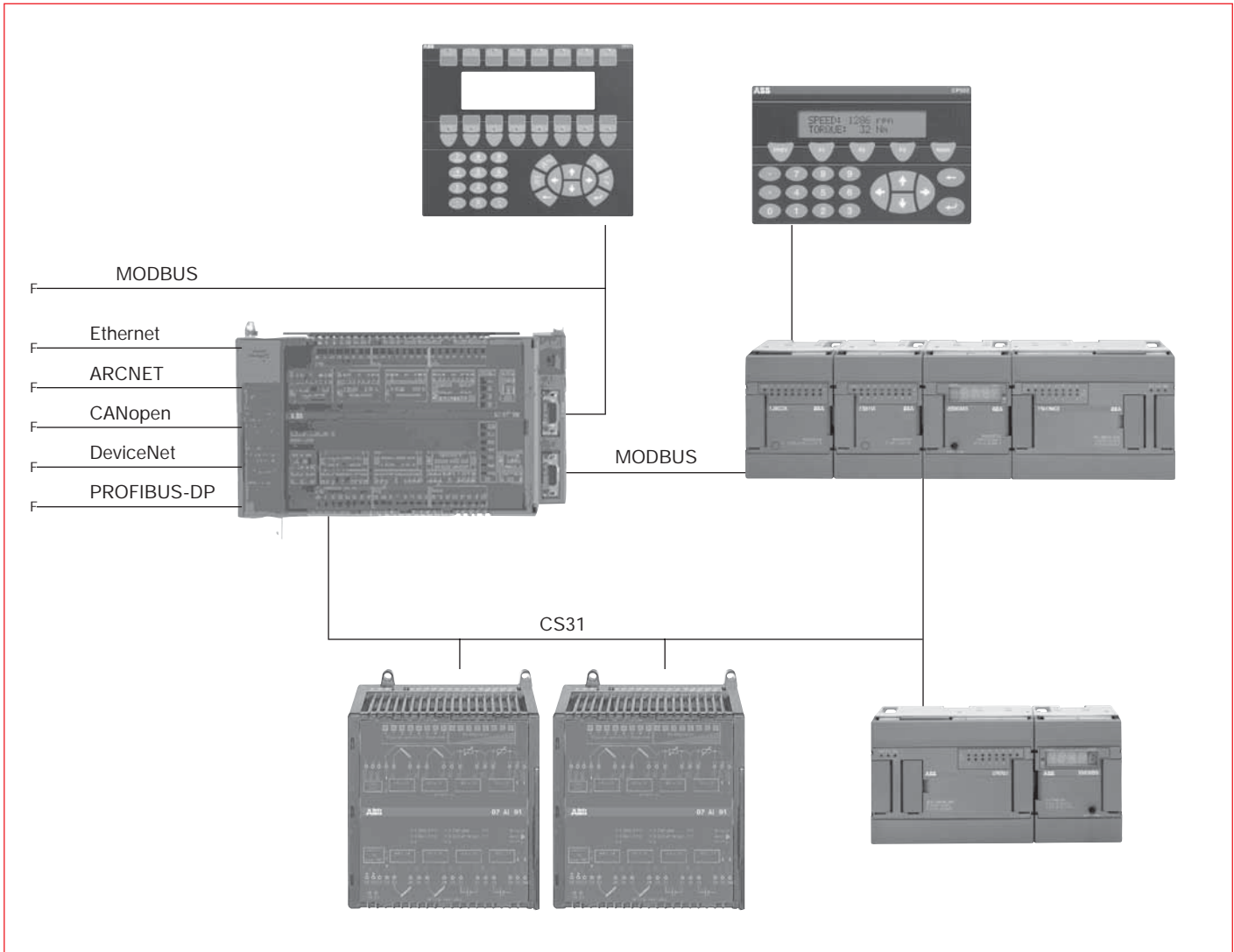


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### Control IT PLC family AC31

AC31 offers compact, high performance central units in varying designs with the possibility of decentral networking.

All central units are universally programmable according to IEC 61131-3, beginning with the small PLC (series 40..50) up to the high-performance compact PLC (series 90).

They offer high functionality within a small space with up to 1 MByte user memory, with 60 integrated I/Os (analogue and digital), with two serial interfaces (both of which are configurable for MODBUS or ASCII) and with a plug-in smart media card for the uploading of user programs or for data saving.

Units are available with built-in RS232 and RS485 ports. The user can choose varying combinations of integrated fieldbuses resp. network protocols: e.g. Ethernet + PROFIBUS DP, ARCNET + CANopen or also CANopen + Ethernet.

The couplers are integrated within the central unit in order to save space. Tools for the configuration of the fieldbuses used are included in the software package 907 AC 1131.

The components of AC31 series 40..50 and of AC31 series 90 can be mixed. This way it is even possible to combine I/O-modules of series 40..50 with the compact controllers of series 90 or vice versa to combine I/O-modules of series 90 with a small PLC of series 50.

All components are Industrial IT – certified. The respective Aspect-Object-files are available upon request.

Hardware	07KT51	07KT94-S	07KT95	07KT96	07KT97	07KT98	07SL97
MODBUS	x	x	x	x	x	x	x
Ethernet					x	x	
CANopen					x	x	
PROFIBUS DP					x	x	x
ARCNET		x			x	x	x
DFÜ RCOM		x	x	x	x	x	
DeviceNet					x	x	x
CS31 system bus	x	x	x	x	x	x	x
AC31 Safety Fieldbus		x					

## Safety PLC AC31-S - Safety First

Nowadays, machine and plant manufacturers are confronted by ever more extensive and ever more stringent safety conditions, in line with the demand that the safety of machines and systems must be implemented optimally and in line with the "state of the art" for protection of man, machine and the environment. The safety-related automation system AC31-S allows small, distributed control units to be designed and standardised. They operate autonomously at a local level where the safety function is required. The relevant, related inputs and outputs are installed in the field where the signal is detected or output. They are connected to their central unit via the AC31 Safety Fieldbus. This helps, once again, to save on cables. These control units can be networked flexibly and can exchange data among each other or with a higher-level system.

## Software programming package 907AC1131

For the integrated programming of AC31 central units according to IEC61131-3.

907AC 131 offers the following functionalities:

- 6 programming languages: Function Block Diagram (FBS), Instruction List (IL), Ladder Diagram (LD), Structured Text (ST) and Sequential Function Chart (SFC) and Continuous Function Chart (CFC).
- Debugger: for the step-by-step processing of the automation program, including setting of breakpoints.
- Offline simulations: IEC-61131-3 commands including fault behaviour can be simulated for an external controller. After testing, the application can be transferred to the controller.
- Sampling Trace (chronological portrayal of process variables) and a visualisation – with integration of pictures and illustrations and display of process-variables from the controller.
- Recipe administration and watch lists: values of selected variables can be displayed. Variables can be preallocated with dedicated values and be transferred to the controller all at once. (Writing the recipe). Current values of the controller can be imported and saved in the same manner into the recipe and watch list manager as preallocations (Reading the recipe). These functions are especially helpful e.g. for the adjustment and gathering of control parameters.

## Economical

The Advant Controller 31-S requires no redundant central unit for safety functions, so this system is lowcost both as regards hardware and as regards engineering. The I/O units at a local level already feature an internal 2-channel structure and monitor themselves, including passive error and fault detection.

## One set of hardware for all functions

The hardware of the Advant Controller 31-S supports the safety functions and operating functions simultaneously. At the AC31 safety field bus safety-related I/O modules and standard I/Os can be mixed.

The safety-related functions are programmed with the help of certified function blocks.

The controller is certified for requirement class 4 and safety category 3.

- Visualization with color changes, moving elements, bitmaps, textdisplay, set value input and display of process variables from the controller. Dynamic columns, alarm and event processing, function keys. The graphics are created with the help of the software package 907 AC1311 and can be also used with the operator version that is available separately on the CD.
- Configuration for PROFIBUS-DP, DeviceNet, Ethernet, CANopen.
- Open interfaces DDE and OPC.
- Programming using ARCNET and Ethernet.
- Engineering interface for accessing an external project data base from the programming system, where data is administered that accumulates while building an automation project. The use of an external data base ensures the consistency of the data, which then can be used mutually by several users, projects and programs.
- Extensive libraries.
- Windows 32 bit standard.
- Operating systems Windows 98, NT, 2000 und XP.
- Visualization package: program for the operation of a machine or installation. Graphics created with the programming software are displayed online.

Details	Type:	Small PLC AC31 series 40..50						Slot-PLC AC31 series 90
		CR41	CT41	CR42	CT42	KR51	KT51	SL97
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 -	x x	x -	
Pug-in Smart Media Card		-				-		x
Cycle time for 1 KByte [ms] 100% binary values 65% binary values and 35% text		0.4 1.2				0.4 1.2		- 0.22
Number of inputs and outputs Integrated (DI / DO / DC) DI/DO maximum integrated (AI / AO) AI/AO 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 Relays (R) 120 / 230 V AC, 2 A		- x	x -	- x	x -	- x	x -	- -
Analogue input range ± 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) configurable as DI		- - - - - -	- - - - x -	x - - - - x -	- - - - - - -	- - - - - - -	- - - - - - -	
Analogue output range ± 10 V 0 ... 20 mA, 4 ... 20 mA		-				-		- -
Data buffering via battery		integrated				integrated		optional
Real-time clock		x				x		x
Programming package 907 AC 1131 907 PC 331 AC31GRAF		x x x				x x x		x - -
Program execution cyclical or time driven multitasking		x x				x x		x x
user program protection password		x				x		x
Serial interfaces RS232 (programming, MODBUS, ASCII) RS485 (CS31 as MODBUS)		1 -				1 (RS232 or RS485) 1		1 -
Integrated potentiometer		2				2		-
Data memory [KByte]		2				2		256, incl. 16 KB RETAIN
Timers		unlimited (42 at the same time)				unlimited (42 at the same time)		unlimited
Counters		unlimited (function)				unlimited (function)		unlimited
High-speed counters (number/frequency)		2 / 7 kHz				2 / 7 kHz		-
Interfaces / Protocols CS31 ASCII MODBUS® Ethernet ARCNET PROFIBUS-DP CANopen DeviceNet AC31Safety-Fieldbus RCOM (additional coupler)		- x x - - - - - - -				x x x - - - - - -		x x x - x x - x -
Note:		centrally expandable with 6 I/O modules of series 40 ... 50, max. Up to 110 digital or up to 36 analogue or mixed.						

# Hardware features

Compact PLC AC31 series 90				Safety PLC AC31 series 90
KT95	KT96	KT97	KT98	KT94-S
480	480	480	1000	240
x	x	x	x	x
-	-	-	-	-
x	x	x	x	x
-	-	-	-	-
0.22	0.22	0.22	0.07	0.22
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	24 / 16 / 8 992 8 / 4 224 / 224
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
optional	optional	optional	optional	optional
x	x	x	x	x
x	x	x	x	-
-	-	-	-	x
-	-	-	-	-
x	x	x	x	-
x	x	x	x	-
x	x	x	x t	x
2	2	2	2	2
-	-	-	-	-
-	-	-	-	-
256, incl. 16 KB RETAIN	256, incl. 16 KB RETAIN	256, incl. 16 KB RETAIN	1256, incl. 256 KB RETAIN	256, incl. 16 KB RETAIN
unlimited	unlimited	unlimited	unlimited	unlimited (80 at the same time)
unlimited	unlimited (function)	unlimited (function)	unlimited	unlimited
2 / 50 kHz	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
x	x	x	x	x

Note:

Connection of safety-related-I/O and standard-I/O

## Digital I/O modules

	Bus modules series 50 ①			Series 40 .. 50 Only in connection with bus modules or CPU							
	ICMK 14 F1	ICMK 14 F1	ICMK 14 N1	XI 16 E1	XO 16 N1	XO 08 Y1	XO 08 R1 ②	XO 08 R2	XC 08 L1	XK 08 F1	XC 32 L1 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
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
Short circuit- / overload-proof	x	x	x	x	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	-	-	-	-	-	-	-	-	-	-	-

## Analogue I/O modules

	Series 40 .. 50 only with bus module or CPU				Series 90		S500 only with bus module		
	XM 06 B5	XE 08 B5	XTC 08 ④	XC 32 L2 ⑤	07 AI 91	07 AC 91 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 -
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	with HE10 connection	1 1	1 1	3 3	3 3	3 3
Display channel number / value	x	x	x	-	-	-	-	-	-

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.

① centrally expansible with up to 6 I/O modules of series 40...50. (Max. 8 AI and 4 AO)

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

# Hardware features

Series 90							Bus modules S500 ⑥		S500 only in connection with bus module		
07 DI 92	07DI93-I	07DO93-I	07DK93-I	07 DC 91	07 DC 92	07 TC90 / TC91 ⑥	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	-	-	-
-	-	-	-	-	-	-	3	3	3	3	3
1	-	-	-	1	1	-	3	3	3	3	3
-	X	X	X	-	-	-	-	-	-	-	-
-	X	X	X	-	-	-	-	-	-	-	-

Safety-related I/O modules	07 DI 90-S	07 DO 90-S	07 AI 90-S
Supply voltage 24 V DC	x	x	x
Number of safety-related digital I/Os (DI / DO)	8 / - / -	- / 8 / -	- / - / -
Number of safety-related analogue I/Os (AI / AO)	- / -	- / -	4 / -
Digital inputs 24 V DC	x	-	-
Digital outputs: transistor (T) 24 V DC, 0.5 A	-	x	-
Analogue outputs: 4 ... 20 mA	-	-	x
Short circuit- / overload-proof	x	x	x
Interfaces / protocols AC31 Safety field bus	x	x	x
Connection type (1=1-cond., 3=3-cond.) screw terminal	1	1	1
Protection class IP67	-	-	-
Fault detection:			
short circuit	x	x	x
overload	-	x	-
breakd in cicuits	x	-	x
forbidden signal level	x	-	x
area over-, underrun	-	-	x
passive error	x	x	x
internal error	x	x	x
Internal 2-channel structures	x	x	x
Requirement class 4 (DIN19250)	x	x	x
Category 3 (EN954-1)	x	x	X
Note:	only in connection with safety-related CPU KT94-S		

⑥ Special key pad for the connection of operating panels with up to S500, 32 buttons / switches and 32 LEDs at the CS31 field bus.

⑥ Centrally expandable with up to 7 I/O modules of series up to four of which can be analogue. Additional extension box available (digital or analogue channels in 1-conductor technology)



07 CR 41

**Central Units AC31 series 40**

Description: see "Overview Central Units". Centrally expandable with up to 6 I/O modules. CRxx: relay outputs, CTxx: transistor outputs. Program memory without / with online changes: 34 [kB] / 16 [kB].

Type	I/O (DI / DO / AI) integrated	Counter inputs/ impulse outputs integrated	Supply voltage	Connection type	Catalog number	Weight 1 piece kg
07 CR 41	8 / 6 / -	2 / -	24 V DC	screw terminal	1SBP 26 0020 R1001	0.400
				spring-type terminal	1SBP 26 0520 R1001	0.400
			120/230 AC	screw terminal	1SBP 26 0021 R1001	0.800
				spring-type terminal	1SBP 26 0521 R1001	0.800
07 CT 41	8 / 6 / -	2 / 1	24 V DC	screw terminal	1SBP 26 0022 R1001	0.400
				spring-type terminal	1SBP 26 0522 R1001	0.400
07 CR 42	8 / 6 / 3	2 / -	24 V DC	screw terminal	1SBP 26 0023 R1001	0.400
			120/230 AC	screw terminal	1SBP 26 0024 R1001	0.800
07 CT 42	8 / 6 / 3	2 / 1	24 V DC	screw terminal	1SBP 26 0025 R1001	0.400

**Central units AC31 series 50**

Description: see "Overview Central Units". Integrated CS31 field bus. Centrally expandable with up to 6 I/O modules, decentrally up to 31 I/O modules. KRxx: relay outputs, KTxx: transistor outputs. Program memory without / with online changes: 34 [kB] / 16 [kB].

Type	I/O (DI / DO / AI) integrated	Counter inputs/ impulse outputs integrated	Supply voltage	Connection type	Catalog number	Weight 1 piece kg
07 KR 51	8 / 6 / -	2 / -	24 V DC	screw terminal	1SBP 26 0010 R1001	0.400
				spring-type terminal	1SBP 26 0510 R1001	0.400
			120/230 AC	screw terminal	1SBP 26 0011 R1001	0.800
				spring-type terminal	1SBP 26 0511 R1001	0.800
07 KT 51	8 / 6 / -	2 / 1	24 V DC	screw terminal	1SBP 26 0012 R1001	0.400
				spring-type terminal	1SBP 26 0512 R1001	0.400



07 KR 51

**Bus modules series 40..50**

Description: see "Overview I/O modules". Integrated CS31 field bus. Centrally expandable with up to 6 I/O modules (Max. 8 AI / Max. 4 AO).

Type	Number DI / DO	Relay/ transistor-outputs	Supply voltage	Connection type	Catalog number	Weight 1 piece kg
ICMK 14 F1	8 / 6	Relay	24 V DC	screw terminal	1SBP 26 0050 R1001	0.400
				spring-type terminal	1SBP 26 0550 R1001	0.400
ICMK 14 F1	8 / 6	Relay	120/230 AC	screw terminal	1SBP 26 0051 R1001	0.800
				spring-type terminal	1SBP 26 0551 R1001	0.800
ICMK14 N1	8 / 6	Transistor	24 V DC	screw terminal	1SBP 26 0052 R1001	0.400
				spring-type terminal	1SBP 26 0552 R1001	0.400

**Bus modules series 40..50**

Description: see "Overview I/O modules". MODBUS RTU slave integrated. Automatic baudrate adaption. Centrally expandable with up to 6 I/O modules, either digital or analogue.

Type	Number DI / DO	Relay/ transistor-outputs	Supply voltage	Connection type	Catalog number	Weight 1 piece kg
ICMK 14 F1-M	8 / 6	Relay	24 V DC	screw terminal	1SBP 26 0053 R1001	0.400
ICMK 14 F1-M	8 / 6	Relay	120/230 AC	screw terminal	1SBP 26 0054 R1001	0.800
ICMK14 N1-M	8 / 6	Transistor	24 V DC	screw terminal	1SBP 26 0055 R1001	0.400



ICMK 14 F1

## Digital I/O modules series 40..50

Description: see "Overview I/O modules".



XI 16 E1

Type	Number of DI / DO / DC	Input signal	Output signal	Connection type	Catalog number	Weight 1 piece kg
XI 16 E1	16 / - / -	24 V DC	-	screw terminal	1SBP 26 0100 R1001	0.220
				spring-type terminal	1SBP 26 0600 R1001	0.220
XO 16 N1	- / 16 / -	-	24 V DC, 0.5 A	screw terminal	1SBP 26 0105 R1001	0.220
				spring-type terminal	1SBP 26 0605 R1001	0.220
XO 08 Y1	- / 8 / -	-	24 V DC, 2 A	screw terminal	1SBP 26 0108 R1001	0.220
				spring-type terminal	1SBP 26 0608 R1001	0.220
XO 08 R1	- / 8 / -	-	250 V AC, 2 A	screw terminal	1SBP 26 0101 R1001	0.220
				spring-type terminal	1SBP 26 0601 R1001	0.220
XO 08 R2 ①	- / 8 / -	-	250 V AC, 2 A	screw terminal	1SBP 26 0109 R1001	0.220
				spring-type terminal	1SBP 26 0609 R1001	0.220
XC 08 L1	- / - / 8	24 V DC	24 V DC, 0.5 A	screw terminal	1SBP 26 0102 R1001	0.220
				spring-type terminal	1SBP 26 0602 R1001	0.220
XK 08 F1	4 / 4 / -	24 V DC	250 V AC, 2 A	screw terminal	1SBP 26 0104 R1001	0.220
				spring-type terminal	1SBP 26 0604 R1001	0.220
XC 32 L1 ②	- / - / 32	24 V DC	24 V DC, 0.5 A	HE10 connector	1SBP 26 0110 R1001	0.220

## Analogue I/O modules series 40..50

Description: see "Overview I/O modules".



XM 06 B5

Type	Number of AI / AO	Input signal	Output signal	Connection	Catalog number	Weight 1 piece kg
XM 06 B5	4 / 2	± 10 V, ± 20 mA, 4 ... 20 mA, PT100, PT1000	± 10 V, 0 ... 20 mA, 4 ... 20 mA	screw terminal	1SBP 26 0103 R1001	0.220
				spring-type terminal	1SBP 26 0603 R1001	0.220
XE 08 B5	8 / -	± 10 V, ± 20 mA, 4 ... 20 mA, PT100, PT1000	-	screw terminal	1SBP 26 0106 R1001	0.220
				spring-type terminal	1SBP 26 0606 R1001	0.220
XC 32 L2 ③	8 / -	0-10 V	-	HE10 connector	1SBP 26 0111 R1001	0.220

## Communication modules for Central Units of series 40..50

Networking interface for small-sized controller AC31 series 40..50. Connection with the central unit via ribbon cable. Voltage supply from central unit. Cable: see accessories.

Type	Protocol	Software	Interfaces	Catalog number	Weight 1 piece kg
07 KP 53	MODBUS	included (in AC1131 and AC31GRAF)	2 independent MODBUS, RTU, Master or Slave (RS232/RS485)	1SBP 26 0162 R1001	0.220

## Display series 40..50

Supplied by central unit or bus module

Type	Description	Catalog number	Weight 1 piece kg
XTC 08	Display for 8 internal channels (4 digits + signs + selected channel)	1SBP 26 0107 R1001	0.220

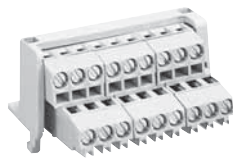
① 4 normally open outputs + 4 normally open and normally closed outputs

② 4 counters 20 kHz/4 frequency meters can be connected to prewiring system INTERFAST. HE10 not included

③ plus 24 configurable digitals (DC) Same as XC 32 L1, but 8 out of 32 DC can be used for AI 4 counters 20 kHz/4 frequency meters can be connected to prewiring system INTERFAST. HE10 not included



07 SK 50



07 ST 50

### Accessories series 40..50

Type	Accessories for	Description	Catalog number	Weight 1 piece kg
07 SK 50	Central units Series 40 ... 50 MODBUS Coupler KP53	Programming cable. PC-Sub D, 9-poles	1SBN 26 0200 R1001	0.220
07 SK 52		Programming cable, without connector on the PC side	1SBN 26 0202 R1001	0.220
07 SK 51		Communication cable MODBUS/ASCII, PC-Sub D9 plug	1SBN 26 0201 R1001	0.100
07 SK53		Communication cable MODBUS/ASCII, without connector on the PC side	1SBN 26 0203 R1001	0.220
07 SG 50	Central units Series 40 ... 50	Simulation device for CPUs 8 switches	1SAY 11 0811 R0001	0.220
LAF100/HE10-20/UNI/662/UL <sup>Ⓞ</sup>	XC32L1 / XC32L2	Cable with HE10 connector for exten. I/O modules and naked wire on the other side length: 1 meter	003900706	
LAF150/HE10-20/UNI/662/UL <sup>Ⓞ</sup>	XC32L1 / XC32L2	Cable with HE10 connector for exten. I/O modules and naked wire on the other side length: 1.5 meters	003900825	
LAF200/HE10-20/UNI/662/UL <sup>Ⓞ</sup>	XC32L1 / XC32L2	Cable with HE10 connector for exten. I/O modules and naked wire on the other side length: 2 meters	003900906	
LAF300/HE10-20/UNI/662/UL <sup>Ⓞ</sup>	XC32L1 / XC32L2	Cable with HE10 connector for exten. I/O modules and naked wire on the other side length: 3 meters	003901104	
LAF500/HE10-20/UNI/662/UL <sup>Ⓞ</sup>	XC32L1 / XC32L2	Cable with HE10 connector for exten. I/O modules and naked wire on the other side length: 5 meters	003901322	
07 ST 50	CPUs and bus modules series 40..50, digital I/O modules	2-tier terminal for digital, 3-wire sensors / actuators, 2 pieces	1SBN 26 0300 R1001	0.220
07 ST 51	XM06B5, XE08B5	2-tier terminal for analogue, 3-wire sensors, 2 pieces	1SBN 26 0301 R1001	0.220
07 ST 52		2-tier spring-type terminal for digital, 3-wire sensors / actuators, 2 pieces	1SBN 26 0302 R1001	0.052
07 ST 54	CPUS and bus modules series 40..50	spring-type terminal set	1SBN 26 0311 R1001	0.052
07 ST 55	XI16E1, XO16N1, XE08B5	spring-type terminal set	1SBN 26 0312 R1001	0.052
07 ST 56	XO08R1, XC08L1, XK08F1	spring-type terminal set	1SBN 26 0313 R1001	0.052
07 ST 57	XM06B5	spring-type terminal set	1SBN 26 0314 R1001	0.052
	Series 40..50	labels for marking of the I/O channels	1SBN 26 0310 R1001	
Documentation	Series 40 ... 50	english	1SBC 26 0400 R1001	0.200

<sup>Ⓞ</sup> ref. to prewiring system INTERFAST documentation for additional information  
INTERFAST harnesses are also available for Series 40 ... 50 central units + remote modules XI16E1, XO16N1, DC92

# AC31 Series 90

## Compact PLC and PCI Slot

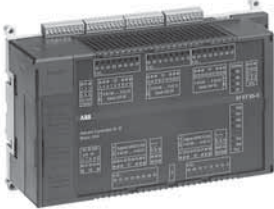


07 KT 95

### Compact PLC AC31 series 90

Description: see "Overview Central Units". Integrated CS31 field bus.  
Optional: Smart Media Card for saving data and user programm backup and battery (ref. accessories).

Type	Digital I/O (DI / DO / DC) integrated	Analogue I/O (AI / AO) integrated	Counter inputs	Program memory [kB]	Catalog number	Weight 1 piece kg
07 KT 95	12 / 8 / -	4 / 2	2	480	GJR 525 2800 R0200	1.3
07 KT 96	24 / 16 / -	- / -	2	480	GJR 525 2900 R0200	1.3
07 KT 97	24 / 16 / 8	8 / 4	2	480	GJR 525 3000 R0200	1.3

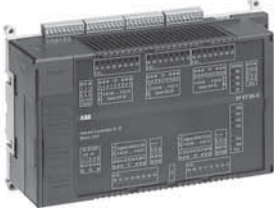


07 KT 97

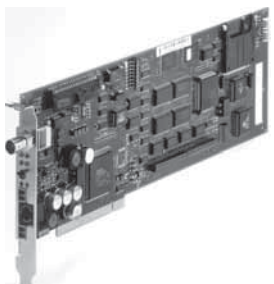
### Compact PLC AC31 series 90 – with up to 2 integrated communication processors

Description: see "Overview Central Units". Integrated CS31 field bus.  
Number I/Os identical with 07 KT 97.  
Optional: Smart Media Card for saving data and user programm backup and battery (ref. accessories).

Type	Processor 1	Processor 2	Program memory [kB]	Catalog number	Weight 1 piece kg
07 KT 97 - Profibus	PROFIBUS-DP	-	480	GJR 525 3000 R0220	1.3
07 KT 97 - CANopen	CANopen	-	480	GJR 525 3000 R0280	1.3
07 KT 97 - DeviceNet	DeviceNet	-	480	GJR 525 3000 R0250	1.3
07 KT 97 - Ethernet	Ethernet	-	480	GJR 525 3000 R0270	1.3
07 KT 97 - ARCNET	ARCNET	-	480	GJR 525 3000 R0260	1.3
07 KT 97 - Ethernet - ARCNET	Ethernet	ARCNET	480	GJR 525 3000 R0276	1.3
07 KT 97 - Ethernet - Profibus	Ethernet	PROFIBUS-DP	480	GJR 525 3000 R0272	1.3
07 KT 97 - Ethernet - CANopen	Ethernet	CANopen	480	GJR 525 3000 R0278	1.3
07 KT 97 - Ethernet - DeviceNet	Ethernet	DeviceNet	480	GJR 525 3000 R0275	1.3
07 KT 97 - Ethernet - Ethernet	Ethernet	Ethernet	480	GJR 525 3000 R0277	1.3
07 KT 97 - ARCNET - Profibus	ARCNET	PROFIBUS-DP	480	GJR 525 3000 R0262	1.3
07 KT 97 - ARCNET - CANopen	ARCNET	CANopen	480	GJR 525 3000 R0268	1.3
07 KT 98 - Profibus	PROFIBUS-DP	-	1000	GJR 525 3100 R0220	1.3
07 KT 98 - CANopen	CANopen	-	1000	GJR 525 3100 R0280	1.3
07 KT 98 - DeviceNet	DeviceNet	-	1000	GJR 525 3100 R0250	1.3
07 KT 98 - Ethernet	Ethernet	-	1000	GJR 525 3100 R0270	1.3
07 KT 98 - ARCNET	ARCNET	-	1000	GJR 525 3100 R0260	1.3
07 KT 98 - Ethernet - ARCNET	Ethernet	ARCNET	1000	GJR 525 3100 R0276	1.3
07 KT 98 - Ethernet - Profibus	Ethernet	PROFIBUS-DP	1000	GJR 525 3100 R0272	1.3
07 KT 98 - Ethernet - CANopen	Ethernet	CANopen	1000	GJR 525 3100 R0278	1.3
07 KT 98 - Ethernet - DeviceNet	Ethernet	DeviceNet	1000	GJR 525 3100 R0275	1.3
07 KT 98 - Ethernet - Ethernet	Ethernet	Ethernet	1000	GJR 525 3100 R0277	1.3
07 KT 98 - ARCNET - Profibus	ARCNET	PROFIBUS-DP	1000	GJR 525 3100 R0262	1.3
07 KT 98 - ARCNET - CANopen	ARCNET	CANopen	1000	GJR 525 3100 R0268	1.3



07 KT 98



07 SL 97

### PCI Slot AC31 series 90 (PCI fullsize) – with up to 2 integrated communication processors

Description: see "Overview Central unit". Integrated ARCNET communication processor and CS31 field bus.  
With own power supply 24 V DC, independent of PC. For operating systems MS-Windows like software package 907AC1131.  
Programming via PCI-interface or vial serial interface with second PC.  
Optional: Smart Media Card for saving data and user programm backup and battery (ref. accessories).

Type	Number PC-Slots	Processor 2	Program memory [kB]	Catalog number	Weight 1 piece kg
07 SL 97-ARCNET	1	-	480	GJR 525 3400 R0160	1.3
07 SL 97-ARCNET-Profibus	2	PROFIBUS-DP	480	GJR 525 3400 R0162	1.3
07 SL 97-ARCNET-DeviceNet	2	DeviceNet	480	GJR 525 3400 R0165	1.3

## AC31 Series 90 Compact PLC



07 DI 92



07 DC 92



07 AI 91



07 KP 90

### Digital I/O modules series 90

Description: see "Overview I/O modules". Integrated CS31 field bus.  
DC: Channels configurable as in- or outputs.

Type	Number DI / DO / DC	Input signal	Output signal	Details	Catalog number	Weight 1 piece kg
07 DI 92	32 / - / -	24 V DC	-	input delay 7 ms	GJR 525 2400 R0101	0.25
07 DI 93-I	16 / - / -	24 V DC	-	input delay 1 ms. IP67. M12-connector s. acces.	GJV 307 5613 R0202	0.25
07 DO 93-I	- / - / 8	-	24 V DC / 2 A (T)		GJV 307 5611 R0202	0.25
07 DK 93-I	8 / 4 / -	24 V DC	24 V DC / 2 A (T)		GJV 307 5623 R0202	0.25
07 DC 91	16 / 8 / 8	24 V DC	24 V DC / 0,5 A (T)	input delay 7 ms	GJR 525 1400 R0202	0.25
07 DC 92	- / - / 32	24 V DC	24 V DC / 0,5 A (T)	input delay 7 ms in groups of 8 electrical isolation	GJR 525 2200 R0101	0.25
07 TC 90	- / - / -	- / - / -	-	Keypad controller for the connec- tion of operating panels with up to 32 keys / switches and 32 LEDs on the CS31 bus, Voltage supply 24 V DC, without housing	GJR 525 1800 R0101	0.1
07 TC 91	- / - / -	- / - / -	-		GJR 525 2700 R0101	0.1

### Analog I/O modules series 90

Description: see "Overview I/O modules". Integrated CS31 field bus.  
AC: Channels configurable as in- or outputs.

Type	Number AI / AO / AC	Input signal	Output signal	Catalog number	Weight 1 piece kg
07 AI 91	8 / - / -	± 10V, 0 ... 20mA, ± 50 mV, ± 500 mV, ± 5 V, PT100, PT1000, thermo-couple, 12 Bit	-	GJR 525 1600 R0202	0.25
07 AC 91 <sup>①</sup>	- / - / 16	± 10 V, 0 ... 20 mA, 4 ... 20 mA, 12 Bit	± 10 V, 0 ... 20mA, 4 ... 20 mA, 12 Bit	GJR 525 2300 R0101	0.25

### Communication modules series 90

Further networking interfaces compac controllers AC31 series 90. Connection with the Central unit via ribbon cable.  
Voltage supply 24 V DC.

Type	Protocol	Software	Interfaces	Catalog number	Weight 1 piece kg
07 KP 90	RCOM	included	2 (1) RCOM (RS232/RS485); (2) RS232 for commissioning	GJR 525 1000 R0303	0.45
07 KP 93	MODBUS	included	2 MODBUS, RTU, Master or Slave (RS232/RS485)	GJR 525 3200 R1161	0.4

### ARCNET: Communication interfaces to PC

For the communication between ARCNET controllers and PC (programming, visualisation).

Type	Description	Catalog number
SH FARC E3 K	ARCNET-KOAX interface card for ISA bus, without RS485, transfer rate 2,5 Mbps	1SAY 11 1401R0001
SH ARC PCI K	ARCNET-KOAX-interface card for PCI bus, transfer rate 2,5 Mbps	1SAY 11 1402R0001
SH ARC PCMCIA	ARCNET-PCMCIA interface card (basic card)	1SAY 11 1403R0001
SH KOAX- PCMCIA	KOAX interface module for basic card	1SAY 11 1404R0001

① incl. 1xDI for the shut-off of all AO of the module.

with 2 modes of operation: (1) 8 AI and 8 AO with 12 Bit resolution or (2) as pairs as AI or AO with 8 Bit.

## AC31 Series 90 Accessories

### Accessories series 90

Type	Accessory for	Description	Catalog number
07 SK 90	CPUs AC31 series 90 (KT94-S, KT95-KT98)	Programming cable incl. adapter 25/9-poles. Cable length 5 m	GJR 525 0200 R0001
07 SK 92		System cable for modem	GJR 525 0400 R0001
07 MC 90	CPUs 07KT94-S and 07KT94	Smart Media Card for saving data and backup of user program, 2 MB	GJR 525 2600 R0102
07 MC 90	CPUs 07KT95 / 96 / 97 / 98 and 07SL97	Smart Media Card for saving data and backup of user program, 8 MB	GJR 525 2600 R0201
07 LE 90	CPUs AC31 series 90 (07KT94-S, 07KT95, 07KT98, 07SL97)	Lithium battery for data buffering	GJR 525 0700 R0001
German		Manual for AC31 (as in software package 907 AC 1131)	1SAC 133 947 R0101
English		Complete hard- und software- description. Includes CD-ROM with documentation.	1SAC 133 947 R0201
-	Digital IP67 I/O modules DI93-I, DO93-I, DK93-I	Plug 5 poles, M12 straight. Connection for basic I/Os with FE connection	GJV 307 5617 R0001
-		Plug 5 poles, M12 bent. AConnection for basic I/Os with FE connection	GJV 307 5618 R0001
-		Plug 4 poles. M12 straight for double connection.	GJV 307 5624 R0001
-	RCOM coupler 07KP90	For commissioning interface Adapter for programming cable 07SK90	GJV 307 3915 R0001
-	AC31-S: 07KP94-S	interface cable incl. adapter for KT94-S with operating panel (passive mode)	GJR 525 0300 R0001
07 SK 93	07SL97 Slot CPU	Programming cable MIN DIN 8/PC-SUB D	GJR 525 3500 R0001
07 SK 94		Communication cable MIN DIN 8/-	GJR 525 3600 R0001

### Programming package 907AC1131 (acc. to IEC61131-3)

For small PLC AC 31 series 40...50 (functionalities adjusted), compact PLC AC31 series 90 and Slot-PLC 07 SL 97. Operating system: Windows 98 / NT / 2000 / XP. Description: see "Overview Software Package".

Programming cable: see accessories.

Integrated: 6 programming languages, sampling trace, debugging, offline simulation, trace recording (multichannel) recipe management, visualisation, field bus configurators, online visualisation package and more.

Delivery includes: software, libraries and documentation on CD-ROM, update service.

Type	Language Manual	Description	Catalog number
907 AC 1131	German	Programming package version 5.0	GJP 520 6900 R0102
907 AC 1131	English	Programming package version 5.0	GJP 520 7000 R0102

### Programming package AC31GRAF (based on IEC61131-3)

For small PLC AC 31 series 40...50. Operating system: Windows 98 / NT / 2000.

Description: see "Overview Software Package".

Programming cable: see accessories.

Integrated: 4 programming languages, debugging, visualisation, and much more.  
Can be used with previous PLC Central units type 30 series and 07KT91 ... KT94

Delivery includes: software, libraries and documentation on CD-ROM.

Type	Language Manual	Description	Catalog number
AC31GRAF	English	Programming package	1SBS 260 250 R0101
AC31GRAF	French	Programming package	1SBS 260 251 R0101
AC31GRAF	Italian	Programming package	1SBS 260 252 R0101

## Accessories

### Bus repeater

2

#### Bus repeater for CS31 field bus

Type	Supply voltage	Description	Catalog number	
NCB	24 V DC	Repeater for CS31 bus max. length 2000 m (3 repeaters)	FPR 347 1200 R1002	0.34
NCBR	24 V DC	Repeater for CS31 bus for redundant, ring or star shaped bus configuration	FPR 347 1300 R1002	0.34

#### Bus repeater for RS485 MODBUS RTU network

Type	Supply voltage	Description	Catalog number	
NCBR-M	24 V DC	Repeater for MODBUS communication. For redundant, ring or star shaped bus configuration	1SBP 260 161 R1001	0.34



07 KT 94-S

## Safety PLC AC31-S, Central Unit

Description: see "Overview CPUs". Integrated AC31 safety field bus.  
For programming of safety-related and operation functions in one CPU.  
Integrated I/O for operation signals (not safety-related). Decentrally expandible with I/O modules for operation and for safety related signals on the AC31 safety field bus.

Type	Digital I/O (DI / DO / DC) integrated	Analogue I/O (AI / AO) integrated	Counter inputs	Program memory [kB]	Catalog number	Weight 1 piece kg
07 KT 94-S	24 / 16 / 8	8 / 4	2	240	GJR 525 2100 R2101	1.3
07 KT 94-S ① ARCNET	24 / 16 / 8	8 / 4	2	240	GJR 525 2100 R2161	1.3



07 DI 90-S

## Safety In-/Output modules

Decentral, internally redundant I/O modules, safety-related, power supply 24 V DC.  
Screw terminals. Integrated AC31 safety field bus connection, electric isolation against bus.

Type	Digital I/O DI / DO / AI	Input signal	Output signal	Fault detection	Catalog number	Weight 1 piece kg
07 DI 90-S	8 / - / -	24 V DC	-	Fault detection: short circuit after 0V and UP, wire break, forbidden input level range, passive fault, internal faults like bus disconnection.	GJR 525 0900 R0202	0.25
07 DO 90-S	- / 8 / -	-	24 V DC / 5 A (T)	Fault detection: Overload, resp. short circuit after ZP, passive fault, internal fault.	GJR 525 0800 R0202	0.25
07 AI 90-S	- / - / 4	4 ... 20 A	-	Fault detection: area over or underrun, short circuit, wire break, passive fault, internal fault.	GJR 525 1200 R0202	0.25



07 DO 90-S

## Programming software for safety-related programming

For safety PLC AC 31-S. Operating system: MS-DOS.  
Programming cable: see accessories.  
The programming software consists of the packages 907 PC 33 + 907 PC 331 + 907 PC 339.

Type	Description	Language of manual	Catalog number
907 PC 33	General description of the programming interface. Also includes: manual	German	GJP 520 3900 R0302
		English	GJP 520 4000 R0302
907 PC 331	Programming and test software. Programming languages: IL, FBD, LD. Includes: programming software on disc, manuals, update service.	German	GJP 520 4500 R0402
		English	GJP 520 4600 R0402
907 PC 339	Add-on safety-related functions for programming software 907 PC 331. For AC31-S central unit 07 KT94-S. Includes: safety manual, software on discs, update service.	German	GJP 520 7500 R0102
		English	GJP 520 7600 R0102



07 AI 90-S

① ARCNET integrated

System data AC31 series 40..50

<p><b>Environmental conditions</b></p> <ul style="list-style-type: none"> <li>Temperature:           <ul style="list-style-type: none"> <li>Operation: horizontal vertical</li> <li>Storage</li> <li>Transport</li> </ul> </li> <li>Humidity:           <ul style="list-style-type: none"> <li>Annual average up to 30 day of the year</li> <li>occasional</li> </ul> </li> <li>Air pressure:           <ul style="list-style-type: none"> <li>Operation</li> <li>Storage</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>0 °C to + 55 °C</li> <li>0 °C to + 40 °C</li> <li>- 40 °C to + 75 °C</li> <li>- 25 °C to + 75 °C</li> <li>DIN 40040 class F without bedewing</li> <li>≤ 75%</li> <li>95%</li> <li>85%</li> <li>DIN 40050</li> <li>≥ 800 hPa (≤ 2000 m)</li> <li>≥ 600 hPa (≤ 3500 m)</li> </ul>
<p><b>Mechanical data</b></p> <ul style="list-style-type: none"> <li>Protection class</li> <li>Housing</li> <li>Vibration resistance</li> <li>Shock resistance</li> </ul>	<ul style="list-style-type: none"> <li>IP 20</li> <li>UL V2</li> <li>CEI68-2-8 Test Fc</li> <li>CEI68-2-27 Test Ea</li> </ul>
<p><b>Tolerances for line voltage</b></p> <ul style="list-style-type: none"> <li>24 V DC</li> <li>120 V AC (50 / 60 Hz)</li> <li>230 V AC (50 / 60 Hz)</li> </ul>	<ul style="list-style-type: none"> <li>9.2 to 30 V (- 20%, + 25%)</li> <li>97.75 to 126.5 V (- 18.5%, + 5.5%)</li> <li>195.5 to 253 V (- 15%, + 10%)</li> </ul>

# Technical data

## AC31 Series 90

### System data AC31 series 90

#### Operation and environmental conditions

<ul style="list-style-type: none"> <li>• Voltages           <ul style="list-style-type: none"> <li>24 V DC operation and supply voltage absolut limits ripple</li> <li>120 V AC supply voltage frequency</li> <li>230 V AC supply voltage frequency</li> </ul> </li> <li>• voltage interruption bridging time           <ul style="list-style-type: none"> <li>DC-supply</li> <li>AC-supply</li> </ul> </li> <li>• temperature operation storage transport</li> <li>• humidity</li> <li>• air pressure operation storage</li> </ul>	<p>24 V DC (+ 20%, - 15% without ripple) 19.2 V ... 30 V, incl. ripple ≤ 5%</p> <p>120 V AC (+ 10%, - 15%) 50 Hz (+ 5%, - 5%) oder 60 Hz (+ 5%, - 5%)</p> <p>230 V AC (+ 10%, - 15%) 50 Hz (+ 5%, - 5%) oder 60 Hz (+ 5%, - 5%)</p> <p>interruption ≤ 10 ms, time between two interruptions ≥ 1 s interruption ≤ 0.5 periods, time between two interruptions ≥ 1 s</p> <p>0 °C ... + 55 °C - 25 °C ... + 75 °C - 25 °C ... + 75 °C</p> <p>50 ... 95%, without bedewing</p> <p>≥ 800 hPa / ≤ 2000 m ≥ 660 hPa / ≤ 3500 m</p>
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#### Creeping and sparking distances

##### Check voltages

230 V circuits (net, 230 V I/Os) against other circuits	2500 V
120 V circuits (net) against other circuits	1500 V
24 V circuits (feed, 24 V I/Os), if they are potentially separated against other circuits	500 V
CS31-Bus against other circuits	500 V

#### Electromagnetic compability

<ul style="list-style-type: none"> <li>• interference resistance against electrostatic discharge (ESD)           <ul style="list-style-type: none"> <li>- interference voltage air discharges</li> <li>- interference voltage contact discharges</li> </ul> </li> <li>• Capacitance immunity (CW radiated)           <ul style="list-style-type: none"> <li>- field intensity at check</li> </ul> </li> <li>• interference resistance against transient noise voltages (burst)           <ul style="list-style-type: none"> <li>- voltage supply (AC / DC)</li> <li>- digital I/Os (24 V DC)</li> <li>- digital I/Os (120 / 230 V AC)</li> <li>- analogue I/Os</li> <li>- CS31 system bus</li> <li>- serial interfaces (COM)</li> <li>- ARCnet</li> </ul> </li> <li>• interference resistance against radio-frequency noise power (CW conducted)           <ul style="list-style-type: none"> <li>- test voltage</li> </ul> </li> <li>• emitted interference</li> </ul>	<p>acc. to DIN 61000-4-2 8 kV 4 kV</p> <p>acc. to DIN 61000-4-5 10 V / m</p> <p>acc. to DIN 61000-4-6 2 kV 1 kV 2 kV 1 kV 2 kV 0.5 kV 0.5 kV</p> <p>acc. to DIN 61000-4-6 10 V</p> <p>acc. to EN 55011 Funkstörgrad A and to EN 55022 Funkstörgrad A (communication modules only)</p>
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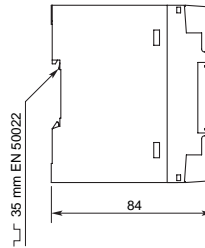
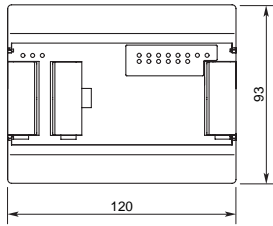
System data AC31 series 90 (cont.)

Mechanical data

<p>Connection types / Terminals</p> <ul style="list-style-type: none"> <li>for terminal block ECZ conductor connection: max. 2 x 2.5 mm<sup>2</sup></li> <li>for plug-in row clamps (large)</li> <li>for plug-in row clamps (small)</li> </ul> <ul style="list-style-type: none"> <li>• Protection class</li> <li>• Housing</li> <li>• Vibration resistance</li> </ul> <ul style="list-style-type: none"> <li>• Shock resistance</li> </ul>	<p>screw terminal for slot- and crosstip screwdriver,</p> <p>screw terminal for slot- and crosstip screwdriver, conductor connection: max. 2.5 mm<sup>2</sup></p> <p>screw terminal for slot- and crosstip screwdriver, conductor connection: max. 1.5 mm<sup>2</sup></p> <p>IP 20</p> <p>acc. to UL 94</p> <p>10 Hz ... 57 Hz      for all three axis                                  continuous: 0.0375 mm                                  peak: 0.075 mm</p> <p>57 Hz ... 150 Hz    continuous: 0.5 g                                  peak: 1.0 g</p> <p>                                 for all three axis</p> <p>15 g, 11 ms</p>
<p><b>Mounting</b></p> <p>DIN-rail acc. to DIN EN 50022, only for terminal block ECZ:</p> <p>Screw mounting</p>	<p>35 mm, height 15 mm height 7.5 mm and 15 mm</p> <p>screws, diameter 4 mm</p>
<p><b>Interfaces</b></p> <p>between central unit and I/O modules</p> <p>for the programming units and the connection with a terminal, 9-pol. D-SUB jack</p>	<p>EIA RS-485 (CS31 system bus)</p> <p>EIA RS-232</p>

## Approximate dimensions

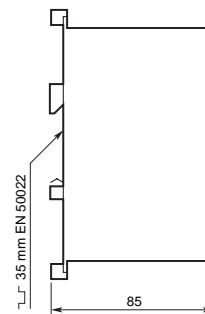
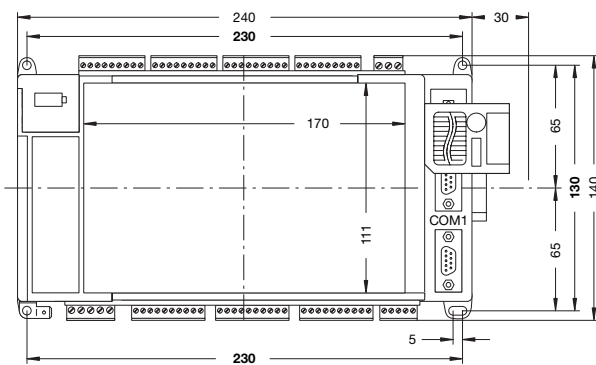
### Central Units series 40..50 and bus module



W x H x D [mm]	120 x 93 x 84
W x H x D [inches]	4.72 x 3.66 x 3.31
Mounting	35 mm – DIN rail acc. to DIN EN 50 022 or screw mounting

07CR41/42, 07CT41/42, 07KR51, 07KT51 and ICMK 14 F1N1

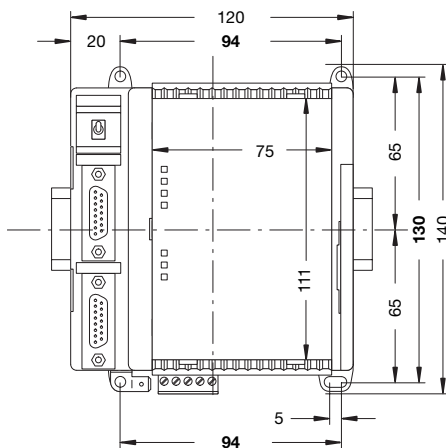
### Central Units series 90



W x H x D [mm]	240 x 140 x 85
W x H x D [inches]	9,45 x 5,51 x 3,35
Mounting	35 mm – DIN rail acc. to DIN EN 50 022 or screw mounting

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

### Communication modules series 90

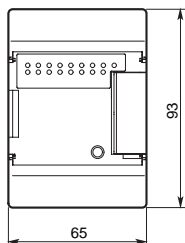


W x H x D [mm]	120 x 140 x 85
W x H x D [inches]	4,72 x 5,51 x 3,35
Mounting	35 mm – DIN rail acc. to DIN EN 50 022 or screw mounting

07KP90, 07KP93

## Approximate dimensions

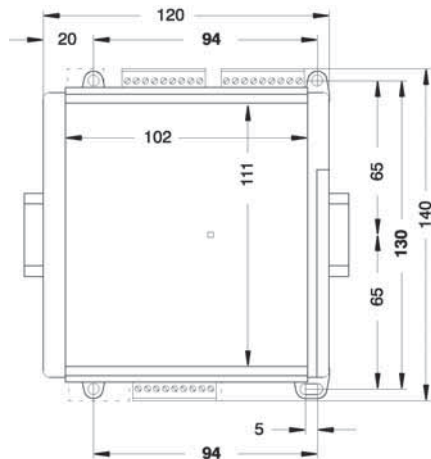
### 2 I/O modules and communication modules series 40..50



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

W x H x D [mm]	65 x 93 x 84,5
W x H x D [inches]	2,56 x 3,66 x 3,33
Mounting	35 mm – DIN rail acc. to DIN EN 50022 or screw mounting

### I/O modules series 90



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

W x H x D [mm]	120 x 140 x 85
W x H x D [inches]	4,72 x 5,51 x 3,35
Mounting	35 mm – DIN rail acc. to DIN EN 50022 or screw mounting