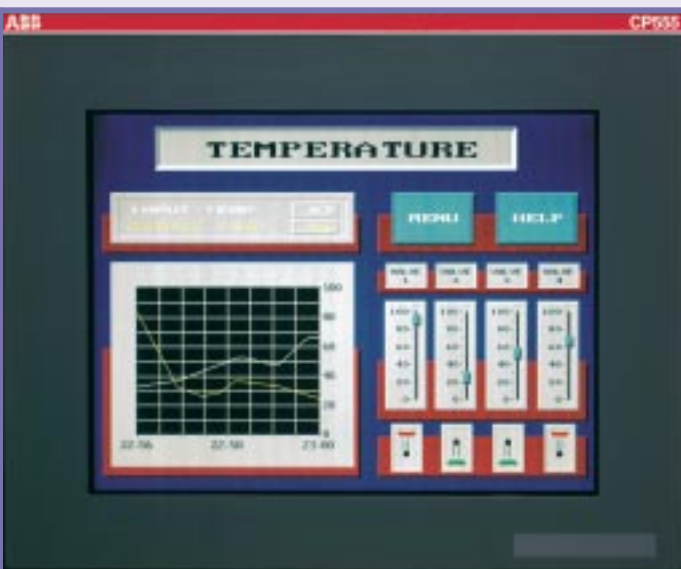
As a result of the rough environment they are frequently faced with at the site of usage, the front ends of all operating panels satisfy type of protection IP65.

The operating and automation devices are either connected simply via serial interfaces or in complex applications via Ethernet, MODBUS or PROFIBUS DP.

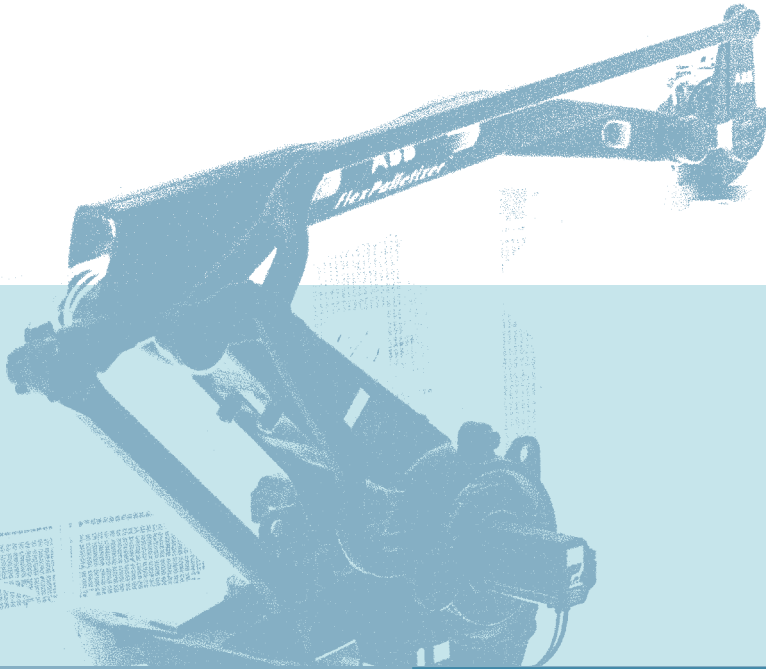
Requirement-related functions

Depending on the device type, the control panels may offer the following functions:

- real-time clock
- alarm administration in several groups
- trend curves
- recipe handling
- formula print-outs
- password protection
- memory of up to 1600 kB Flash



Advant Controller 31



Operating



Text

Graphics



Controlling / regulating



Logic module AC010

Input / output module



Central + remote

Remote S500



Summary

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Overview of CPUs

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Overview of display and operating panels

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Certification

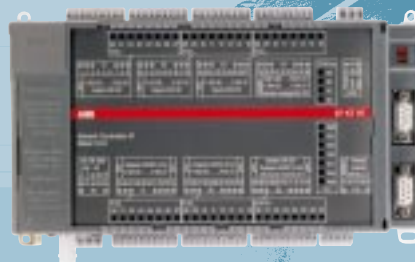
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Touch screen



Small control unit




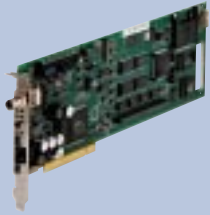
Compact control unit



Remote

Control^{IT} automation devices

Overview of CPUs

	Small control unit AC31 series 40 ... 50						Slot PLC AC31 series 90	
								
Details	Type:	07CR41	07CT41	07CR42	07CT42	07KR51	07KT51	07SL97
Program memory Flash EPROM and RAM [Kbyte]		32				32		480
Supply voltage 24 V DC 120 / 230 V AC		x	x	x	x	x	x	
Plug-type Smart Media Card		-				-		x
Cycle time for 1 Kbyte [ms] 100% binary values 65% binary values and 35% words		0.4 1.2				0.4 1.2		- 0.22
Number of inputs and outputs Digital, integrated (DI / DO / DC) Digital, maximum Analogue, integrated (AI / AO) Analogue, maximum		8 / 6 / - 110 - / - 36		8 / 6 / - 110 3 / - 36		8 / 6 / - 1000 - / - 222		- / - / - 992 - / - 224 / 224
Digital inputs 24 V DC		x				x		-
Digital outputs: Transistor (T) 24 V DC, 0.5 A Relay (R) 120 / 230 V AC, 2 A		-	x	-	x	-	x	-
Analogue input ranges ± 10 V 0 ... 10 V, 0 ... 5 V, ± 5 V 0 ... 20 mA, 4 ... 20 mA PT100 (- 50 °C ... + 400 °C) PT100 (- 30 °C ... + 70 °C) PT100 (- 100 °C ... + 524 °C) can be configured as DI		-	-	x	-	-	-	-
Analogue output ranges ± 10 V 0 ... 20 mA, 4 ... 20 mA		-	-	-	-	-	-	-
Data buffering via battery		Integrated				Integrated		Optional
Real-time clock		x				x		x
Programming package 907AC1131 907PC331 AC31GRAF		x				x		x
Program execution Cyclic or time-controlled Multi-tasking		x				x		
User program protection Password		x				x		x
Serial interfaces RS232 (programming, MODBUS, ASCII) RS485 (CS31 as MODBUS)		1				1		1
Integrated potentiometer		2				2		-
Data memory [Kbyte]		2				2		256, incl. 16 KB RETAIN
Timing elements		Unlimited (42 at the same time)				Unlimited (42 at the same time)		Unlimited
Counter		Unlimited (function)				Unlimited (function)		Unlimited
Fast counter (number / frequency)		2 / 7 kHz				2 / 7 kHz		-
Interfaces / protocols CS31 ASCII MODBUS® Ethernet ARCNET PROFIBUS DP CANopen DeviceNet AC31 Safety-Fieldbus RCOM (additional coupler)		-				x		x
		x				x		x
		x				x		x
		-				-		-
		-				-		x
		-				-		x
		-				-		-
		-				-		x
		-				-		-
		-				-		-

**Compact control unit
AC31 series 90**



07KT95	07KT96	07KT97	07KT98
480	480	480	1000
x	x	x	x
-	-	-	-
x	x	x	x
-	-	-	-
0.22	0.22	0.22	0.07
12 / 8 / 0 1012 4 / 2 228 / 226	24 / 16 / 0 1032 - 224 / 224	24 / 16 / 8 1040 8 / 4 232 / 228	24 / 16 / 8 1040 8 / 4 232 / 228
x	x	x	x
x	x	x	x
-	-	-	-
x	-	x	x
x	-	x	x
-	-	x	x
-	-	x	x
-	-	-	-
-	-	x	x
x	-	x	x
-	-	x	x
optional	optional	optional	optional
x	x	x	x
x	x	x	x
-	-	-	-
-	-	-	-
x	x	x	x
x	x	x	x
x	x	x	x t
2	2	2	2
-	-	-	-
-	-	-	-
256, incl. 16 KB RETAIN	256, incl. 16 KB RETAIN	256, incl. 16 KB RETAIN	1256, incl. 256 KB RETAIN
Unlimited	Unlimited	Unlimited	Unlimited
Unlimited	Unlimited (function)	Unlimited (function)	Unlimited
2 / 50 kHz	2 / 50 kHz	2 / 50 kHz	2 / 50 kHz
x	x	x	x
x	x	x	x
x	x	x	x
-	-	x	x
-	-	x	x
-	-	x	x
-	-	x	x
-	-	x	x
-	-	-	x
-	-	-	-
x	x	x	x

Control^{IT} automation devices

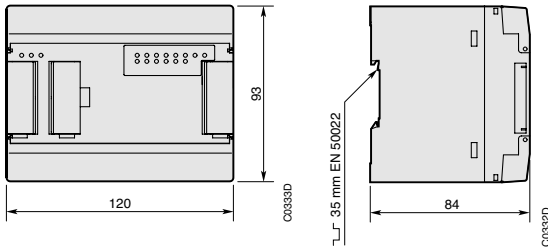
Overview of I/O modules, series 40..50, series 90 and S500, dimensions

Digital I/O modules	Bus modules series 50 ⁽¹⁾			Series 40 .. 50							
	ICMK14F1	ICMK14F1	ICMK14N1	Only in connection with bus modules or CPU							
	ICMK14F1	ICMK14F1	ICMK14N1	XI16E1	XO16N1	XO08Y1	XO08R1 ⁽²⁾	XO08R2	XC08L1	XK08F1	XC32L1 ⁽³⁾
Supply voltage 24 V DC 230 V AC	x -	- x	x -	x x	x x	x x	x x	x x	x x	x x	x x
Number of digital I/Os (DI / DO / DC)	8 / 6 / -	8 / 6 / -	8 / 6 / -	16 / - / -	- / 16 / -	- / 8 / -	- / 8 / -	- / 8 / -	- / - / 8	4 / 4 / -	- / - / 32
Digital inputs 24 V DC				x	-	-	-	-	x	x	x
Digital outputs : relay (R) 120 / 230 V AC, 2 A transistor (T) 24 V DC, 2 A transistor (T) 24 V DC, 0.5	x - -	x - -	- - x	- - -	- - x	- x -	x - -	x - -	- - x	x - -	- - x
Short circuit- / overload-proof	-	-	x	x	x	x	-	-	x	x	x
Interfaces / protocols CS31 field bus PROFIBUS-DP	x -	x -	x -	- -	- -	- -	- -	- -	- -	- -	- -
Connection type (1=1-cond., 3=3-cond.) spring-type terminal screw terminal M12	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	1 1 -	with HE10 connector
Protection class IP67	-	-	-	-	-	-	-	-	-	-	-
Note:	⁽¹⁾ centrally expandable with up to 6 I/O modules of series 40...50. (Max. 8 AI and 4 AO) - (available also with MODBUS protocol) ⁽²⁾ 4 normally open outputs + 4 normally open and normally closed outputs ⁽³⁾ 4 counters 20 kHz / 4 frequency meters can be connected to the pre-wiring system INTERFAST										

Analogue I/O modules	Series 40 .. 50				Series 90		S500		
	only with bus module or CPU						only with bus module		
	XM06B5	XE08B5	XTC08 ⁽⁴⁾	XC32L2 ⁽⁵⁾	07AI91	07AC91 ⁽⁶⁾	AI511	AI512	AX511
Supply voltage 24 V DC 230 V AC	x x	x x	x x	x x	x -	x -	x -	x -	x -
Number of analogue I/Os AI / AO / AC	4 / 2 / -	8 / - / -	8 intern.	8 / - / -	8 / - / -	- / - / 16	4 / - / -	8 / - / -	4 / 4 / -
Analogue input signals 0 ... 10 V ± 10 V ± 20 mA 0 ... 20 mA 4 ... 20 mA ± 50 mV, ± 500 mV, ± 5 V PT100, PT1000 thermo-couple	- x x - x - x -	- x x - x - x -	- - - - - - - -	x - - - - - - -	- x - x - x - x x	- x - x - - - x	x x x x x - - -	x x x x x - - -	x x x x x - - -
Analogue output signals ± 10 V 0 ... 20 mA, 4 ... 20 mA ± 20 mA	x x -	- - -	- - -	- - -	- - -	x x -	- - -	- - -	x x x
Short-circuit- / overload-proof	x	x	x	x	x	x	x	x	x
Interfaces/ Protocols CS31-Feldbus PROFIBUS DP	- -	- -	- -	- -	x -	x -	- x	- x	- x
Connection type (1=1-cond., 3=3-cond.) spring-type terminal screw terminal	1 1	1 1	1 1	with HE10 connection	1 1	1 1	3 3	3 3	3 3
Display channel number / value	x	x	x	-	-	-	-	-	-
Note:	⁽⁴⁾ Display for 8 internal channels ⁽⁵⁾ plus 24 configurable digitals (DC). Same as XC 32 L1 but 8 out of 32 DC can be used for AI. ⁽⁶⁾ incl. 1 x DI for shut-off of all AO of module. with 2 modes of operation: (1) 8 AI and 8 AO with 12 Bit resolution or (2) in pairs as AI or AO with 8 Bit.								

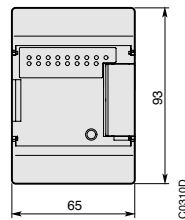
Series 90							Bus module S500		S500 Only in conjunction with bus module		
07DI92	07DI93-I	07DO93-I	07DK93-I	07DC91	07DC92	07TC90 / 07TC91	DX501-DP	DX502-DP	DX511	DI511	DO511
x -	x -	x -	x -	x -	x -	x -	x -	x -	x -	x -	x -
- / - / 32	16 / - / -	- / 8 / -	8 / 4 / -	16 / 8 / 8	- / - / 32	32 / 32 / -	8 / 8 / -	8 / 8 / -	8 / 8 / -	16 / - / -	- / 16 / -
x	x	-	x	x	x	-	x	x	x	x	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	x	x	-	-	-	-	-	-	-	-
x	-	-	-	x	x	-	x	x	x	-	x
x	x	x	x	x	x	-	x	x	x	x	-
x	x	x	x	x	x	x	-	-	-	-	-
-	-	-	-	-	-	-	x	x	-	-	-
-	x	x	x	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	3	3	3	3	3
1	-	-	-	1	1	-	3	3	3	3	3
-	x	x	x	-	-	-	-	-	-	-	-
-	x	x	x	-	-	-	-	-	-	-	-

CPUs, series 40..50 and bus module



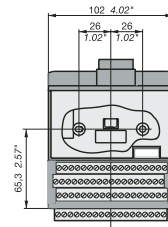
07CR41/42, 07CT41/42, 07KR51, 07KT51 and ICMK14F1N1

I/O module and communication module Series 40..50

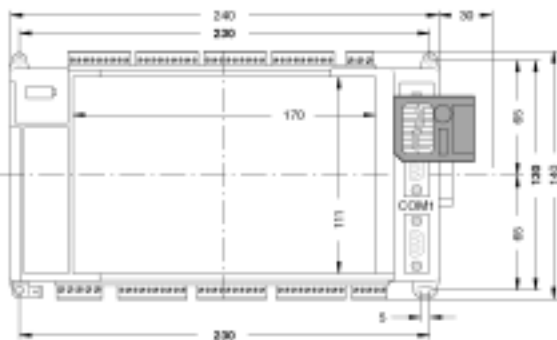


XI16E1, XO16N1, XO08R1, XO08Y1, XC08L1, XK08F1, XM06B5, XE06B5, 07KP53

I/O module S500 for profibus DP

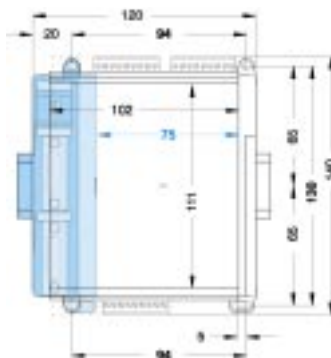


CPUs, series 90



07KT94, 07KT94-S, 07KT96, 07KT97 and 07KT98

I/O module, series 90 / communication module, series 90



07DI92, 07DC91/92, 07AI91, 07AC91, 07DO90-2, 07DI90-S, 07AI90-S 07KP90, 07KP93

Control^{IT} automation devices

Overview of display and control panels



Display type	STN-LCD with background lighting	STN-LCD with background lighting	STN-LCD with background lighting	STN-LCD with background lighting	S/W-STN-LCD with background lighting
Depiction	Text	Text	Text	Graphics and text	Graphics and text
Display size	2 lines x 16 characters	2 lines x 20 characters	4 lines x 20 characters	240 x 64 pixels	240 x 128 pixels
Display area W x H (mm)	55.7 x 11.0	73.5 x 11.5	70.4 x 20.8	127.2 x 33.9	120.0 x 64.0
Text height (mm)	5	5	5	Variable	Variable
LEDs			5 (2 colours)	16 (2 colours)	16 (2 colours)
Function keys	4	3	5	8	16 (8 with inscription strips)
Web functions				●	●
Buzzer				●	●
Alarm administration			1 group	4 groups	4 groups
Time channel		●	●	●	●
Real-time clock		●	●	●	●
Trend curve				Real-time	Runtime
Recipe handling		●	●	●	●
Report print-outs		●	●	●	●
Password protection		8 levels	8 levels	8 levels	8 levels
Multi-lingual support		●	●	●	●
Memory for application	16 kB Flash	64 kB Flash	64 kB Flash	400 kB Flash	400 kB Flash
Voltage supply	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Electricity consumption			150 mA	450 mA	450 mA
Ambient temperature	0 – 50 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C
Communication interfaces	RS232 or RS422	RS232, RS422 RS485 (of which 2 at the same time)	RS232, RS422	RS232, RS422 Ethernet	RS232, RS422
Extension slots	–	–	–	1	1
Type of protection Front cover	IP65	IP65	IP65	IP65	IP65
Dimensions W x H x D (mm)	104 x 69 x 38	142 x 100 x 29	147 x 163,5 x 38	211 x 198 x 69	214 x 232 x 87
Weight (kg)	0.2	0.5	0.7	1.5	1.4



CP513



CP551



CP552



CP554



CP555

CP513

CP551

CP552

CP554

CP555

Colour LCD with background lighting	Touch S/W STN with background lighting	Touch LCD 16 shades of grey	Colour touch display, TFT	Colour touch display, TFT
Graphics and text	Graphics and text	Graphics and text	Graphics and text	Graphics and text
320 x 240 pixels	320 x 240 pixels	320 x 240 pixels	320 x 240 pixels	640 x 480 pixels
115.2 x 86.4	78.0 x 58.5	115.2 x 86.4	115.2 x 86.4	211.2 x 158.4
Variable	Variable	Variable	Variable	Variable
16 (2 colours)				
16 (8 with inscription strips)				
●	●	●	●	●
●	●	●	●	●
16 groups	4 groups	5 groups	5 groups	11 groups
●	●	●	●	●
●	●	●	●	●
Runtime	Runtime	Runtime	Runtime	Runtime
●	●	●	●	●
●	●	●	●	●
8 levels	8 levels	8 levels	8 levels	8 levels
●	●	●	●	●
400 kB Flash	400 kB Flash	400 kB Flash	400 kB Flash	1600 kB Flash
24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
550 mA	450 mA	400 mA	450 mA	1 A
0 – 50 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C
RS232, RS422	RS232, RS422 RS485, Ethernet (of which 2 at the same time)	RS232, RS422 RS485 (of which 2 at the same time)	RS232, RS422 RS485 (of which 2 at the same time)	RS232, RS422
2	-	1	1	2
IP65	IP65	IP65	IP65	IP65
276 x 198 x 89	138 x 100 x 30	200 x 150 69	200 x 150 x 69	290 x 250 x 105
1.7	1.4	1.5	1.5	3.3

Advant Controller 31 – the basic conditions

Certification and licenses

The Industrial IT system, Advant Controller 31, is the modern and proven automation system from ABB which is clearly appropriate for a wide range of markets and applications in which it is ensured a good future. Its clear device program, open system architecture, simple device handling and project planning software are the result of years of development work conducted with a close link to real-life situations.

The numerous forms of approval gained by AC31 satisfy requirements for the export of components and systems for machines and systems. Applications in the marine and shipbuilding sectors are also approved areas of use for the reliable technology of the Advant Controller 31.

Advant Controller 31 Approbations



CSA, Canada



UL, USA



GL, Germany



DNV, Norway



BV, France



RINA, Italy

Lloyd's
Register Of
Shipping

LRS, Great Britain



Comprehensive after-sales service

ABB has set itself the task of making its many years of experience in the low-voltage sector available in the form of comprehensive service programs all around the world.

And if you have any special questions related to automation technology, you can also contact our skilled helpline team by phone, fax or e-mail. The experts on this team undertake project planning and programming themselves and therefore incorporate their own everyday practical experience with the products and applications in their advisory work.

We organize seminars and training sessions throughout the year for many of the products and systems available. These cover special tasks, such as the automation of machines and systems.

On request, we are also happy to provide on-site training in your premises. Simply contact your regional specialist advisor for more details.



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