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Distributed Control Systems for Industrial Automation

ABB



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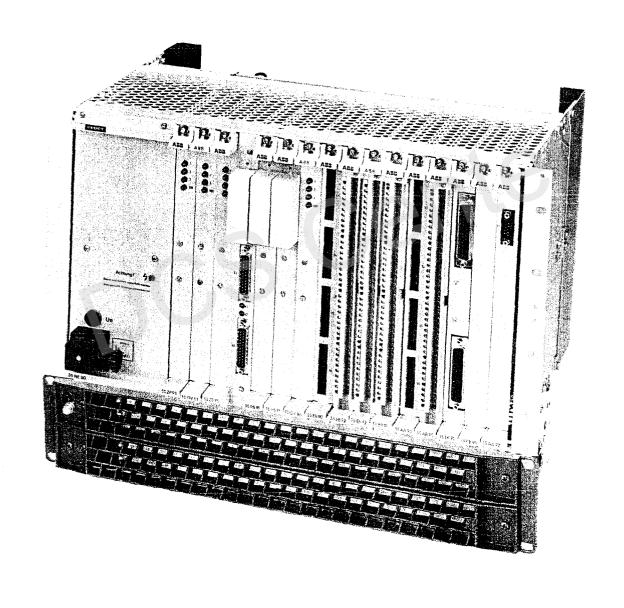
System description

ABB Procontic T300

Multiprocessor Control System

General Part

Order number GATS 1315 01 R2002 part 1 replaces Publication number D AT 1679 87 E





Regulations

Regulations Concerning the Setting up of Installations

Apart from the basic "Regulations for the Setting up of Power Units" VDE 10100 and for "The Rating of Creepage Paths and Air Gaps" VDE 0110 the regulations "The Equipment of Power Units with Electrical Components" VDE 0160 in connection with VDE 0660, part 500, have to be taken into due consideration. Further attention has to be paid to VDE 0113 in case of the control of working and processing machines. If operating elements are to be arranged near shock—hazard parts with protection against electrical shock, VDE 0106, part 100, is relevant.

The user has to ensure that the units as well as the associated components have to be installed according to these regulations. Respectively valid safety regulations, e.g. regulation for the prevention of accidents and the law concerning technical working material, are valid for machines and units connected as well.

ABB Procontic units have been built according to VDE regulation 0160. The protection against direct touching as demanded by chapter 5.5.1 of this VDE regulation has to be satisfied by the user, e.g. at installing of switch cabinet.

ABB Procontic units have been designed for operation according to insulation class A of VDE 0110. If considerable polution is expected during operations, the units have to be installed in housings of the respective kind of protection.

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

Note: Please observe the national regulations for the installation of electrical equipments, which are valid in your country.

ABB Schalt- und Steuerungstechnik GmbH

General Information

ABB Procontic T300 is a controller with a modular structure for the realization of very different tasks with a single system solution.

The function blocks:

- Programmable controller PLC
- Numerical controller CNC
- Industrial computer IC

are formed with the same basic hardware.

Any combination or accumulation of these functions is possible with the multiprocessor capability of the ABB Procontic T300 for the automation task. The function blocks communicate with each other via the system bus.



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1 General System Description

ABB Procontic T300 has the following structure and capabilities divided according to function blocks:

ABB Procontic T300, function block PLC

This function block is generally the central block for solving an automation problem as regards the control.

It consists of a central unit 35 ZE 93 and various binary and analog in- and output units as an interface for the process.

An extensive command reserve is available for the use, testing and communication with other PLC processors.

Programming the user programs can be carried out via an IBM compatible personal computer (PC) and the ABB programming software either in the

- Instruction list
- Function block diagram or
- Ladder diagram.

The language scope for compiling the user programs includes the following functions, among others:

- Binary and word processing
- Comparison functions
- Function blocks including control blocks,
- Text outputs (messages)
- Axis control.

ABB Procontic T300, function block CNC

The function block CNC, for positioning or path control, is capable of controlling an almost infinite number of axes or moving according to a given path due to the possibility of the multiple use.

Axis cards and positioning modules are used here as I/O units.

The paths to be moved can be programmed in the absolute measuring system or the relative measuring system. The positioning module moves a maximum of 16 axes in a path-controlled way. The path control module can interpolate a maximum of 4 axes; 3 axes in a linear way or 2 axes in a circular way.

Programming the function block CNC is carried out in accordance with DIN 66025. Every function can be programmed individually via a central interface. A personal computer or a standard terminal can be used as the programming unit. DNC transfer including set operating modes and manual functions is also possible.

The data exchange with the function block PLC is carried out via the multiprocessor-based control parallel bus.

ABB Procontic T300, function block IC

The industrial computer is a computer, which can be used in an industrial environment for processing automation tasks.

The scope of use of the industrial computer includes data processing, man-machine communication and networking.

Programming the industrial computer is carried out in the usual high-level languages like PASCAL, C, FORTRAN, etc. The program compilation can be carried out on an IBM compatible personal computer, an INTEL development system or on the industrial computer itself.

A programming system known to the programmer is used. The operating system manages the operating means typical for a computer, like, e.g., the memory tasks, communication means, the printer and the bulk storage device.

The ABB Procontic T300 is a modular automation system from the ABB Procontic family, which was developed and produced with very modern points of view. ABB procontic T300 fulfills all the main automation tasks in the medium and upper performance levels.

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2 Technical System Data, Features and General Capabilities

Voltage data

Process voltage UP			
UP1 (incl	. residual ripples)	or	24 V DC (+ 25 %, - 20 %) 48 V DC (+ 25 %, - 20 %)
UP3			12 V DC (± 10 %)
UP5			110 V AC (+ 20 %, - 22 %)
UP7		or	220 V AC (+ 20 %, - 22 %) 24 V AC
UP8			48 V AC
Residual ripples Upp			< 4 V
	UP1 = 48 V DC		< 8 V
Reference potential 2	ZP		
ZP			0 V for process voltage UP
Mains voltage UN			
UN1			220 V AC (+ 20 %, - 22 %)
UN2			110 V AC (+ 20 %, - 22 %)
Logic voltage UB			
UB1			5 V DC
UB4			24 V DC
Reference potential ZB			
ZB			0 V for logic voltage UB

Creep distances and air gaps

The creep distances and air gaps correspond to the DIN VDE regulation 0160.

Test voltages

The test voltages correspond to the DIN VDE regulation 0160.

Electro-magnetic compatibility

,		
The electro-static discharge (ESD) corresponds to the standard IEC 801-2 with a severity of 3. Interference voltage	8 k'	√
The radiation with electro-magnetic fields (RFI=radio-frequency interference) corresponds to the standard IEC 801-3.		
Field strength	10	V:m
The fast transient test (FTT)		
meets the standard specification IEC 801-4.		
Interference voltages for:		
220 V AC power supply units	2	kV
24 V DC power suppliy units	1	kV
binary I/O units 110 V/220 V	2	kV
binary I/O units 24 V	1	kV
anaiog I:O units	1	κV
networking	2	kV
other connections	0.5	kV

Radio interference level

The measurement of the radio interference voltage is carried out according to the DIN VDE regulation 0871. limit value category

Α

Operating conditions

Temperature according to DIN 40040

operation storage transport

prage - 25 °C ... + 75 °C ...

Humidity according to DIN 40040

annual average on 30 days in the year

on the other days when observing the annual average, occasionally

Air pressure according to DIN 40040

operation storage

Resistance to vibration

95 % 85 %

Category F, always without moisture condensation.

 \geq 800 hPa/ \leq 2,000 m \geq 660 hPa/ \leq 3,500 m

0 °C ... + 55 °C

Category A according to germanic Lloyd and VDE 0160

Degree of protection

according to DIN 40050

IP 20

≤ 75 %

Conductor cross sections of the process connections

Power supplies

L1, N PE

I/O units

Subrack, earth terminals

max. 1.5 mm²

max. 2.5 mm²

max. 1.5 mm²

max. 6.0 mm²

Function block PLC

Note:

The data listed in the following are valid for one PLC central unit each.

Number of the user programs

battery buffer

Inputs, binary
Outputs, binary
Inputs, word
Outputs, word
Flags, binary
Flags, word
Constants, binary

Constants, word

Constants, double word

Program processing per 1 K instructions:

Bit Word 2, time-controlled with a maximum of 14K control instructions per central unit

for user program, operand memory and comment memory

1024

1024 256 256

4096 per program 4096 per program 2 per program

640 per program 128 per program

3 ms

6 to 17 ms

Function block CNC

General capabilities:

Displays
Operation modes

G and M functions:

Zero point shift Path programming Number of NC programs

Capabilities of the path control:

Path-controlled axes
Level selection
Interpolation
Interpolation and position control cycle
Linear interpolation
Path speed
Sentence sequence time
Circular interpolation
Override
Max. jog speed
Acceleration and deceleration ramps
Measuring cycle can be recalled via a G function

Capabilities of the positioning control:

Number of the path-controlled axes Position control Programming possibility Max. jog speed Interpolation and position control cycle selectively all actual values or following errors single sentence mode/automatic mode

programmable in increments μm or mm 999 (max. 256 KBytes)

2 to 4
x/y. y/z, x/z
Helical interpolation
5 ms
in 3 axes (4th axis is towed)
programmable
5 ms
in 2 out of 3 axes (3rd axis is towed)
adjustable
16 m/min (with 1 μm resolution)
can be switched per G function

1 ... 16
disconnectable
jog path and speed for each axis
64 m/min with 1 μm resolution
2.5 ms + number of axes x 0.5 ms

Function block IC

Features of the industrial computer function block:

- Infinite extension to the single board computer through to the multi-microcomputer system
- The separation of the local bus and the multiprocessor-based control system bus guarantees a high processing speed
- An additional 80 bit arithmetical processor (8087) can be used, if necessary
- Intelligent preprocessing of process signals with a high calculation performance
- Several data transfer possibilities
- Real-time multi-user operating system iRMX 86 with real-time processing in the μs range, almost parallel control of processes, multi-computing, user-friendly operation, connection with superior units, support from standard peripheral units.

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3 Assortment Overview

Subracks			
Type	Description	Order Number	
35 GS 91 R1	Subrack 19'', 6 U, for 16 slots with a bus line and	GJR5136400R1	
35 GS 93 R1	a power supply unit 220 V AC, 5 V DC/25 A, ± 15 V DC/1A Subrack 19'', 6 U, for 16 slots with a bus line and a power supply unit 24 V DC, 5 V DC/12 A, ± 15 V DC/2A	GJR5144000R1	
34 LU 31 R2	Ventilation level	GJV3071301R2	
Power suppl	y units		
Type	Description	Order Number	
35 NE 93 R1	Power supply unit 24 V DC, 5 V DC/12 A, \pm 15 V DC/2A as a plug-in unit in 35 GS 93 R1	GJV3072601R1	
Couplers			
Type	Description	Order Number	
35 EK 90 R1	Bus-coupler for 1st subrack (basic subrack) for the connection of up to 3 extension subracks	GJR5143100r1	
35 EK 91 R1 35 SK 96 R1	Bus-coupler for 2nd to 4th subracks (extension subracks) Connection cable for the bus coupler	GJR5143200R1 GJR5143700R1	
Processor units			
Type	Description	Order Number	

Processor unit with a processor, Intel 8086, 5 MHz

Processor unit with a processor, Intel 8086, 8 MHz

Processor unit with processors, Intel 8086 and 8087, 5 MHz

Processor unit with processors, Intel 8086 and 8087, 8 MHz

GJR5133200R11

GJR5133200R21

GJR5133200R31

GJR5133200R41

35 ZP 93 R11

35 ZP 93 R21

35 ZP 93 R31

35 ZP 93 R41

Data interface units

Туре	Description	Order Number
35 DS 90 R20	Data interface and memory extension for 35 ZP 93 serial interfaces RS 422, RS 232 and current loop 20 mA, data transfer rate adjustable from 110 38400 baud; memory expansion up to 256 KByte is possible	GJR5133300R2000
35 DS 91 R2	Data interfaces with memory for 35 ZP 93 R31/R41 mit buffered memory, 2 serial interfaces RS 422, RS 232 data transfer rate adjustable from 110 38400 baud; memory expansion up to 512 KByte is possible	GJR5137400R1
35 DS 91 R3	Data interfaces and memory extension for 35 ZP 93 R31/R41 mit battery buffered memory, 2 serial interfaces RS 422, RS 232 with iSBX interface for multi-function modules, data transfer rate adjustable from 110 38400 baud; memory expansion up to 512 KByte is possible	GJR5137400R3

Program memories

Type	Description	Order Number
35 PS 91 R12 35 PS 91 R13	RAM card with 32 KByte memory, battery buffered RAM card with 128 KByte memory, with automatic error detection	GJR5137100R12 GJR5137100R13
	and correction (EDC), battery buffered	
35 PS 91 R14	RAM card with 128 KByte memory, battery buffered	GJR5137100R12
35 PS 91 R22	RAM card with 514 KByte memory, battery buffered	GJR5137100R12

PLC central processors

Туре	Description	Order Number
35 ZE 93 R301	Central processor PLC with 14 K instructions of user program, bit- and word processing, blocks, 2 serial interfaces, battery buffered memory, 2.5 ms/K bit processing	GJR5145000R301

CNC central processors

Type	Description	Order Number
35 GV 80 R101	Positioning unit for 1 4 axes, 35 AE 92 R4/R5 also required	GJR5145300R101
35 GV 83 R101	Path control unit for 1 4 axes, 35 AE 92 R4/R5 also required	GJR5145400R101
35 ZS 86 R101	Central control device for the path control and positioning, among other things	GJR5145500R101

Axis units

Туре	Description	Order Number
	Positioning unit for 1 axis with an NC data memory, 1 serial interface, Input for incremental measuring systems, output ±10 V	GJR5144100R101
Accessories for	35 PO 90 R101:	
Operating and p	rogramming unit 35 AB 50	GJR5139200R102
Electronic revers	sing and control logic 35 US 50 b	GJR5141800R101
Software for the	Personal Computer 935 AM 50	GJR5512000R202
Dialogue cable 3	35 AK 10, 35 PO 90 - 35 AB 50/PC	
R1	2.5 m	GJR5139300R1
R2	5 m	GJR5139300R2
R3	10 m	GJR5139300R3
R4	20 m	GJR5139300R4
Dialogue cable 3	35 AK 20, 35 PO 90 - 35 RC 50	
R1	1 m	GJR5142000R1
Engine speed se	et value cable 35 AK 30	
R1	2.5 m	GJR5139500R1
R2	5 m	GJR5139500R2
Initiator cable 35	5 AK 40	
R1	2.5 m	GJR5139600R1
R2	5 m	GJR5139600R2
Locator cable 35	5 AK 60	
R5	5 m	GJR5142200R5
R6	10 m	GJR5142200R6
R7	20 m	GJR5142200R7
Locator cable 35	5 AK 70 for AXODYN® Inverter, DRH range	
R1	2.5 m	GJR5142300R1
Incremental loca	tor (for adaptor flanges with a 50 mm pick-up bore)	
	500 Pulses per revolution	GJV3075101R1
	1000 Pulses per revolution	GJV3075101R2
Proximity sensors		
,	NJ 5-18 GK 50-E3 (closed-circuit current)	GJV3200001R2
	NJ 5-18 GK 50-E2 (working current)	GJV3200003R2
35 AE 92 R4	Axis card to control 2 axes	GJR5137200R4
35 AE 92 R5	Axis card to control 4 axes	GJR5137200R5
35 AE 92 R6	4-fold incremental input	GJR5137200R6
00 /\L 01 /\0	Total moral impat	301.0101200110

IC Central units

Type	Description	Order Number
935 IR 86 R101	Software for the central unit IC (industrial computer with a 14 K instruction user program, bit and word processing, blocks, 2 serial interfaces, buffered flag range)	GJR5122700R101

Video Sensor, OMS-F

Type	Description	Order Number
	Opto-electronic measuring and sensor system OMS-F, optical length measurement and planimetering parallel in 8 freely programmable windows, determining the area point of gravity and histogram analysis, control and evaluation by the PLC central units	
35 CI 90 R101 35 IP 90 R1	Camera interface Iconic image processor Sensor periphery unit	GJR5146000R101 GJR5145900R1 upon request

Binary input units

Type	Description	Order Number
35 EB 90 R2	Binary input unit, 24 V DC, isolated, 64-fold	GJR5132100R2
07 EM 61 R1	Input module, 24 V DC, isolated, 8-fold	GJR5210800R1
35 SK 90 R3	Ribbon cable for I/O-units	GJR5135000R3
35 EB 91 R1	Binary input unit, 24 V DC input signals with LED, not isolated, 32-fold, input delay typically 8 ms	GJR5142600R1
35 EB 91 R2	Binary input unit, 48 V DC input signals with LED, not isolated, 32-fold, input delay typically 8 ms	GJR5142600R2
35 EB 92 R1	Binary input unit, 24 V DC input signals with LED, not isolated, 32-fold, input delay typically 8 ms	GJR5145800R1
35 EB 92 R2	Binary input unit, 48 V DC input signals with LED, not isolated, 32-fold, input delay typically 8 ms	GJR5145800R2

Analog input units

Type	Description	Order Number
35 TP 90 R1 35 EA 90 R1	Carrier board for accepting up to 4 input modules Input module for 8 analog signals, ± 10 V or. ± 5 V,	GJR5143600R1 GJR3073002R1
35 EA 91 R1	for the installation in 35 TP 90 R1 Input module for 8 analog signals, 4 20 mA, for the installation in 35 TP 90 R1	GJR3073003R1
35 EA 92 R1	Input module for 4 analog signals Pt100, for the installation in 35 TP 90 R1, -50 °C +150 °C	GJR3073004r1
35 EA 92 R2	Input module for 4 analog signals Pt100, for the installation in 35 TP 90 R1, -50 °C +400 °C	GJR3073004R2

Binary output units

Type	Description	Order Number
35 AB 90 R1 07 LM 61 R1	Binary output unit, 24 V DC, isolated, 64-fold Lamp driver level, 24 V DC/120 mA, short-circuit-proof,	GJR5132200R1
	with LED, 8-fold	GJR5210900R1
07 AM 62 R2	Reed relay switch level, 60 V DC/100 mA, with LED, 8-fold	GJR5214500R2
07 SK 90 R3	Ribbon cable for für 07 LM 61 R1 or 07 AM 62 R2,	GJR5135000R3
	Socket connector with 34 poles and 2 x 16 poles, 1.5 m	
07 TM 61 R1	Transistor switch level, 24 V DC/2 A, with LED, 4-fold	GJR5211100R1
07 RM 61 R1	Relay switch level 220 V AC/4 A, with LED 4-fold	GJR5211000R1
35 SK 91 R3	Ribbon cable for 07 TM 61 R1 or 07 RM 61 R1,	GJR5135100R3
	Socket connector with 32 poles and 4 x 8-poles, 1.5 m	
35 AB 94 R1	Binary output unit, 24 V DC/100 mA, with LED, not islated, 32-fold	GJR5142800R1
35 AB 95 R1	Binary output unit, 24 V DC/0,5 A, with LED,	GJR5145600R1
	isolated, total load 8 A, 32-fold	
35 AB 96 R1	Binary output unit, 250 V AC and/or DC/2 A, with LED,	GJR5142900R1
	isolated, 4 changeover contacts, 12 make contacts, 16-fold	
35 AB 97 R2	Binary output unit, 24 V DC/2 A, with LED,	GJR5145700R2
	isolated, total load 8 A,16-fold	

Analog output units

Туре	Description	Order Number
35 AA 92 R2	Analog output unit ±10 V, 16 bit resolution, 4-fold	GJR5143000R2

Communication units

Туре	Description	Order Number
35 KP 91 R101	Communication processor for the connection to the Master via an EXCOM interface, 2 serial interfaces	GJR5146100R101
35 KP 92 R101	Communication processor for the connection to a VERITRON converter PAD type, 2 serial interfaces	GJR5146400R101

Area bus coupling units for the ABB field bus ZB10

Туре	Description	Order Number
35 ZB 91 R1	ABB Procontic T300 - ABB field bus ZB10 coupler	GJR5143500R1

System cables

Туре	Description	Order Number
35 SK 93 R1	Connecting cable for the serial interface RS422, 25-polar socket - 25-polar socket, 5m	GJR5135400R1
35 SK 93 R11	Extension cable for the serial interface RS422 (35 SK 93 R1).	GJR5135400R11
35 SK 94 R2	Connecting cable for V24 interface RS232 for 07 PC 31/07 PC 32 with 35 DS 90, 35 DS 91 35 ZE 93 and 07 ZV 86 as well as 35 BS 95 with 07 ZV 86, 25-polar socket - 25-polar socket, 5m	GJR2370500R2
35 SK 95 R1 35 SK 97 R1	Extension cable for the V24 interface RS232 (35 SK 94 R1), 0.25 m. Connecting cable for the V24 interface RS232 for 07 PC 32/07 PH 31	GJR2371000R1
30 3N 8/ NI	with 35 DS 90, 35 DS 91 and 35 ZE 93, 9-polar socket - 25-polar socket. 3m	

Service aid units

Type	Description	Order Number
35 SH 90 R1 35 SH 91 R1	Bus extension card for separating and measuring all bus lines Bus display for displaying the status of the addresses, data and controlled signals on the multiprocessor-based control bus	GJR5136700R1 GJR5136500R1
35 SH 94 R1	Axis simulator, for the simulation of the automatic control unit, the motor and the actual value pulse generator	GJR3074201R1

Accessories

Туре	Description	Order Number
35 ST 90 R1	Front connector for I/O-units	GJR5144900R1
35 SB 90	Label for the front connector with 9 insert strips and 9 sticky strips each for the units	ch
35 SB 90 R1	35 EB 91 R1	GJR5144600R1
35 SB 90 R2	35 EB 91 R2	GJR5144600R2
35 SB 90 R3	35 EB 92 R1	GJR5144600R3
35 SB 90 R4	35 EB 92 R2	GJR5144600R4
35 SB 90 R5	35 AB 94 R1	GJR5144600R5
35 SB 90 R6	35 AB 95 R1	GJR5144600R6
35 SB 90 R7	35 AB 96 R1	GJR5144600R7
35 SB 90 R8	35 AB 97 R1	GJR5144600R8
35 BA 60 R1	Blanking cover for 1 slot	GJV5135200R1
07 LB 20 R1	Spare lithium battery	GJR5223500R!
35 LE 90 R1	Lithium battery modules	GJR5146300R1



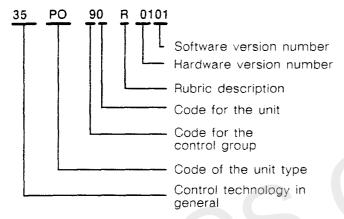
4 Information on Ordering

General ABB Procontic description systematy

A unit or a component is described functionally by the type description in the control system ABB Procontic T300. The development consultation is carried out using the order number. ABB Procontic units are described in accordance with the following rules:

a) Type description

Example:



Note:

The preceding zeroes of the hardware or software version numbers can be omitted, e.g., 35 PO 90 R101 and 35 PO 60 R0101 or 35 EK 90 R1 and 35 EK 90 R0001 are the same. The shorter form is preferred.

Codes of the unit types

GS	Subrack
NE	Power-supply unit
EK	Level coupler
SK	System cable
ZP	Central processor
DS	Data interface
PS	Memory unit
ZE	Central unit
IR	Industrial computer
KI	Camera interface
IV	Iconic processor
ΑE	Axis card
PO	Positioning unit
EB	Binary input unit
TP	Carrier board
EΑ	Analog input unit
AB	Binary output unit
AA	Analog output unit
ΚP	Communication processor
ZB	ABB field bus coupler
SH	Service aid units
FB	Blanking cover
ST	Front connector

b) Order number

Example: GJV3074301R1

Units, which are similar to a large extent but are not completely identical, are distinguished by the rubric description with the hardware and software version numbers. The rubric data in the type description and in the order number are the same.

c) Order data

The order data must include the **complete type descriptions and order numbers** in order to guarantee a perfect supply.

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5 Customer Training

Asea Brown Boveri offers seminars to support configurating, starting and operating ABB Procontic T300 controls. Seminars are also carried out on the customer's premises, if required.

Detailed information is included in the leaflet, "Seminars for factory automation", which you can request from:

ABB Schalt- und Steuerungstechnik GmbH

Abteilung: SST/MV Eppelheimer Straße 82 D-6900 Heidelberg 1

Telephone (06221) 777-135 Telefax (06221) 777-111

The registration is carried out directly at the above mentioned address or via our distribution centres:

ABB Schalt- und Steuerungstechnik GmbH Vertriebszentrum Nord Hildesheimer Straße 25 P. O. Box 1040 D-3000 Hannover 1

Telephone (0511) 8501-343 Telefax (0511) 8501-200 Telex 922 708 bbcb d

ABB Schalt- und Steuerungstechnik GmbH Vertriebszentrum West Kronprinzenstraße 5-7 P. O. Box 10 04 52

P. O. Box 10 04 5 D-4300 Essen 1

Telephone (0201) 1004-429 Telefax (0201) 1004-371 Telex 857 882 bbcb d

ABB Schalt- und Steuerungstechnik GmbH

Vertriebszentrum Ost Hans-Beimler-Straße 91-94 DDR-1017 Berlin

Telephone (0372) 4300513 or (0372) 4374405 Telefax (0372) 4372432

ABB Schalt- und Steuerungstechnik GmbH

Vertriebszentrum Mitte Dudenstraße 44

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Telephone (0621) 388-2589 Telefax (0621) 388-2600 ABB Schalt- und Steuerungstechnik GmbH

Vertriebszentrum Süd Schloßstraße 29 P. O. Box 609 D-7000 Stuttgart 1

Telephone (0711) 2059-300 Telefax (0711) 29 06 76 Telex 722567 bbcb d

The following seminars for the ABB Procontic T300 are on offer:

Programmable controllers Seminar concerning the principles

Contents: Getting to know the ABB Procontic controls and their components, learn-

ing the programming language, programming with the personal computer, practical exercises on ABB Procontic systems, configuration instructions, independent configuration using given tasks together with starting

up a system model

Aim: Independent configuration of a sys-

tem model with the ABB Procontic

PLC.

Prerequisite: Knowledge of the general control

technology

Duration: 5 days

ABB Procontic T300 configuration seminar

Contents: Components of the ABB Procon-

tic T300, extension possibilities, networking, programming of the ABB Procontic T300, practical exercises concerning the binary, word and analog processing, configuration with function blocks, setting up your own user blocks, applications for the con-

trol of various system models

Independent configuration of a sys-

tem model with ABB Procontic T300

Prerequesite: Knowledge of the general control

technology.

Duration: 5 days

Aim:

ABB Procontic T300 maintenance seminar

Contents: Getting to know the ABB Procontic

T300 components, learning the ABB Procontic programming language, composing the hardware, starting a system model with fault-finding in the ABB Procontic T300 PLC in the range of the coupling level and in the system

model.

Aim: Independently starting a system mod-

el and finding the faults with ABB Pro-

contic T300.

Prerequisite: Knowledge of the general control

technology

Duration: 5 days



6 Maintenance Services and Support

Services

We have a qualified service department in order to be able to help with difficult problems as well.

- Consultation by telephone
- Malfunction analyses and removal from the machine/system
- Support when compiling programs
- Training of the personnel in the factory
- Leasing programming units

If you wish to consult our service department, we request you to take the corresponding preparations depending on the desired service, like, e.g.:

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

Inquiries and orders are to be directed to:

ABB Schalt- und Steuerungstechnik GmbH Abteilung SST/VPS Eppelheimer Straße 82 D-6900 Heidelberg 1

Telephone (06221) 777-210 Telefax (06221) 777-113

Support

Our range of services also includes the following:

- Supply of spare units
- · Repairing faulty units and systems

Inquiries and orders are to be directed to:

ABB Schalt- und Steuerungstechnik GmbH Abteilung SST/OA Neuer Weg 47 D-6930 Eberbach

Telephone (06271) 81-467

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7 Application department

The modular multiprocessor-based controller ABB Procontic T300 represents a competent range of units and standard software for the user's applications.

The application department is responsible for advising the customer when selecting the suitable system in the respective special case of application and, if desired, undertaking the compilation of user programs as a service.

The possibility of using the ABB know-how in the sector of factory automation exists in this way.

The application department offers the following:

- Cooperation when specifying the control task and when determining the suitable system configuration
- Compiling user programs in the form of PLC instruction lists or function block diagrams for ABB Procontic T300
- Executing commissionig

The basis for the execution of applications is a deadline schedule worked out with the user, which is constantly followed together with a project leader known to the user.

You can contact the application department under the following address:

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8 Advice and addresses

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

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