System Description

ABB Procontic b
Programmable Control System

General Part
Regulations

Regulations concerning the setting up of installations

Apart from the basic "Regulations for the setting up of power units" VDE* 0100 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 pollution is expected during operations, the units have to be installed in housings of the respective kind of protection.

* VDE stands for "Assosiation 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
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PROCONTIC b is a modular control system which does justice to a high degree to a modern control system in the field of automation.

For instance, this includes bit and word processing, arithmetic computing operations, modular technology, analog data processing and the possibility of addressing serial interfaces. A system which is always in compliance with the state of the art will be available to the user at all times in the future thanks to intensive updating of both the system's hardware and software.

A staggered range of programming units facilitates the user's task of creating and testing software and of commissioning systems.
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For instance, this includes bit and word processing, arithmetic computing operations, modular technology, analog data processing and the possibility of addressing serial interfaces. A system which is always in compliance with the state of the art will be available to the user at all times in the future thanks to intensive updating of both the systems' hardware and software.

A staggered range of programming units facilitates the user's task of creating and testing software and of commissioning systems.
ABB Proconic b is a modular control system which fulfills high requirements in a minimum of space.

The control system with a central processor unit 07 ZE 84 connected with a word processor 07 WP 84 can basically be split up into a bit section and a word section, whereby the central function is assigned to the bit processing processor, while word operations are assigned to the word processor. Thus, the bit processor can be operated separately for pure bit operations, although this does not apply to the word processor.

The bit processor, the central processor 07 ZE 84, contains the program of the entire control. It assigns word operations to the word processor which it cannot execute itself. The word processor is capable of processing these in the foreground or in a background cycle.

The word processor 07 WP 84 operates in the background when it is assigned a task and the assigning bit processor waits until a result is provided to it. During background processing, both processors continue to operate in parallel after transfer of the information until the bit processor is ready to hand over a result.

The bit processor can only process yes/no information. It can thus only process the status of an operand, e.g., of an input, to ascertain whether or not it is activated or deactivated. The depiction of numerical values is only possible in word operations. Bit operations are carried out in the central processor unit 07 ZE 84.

In the central processor 07 ZE 86 and 07 ZE 88 are bit and word operations only with one processor carried out. The disconnection of bit and word operations does not exist here.

Typical bit operations are:

a. Linkage of operands
   (input signals, flags, timers) for the generation of assignments (switching of outputs)

b. Subroutine technique
   Parts of the program are run through depending on the process

c. Branch technique (not 07 ZE 82)
   Depending on the process, it is possible to specifically branch to and process program sections.

d. Module technique (not 07 ZE 82)
   Recurring program sections can be declared as modules and processed by calling the module number.

Word commands can only be processed in the word processor 07 WP 84 or in the central processor 07 ZE 86. Numerical values are distributed in binary code over 15 bits. The numerical space is limited due to the number of available bits. It amounts to $2^{15} \approx 32767$. The 16th bit is the sign bit. Analog format (MICAS format) numerical values can be processed in the word processor in addition to binary notation (signed integer). In the former case, the value $10 \, V = 1.000 = 100\%$ (Value area $+/-\ 7.999$).

Typical word commands are:

- arithmetic operations, i.e. fundamental operations
- processing of analog values
- comparative operations
2 Technical data

Capabilities

- bit processing
- subroutine technique
- module processing
- branch functions
- word processing
- comparation operations
- arithmetics
- analog value processing
- logging functions

Connection

Programming

to the ABB field bus ZB10

Supply voltage

24 V DC

Allowed potential difference

± 30 %

Permissible temperature range

0 °C ... +55 °C during operation
-25 °C ... +75 °C when idle

Humidity class

F

Format and installation mode

Metal subrack, optionally for screwing onto plates, for snapping onto 35 mm standard profile rail in accordance with DIN 46 277, Sheet 3, or for installation in 19" racks

Depth: 120 mm
Height: 128 mm

Width: Commissioning and test unit: 157 mm
subrack with 13
plug-in positions: 277 mm
subrack with 21
plug-in positions: 437 mm

Faston tab connector, 2.8 x 0.8 mm
or system cable

Max. 1536 inputs and outputs in six subracks

Max. 128 inputs and 128 outputs in four subracks

Max. 60, additionally software timers

Max. 16, additionally software counters

Max. 64
Number of main memories:
Max. 7K bit, buffered,
512 word memories of 16 bits each,
256 word memories of these buffered

Program memory:
EPROM 2 kwords, 4 kwords, 8 kwords;
EEPROM 8 kwords, 16 kwords on the CPU
RAM 2K words, 8K words, buffered, on the commissioning and test unit

Cycle time:
Central control unit 07 ZE 82
Central control unit 07 ZE 84
Central control units 07 ZE 86 and 07 ZE 88
2.5 ms/1K words for binary statements
2.5 ms/1K words for binary statements
5 ms/1K words (only I/O ≤ 15, 15, M and S)

Serial interfaces
RS 423 on the digital timer unit 07 TZ 82
RS 423 on the word processor 07 WP 84
RS 423 on the central control unit 07 ZE 86

ZB 10 interface on the coupling unit 07 ZB 80
ZB 10 interface on the coupling unit 07 ZB 82

Binary inputs
220 V AC or 110 V AC, electrically isolated
48 V DC or 24 V DC
Evaluator for 2-wire initiators in accordance with DIN 19 234 (NAMUR)

Binary outputs
Relay output, max. 250 V/2A
24 V DC/2A
24 V DC/500 mA
24 V DC/130 mA

Analog inputs
0 ... 20 mA/4 ... 20 mA, 0 ... +10 V, 8 bit
0 ... 20 mA/4 ... 20 mA,
-2.4 ... +2.4 V/-12 ... +12 V, 12 bit

Analog outputs
-10 ... +10 V, 8 bit
0 ... 20 mA/4 ... 20 mA, -12 V ... +12 V, 12 bit
### BUS modules

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 ET 82 R2</td>
<td>BUS module with 8 slots for binary input/output units</td>
<td>GJR5217400R2</td>
</tr>
<tr>
<td>07 ET 83 R2</td>
<td>BUS module with 16 slots for binary input/output units</td>
<td>GJR5217500R2</td>
</tr>
<tr>
<td>07 ET 84 R2</td>
<td>BUS module with 16 slots for binary digital and analog input/output units</td>
<td>GJR5218500R2</td>
</tr>
</tbody>
</table>

### Power supply unit

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 NG 80 R4</td>
<td>Power supply unit</td>
<td>GJR5211700R4</td>
</tr>
<tr>
<td>07 NG 82 R4</td>
<td>Power supply unit</td>
<td>GJR5215100R4</td>
</tr>
</tbody>
</table>

### BUS coupling modules

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 BT 82 R3</td>
<td>BUS driver with central control unit 07 ZE 82, modules ≤ 15.15</td>
<td>GJR5215600R3</td>
</tr>
<tr>
<td>07 BT 84 R1</td>
<td>BUS driver with central control units from 07 ZE 84</td>
<td>GJR5230400R1</td>
</tr>
<tr>
<td>07 BV 84 R1</td>
<td>BUS line connection for extension subrack, also modules &gt;15.15</td>
<td>GJR5230500R1</td>
</tr>
</tbody>
</table>

### Zentrale Steuerwerke

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 ZE 82 R4</td>
<td>Central processor unit with 256 bits main memory, for 2 kwords user program (without EPROM)</td>
<td>GJR5215900R4</td>
</tr>
<tr>
<td>07 ZE 84 R2</td>
<td>Central processor unit for 4 kwords or 8 kwords user program (without EPROM) (only in conjunction with 07 AS 82)</td>
<td>GJR5218700R2</td>
</tr>
<tr>
<td>07 ZE 88 R101</td>
<td>Central processor unit for 8 kwords user program (EEPROM), bit- and wordprocessing, 1 serial interface</td>
<td>GJR5231800R101</td>
</tr>
<tr>
<td>07 ZE 88 R102</td>
<td>Central processor unit for 16 kwords user program (EEPROM), bit- and wordprocessing, 1 serial interface</td>
<td>GJR5231800R102</td>
</tr>
</tbody>
</table>

### Program memories

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 PR 82 R1</td>
<td>2 kword EPROM program memory</td>
<td>GJR5216000R1</td>
</tr>
<tr>
<td>07 PR 84 R2</td>
<td>8 kword EPROM program memory</td>
<td>GJR5218400R2</td>
</tr>
</tbody>
</table>
### Active memories

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 RK 80 R4</td>
<td>Step chain memory, 8 chains per 16 steps + 64 flags (power failsafe). Only in conjunction with the central processor unit 07 ZE 82</td>
<td>GJR5214400R4</td>
</tr>
<tr>
<td>07 AS 82 R1</td>
<td>Memory unit, 7 K bit (power failsafe)</td>
<td>GJR5218300R1</td>
</tr>
</tbody>
</table>

### Wortprozessor

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 WP 84 R302</td>
<td>Word processor with 512 word memories of 16 bits each, 256 of these are power failsafe. Module processing, firmware modules, serial interface RS 423, arithmetics, comparison and logging functions, PI-regulator</td>
<td>GJR5230300R302</td>
</tr>
</tbody>
</table>

### Timing and counting units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 TI 80 R1</td>
<td>Analog timer, 4 independent functions, 0.05 ... 128 seconds potentiometer-adjustable range switching on the PC board</td>
<td>GJR5211900R1</td>
</tr>
<tr>
<td>07 TI 80 R2</td>
<td>Analog timer, 4 independent functions, 0.05 ... 128 seconds potentiometer-adjustable range switching on the front side</td>
<td>GJR5211900R2</td>
</tr>
<tr>
<td>07 TI 81 R1</td>
<td>Digital timing unit, two independent functions, times software-adjustable, 5 time cycles</td>
<td>GJR5215200R1</td>
</tr>
<tr>
<td>07 TZ 82 R201</td>
<td>Microprocessor-controlled timing unit with 60 digital timers, 3 time cycles, setpoint monitoring, serial interface, logging functions</td>
<td>GJR5217100R201</td>
</tr>
<tr>
<td>07 ZG 84 R1</td>
<td>Fast counter, 16 bit, up/down counter, logic for the sense of direction</td>
<td>GJR5232600R1</td>
</tr>
</tbody>
</table>

### Binary input units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 XS 80 R5</td>
<td>Input unit, 8 inputs for 24 DC input signals, with LED (typical input delay in 8 ms)</td>
<td>GJR5212000R5</td>
</tr>
<tr>
<td>07 XS 81 R1</td>
<td>Input unit, 8 inputs for 2-wire initiators (NAMUR evaluator), with LED (typical input delay 3 ms)</td>
<td>GJR5217200R1</td>
</tr>
<tr>
<td>07 XS 86 R1</td>
<td>Input unit, 8 inputs for input signals from 13 ... 63 V DC, with LED (typical input delay 8 ms)</td>
<td>GJR5218200R1</td>
</tr>
<tr>
<td>07 XS 86 R2</td>
<td>Input unit, 8 inputs for input signals from 13 ... 63 V DC, with LED (typical input delay 0.1 ms)</td>
<td>GJR5218200R2</td>
</tr>
<tr>
<td>07 XS 87 R1</td>
<td>Input unit, 4 electrically isolated inputs for 220 V AC/DC input signals (typical input delay 13 ms)</td>
<td>GJR5216500R1</td>
</tr>
</tbody>
</table>
Binary output units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 YS 80 R2</td>
<td>Output unit, 8 outputs, 24 V DC/130 mA, with LED</td>
<td>GJR5212100R2</td>
</tr>
<tr>
<td>07 YS 81 R2</td>
<td>Output unit, 4 outputs, 24 V DC/2 A, with LED (total load max. 6 A)</td>
<td>GJR5221800R2</td>
</tr>
<tr>
<td>07 YS 82 R1</td>
<td>Output unit, 8 outputs, 24 V DC/500 mA, with LED (total load max. 2 A)</td>
<td>GJR5221100R1</td>
</tr>
<tr>
<td>07 YS 86 R2</td>
<td>Relay output, 4 outputs (2 changeover, 2 n/o contacts), 250 V AC/DC/2 A, with LED</td>
<td>GJR5215400R2</td>
</tr>
<tr>
<td>07 AB 83 R1</td>
<td>Output unit, 8 outputs, 24 V DC/500 mA, short circuit protected, with LED</td>
<td>GJR5231400R1</td>
</tr>
</tbody>
</table>

Binary input and output units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 AE 83 R1</td>
<td>In/output unit, 8 inputs for 24 V DC, with LED, 8 outputs 24 V DC/500 mA, with LED, total load max. 1 A</td>
<td>GJR5231200R1</td>
</tr>
</tbody>
</table>

Analog input units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 EA 80 R1</td>
<td>Input unit for 8 analog signals, 0 V ... 20 mA/4 V ... 20 mA, 0 V ... +10 V, resolution 8 bits</td>
<td>GJR5230200R1</td>
</tr>
<tr>
<td>07 EA 81 R1</td>
<td>Input unit for 8 analog signals, 0 V ... 20 mA/4 V ... 20 mA, -2.4 V ... +2.4 V/-12 V ... +12 V, resolution 12 bits (10 µA or 10 mV)</td>
<td>GJR5214000R1</td>
</tr>
</tbody>
</table>

Analog output units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 AA 80 R1</td>
<td>Output unit for 4 analog signals -10 V ... +10 V, resolution 8 bits</td>
<td>GJR5230000R1</td>
</tr>
<tr>
<td>07 AA 81 R1</td>
<td>Output unit for 2 analog signals 0 V ... 20 mA/4 V ... 20 mA, -12 V ... +12 V, resolution 12 bits (10 µA or 10 mV)</td>
<td>GJR5218600R1</td>
</tr>
</tbody>
</table>

Drive control units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 AG 80 R1</td>
<td>Drive control unit for non-reversing drives</td>
<td>GJR5217700R1</td>
</tr>
<tr>
<td>07 AG 81 R1</td>
<td>Drive control unit for reversing drives</td>
<td>GJR5217900R1</td>
</tr>
</tbody>
</table>

Programming and test adaptors

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 IE 84 R202</td>
<td>Commissioning and test adaptor with buffered RAM for 8 kwords For central processor units 07 ZE 82 und 07 ZE 84. Without system cable 07 SK 85.</td>
<td>GJR5219100R202</td>
</tr>
</tbody>
</table>
### Systemkabel

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 SK 82 R11</td>
<td>Cable length 750 mm</td>
<td>GJR5214900R11</td>
</tr>
<tr>
<td>07 SK 82 R12</td>
<td>Cable length 1500 mm</td>
<td>GJR5214900R12</td>
</tr>
<tr>
<td>07 SK 82 R13</td>
<td>Cable length 2000 mm</td>
<td>GJR5214900R13</td>
</tr>
<tr>
<td>07 SK 87 R2</td>
<td>V 24 cable to connect 07 PC 31/32 to 07 IE 84 and 07 ZE 86</td>
<td>GJR5230800R1</td>
</tr>
<tr>
<td>07 SK 88 R1</td>
<td>V 24 cable to connect 07 PM 11, 35 BS 93 with 07 ZE 88, 07 WP 84 and 07 TZ 82</td>
<td>GJR5231700R1</td>
</tr>
<tr>
<td>07 SK 89 R1</td>
<td>V 24 cable to connect 07 PC 32, 07 PH 31 to 07 ZE 88 and 07 IE 84</td>
<td>GJV3073901R1</td>
</tr>
<tr>
<td>07 SK 84 R1</td>
<td>System plug connector for binary I/O-modules (not for 07 AE 83)</td>
<td>GJV3073901R1</td>
</tr>
<tr>
<td>07 SK 85 R1</td>
<td>System cable for connecting the commissioning unit 07 IE 84 to the central processor unit 07 ZE 84</td>
<td>GJR5219900R1</td>
</tr>
<tr>
<td></td>
<td>Connect housing (empty) as shock hazard protection for I/O units with 24 V DC or 60 V DC</td>
<td>GJR1948094P2</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 BA 80 R1</td>
<td>Dummy panel</td>
<td>GJR5214200R1</td>
</tr>
<tr>
<td>07 MW 80 R1</td>
<td>2 brackets for cabinet installation of a BUS module, cycle monitoring unit, cycle time approx. 260 ms</td>
<td>GJR1948116R1</td>
</tr>
<tr>
<td>07 ZW 80 R2</td>
<td></td>
<td>GJR5215300R2</td>
</tr>
</tbody>
</table>

### Spare units

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 SK 81 R4</td>
<td>System cable for connection of or 07 IE 84 to the central processor unit 07 ZE 82</td>
<td>GJR5213800R4</td>
</tr>
<tr>
<td>07 LB 20 R1</td>
<td>Lithium battery for 07 RK 80, 07 AS 82, 07 TZ 82, 07 WP 84 and 07 ZE 86</td>
<td>GJR5223500R1</td>
</tr>
<tr>
<td></td>
<td>Actuating pin for switch sockets</td>
<td>GJT115502P1</td>
</tr>
</tbody>
</table>
Information on ordering

General ABB Proconic description system-

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

a) Type description

Example:

07 ZE B2 R0003

Software version number
Hardware version number
Rubric description
Code for the unit
Code for the control group
Code of the unit type
Control technology in general

Note: The preceding zeroes of the hardware or
software version numbers can be
omitted, e.g., 07 ZE 82 R0003 and
07 ZE 82 R3 or 07 IE 84 R0202 and
07 IE 84 R202 are the same. The shorter
form is preferred.

Codes of the unit types

ZE central units
BT bus drivers
BV bus connectors
NG power-supply units
T timers
XS binary input units
AE in- and output units
AB binary output units
YS binary output units
WP word processor
FK register unit
AS memory units
AA analogue output units
EA analogue input units
PG programming units
ZV bus administrator
ZB bus coupler
PT programming unit
PC personal computer

b) Order number

Example: GJR5215900R3

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 de-
scriptions and order numbers in order to guarantee a
perfect supply.
Seminars

Asea Brown Boveri offers seminars to support configuring, starting and operating ABB Procontic b 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 bbc b d

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum West
Kronprinzenstraße 5-7
P. O. Box 10 04 52
D-4300 Essen 1

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

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Mitte
Dudenstraße 44
P. O. Box 10 03 51
D-6800 Mannheim

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 bbc b

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

Programmable controls
Seminar concerning the principles

Contents: Getting to know the ABB Procontic controls and their components, learning the programming language, programming with the personal computer, practical exercises on ABB Procontic systems, configuration instructions, independent configuration using given task together with starting up a system model

Aim: Independent configuration of a system model with the ABB Procontic PLC.

Prerequisite: Knowledge of the general control technology

Duration: 5 days

ABB Procontic b configuration seminar

Contents: Components of the ABB Procontic b, extension possibilities, networking, programming of the ABB Procontic b, practical exercises concerning the binary, word and analog processing, configuration with function blocks, setting up your own user blocks, applications for the control of various system models

Aim: Independent configuration of a system model with ABB Procontic b

Prerequisite: Knowledge of the general control technology.

Duration: 5 days
ABB Procontic b maintenance seminar

Contents: Getting to know the ABB Procontic b components, learning the ABB Procontic programming language, composing the hardware, starting a system model with fault-finding in the ABB Procontic b PLC in the range of the coupling level and in the system model.

Aim: Independently starting a system model and finding the faults with ABB Procontic b.

Prerequisite: Knowledge of the general control technology

Duration: 5 days
Maintenance Services and Supports

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/OA
Neuer Weg 47
D-6930 Eberbach

Telephone (06271) 81-467

Support
Our range of services also includes the following:

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

Inquiries and orders are to be directed to:

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

Telephone (06221) 777-210
Telefax (06221) 777-113
The modular multiprocessor-based control system ABB Proconet b 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 Proconet b
- Executing commissioning

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:

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Projekte
Abteilung: SST/VP
Eppelheimer Straße 82
D-6900 Heidelberg 1

Telephone 06221/777-200
Telefax 06221/777-113
Advice and addresses

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

**Germany**

ABB Schalt- und Steuerungstechnik GmbH
Abteilung: SST/V
Eppelheimer Straße 82
D-6900 Heidelberg 1
Telephone (06221) 777-190
Telex 922 708 abbh d

ABB Schalt- und Steuerungstechnik GmbH
Abteilung: SST/VP
Eppelheimer Straße 82
D-6900 Heidelberg 1
Telephone (06221) 777-137
Telex 857 882 abbh d

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Projekte
Abteilung: SST/VP
Eppelheimer Straße 82
D-6900 Heidelberg 1
Telephone (06221) 777-200
Telex 922 708 abbh d

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Nord
Hildesheimer Straße 25
P. O. Box 1040
D-3000 Hannover 1
Telephone (0511) 8501-310
Telex 922 708 abbh d

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum West
Kronprinzenstraße 5-7
P. O. Box 10 04 52
D-4300 Essen 1
Telephone (0201) 1004-420
Telex 857 882 abbh d

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Ost
Hans-Beimler-Straße 91-94
D-O-1017 Berlin
Telephone (0621) 388-2589
Telex 388-2589

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Mitte
Dudenstraße 44
P. O. Box 10 03 51
D-W-8800 Mannheim
Telephone (0621) 388-2589
Telex 388-2589

ABB Schalt- und Steuerungstechnik GmbH
Vertriebszentrum Süd
Schloßstraße 33
P. O. Box 10 07 41
D-7000 Stuttgart 1
Telephone (0711) 2059-291
Telex 722567 abbs d

ABB Proconic b/issued: 11.90
Europe

Austria
Asea Brown Boveri AG
Department: PLC
Pernerstorfergasse 94
P. O. Box 184
A-1100 Wien
Telephone 0043 222 601090
Telefax 0043 222 6043716
Telex 131760 atabb a

Belgium
Asea Brown Boveri
Div. de la S. A. Brown Boveri N. V.
96, Rue de Stalle
B-1180 Bruxelles
Telephone 0032 2 3773000
Telefax 0032 2 3320543
Telex 21555 abbr b

Asea Brown Boveri S. A.
Hoge Wei, 27
B-1930 Zaventem
Telephone 0032 2 7212031
Telefax 0032 2 7212031
Telex 25186 asea b

Denmark
CSI a-s
Hoarsvinget 7
DK-2630 Tøstrup
Telephone 0045 2 999111
Telefax 0045 2 991950
Telex 33609 csi dk

Finland
Asea Brown Boveri Strömberg Distribution Ltd.
P. O. Box 600
SF-65101 Vaasa
Telephone 0358-61-162 021
Telefax 0358-61-161 097
Telex 12440566 STR SF

France
Asea Brown Boveri Petercem S. A.
10, Rue Ampere Z. I.
F-69860 Chassieu
Telephone 033 72 221739
Telefax 033 78 902758
Telex 340037 ptercem f

Alsthom
Etablissement Parvex
27, Rue Lucien Juy
F-21007 Dijon Cedex
Telephone 0033 80 424140
Telefax 0033 80 424123
Telex 350635

Great Britain
Asea Brown Boveri Power Ltd.
Grovelands House
Longford Road, Exhall
GB-Coventry, CV7 9ND
Telephone 0044 203 364021
Telefax 0044 203 364499
Telex 312114 abbt g

Greece
Asea Hellas S. A.
15, Messoghion St.
GR-11526 Athen
Telephone 0030 1 7703415/7751501-03
Telefax 0030 1 7753072
Telex 216289 asea gr

Ireland
Asea Brown Boveri Ltd.
Whitestown Industrial Estate
Tallaght
IRL-Dublin 24
Telephone 00353 1 522622
Telefax 00353 1 522985
Telex 33681 abbie
Italy
ABB Elettrocondutture
43/45 Via Valtorta
I-20127 Milano
Telephone 0039 2 284571
Telex 0039 2 28457205
Telex 320486 elcond i

Netherlands
Asea Brown Boveri Nederland B. V.
Marten Meesweg
NL-3068 AV Rotterdam
Telephone 0031 10 4078911
Telex 0031 10 4555531
Telex 21539 abbn nl

Norway
EB Industry & Offshore
Automation Division
Haslevien 50
P. O. Box 6540, Rodelokka
N-0501 Oslo 5
Telephone 0047 2 352010
Telefon 0047 2 377423
Telex 71105 kure n

Portugal
Asea Brown Boveri Lda.
Rua Sa da Bandeira 481-2
P-4003 Porto Codex
Telephone 0035 12 322802
Telex 0035 12 9959662
Telex 0404-25106 sebb p
Asea Brown Boveri Industry Division
Av. Conselheiro Fernando de Sousa, 25 B
P-1000 Lisboa
Post address
Apartado 1124
P-1003 Lisboa Codex Portugal
Telephone 00351 1 664194
Telefon 00351 1 591771
Telex 12652 asea p

Spain
Asea Brown Boveri S. A.
P. Castellana, 83-85
Apartado de Correos 463
E-28046 Madrid
Telephone 0034 1 5974693
Telex 0034 1 5556187
Telex 22793 asba e
Asea Brown Boveri S. A.
Menendez Pelayo, 220
E-08012 Barcelona
Telephone 0034 93 2377240
Telefon 0034 93 2378722
Telex 52253

Sweden
Asea Brown Boveri AB
Dept. DFB
S-72172 Västerås
Telephone 046 21 320582
Telex 046 21 120099
Telex 40720 abba s

Switzerland
Asea Brown Boveri Normelec AG
Department: G4
Riedstrasse 8
CH-8953 Dietikon
Telephone 0041 1 7434111
Telefon 0041 1 7405731
Telex 825222 • 825221 nelec ch

Turkey
Asea Brown Boveri Elektrik A. S.
Kasap Sokak No.
Ozden Konak Is. Hani Kal 9
TR Esenboste 80280 Istanbul
Telephone 0090 1 1752811
Telefon 0090 1 1589821
Telex 27253 bbis tr
Worldwide

Australia
Asea Brown Boveri Pty. Ltd.
Berestford Road
P. O. Box 126
AUS–Lilydale VIC 3140
Telephone 0061 3 7357222
Telefax 0061 3 7395192
Telex AA 30338

Canada
Asea Brown Boveri Inc.
Dept. IK
10300 Boul. Henri Bourassa Ouest
CDN–Saint Laurent (Quebec) H4S 1NG
Telephone 001 514 3325350
Telefax 001 514 3320609
Telex 524751

Hong Kong
Asea Brown Boveri Ltd.
OTB Building 19/F
160 Gloucester Road
G. P. O. Box 448
HK–Wanchai
Telephone 00852 5 8648888
Telefax 00852 5 8488907

Singapore
Asea Brown Boveri Ltd.
2, Ayer Rajah Crescent
SGP–Singapore 0513
Telephone 0065 7753777/8
Telefax 0065 2655926
Telex 23436 abb sin

Asea Brown Boveri Pte. Ltd.
Regional Product Center
8 Pandan Avenue
Singapore 2260
Telephone 0065 2657380
Telefax 0065 2655926

South Africa
Asea Brown Boveri Technologies (Pty) Ltd
Hawley Road Ext. 344, Bedfordview
P. O. Box 751275
RSA–Gardenview 2047
Telephone 0027 11 4553010
Telefax 0027 11 4551619
Telex 741339 sa

USA
Asea Brown Boveri Industrial Systems Inc.
1460 Lingvistone Ave.
USA–North Brunswick, NY 08902
Telephone 001 201 9326000
Telefax 001 201 9326456
Telex 23436 brownbove nbr