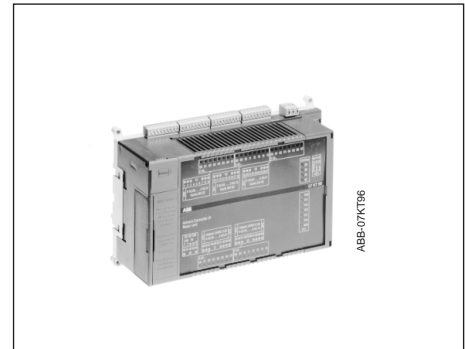
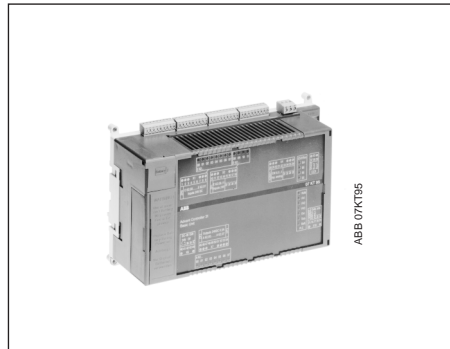


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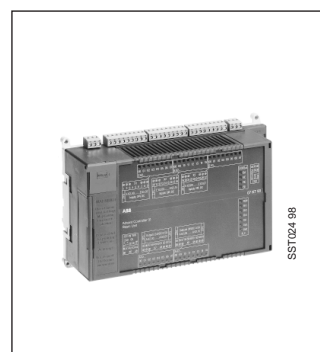
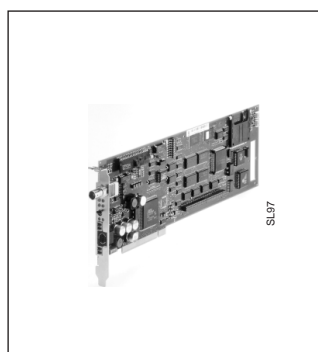
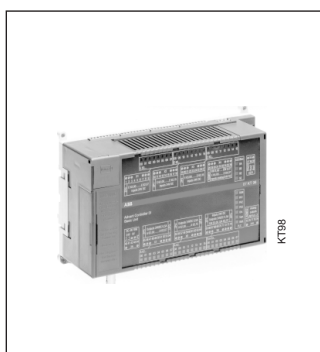
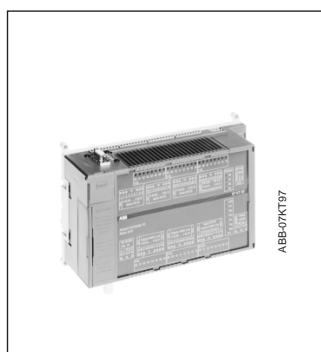
Central units



AC 31

Details	Series 90 Central unit 07 KT 95	Series 90 Central unit 07 KT 96
CS 31 - Field bus	Yes	Yes
Program memory	480 kByte Flash EPROM and RAM	480 kByte Flash EPROM and RAM
Plug-in memory	Smart Media Card (flash) For data storage, to reload the SPS-program	Smart Media Card (flash) For data storage, to reload the SPS-program
Cycle time for 1 Kbyte 100 % binary values 65% binary values and 35% words	— 0.22 ms	0.22 ms
Number of inputs/outputs Integral DI/DO DI/DO max. Integral AI/AO AI/AO max.	12 DI and 8 DO 1012 in total 4 AI / 12 AO 228 AI / 226 AO	24 DI and 14 DO 1032 in total 448 AI / AO 224 AI / 224 AO
Data buffer (selectable)	Exchangeable battery	Exchangeable battery
Real-time clock	Yes	Yes
Programming system	907AC1131	907AC1131
Program execution	cyclic, time controlled Multitasking (20 Tasks)	cyclic, time controlled Multitasking (20 Tasks)
User program protection	Password	Password
Data memory (bit) Words (16 bit) Double words (32 bit) Sequencers (of 16 sequences) (All output variables, binary or analogue, can be used as variables)	8192 8192 1024 256 256 k Variables of wich 16 k RETAIN	8192 8192 1024 256 256 k Variables of wich 16 k RETAIN
Timers	Unrestricted	Unrestricted
Counters	Unrestricted	Unrestricted
Fast counters (Digital inputs used as counter inputs)	1 to 2 (various operating modes, max. 50 kHz)	1 to 2 (various operating modes, max. 50 kHz)
Special functions	Protocols MODBUS®, PI and PID controllers, ASCII communication 32 Bit arithmetic Floating Point Arithmetic	Protocols MODBUS®, PI and PID controllers ASCII communication 32 bit arithmetic, Floating Point Arithmetic
Connections	Withdrawable terminal blocks with screw terminals	Withdrawable terminal blocks with screw terminals
Mounting	With or without DIN rail	With or without DIN rail

Central units

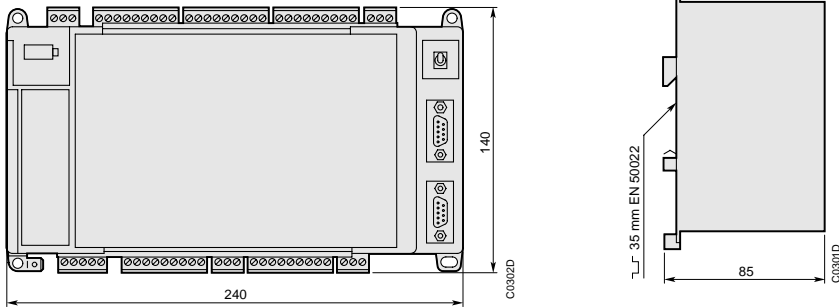


Series 90 Central unit 07 KT 97	Series 90 Central unit 07 KT 98	Series 90 Central unit 07 SL 97	Series 90 Central unit 07 KT 93-S
Yes	Yes	Yes	Yes
480 kByte Flash EPROM and RAM	1000 kByte Flash EPROM and RAM	480 kByte Flash EPROM and RAM	56 KByte Flash EPROM and RAM
Smart Media Card (Flash). For data storage, to reload the SPS-program	Smart Media Card (Flash). For data storage, to reload the SPS-program	Smart Media Card (Flash) For data storage, to reload the SPS-program	—
0.22 ms	0.07 ms	0.22 ms	0.7 ms
24 DI, 16 DO and 8 DC 1040 in total 8 AI and 4 AO 232 AI / 228 AO	24 DI, 16 DO and 8 DC 1040 in total 8 AI and 4 AO 232 AI / 228 AO	- 992 DI / DO - 224 AI / 224 AO	24 DI and 16 DO 1032 in total 192 AI / AO
Exchangeable battery	Exchangeable battery	Exchangeable battery	Exchangeable battery
Yes	Yes	Yes	Yes
907AC1131	907AC1131	907AC1131	907PC331
cyclic, time controlled Multitasking (20 Tasks)	cyclic, time controlled Multitasking (20 Tasks)	cyclic, time controlled Multitasking (20 Tasks)	1 Task
Password	Password	Password	Password
8192 8192 1024 256 256 k Variables of wich 16 k RETAIN	8192 8192 1024 256 1 MB Variables +256 k RETAIN	8192 8192 1024 256 256 k Variables of wich 16 k RETAIN	4096 4096 512 128 - -
Unrestricted	Unrestricted	Unrestricted	Unrestricted (80 simultaneously)
Unrestricted	Unrestricted	Unrestricted	Unrestricted
1 to 2 (various operating modes, max. 50 kHz)	1 to 2 (various operating modes, max. 50 kHz)	—	1 (10 kHz)
Protocols such as Profibus DP, ARCNET®, MODBUS®, PI and PID controllers, 32 bit arithmetic, ASCII communication Floating Point Arithmetic	Protocols such as PDnet, ARCNET®, MODBUS®, PI and PID controllers, 32 bit arithmetic, ASCII communication Floating Point Arithmetic	Protocols such as ARCNET®, MODBUS®, integrated Profibus DP or DeviceNet as optional communication processors PI and PID controllers, 32 bit arithmetic, ASCII communication	Safety-orientated control for the additional programming of safety functions up to AK4 (DIN V 19250) and category 3 (EN 954). Protocols PDnet, MODBUS® PI and PID controllers, ASCII communication
Withdrawable terminal blocks with screw terminals	Withdrawable terminal blocks with screw terminals	Withdrawable terminal blocks with screw terminals	Withdrawable terminal blocks with screw terminals
With or without DIN rail	With or without DIN rail	im PCI-Slot (fullsize)	With or without DIN rail

Dimension drawings

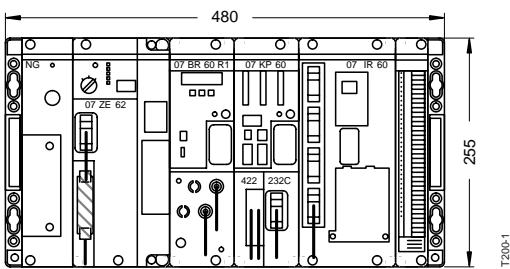
Central units

Advant Controller Series 90

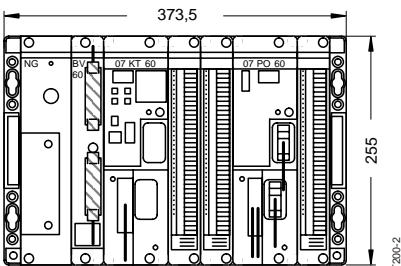


07 KR 91*, 07 KT 92/93/94, 07 KT 93-S and 07 KT 95, 07 KT 96, 07 KT 97 and 07 KT 98
 * Unit with 1 serial port (COM1)

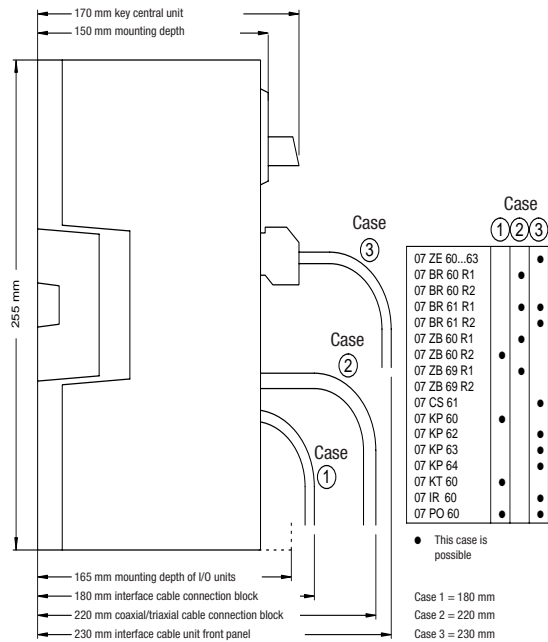
ABB Procontic T200



07 BT 61, 07 BE 61



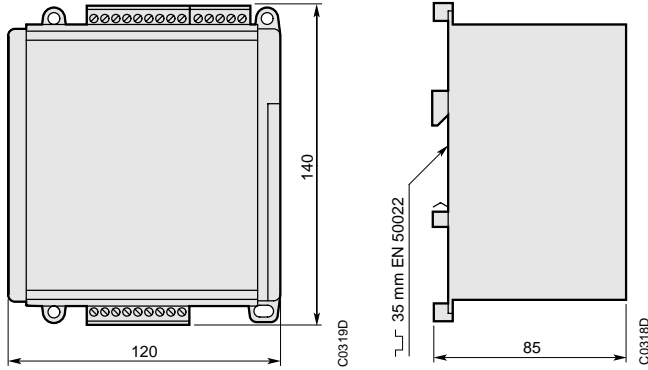
07 BT 62, 07 BE 62



Side view of all
 T200 components incl. I/O units

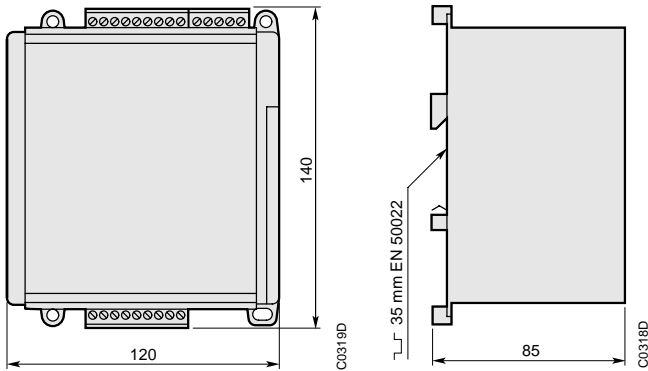
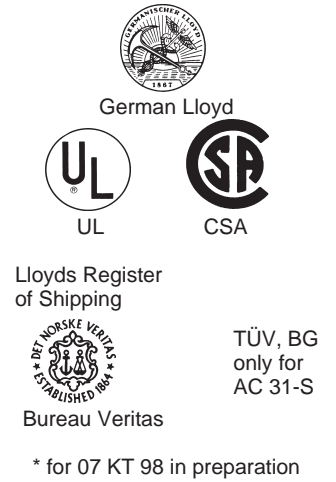
Dimension drawings

I/O Modules



07 DI 92, 07 DC 91/92, 07 AI 91,
07 AC 91, 07 DO 90-S, 07 DI 90-S, 07 AI 90-S

Certifications

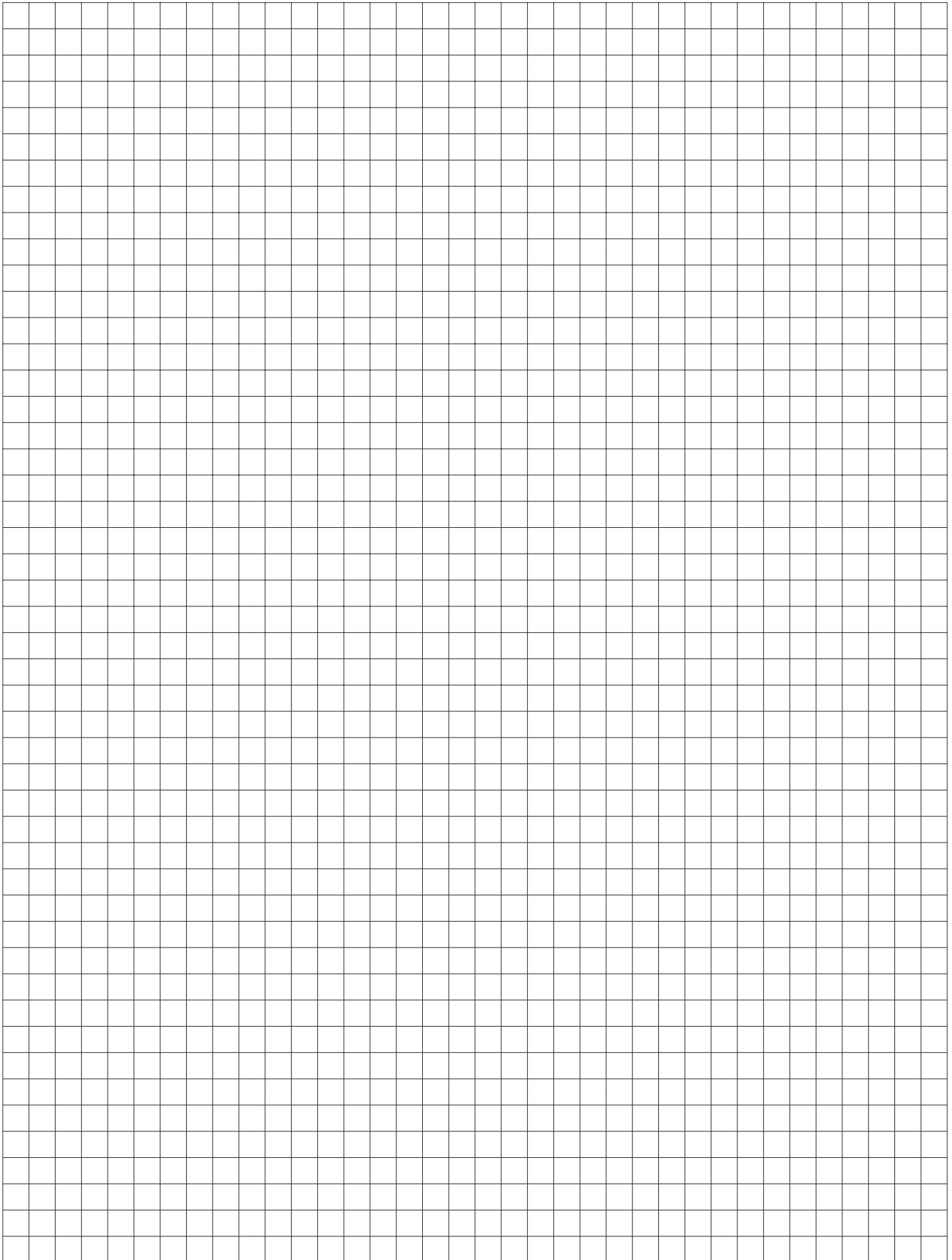


07 EB 90-S,
07 AB 90-S,
07 EA 90-S



TÜV, BG
only for
T 200-S

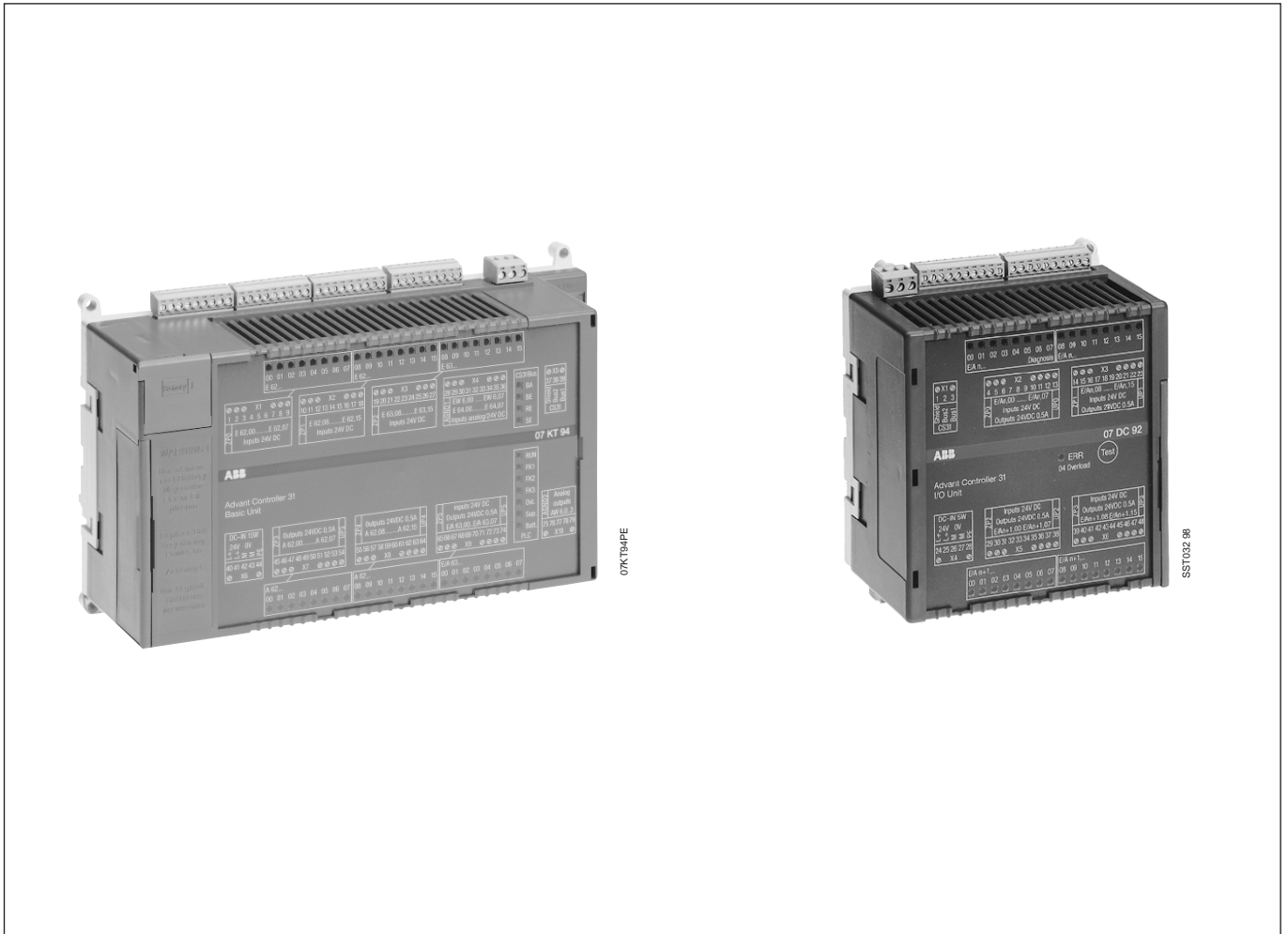
Notes





Advant Controller 31

Distributed, intelligent automation



The Advant Controller 31*) is a modular-designed, programmable control system. The series 90 units can be used in a distributed structure.

- Cable-saving system
Today's open-loop and closed-loop control systems operate ever faster and are becoming more powerful, but also more complicated. The number of units connected to the central unit is constantly increasing: - contactors, relays, circuit breakers, transducers, push-buttons, indicator lamps and intelligent preprocessors. Connection of these units means increased wiring complexity. The Advant Controller 31 eliminates this disadvantage and allows the wiring complexity for the control cables to be reduced by up to 80%.
- Extensive diagnosis
The Advant Controller 31 reliably detects, locates and displays errors of input and output signals, whether they are discontinuity, overload or short-circuit. The functions of the CPU and system bus are, of course, monitored continuously.

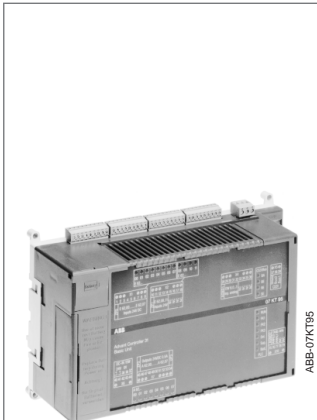
- Economical solution
Not only saving on cables, but also cost cutting at the planning and installation stage make the Advant Controller 31 a system featuring substantial time and cost advantages.
- Easy modification and expansion of the system
On the series 90 modules, the plug connectors are of plug-in design. This means that the modules can be exchanged without the need for rewiring.

*) Former name of control family: ABB Procontic CS31

Advant Controller 31 - Series 90

Distributed, intelligent automation

Ordering details



07 KT 95

ABB-07KT95

Series 90 automation units (programming software 907 AC 1131)

Automation units with on board in-/outputs, distributed expansion capability up to approximately 1000 E/A, with RAM and FLASH-EPROM, real-time clock, interface to the CS31 field bus, online program modification, bit, word and double word processing, isolated; 24 V DC digital inputs, transistor (T) 24 V DC, 0,5 A; analogue inputs, 12 bit resolution, +/- 10 V, 0...20 mA, 4...20 mA, also for 07 KT 97/98 +/-5 V, -50°C ... +40°C, -30 °C ... +70°C or to be used as digital I/Os; analogue outputs, 12 bit resolution, +/-10 V, also for 07 KT 97/98 0...20 mA, 4...20 mA. Power supply 24 V DC. 2 serial interfaces, the second is configurable for ASCII or MODBUS® communication.

Optional Smart Media Card for data storage and user program back-up (see Accessories).

Integral inputs *)	Integral outputs *)	Counter inputs	Progr. Memory	Type	Order code	Weight/ piece kg
12 DI, 4 AI	8 DO, T, 2 AO	2	480 kB	07 KT 95	GJR 525 2800 R 0100	1.3
24 DI	16 DO, T	2	480 kB	07 KT 96	GJR 525 2900 R 0100	1.3
24 DI, 8 DC, 8 AI	16 DO, T, 4 AO	2	480 kB	07 KT 97	GJR 525 3000 R 0100	1.3

*) AI - analogue inputs, AO - analogue outputs, DI - digital inputs, DO - digital outputs, DC - digital, configurable as DI or DO

Series 90 automation units with integrated communication processors

Integral inputs *)	Integral outputs *)	Counter inputs	Progr. Memory	Type	Order code	Weight/ piece kg
24 DI, 8 DC 8 AI	16 DO, T, 4 AO	2	480 kB	07 KT 97 Profibus	GJR 525 3000 R 0120	1.3
24 DI, 8 DC, 8 AI	16 DO, T, 4 AO	2	480 kB	07 KT 97 ARCNET	GJR 525 3000 R 0160	1.3
24 DI, 8 DC, 8 AI	16 DO, T, 4 AO	2	480 kB	07 KT 97 ARCNET Profibus	GJR 525 3000 R 0162	1.3
24 DI, 8 DC, 8 AI	16 DO, T 4 AO	2	1000 kB	07 KT 98 ARCNET	GJR 525 3100 R 0160	1.3

ABB-07KT97

07 KT 97

Automation unit as PC slot board (PCI full size)

Distributed extension capacity up to approximately 1000 I/O, with RAM and FLASH-EPROM, real-time clock, interface to the CS31 field bus, online program modification, bit, word and double word processing, power supply 24 V DC, 1 serial interface, configurable for programming/communication, integral ARCNET interface, PC operating system Windows NT. Optional Smart Media Card for data storage and user program back-up (see Accessories).

Description	Progr. memory	Type	Order code	Weight / piece kg
07 SL 97 with ARCNET networking	480 kB	07 SL 97-ARCNET	GJR 525 3400 R 0160	1.3
07 SL 97 with ARCNET and Profibus DP	480 kB	07 SL 97-ARCNET-Profibus	GJR 525 3400 R 0162	1.3
07 SL 97 with ARCNET and DeviceNet	480 kB	07 SL 97-ARCNET-DeviceNet	GJR 525 3400 R 0165	1.3

Programming software 907 AC 1131

Programming and test software in accordance with IEC 6 1131-3 for AC 31 series 40 .. 50* and series 90 (as of 07 KT 95 ...98 and 07 SL 97) in FDB, LD, IL, SFD, ST sampling trace, offline simulation, integral visualization, for Windows 95/98/NT, on CD-ROM incl. documentation.

Description	Language	Type	Order code	Weight / piece kg
Programming and test software	German	907 AC 1131	GJP 520 6900 R 0102	
Programming and test software	English	907 AC 1131	GJP 520 7000 R 0102	

* system-specific functions

Advant Controller 31 - Series 90

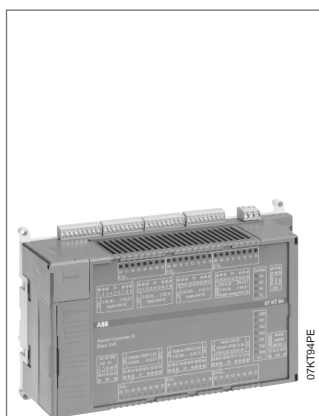
Distributed, intelligent automation

Ordering details

Series 90 central units overview

	07 KR 91 R0353	07 KR 91 R0303	07 KT 92 R0202	07 KT 92 R0262	07 KT 93 R0101	07 KT 93 R0171	07 KT 93 R2171 ^{*)}	07 KT 94 R0101	07 KT 94 R0161
Digital inputs 24 V DC	20	20	12	12	24	24	24	24	24
Digital outputs, transistor	-	-	8	8	16	16	16	16	16
Digital outputs, relay	12	12	-	-	-	-	-	-	-
Configurable, digital I/O-channels, inputs 24 V/outputs transistor	-	-	-	-	-	-	-	8	8
Analogue inputs 12 Bit, +/- 10 V, 0/4 ... 20 mA	-	-	4	4	-	-	-	-	-
Analogue inputs 12 Bit, +/- 5 V, +/- 10 V, 0/4 ... 20 mA, PT100	-	-	-	-	-	-	-	8	8
Analogue outputs 12 Bit, +/- 10 V	-	-	2	2	-	-	-	-	-
Analogue outputs 12 Bit, +/- 10 V, 0/4 ... 20 mA	-	-	-	-	-	-	-	4	4
Counter inputs 10 KHz ^{*)}	1	1	1	1	1	1	1	-	-
Counter inputs U/D 50 KHz	-	-	-	-	-	-	-	2	2
1. serial port (RS232) programming or comm. ASCII	1	1	1	1	1	1	1	1	1
2. serial ports (RS232), communication ASCII(A)/MODBUS(M)	-	-	A	A	A	A	A	A/M	A/M
ARCNET-interface	-	-	-	X	-	X	X	-	X
Safety-related automation unit	-	-	-	-	-	-	X	-	-

^{*)} included in digital input ^{*)} Digital I/O not safety related; for safety related I/O see I/O units



07 KT 94

Series 90 automation units (programming software 907PC33/331)

Distribution expansion capability up to approx. 1000 I/O, with RAM and FLASH-EPROM, real-time clock, interface to CS31-Field bus, online program modification, bit, word and double word processing,

Integral inputs (*)	Integral outputs (*)	Counter inputs	Progr.-mem-ory	Power supply in V	Serial port	Type	Order code	Wt. / piece kg
20 DI	12 DO, R	1	28 kB	24 DC	1	07 KR 91	GJR 525 0000 R 0353	1.3
20 DI	12, DO, R	1	28 kB	230 AC	1	07 KR 91	GJR 525 0000 R 0303	1.6
12 DI, 4 AI	8 DO, T, 2 AO	1	28 kB	24 DC	2	07 KT 92	GJR 525 0500 R 0202	1.3
12 DI, 4 AI	8 DO, T, 2 AO	1	28 kB	24 DC	2	07 KT 92	GJR 525 0500 R 0262	1.6
24 DI	16 DO, T	1	28 kB	24 DC	2	07 KT 93	GJR 525 1300 R 0101	1.3
24 DI	16 DO, T	1	56 kB	24 DC	2	07 KT 93	GJR 525 1300 R 0171	1.6
24 DI	16 DO, T	1	56 kB	24 DC	2	07 KT 93-S	GJR 525 1300 R 2171	1.6
24 DI, 8 DC, 8 AI	16 DO, T, 4 AO	2	240 kB	24 DC	2	07 KT 94	GJR 525 2100 R 0101	1.3
24 DI, 8 DC, 8 AI	16 DO, T, 4 AO	2	240 kB	24 DC	2	07 KT 94	GJR 525 2100 R 0161	1.6

For buffer-battery and memory board see Accessories

^{*)} AI - analogue inputs AO - analogue outputs, DI - digital inputs, DO - digital outputs, DC - digital, configurable as DI or DO

IMPORTANT: Central units 07 KR 91, 07 KT 92 and 07 KT 93 are discontinued and are delivered without real time clock under R 9xxx without notice.

For successor models see under "Series 90 automation units for programming software 907 AC 1131".

Programming software 907PC33/331

Description	Language	Type	Order-Code	Wt. / piece kg
Programming and test software, general description of programming environment excl. software (for SW see 907 PC 331)	German English	907 PC 33 907 PC 33	GJP 520 3900 R 0302 GJP 520 4000 R 0302	
Programming and test software in IL, FBD, LD system-specific section incl. SW on disk. Documentation	German English	907 PC 331 907 PC 331	GJP 520 4500 R 0402 GJP 520 4600 R 0402	
Supp.package, safety functions for 07KT93-S incl. safety manual	German English	907 PC 338 907 PC 338	GJP 520 6700 R 0102 GJP 520 6800 R 0102	

Programming cable

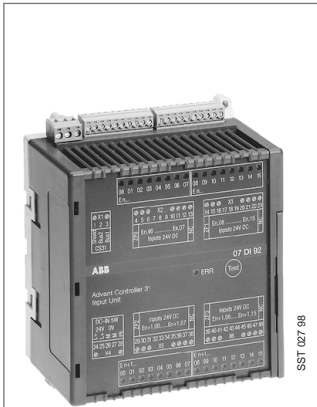
Cable for connecting Series 39 and 90 automation units to PC, cable length 5 m

Description	Connector	Type	Order code	Wt. / piece kg
Programming cable	PC-Sub D, 25 pin	07 SK 90	GJR 525 0200 R 0001	0.3

Advant Controller 31 - Series 90

Distributed, intelligent automation

Ordering details



07 DI 92

SST 027 98



07 DK 93-I

SST 028 98



07 DC 91

SST 028 98



07 AI 91

SST 029 98

Distributed, digital input modules for Series 30, 50, 90 and T200 (via 07 CS 61)

Power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus

Integral inputs (DI)	Input voltage	Details of signal	Type	Order code	Wt. / piece kg
32	24 V DC	Electr. isolated, input delay 7 ms	07 DI 92	GJR 525 2400 R 0101	0.25
16	24 V DC	Input delay 1 ms	07 DI 93-I ¹⁾	GJV 307 5613 R 0202	0.75
8	24 V DC	Input delay 5 ms	07 DI 90-S ²⁾	GJR 525 0900 R 0202	0.25

¹⁾ Enclosure IP67, for connectors see Accessories
²⁾ Only in conjunction with 07 KT 93-S and T200-S via 07 CS 31 bus

Distributed, digital output modules for Series 30, 50, 90 and T200 (via 07 CS 61)

Power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus

Integral outputs (DO)	Output voltage	Details of signal	Type	Order code	Wt. / piece kg
8	24 V DC	Short-circuit and overload-proof	07 DO 93-I ¹⁾	GJV 307 5611 R 0202	0.75
8, Transistor	24 V DC / 0.5 A		07 DO90-S ²⁾	GJR 525 0800 R 0202	0.25

¹⁾ Enclosure IP67, for connectors see Accessories
²⁾ Only in conjunction with 07 KT 93-S and T200-S via 07 CS 31 bus

Distributed, digital input/output modules for Series 30, 50, 90 and T200 (via 07CS61)

Integral CS31 bus connection, electrically isolated from bus, input delay 1 ms, short-circuit-proof and overload-proof

Integral inputs (DI) or outputs (DO) signal	Input/output voltage	Power supply in V	Type	Order code	Wt. / piece kg
8 DI / 4 DO	24 V DC / 24 V DC, 2 A	24 DC	07 DK 93-I ¹⁾	GJV 307 5623 R 0202	0.75

¹⁾ Enclosure IP67, for connectors see Accessories

Distributed, digital, configurable input/output modules for Series 30, 50, 90 and T200 (via 07CS61)

Power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus, input delay 7 ms, short-circuit-proof, configurable for input or output signals, transistor outputs.

Integral inputs (DI) or outputs (DO)	Input/output voltage	Output current max.	Type	Order code	Wt. / piece kg
16 DI / 8 DO / 8 DC	24 V DC	0.5 A	07 DC 91	GJR 525 1400 R 0202	0.75
32 DC*)	24 V DC	0.5 A	07 DC 92	GJR 525 2200 R 0101	0.75

*) Electrical isolation in the 8 group

Distributed, analogue input modules for Series 90 and T200 (via 07 CS 61)

Power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus.

Integral inputs (AI)	Input range	Resolution	Type	Order code	Wt. / piece kg
8	PT100, +/-50mV, +/-500mV, +/-500mV +/-5V, +/-10V, 0...20mA	12 bit	07 AI 91	GJR 525 1600 R 0202	0.25
4	4...20 mA signals	12 bit	07 AI 90-S ²⁾	GJR 525 1200 R 0202	0.25

²⁾ Only in conjunction with 07 KT 93-S and T200-S via 07 CS 31 bus

Advant Controller 31 - Series 90

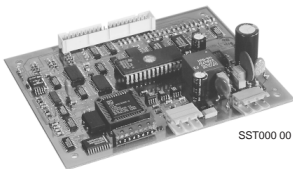
Distributed, intelligent automation

Ordering details



07 AC 91

SST 003 98



07 TC 90

SST000 00

Distributed, analogue input/output modules for Series 30, 50, 90 and T200 (via 07 CS 61)

Power supply 24 V DC, integral CS31 bus connection, configurable, electrically isolated from bus, 2 operating modes

Integral inputs (AI) outputs (AO)	Voltage in V	Current in mA	Resolution in Bit	Operating mode	Type	Order code	Wt. / piece kg
16 AI / AO*	0...10	0...20 / 4...20	8	1*)			
8 AI / 8 AO*	+/-10	0...20 / 4...20	12	2*)	07 AC 91	GJR 525 2300 R 0101	0.25

* Operating mode 1 : 16 analogue channels can be configured in pairs as inputs or outputs
 Operating mode 2 : 8 analogue inputs and 8 analogue outputs fix configuration

Keyboard controller for Series 30, 50 and 90, T200 (via 07 CS 61)

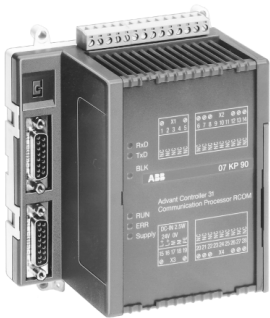
Keyboard controller for connecting operating panels with up to 32 keys/switches and 32 LEDs to the CS31 bus, power supply 24 V DC, without housing

Description	Details	Type	Order code	Wt. / piece kg
Keyboard controller	Replaces TCK64	07 TC 90	GJR 525 1800 R 0101	0.1
Keyboard controller	New: with updated electronics, smaller installation dimensions no connection compatibility w. 07TC90	07 TC 91	GJR 525 2700 R 0101	0.1

Advant Controller 31 - Serie 90

Distributed, intelligent automation

Ordering details



07 KP 90

Overview of communication modules

Communication modules for networking, 24 V DC prime power, 07 KT 95, 07 KT 96, 07 KT 97 and 07 KT 98 programmable with 907 PC 331

	07 KT 95 R 0353	07 KT 96	07 KT 97 all rubrics*)	07 KT 98**)
07 KP 90	X	X	X	—
07 KP 93	X	X	X	—
07 KP 94	—	—	—	—

*) 07 KT 97 rubric R 0160/R 0162 with integrated ARCNET interface
 07 KT 97 rubric R 0120 /R 0162 with integrated Profibus DP interface
 **) 07 KT 98 with integrated ARCNET interface

Overview of communication protocols

RCOM	Communication module for remote data transmission via dedicated or dialup lines, 1 RS232/RS485 connection for RCOM 1 RS232 connection for programming and diagnosis	07 KP 90
MODBUS®	Communication module for MODBUS, can either be used as 1 x MODBUS Master and 1 x MODBUS Slave or 2 x MODBUS Slave, interfaces can be used as RS232/RS485	07 KP 93
Master-Field-Bus (MFB)*	Communication module for connecting AC31 to the ABB Master-Field-Bus (MFB), communication with the MFB via RS485 interface	07 KP 94
Profibus DP	On-board Profibus DP interface 9-pole Sub D	see AC31-automation units
ARCNET®	On-board ARCNET interface for connection to the ARCNET network via KOAX cable	see AC31-automation units

Communication modules for networking

Protocol	Software	Software to be ordered separately	Type	Order code	Weight / piece kg
RCOM	907 KP 90	yes	07 KP 90	GJR 525 1000 R 0303	0.45
MODBUS	on request	yes (free)	07 KP 93	GJR 525 3200 R 1161	0.4
MFB*	907 KP 94	yes	07 KP 94	GJR 525 1700 R 0101	0.4

Software package including documentation and CE library

Software	Protocol	Unit	Language	Type	Order code	Weight / piece kg
907 KP 90	RCOM	07 KP 90	German	907 KP 90	GJP 520 5200 R 0202	
			English	907 KP 90	GJP 520 5100 R 0202	
907 KP 94	MFB*	07 KP 94	German	907 KP 94	GJP 520 6100 R 0102	
			English	907 KP 94	GJP 520 6200 R 0102	

* Discontinued types

Advant Controller 31 - Series 90

Distributed, intelligent automation

Ordering details

Accessories for Series 90 modules

Description	Can be used for	Details	Type	Order code	Wt. / piece kg
Smart Media Card	07 KT 94, 95, 96, 97, 98		07 MC 90	GJR 525 2600 R 0101	
Surge-Moduls	07 SM 90	24 V DC	07 LE 90	GJR 525 1900 R 0101	0.1
Lithium battery			07 LE 90	GJR 525 0700 R 0001	
Plug 5 pin ¹⁾	Connection for single I/Os	M12 straight		GJV 307 5617 R 0001	
Plug 5 pin ¹⁾	Connection for single I/Os	M12 angled		GJV 307 5618 R 0001	
Plug 4 pin ¹⁾	Double input	M12 straight		GJV 307 5624 R 0001	
Adapter f. 07SK90	07KP90R303 and 07MK92	15 pin to 9 pin		GJV 307 3915 R 0001	
Interface cable incl. adapter	07 KP 62, 07 KT 94 with operator panel (passive mode)	5 m long	07 SK 91	GJV 525 0300 R 0001	0.3
System cable for modem	07 KT 94-98 and 07 SL 97	25 pol.	07 SK 92	GJV 525 0400 R 0001	0.3
Programming cable	07 SL 97	MIN DIN PC-SUB D	07 SK 93	GJV 525 3500 R 0001	0.3
Communication cable	07 SL 97	MIN DIN PC-SUB D	07 SK 93	GJV 525 3600 R 0001	0.3

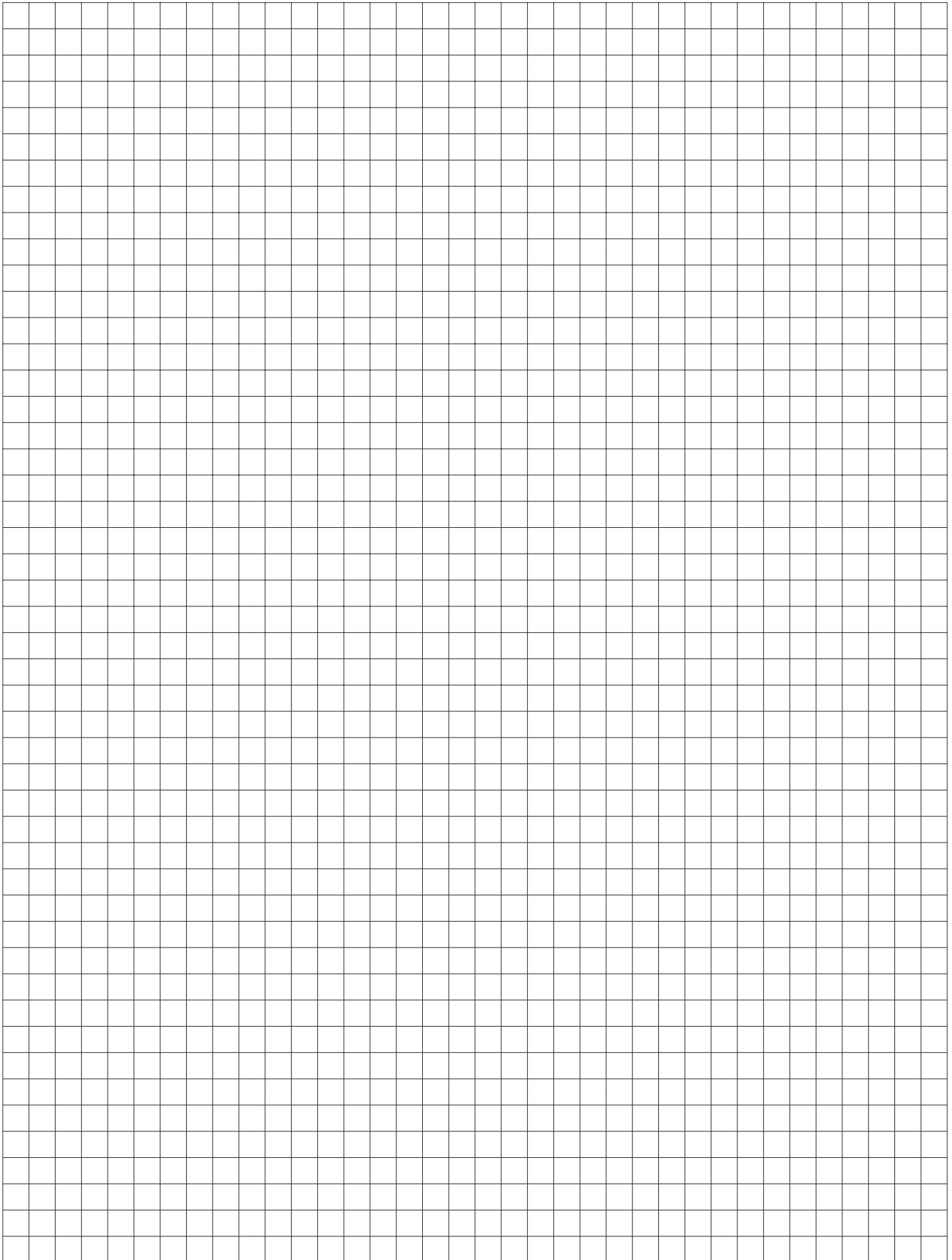
Documentation for Series 90 modules

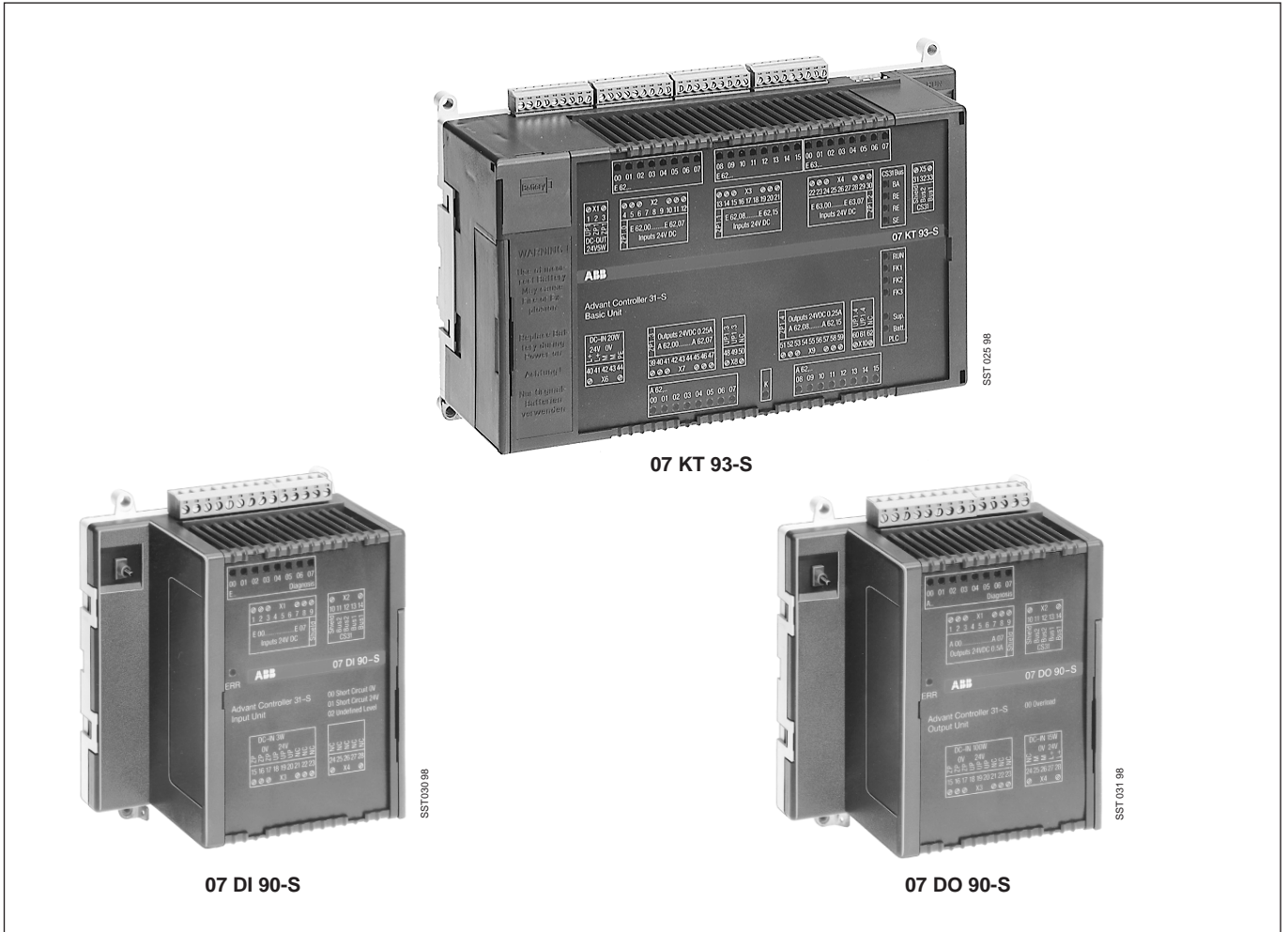
Description	Language	Type	Order code	Wt. / in kg
Documentation for ABB Procontic CS 31	German English		GATS 131 699 R 1002 FPTN 440 004 R 2001	
Complete hardware description, Project planning and operating instructions	German English		1SAC 131 699 R 0101 1SAC 131 699 R 0201	
Complete hard- and software description, Project planning and operating instructions for 907 AC 1131	German English		1SAC 133 947 R 0101 1SAC 133 947 R 0201	

Power supply units

Description	Details	Type	Order code	Wt. / piece kg
Power pack	115 V AC, 230 V AC /24 V DC; 2.5A	07 NG 32	GJV 307 5601 R 0001	2.3
Power pack	15 V AC, 230 V AC /24 V DC; 5A	07 NG 34	GJV 307 5602 R 0001	4.2
Power pack	230 V AC (Δ),400 V AC (Δ) / 24 V DC; 10A	07 NG 35	GJV 307 5603 R 0001	6.0
Power pack	230 V AC (Δ),400 V AC (Δ) / 24 V DC; 20A	07 NG 36	GJV 307 5604 R 0001	15.0

Notes





Safety for man, machine and the environment

Complying with safety requirements at the highest technical level - that is the purpose of the Advant Controller 31-S. AC31-S is a German Technical Inspection Authority (TÜV) and BG-certified, safety-orientated controller for programming safety and operating functions, i.e. one controller for all functions of a machine or plant.

The inputs and outputs for the safety signals are designed to be redundant internally, and the safety functions in the central unit are programmed by certified user function blocks. All devices of the AC31 family can be used as inputs and outputs for the operating signals. The I/O modules are connected via the CS31 field bus to the central unit 07KT93-S.

Certification is based, amongst other things, on the following Standards (please refer to the certification report for detailed information; we will be pleased to send you this report on request):

- DIN V 19250: Fundamental Safety Considerations for Measurement and Control Safety Devices, **Requirement Category (AK) 4**.
- IEC 65A: Software for computers in the application of industrial safety related systems, system aspects, **Safety Integrity Level (SIL) 2**

- EN954: Machine Safety, Category 3
- EN 60204-1: Machine Safety - Electrical Equipment of Machines Part 1
- DIN VDE 0116: Electrical Equipment of Firing Systems. Requirements Applicable to Safety-Orientated Electronic Components
- DIN EN 298: Automatic Burner Control Units for Gas Burners and Gas Appliances with or without Fan
- NE 31: Plant Safety with Process Control Engineering Equipment, **Class A1**

Typical fields of application include the following:

- Firing systems, gas appliances
- Storage and materials-handling systems, mixing systems
- Construction and container cranes
- Plant construction, environmental engineering
- Traffic signal installations, tunnel construction

Advant Controller 31-S

Ordering details



SST 024 98

07 KT 93-S

Safety-related automation unit for programming software 907 PC 33/331/338

Central unit for the programming of safety and operating functions, distributed, 992 I/Os in total, with RAM and FLASH-EPROM, real-time clock, interface to CS31 field bus, second serial port for communication (ASCII), programming software 907 PC 33/331 additional safety modules 907 PC 338, integral ARCNET interface, online program modification, bit and word processing, electrically isolated, 24 V DC digital inputs, 1 of which can be used optionally as 50 kHz counter input, electrically isolated, input delay 7 ms, digital outputs, transistor, 24 V DC, 0.25 A, electrically isolated, short-circuit-proof

Integral inputs DI ¹⁾	Integral outputs DO ¹⁾	Counter inputs	Progr. memory	Power supply in V	Serial port	Type	Order code		Wt. / piece kg
24	16	1	56 kB	24 DC	2	07 KT 93-S	GJR 525 1300 R 2171		1.6

For buffer battery, see Accessories

¹⁾ Not safety-orientated

Programming software

Description	Language	Type	Order code		Wt. / piece kg
Programming and test software, General description of programming environment excl. software (for SW see 907 PC 331)	German	907 PC 33	GJP 520 3900 R 0302		
	English	907 PC 33	GJP 520 4000 R 0302		
Programming and test software in IL, FBD, LD, system-specific part incl. software on disk, Documentation	German	907 PC 331	GJP 520 4500 R 0402		
	English	907 PC 331	GJP 520 4600 R 0402		
Additional package - safety functions for 07KT93-S incl. safety manual	German	907 PC 338	GJP 520 6700 R 0102		
	English	907 PC 338	GJP 520 6800 R 0102		

Programming cable

Cable for connecting Series 30 and 90 automation systems to PC, cable length 5 m

Description	Connector	Type	Order code		Wt. / piece kg
Programming cable	PC-Sub D, 25pin	07 SK 90	GJR 525 0200 R 0001		0.3

Safety-related input/output modules

Distributed, internally redundant I/O modules, safety-related, power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus

Integral inputs/ outputs	Input/output voltage/ range	Details	Res-olution	Input delay	Type	Order code		Wt. / piece kg
8 digital I	24 V DC			5 ms	07 DI 90-S	GJR 525 0900 R 0202		0.25
8 digital O	24 V DC/0.5 A	Transistor			07 DO 90-S	GJR 525 0800 R 0202		0.25
4 analogue I	4...20 mA		12 bit		07 AI 90-S	GJR 525 1200 R 0202		0.25



SST030 88

07 DI 90-S

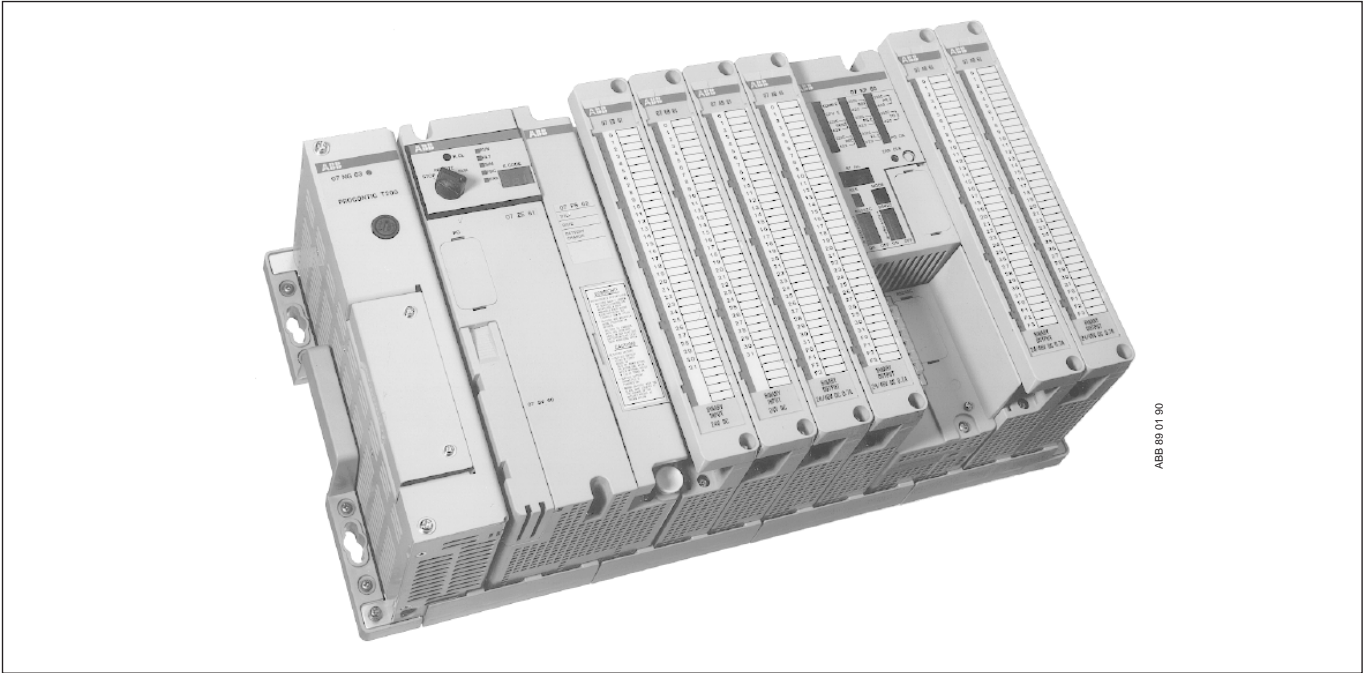


ABB 89 01 90

The system

The ABB Procontic T200 programmable logic controller is a modular control system meeting the requirements of the latest automation technology, today and in the future, at the highest technical level.

Due to its modular system and its wide range of units, the ABB Procontic T200 can be configured for any application. The system's simple handling and project planning save time and money.

The ABB Procontic T200 has been fully integrated into the AC31 family. It features a convenient programming technique (907 PC 332) with IBM-compatible PC, has facilities for efficient process display and operation, and can be connected to the ABB Procontic buses, PDnet, ZB20, CS31 and MODBUS.

ABB Procontic systems are designed for rough industrial applications and are therefore sturdy and immune to interference (EMC). Extensive diagnostic functions of the ABB Procontic T200 simplify commissioning and troubleshooting in the plant.

In the simplest case, an ABB Procontic T200 controller consists of a subrack, a central unit, a program memory, several input/output units and a power supply unit for internal power supply.

Expansion subracks - centrally (in the immediate vicinity) or distributed - allow generous space for further input/output modules. Four central units, classified according to expansion capability, and a number of preprocessors and interface units allow the ABB Procontic T200 to be optimally matched to the respective control task.

Powerful serial bus systems connect in different areas

- The T200 exchanges process data with the other ABB systems and third-party controls via PDnet.
- The ABB Procontic T200 Bus ZB20 has been designed specifically for data exchange between ABB Procontic T200 stations and, in addition to process data, can also handle programs and parameters.
- Telecontrol applications are networked with RCOM.
- Simple, cross-manufacturer networking with MODBUS.
- CS31 field bus

ABB Procontic T 200

Controller in subrack

Ordering details

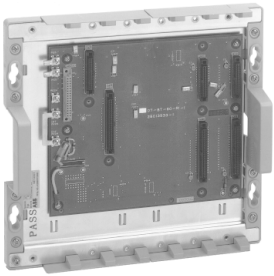


ABB 89 0227

07 BT 61

Subracks

Basic/Expansion subracks for T200 components

Power supply unit slot	Central unit slot	Bus coupler slot	I/O slot	Type	Order code	Wt. / piece kg
1	1		5	07 BT 61	GJV 307 4302 R 0001	1.9
1	1		8	07 BT 62	GJV 307 4303 R 0001	2.5
1		1	7	07 BE 61	GJV 307 4305 R 0001	1.8
1		1	10	07 BE 62	GJV 307 4306 R 0001	2.4

Power supply units

Input voltage	Output voltage	Output current	Type	Order code	Wt. / piece kg
110/220 V AC	5 V DC 24 V DC	4 A 1.5 A	07 NG 61	GJV 307 4311 R 0002	1.3
110/220 V AC	5 V DC 24 V DC	9 A 0.5 A	07 NG 63	GJV 307 4313 R 0002	1.2
24 V DC	5 V DC 24 V DC	4 A 1.5 A	07 NG 66	GJV 307 4315 R 0002	1.2
24 V DC	5 V DC 24 V DC	9 A 0.5 A	07 NG 68	GJV 307 4317 R 0002	1.2

ABB Procontic T200 central units

Central units in subrack, 1 serial port, real-time clock, online program modification

Max. central inputs/ outputs	Subracks max.	Instructions	(Memory in kByte)	Type	Order code	Wt. / piece kg
max. 256	1	7.6 K	(30.4)	07 ZE 60	GJV 307 4320 R0302	0.8
max. 576	2	15.7 K	(62.8)	07 ZE 61*)	GJV 307 4321 R 0302	0.8
max. 1856	6	48.5 K	(194)	07 ZE 62*)	GJV 307 4322 R 0302	1.0
max. 1856	6	15.7 K	(62.8)	07 ZE 63*)	GJV 307 4323 R 0302	0.9

*)In conjunction with 907 PC 336 and safety-orientated I/O units, can be used as a safety-orientated system

Programming software

Description	Language	Type	Order code	Wt. / piece kg
Programming and test software, General description of programming environment excl. software (for SW see 907 PC 332)	German English	907 PC 33 907 PC 33	GJP 520 3900 R 0302 GJP 520 4000 R 0302	
Programming and test software in IL, FBD, LD System-specific part incl. software on disk, Documentation	German English	907 PC 332 907 PC 332	GJP 520 4300 R 0202 GJP 520 4400 R 0202	

07 ZE 61

ABB 89 0396/1

ABB Procontic T 200

Controller in subrack

Ordering details

Programming cables

Cables for connecting automation units 07 ZE 60/61/62/63, 07 BR 61, 07 KP 60 to a PC, cable length 3 m

Description	Plug	Type	Order code	Wt. / piece kg
Programming cable	25-pin	07 SK 61	GJV 307 3906 R 0001	0.2
Programming cable	9-pin	07 SK 62	GJV 307 3907 R 0001	0.2

Program memory

Program memory	Memory-location	Data memory for word flags	Online program modification	Type	Order code	Wt. / piece kg
CMOS-RAM	62.8 kB	16 k	No	07 PS 62	GJV 307 4332 R 0002	0.45
CMOS-RAM	62.8 kB	16 k	Yes	07 PS 62	GJV 307 4332 R 0003	0.5
CMOS-RAM	194 kB	50 k	No	07 PS 63	GJV 307 4333 R 0002	0.5
CMOS-RAM	194 kB	50 k	Yes	07 PS 63	GJV 307 4333 R 0003	0.55
EPROM	62.8 kB	16 k	No	07 PR 62	GJV 307 4336 R 0002	0.5
EPROM	194 kB	50 k	New	07 PR 63	GJV 307 4337 R 0002	0.5

Digital input modules

Digital input modules, electrically isolated with 1 slot, incl. front connector for screw-type terminals

Integral inputs (DI)	Power supply	Input delay max.	Type	Order code	Wt. / piece kg
32	4 V AC/DC	16 ms	07 EB 61	GJV 307 4341 R 0001	0.5
32	24 V DC	1 ms	07 EB 62	GJV 307 4342 R 0001	0.5
16	48 V AC/DC	16 ms	07 EB 63	GJV 307 4343 R 0001	0.45
32	48 V AC/DC	16 ms	07 EB 64	GJV 307 4344 R 0001	0.5
16	110 V AC	16 ms	07 EB 66	GJV 307 4346 R 0001	0.45
8	24 V DC	5 ms	07 EB 90-S ¹⁾	GJR 525 0900 R 0101	0.45

¹⁾ Only in conjunction with 907 PC 336 and central units 07 ZE 61, 07 ZE 62 or 07 ZE 63 via 07 CS 61 bus coupler

Digital output modules

Digital output modules, electrically isolated with 1 slot, incl. front connector for screw-type terminals

Integral outputs (DO)	Power supply	Output loading capacity max.	Type	Order code	Wt. / piece kg
16 Transistor	24/48 V DC	2 A	07 AB 60	GJV 307 4360 R 0001	0.6
32 Transistor	24/48 V DC	0.5 A	07 AB 61	GJV 307 4361 R 0001	0.6
32 Transistor sh-circuit-proof	24 V DC	0.5 A	07 AB 63	GJV 307 4363 R 0001	0.5
16 Relay	240 V AC	2 A	07 AB 67	GJV 307 4364 R 0001	0.6
8 Transistor	24 V DC	0.5 A	07 AB 90-S ¹⁾	GJR 525 0800 R 0101	0.47

¹⁾ Only in conjunction with 907 PC 336 and central units 07 ZE 61, 07 ZE 62 or 07 ZE 63 via 07 CS 61 bus coupler

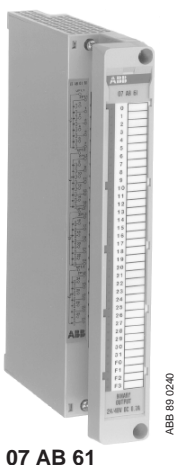
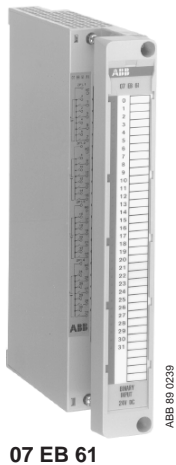


ABB Procontic T 200

Controller in subrack

Ordering details

Analogue input modules

Analogue input modules, electrically isolated with 1 slot, incl. front connector for screw-type terminals

Integral inputs (AI)	Input current range	Input voltage range	Res-olution	Tempera- ture range in °C	Type	Order code	Wt. / piece kg
8	4 - 20 mA		8 bit		07 EA 61	GJV 307 4351 R 0001	0.5
8		-10 to +10 V	12 bit		07 EA 62	GJV 307 4352 R 0001	0.5
8	4 - 20 mA		12 bit		07 EA 63	GJV 307 4353 R 0001	0.5
8	0 - 20 mA		8 bit		07 EA 64	GJV 307 4355 R 0001	0.5
8	0 - 20 mA		12 bit		07 EA 65	GJV 307 4359 R 0001	0.5
8 Pt-100			13 bit	-50 ... 400	07 EA 66	GJV 307 4354 R0001	0.5
8**)			13 bit	0 ... 1600	07 EA 67	GJV 307 4358 R 0001	0.5
4	4 - 20 mA		12 bit		07 EA 90-S ¹⁾	GJR 525 1200 R 0101	0.47

¹⁾ Only in conjunction with 907 PC 336 and central units 07 ZE 61, 07 ZE 62 or 07 ZE 63 via 07 CS 61 bus coupler
Thermocouple inputs Fe-CuNi, Ni-CrNi, Pt Rh-Pt

Analogue output modules

Analogue output modules, electrically isolated with 1 slot, incl. front connector for screw-type terminals

Integral outputs (AO)	Output current range	Output voltage range	Res-olution	Type	Order code	Wt. / piece kg
4		0 - 10 V	8 bit	07 AA 60	GJV 307 4365 R 0001	0.5
4	4 - 20 mA		8 bit	07 AA 61	GJV 307 4366 R 0001	0.5
4		-10 V to +10 V	12 bit	07 AA 62	GJV 307 4367 R 0001	0.5
4	4 - 20 mA		12 bit	07 AA 63	GJV 307 4368 R 0001	0.55
4	0 - 20 mA		8 bit	07 AA 65	GJV 307 4369 R 0001	0.5

Counters

High-speed counter with 1 slot, incl. front connector for screw-type terminal

Counter range	Count frequency	Type	Order code	Wt. / piece kg
16 bit	50 kHz	07 ZG 60	GJV 307 4356 R 0001	0.55



ABB 89 0238

07 EA 61



ABB 89 0235

07 AA 61



ABB 89 0237

07 ZG 60

ABB Procontic T 200

Controller in subrack

Ordering details



ABB 89 0243

07 BV 60



ABB 90 0015

07 BR 60

Module for central expansion

Bus coupler for central I/O expansions without cable, 1 bus coupler slot in expansion subrack

Description	Type	Order code	Wt. / piece kg
Bus coupler	07 BV 60	GJV 307 4370 R 0001	0.4

Cables for bus couplers

Cable for bus coupler 07 BV 60 between CPU and expansion module or between two expansion modules

Description	Cable length	Type	Order code	Wt. / piece kg
Cable ZExx-BV60	0.5 m	07 SV 60	GJV 307 4371 R 0001	0.3
Cable Zexx-BV60	1.0 m	07 SV 60	GJV 307 4371 R 0002	0.4
Cable ZExxBV60	0.5 m	07 SV 61	GJV 307 4372 R 0001	0.3
Cable ZexxBV60	1.0 m	07 SV 61	GJV 307 4372 R 0002	0.4

Modules for distributed expansion/coupler

Distributed I/O coupler for	Cable	Slot	Type	Order code	Wt. / piece kg
Basic subrack	TRIAX	2	07 BR 60	GJV 307 4375 R 0001	0.9
Substation	TRIAX	2	07 BR 61	GJV 307 4376 R 0001	0.9
CS31 system bus		1	07 CS 61	GJR 524 0300 R 0202	0.9

ABB Procontic T 200

Controller in subrack

Ordering details

Communication processors/couplers for networking

Communication protocols overview

T200	Communication module for coupling the ABB Procontic T200 to external computers via a fixed protocol with 2 serial ports (1 x RS232/ 1 x RS422)	07 KP 60
ASCII/CS31	Programmable communication module with 2 serial ports (2 x RS232)	07 KP 62
MODBUS	Communication module for MODBUS with 2 serial ports 1 RS232 connection for MODBUS Master 1 RS232 connection for MODBUS Slave	07 MK 62
RCOM	Communication module for tele communication via dedicated or dial-up lines 1 RS232 connection for RCOM 1 RS232 connection for programming and diagnosis	07 KP 64
PDnet ¹⁾	Communication module for connection to the Process Data Transport Network (PDnet)	07 KP 66
ZB20-Bus	Communication module for connecting the T200 to the ZB20 bus via triaxial cable	07 ZB 69

¹⁾ Lithiumbattery für 07 KP 62 see Accessories AC 31

Communication modules for networking

Protocol	Slot	Version	Software	Software to be ordered separately	Type	Order code	Wt. / piece kg
T200	2	—	None	No	07 KP 60	GJV 307 4380 R 0101	0.8
ASCII/CS31	1	—	907 PC 331	Yes	07 KP 62	GJR 524 0400 R 0202	0.9
MODBUS	1	—	On request	Yes (free)	07 MK 62	GATS 110 143 R 0002	1.0
RCOM	1	—	907 KP 64	Yes	07 KP 64	GJR 524 0600 R 0101	0.9
ZB20-Bus	2	—	None	No	07 ZB 69	GJV 307 4379 R 0001	0.9

Software packages including documentation and CE library

Software	Protocol	Unit	Language	Type	Order code	Wt. / piece kg
907 PC 331	ASCII/CS31	07 KP 62	German English	907 PC 331 ¹⁾ 907 PC 331 ¹⁾	GJP 520 4500 R 0302 GJP 520 4600 R 0302	
907 KP 64	RCOM	07 KP 64	German English	907 KP 64 907 KP 64	GJP 520 4900 R 0202 GJP 520 5000 R 0202	

¹⁾ Programming cable 07 SK 90 required, see Accessories - AC31



07 KP 60

ABB 89 0386



07 KP 62

SST 287 92



07 KP 64

SST 288 92



07 ZB 69

ABB 89 0229

ABB Procontic T 200

Controller in subrack

Ordering details

Accessories

Description	Can be used for	Details	Type	Order code	Wt. / piece kg
Lithium battery	07PS60/61/62/63, 07PR62/63		07 LB 60	GJV 307 4399 R 0001	0.2
Surge module		24 V DC	07 SM 90	GJR 525 1900 R 0001	0.1
Vacant housing		1 slot	07 BA 60	GJV 307 4397 R 0001	0.3
Terminal strip	I/O modules	20 pin		GJV 307 4393 P 0001	
Terminal strip	I/O modules	40 pin		GJV 307 4393 P 0002	
Fuse		5 A		GJV 307 4395 P 0001	
Fuse		7.5 A		GJV 307 4395 P 0002	

Power supply units

Description	Details	Type	Order code	Wt. / piece kg
Power pack	115 V AC, 230 V AC /24 V DC; 2.5A	07 NG 32	GJV 307 5601 R 0001	2.3
Power pack	15 V AC, 230 V AC /24 V DC; 5A	07 NG 34	GJV 307 5602 R 0001	4.2
Power pack	230 V AC (j),400 V AC (Y) / 24 V DC; 10A	07 NG 35	GJV 307 5603 R 0001	6.0
Power pack	230 V AC (j),400 V AC (Y) / 24 V DC; 20A	07 NG 36	GJV 307 5604 R 0001	15.0

Documentation

Description	Language	Type	Order code	Wt. / piece kg
General section, hardware, project planning and operating instructions, in a ring binder	German English		GATS 131 499 R 1001 GATS 131 499 R 2001	

CS31 field bus coupler

Description	Details	Type	Order code	Wt. / piece kg
Coupler to CS31 system bus	1 slot	07 CS 61	GJR 524 0300 R 0202	0.9

Notes

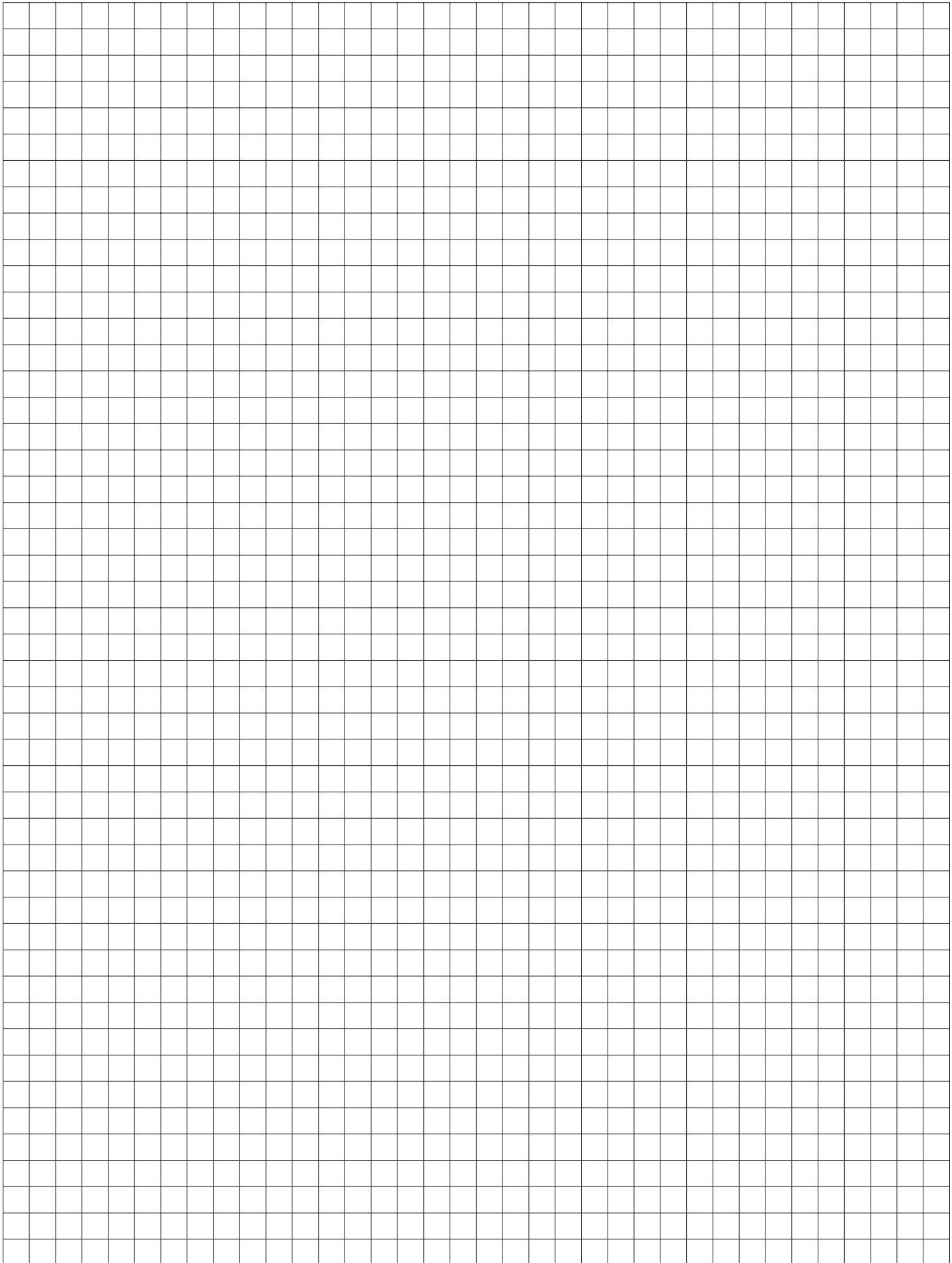
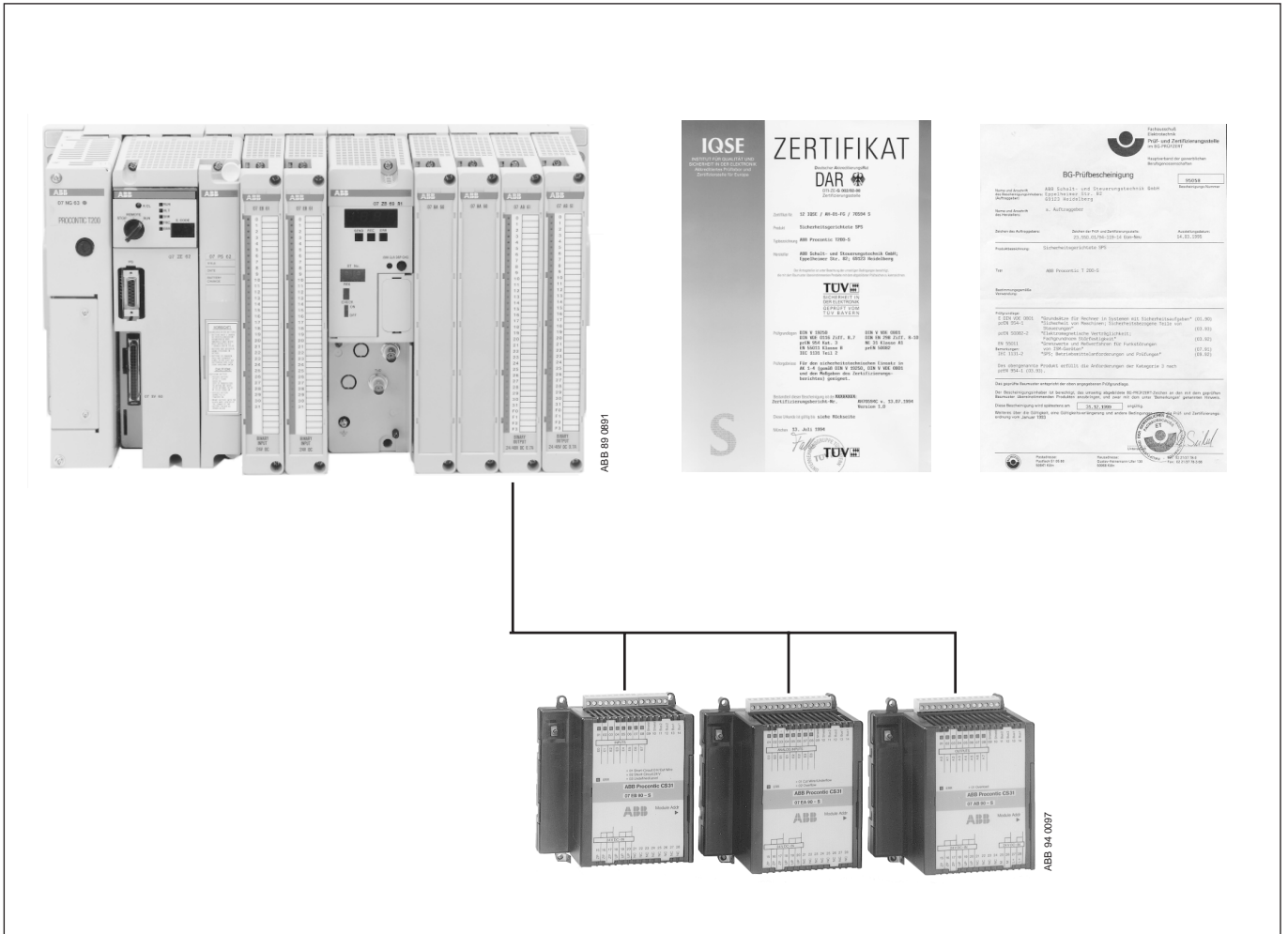


ABB Procontic T 200-S



Fields of application

The ABB Procontic T200-S is a safety-orientated automation system for plant and machines.

If a hazard analysis shows that, in the event of a fault, damage or injury could occur to persons, the environment or equipment, a safety-orientated system is required. This prevents a hazardous state by reverting to a planned safe state in the event of a fault.

The T200-S allows conventional safety circuits to be replaced. More complex safety circuits, which would be impossible or very costly to implement, are also possible.

The T200-S is certified by the German Technical Inspection Authority (TÜV) and the German Employers' Liability Insurance Associations for Requirement Category 4 to DIN V 19250 and Category 3 to EN 954-1. The detailed certification report and the list of application-related standards on which testing was based are available on request.

Advantages

- One controller for the safety-orientated and non-safety-orientated components of your system
- Reduction in the wiring complexity thanks to a consistently distributed system structure
- Simplification of wiring as the result of inputs/outputs designed internally on a two-channel basis
- Safety-orientated inputs/outputs directly on site in the terminal box
- Comprehensive diagnostic functions
- Safety through diversity-based, redundant software, internally redundant inputs/outputs and secure transfer.
- Mixing of safety-orientated and non-safety-orientated components in one system (from the CS31 and T200 module families).

Programming

Simple, time-saving programming (FBD, LD, IL). This contains special, TÜV-certified safety function blocks and a permanently predefined structure with the separate programming components "Safety-Orientated" and "Non-Safety-Orientated".

ABB Procontic T 200-S

Ordering details

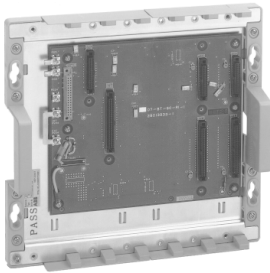


ABB 83 0227

07 BT 61

Subracks

Subracks for T200 components

Power supply unit slot	Central unit slot	Bus coupler slot	I/O slot	Type	Order code	Wt. / piece kg
1	1		5	07 BT 61	GJV 307 4302 R 0001	1.9
1	1		8	07 BT 62	GJV 307 4303 R 0001	2.5
1		1	7	07 BE 61	GJV 307 4305 R 0001	1.8
1		1	10	07 BE 62	GJV 307 4306 R 0001	2.4

Power supply units

Input voltage	Output voltage	Output current	Type	Order code	Wt. / piece kg
110/220 V AC	5 V DC 24 V DC	4 A 1.5 A	07 NG 61	GJV 307 4311 R 0002	1.3
110/220 V AC	5 V DC 24 V DC	9 A 0.5 A	07 NG 63	GJV 307 4313 R 0002	1.2
24 V DC	5 V DC 24 V DC	4 A 1.5 A	07 NG 66	GJV 307 4315 R 0002	1.2
24 V DC	5 V DC 24 V DC	9 A 0.5 A	07 NG 68	GJV 307 4317 R 0002	1.2



ABB 83 086311

07 ZE 61

ABB Procontic T200 central units

Central units in subracks, 1 serial port, real-time clock, online program modification

Max. central inputs/ outputs	Subracks max.	Instructions	(Memory in kByte)	Type	Order code	Wt. / piece kg
max. 576	2	15.7 K	(62.8)	07 ZE 61*)	GJV 307 4321 R 0302	0.8
max. 1856	6	48.5 K	(194)	07 ZE 62*)	GJV 307 4322 R 0302	1.0
max. 1856	6	15.7 K	(62.8)	07 ZE 63*)	GJV 307 4323 R 0302	0.9

* Can be used in conjunction with 907PC 336 and safety-orientated I/O modules as a safety-orientated system

Programming software

Description	Language	Type	Order code	Wt. / piece kg
Programming and test software, general description of programming environment without software (for SW see 907 PC 332)	German	907 PC 33	GJP 520 3900 R 0302	
	English	907 PC 33	GJP 520 4000 R 0302	
Programming and test software on disk for safety-orientated PLCs including documentation, safety-orientated blocks and safety manual	German	907 PC 336	GJP 520 6300 R 0102	
	English	907 PC 336	GJP 520 6400 R 0102	

ABB Procontic T 200-S

Ordering details



07 PS 62

ABB 80 0896/2

Programming cables

Cables for connecting 07 ZE 60/61/62/63, 07 BR 61, 07 KP 60 automation units to a PC, cable length 3 m

Description	Plug	Type	Order code	Wt. / piece kg
Programming cable	25 pin	07 SK 61	GJV 307 3906 R 0001	0.2
Programming cable	9 pin	07 SK 62	GJV 307 3907 R 0001	0.2

Program memory for test mode

Program memory	Memory location	Data memory for word flags	Online program modification	Type	Order code	Wt. / piece kg
CMOS-RAM	62.8 kB	16 k	No	07 PS 62	GJV 307 4332 R 0002	0.45
CMOS-RAM	62.8 kB	16 k	Yes	07 PS 62	GJV 307 4332 R 0003	0.5
CMOS-RAM	194 kB	50 k	No	07 PS 63	GJV 307 4333 R 0002	0.5
CMOS-RAM	194 kB	50 k	Yes	07 PS 63	GJV 307 4333 R 0003	0.55

Program memory for safety mode

Program memory	Memory location	Data memory for word flags	Online program modification	Type	Order code	Wt. / piece kg
EPROM	62.8 kB	16 k	No	07 PR 62	GJV 307 4336 R 0002	0.5
EPROM	194 kB	50 k	No	07 PR 63	GJV 307 4337 R 0002	0.5

CS31 field bus coupler

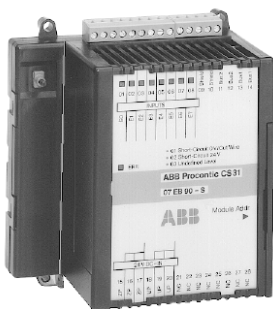
Distributed I/O coupler for	Cable	Slot	Type	Order code	Wt. / piece kg
CS31 System bus		1	07 CS 61	GJR 524 0300 R 0202	0.9

Safety-orientated input/output modules

I/O modules, safety-orientated, power supply 24 V DC, integral CS31 bus connection, electrically isolated from bus

Integral inputs/ outputs	Input-voltage/ range	Input delay max.	Details	Type	Order code	Wt. / piece kg
8 digital I	24 V DC	5 ms		07 EB 90-S ¹⁾	GJR 525 0900 R 0101	0.45
8 digital O	24 V DC-0.5 A	Transistor		07 AB 90-S ¹⁾	GJR 525 0800 R 0101	0.47
4 analogue I	4...20 mA		12 bit	07 EA 90-S ¹⁾	GJR 525 1200 R 0101	0.47

¹⁾ Only in conjunction with 907 PC 336 and central units 07 ZE 61, 07 ZE 62 or 07 ZE 63 via 07 CS 61 bus coupler



07 EB 90-S

ABB 94 0094 F

ABB Procontic T 200-S

Ordering details

Accessories

Description	Details	Type	Order code	Wt. / piece kg
Surge module	24 V DC	07 SM 90	GJR 525 1900 R 0001	0.1

Non-safety-orientated modules

T200: In addition, all T200 modules, such as input/output modules or couplers, can be used in the non-safety-related area.

AC31: In addition, all AC31 modules, including AC31 central units operating as slaves on the CS31 field bus, can be used in the non-safety-related area.

Documentation

Description	Language	Type	Order code	Wt. / piece kg
General section, hardware, project planning and operating instructions, in a ring binder	German		GATS 131 499 R 1001	
	English		GATS 131 499 R 2001	
Complete hardware description, project planning and operating instructions	German		1SAC 131 699 R 0101	
	English		1SAC 131 699 R 0201	
General section General section	German		GATS 131 699 R 1002	
	English		FPTN 440 004 R 2001	

Programming CS31, AC31, AC31-S, T200 and T200-S

The following hardware and software is required for programming the CS31, CS31-S, AC31, T200 and T200-S controllers:

1. Hardware

1.1. Personal computer for programming software 907 PC 33/331/332/336/338 with:

- minimum 80386 processor, minimum 4 MB RAM
- minimum 15 MB free hard disk capacity
- 3.5", 1,44 MB floppy disk drive, mouse
- serial port EIA-RS-232 for the controller, parallel port for printer
- MS-DOS operating system, version 5.0 and above

1.2. Personal computer for programming software 907 AC 1131 with:

- minimum Pentium II processor, 133 MHz, minimum 32/64 MB RAM
- minimum 40 MB free hard disk capacity
- CD-ROM drive, mouse
- serial port EIA-RS-232 for the controller, parallel port for printer
- Windows 9x or Windows NT 4.0

1.2. Programming cable

(For further information please refer to the Ordering Details for the individual controllers)

- 07 SK 90 for CS31/AC31 central units - Series 30, 90 (25/9 pin)
- 07 SK 50 for CS31/AC31 central units - Series 40..50 (9 pin/Mini-DIN)
- 07 SK 61 for T200 and T200-S central units (25 pin)
- 07 SK 62 for T200 and T200-S central units (9 pin)

1.3. Programming unit for EPROM's (only T200 and T200-S)

An EPROM programming unit for EPROM types upwards of 1 Mbit is required. The unit must be capable of processing Intel-hexadecimal files.

2. Software

2.1. Programming software and documentation for central units ABB Procontic and Advant Controller

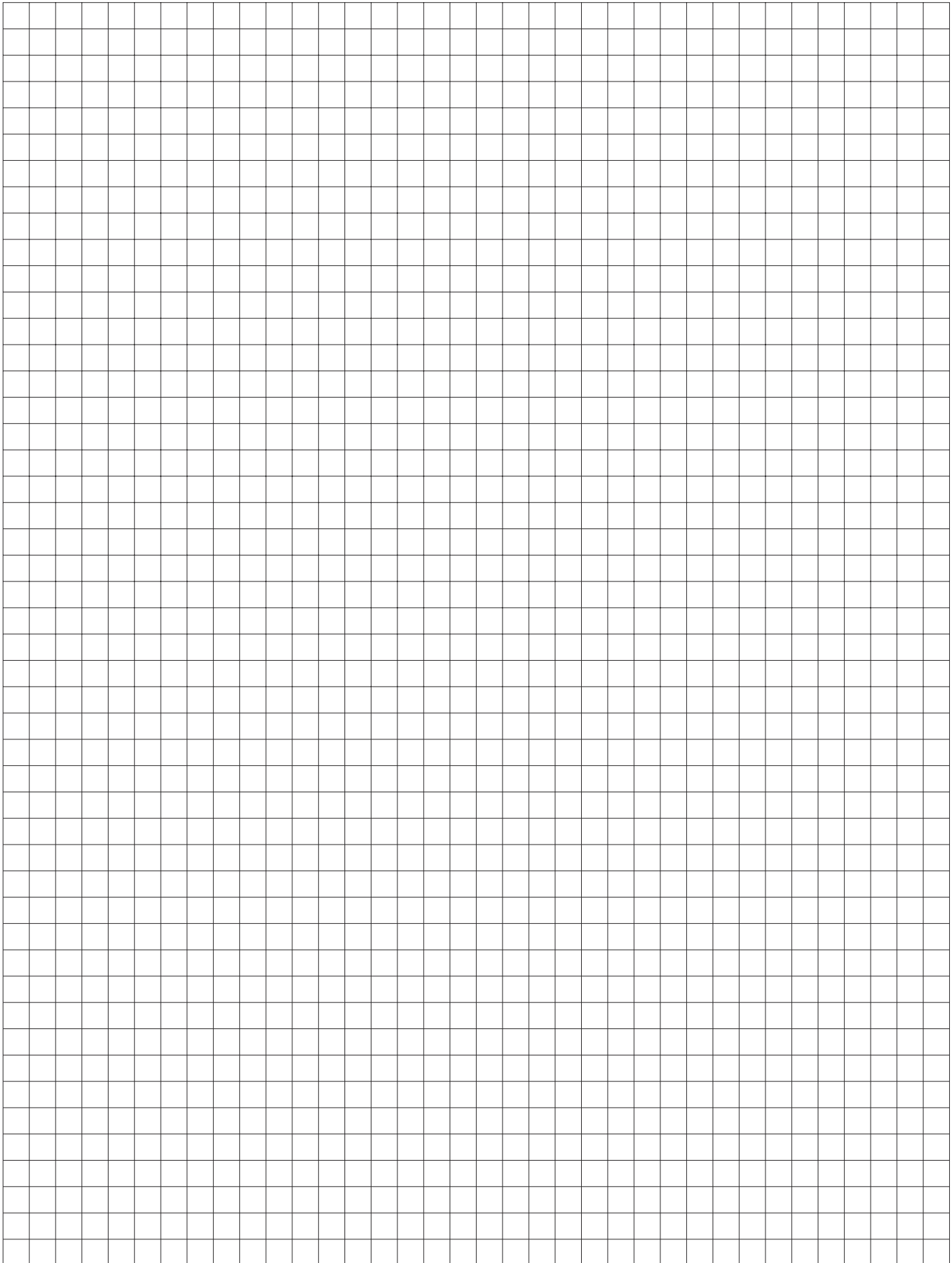
(For further information please refer to the Ordering Details for the individual controllers)

- 907 PC 33. General section for CS31/AC31, T200 and T200-S. Documentation (no software) for programming software.
- 907 PC 331. System-specific section for CS31 central units and communication processor 07KP62 (T200). Documentation and software.
- 907 PC 338. Add-on safety function package AC31-S.
- 907 PC 332. System-specific section for T200 central units. Documentation and software.
- 907 PC 336. System-specific section for T200-S central units. Contains software 907 PC 332 including German Technical Inspection Authority (TÜV)-certified safety function blocks and safety manual.

2.2. Programming software and documentation for ABB Procontic communication coupler

(For further information please refer to the Order Details for the individual couplers)

Notes





MT 45

SST 021 96



MT 91

SST 011 99

Man/machine communication

Operating Panels are used to observe machine statuses and intervene in machine routines.

MMC units (Man/Machine Communication)

MT30/45
MT65
MT91

Operating Panels MT30, MT45, MT65 and MT91 communicate using active drivers with controllers ABB Procontic T200, CS31 and Advant Controller 31.

This means that the MMC units have direct read and write access to all relevant data in the controllers. Consequently, there is no need for complex project planning instructions in respect of communication in the controllers.

With all the Operating Panels, communication takes place via the relevant programming interfaces or, in the case of MT45/65/91, via the optional ARCNET connection of the central unit.

The logically and ergonomically well-conceived operator prompting system of the terminals helps to optimise your production routines. The units feature sufficiently large operating keys which can be easily labelled for clear and unambiguous operation. The systematic colour coding of the operating keys means reliable operation of various machine routines by the operator.

Slide-in strips can be used to label the individual key areas, whilst still preserving enclosure IP 54 or 65.

Visually highlighted cursor keys featuring LEDs allow clear assignments of routines and provide visual assistance for operator prompting.

The softkeys which are mask-orientated on the MT91, provide the operator with further individual options for text displays as a function of machine statuses.

The text displays are 2-line on the MT30.

Up to 1000 texts can be saved in the 32 KByte EEPROM on the MT30. Depending on the selected font size (3 options), 8, 4 or 2 lines can be displayed by the operator on the text terminal MT45. Up to 100 process displays per language can be displayed on graphics terminal MT65 on the 256 x 64 pixel display. Up to 3 x 100 process displays and up to 6000 texts can be saved on the graphics terminal MT91.

What you need for project planning:

- **Editor for programming**
for MT30, MT45, MT65 and MT91 935SPSPLUS Win
- **Programming cable** VB30 (MT30, MT45, MT65, MT91)
- **Interface cable for Advant Controller 31 (CS31)**
Series 90 VB86 (MT30, MT45, MT60, MT91)
Series 90 with MODBUS coupler (07KP93) VB58 (MT30, MT45, MT60, MT91)
- **Interface cable for T200** VB43 (MT30, MT45, MT60, MT91)

Display and operator control units

Ordering details



MT 45

SST 021 96

Operator control units - performance class Text

- Active communication concept
- Text polling by programmable controller, function keys or cursor
- Integral interference bit processing
- Histogram memory (up to 170 entries)
- Free variable insertion and editing (max. 15 per text)
- Dynamic menu branching
- Internal function key and softkey project planning
- Project planning for 3 languages
- ladbare Gerätetreiber cs 31, T 200, MODBUS (Master/Slave) und ARCNET (Profibus-DP in preparation)

Important Note: Operator control units with a CS31 driver can be used only in conjunction with central units 07 KR 91, 07 KT 92, 07 KT 93 and 07 KT 94 and 07 KP 62 (T200)!

Lines/Width (mm)	Char./Height (mm)	Display type	Function/Alpha and System Keys/Softkeys	Unit driver/Interface	Type	Order code	Wt. / piece kg
2/82.5	20/18	LCD	4/8/-	Loadable/RS232	MT30	GATS 111 100 R 0001	0.45
2/71	20/40	LCD	8/23/-	Loadable/RS232	MT40	GATS 110 091 R 0001	0.45
2/71	20/40	LCD	8/23/-	Loadable/RS485	MT40	GATS 110 091 R 0201	0.45
2/71	20/40	LCD	8/23/-	Loadable/ARCNET	MT40	GATS 110 091 R 0401	0.45

*) MT45 identical with MT40 in respect of hardware and project planning

Operator control units - performance class Graphics

- All functions of Text performance class
- 100 process images per language
- Integral interference bit processing with acknowledge field (512 faults)
- Histogram memory (up to 1000 entries)
- Symbolic variable processing with scaling and limiting values (max. 25 per text)
- 3 editable character sets
- ladbare Gerätetreiber cs 31, T 200, MODBUS (Master/Slave) und ARCNET (Profibus-DP in preparation)

Important Note: Operator control units with a CS31 driver can be used only in conjunction with central units 07 KR 91, 07 KT 92, 07 KT 93 and 07 KT 94 and 07 KP 62 (T200)!



MT91

SST 011 99

Lines/Width (mm)	Char./Height (mm)	Display type	Function/Alpha and System-Keys/Softkeys	Unit driver/Interface	Type	Order code	Wt. / in kg
8/240	40/64	LCD	16/23/8	Loadable/RS232	MT65*)	GATS 110 092 R 1001	0.75
8/240	40/64	LCD	16/23/8	Loadable/RS485	MT65*)	GATS 110 092 R 1201	0.75
8/240	40/64	LCD	16/23/8	Loadable/ARCNET	MT65*)	GATS 110 092 R 1401	0.75
—/120	—/64	VFD	16/23/8	Loadable/RS232	MT91	GATS 110 167 R 0001	0.75
—/120	—/64	VFD	16/23/8	Loadable/RS485	MT91	GATS 110 167 R 0201	0.75
—/120	—/64	VFD	16/23/8	Loadable/ARCNET	MT91	GATS 110 167 R 0401	0.75

*) MT65 identical with MT60 in respect of hardware and project planning

Display and operator control units

Ordering details

Programming cables

Operator control unit	Type	Order code	Wt. / piece kg
MT30/40/45/60/65/91	VB30	GATS 110 094 R 0001	

Communication cables

Operator panel unit	Communication driver	PLC	Interface type	PLC interface	Type	Order code	Wt. / piece kg
MT30/45/60/65/91	AC31	Series 90	RS232	COM1	VB86	GATS 110 093 R 0011	
	AC31	07KP62	RS232	COM1			
	MODBUS	AC31	RS232	COM2	VB86	GATS 110 093 R 0011	
	T200	T200	RS232	PG-SS	VB43	GATS 110 093 R 0201	
	MODBUS	07KP93	RS232	COM3/4	VB58	1SAY 110 700 R 0001	
	AC31	Series 50	RS232	COM1	VB67	1SAY 111 102 R 0001	
	MODBUS	Series 50	RS232	COM1			

Cable for interface RS485

Operator panel unit	Interface type	Details	Type	Order code	Wt. / piece kg
MT40/65/91	RS485	Open on PLC side	VB69	1SAY 111 103 R 0001	

Programming software for operate panels

Programming software 935SPSPLUS is supplied with documentation in all versions.

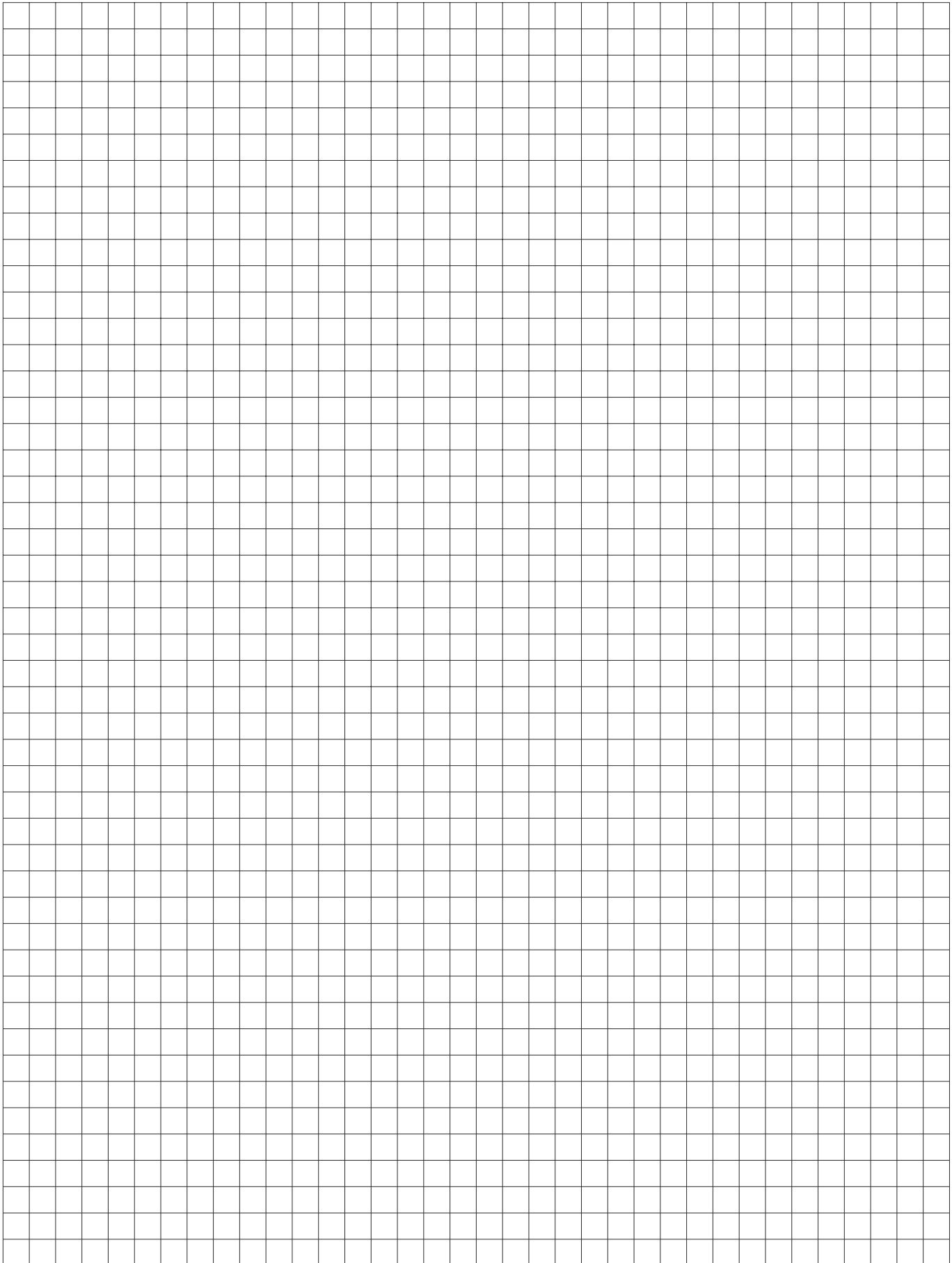
Operator panel unit	Incl. driver AC31/ T200/ MODBUS/ ARCNET	Programming software	Type	Order code	Wt. / piece kg
MT30/45 MT65/91	Yes	935SPSPLUS	WIN	GATS 110 095 R 0003	

Documentation

Manuals without software

Documentation	for	Language	Type	Order code	Wt. / piece kg
Planning manual	SPSPLUS Win	German		GATS 111 104 R 0001	
		English		GATS 111 104 R 0002	
Equipment manual	MT30/40/45/60/65/91 MT30/40/45/60/65/91	German		GATS 111 106 R 0001	
		English		GATS 111 106 R 0002	

Notes



Notes

