SÜTRON
visualization | control | communication

User Manual

Connection to Phoenix PDD

Part Number:	80860.701
Version:	1
Date:	21.06.2006
Valid for:	TSwin .net 4.10 + SP1

visualization | control | communication

Version	Date	Modifications
1	21.06.2006	First Edition

Overall Table of Contents

1 Important Notes

1.1 Symbols

The symbols in this manual are used to draw your attention on notes and dangers.

Danger
This symbol is used to refer to instructions wich, if ignored or not carfully followed could result in personal injury.

Note
This symbol indicates application tips or supplementary notes.

Reference to source of information
This symbol refers to detailed sources of information on the current topic.

1.2 Safety Notes

- Read this manual carefully before using the software. Keep this manual in a place where it is always accessible to all users.
- The user manual, in particular the safety notes, must be observed by all personnel working with the software and the programmed device.
- Observe the accident prevention rules and regulations that apply to the operating site.
- Installation and operation must only be carried out by qualified and trained personnel.

1.3 Intended Use

- The software has to be used for programming operating devices exclusively. Every other use is not permitted.

1.4 Target Group

All configuration and programming work in connection with the automation system must be performed by trained personnel only (e.g. qualified electricians, electrical engineers).

The configuration and programming personnel must be familiar with the safety concepts of automation technology.

2 Phoenix PDD

The Phoenix PDD protocoll is used for communication between the operating unit and the Soft-PLC of the control panel CP 306 ETH TSVISRT.

For programming with TSwin .net all features are available except the representation of variables in tables.

2.1 Transfer of Process Variables

To ensure that the process variables are properly transferred, you must create the projekt folder for TSwin .net in the same directory as the PC-WORX project.

PC-WORX creates the file SR.CSV. This file contains a list of all process variables that the operating device can access.

The PC-WORX project directory contains the file CSV.LST (C:\PCWORX\PROJECT\MYPROJECT\CSV.LST), which in turn contains the directory details for the file SR.CSV. These details are used by TSwin .net to find the file SR.CSV.

TSwin .net imports the list for the file SR.CSV and provides the variables for the application description contained in the list.

The changed data in the file SR.CSV is taken into account when a new compilation run takes place in the TSwin .net. You must then reload the application into the operating unit.

2.2 Programming

2.2.1 Protocol Parameters

2.2.1.1 Maximum Waiting Time For Response

This parameter specifies how long the operating unit will wait for a reply from the controller unit.

Table 2-1 Maximum waiting time for response

Configurable Values	Default Value
100 ms to 25500 ms	1000 ms

2.2.1.2 Delay until Connection Set-Up

This parameter specifies a particular waiting period after which the operating unit starts the communication process.

Table 2-2 Delay until connection set-up

Configurable Values	Default Value
5 s to 255 s	5 s

2.2.2 Supplementary Functions

2.2.2.1 Polling Area

The poll area consists of three single variables.

Table 2-3 Poll area, with three single variables

Variable for subarea	Length
Write Coordination Byte (WCB)	1 Byte/1 Word
Message Number	1 Word
Status LEDs for Function Keys	5 Bytes ARRAY OF BYTE[1..5]

2.2.2.2 Status Messages

Status messages represent the static assignment of flags (bits) in the controller unit to plain text messages in the operating unit of the device.

For the parallel message system, define an ARRAY OF BYTE type variable with a maximum length of 50 bytes.

2.2.2.3 Data Set Transfer

A recipe buffer is not used during the data set transfer of recipes. You must write the data set values directly to the single variables.

2.2.3 Variables

The operating devices in the CP series can handle up to 1000 variables.

2.2.3.1 Variable Types

You can use the following types of variables directly.

Table 2-4 Phoenix PDD variable types

Variable Type	Lenght in Bit
Boolean	1
Short Integer	8
Integer	16
Double Integer	32
Long Integer	64
Unsigned Short Integer	8
Unsigned Integer	16
Unsigned Double Integer	32
Unsigned Long Integer	64
Variable-Length Character String	8*len
Bit String (BYTE)	8
Bit String (WORD)	16
Bit String (DWORD)	32
Bit String (LWORD)	64

For longer variables, you must use the ARRAY OF BYTE type variables. In PC-WORX, you must create and use an appropriate data type for this purpose, and make sure that this type has the same number of elements and the same number of bytes (length specification) programmed in TSwin .net.

Use the ARRAY OF BYTE type for the following objects:

Table 2-5 Objects for ARRAY OF BYTE

Object	Number of Elements is Equal to
Text Variable	String Length
Parallel Message System	Number of Bytes
Status LEDs for Function Keys	Number of Bytes

The maximum size of data objects is 50 bytes.

2.3 Error Messages

Error messages are displayed on the operating device along with a code and sub-code. Error messages are composed as follows:

Communication Error

Code XXXXX

Subcode XXXXX

Retries XXXXX

Table 2-6 Phoenix PDD error messages

Code	Subcode	Description	Possible causes
30	01	Cannot allocate memory	
40		Connection errors	
	01	Cannot establish connection	
41		Transmit errors	
	153	Mailbox is not available	
42		Receive errors	
	153	Mailbox is not available	
	154	Response telegram is too long	
60		Timeout errors	
	01	Error in idle status	
	02	Error in wait free status	
	03	Error in wait status 1	
	04	Error in wait status 2	
	06	Error in notification status	
70		Data errors	
	xx	Subcode contains error code	
80		Read/write error on process variable	
	xx	subcode contains error class and error code	
100		Error on data layer	
	01	No data for read order	
	02	Length of received and requested data is odd	

A Index

SÜTRON
visualization | control | communication

Sütron electronic GmbH
Kurze Straße 29
D-70794 Filderstadt
Phone: 0049 711 / 77098-0
Fax: 0049 711 / 77098-60
E-Mail: doku@suetron.de
Internet: www.suetron.com