

User Manual

Connection to ProComm Plus

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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 which, if ignored or not carefully 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 operating device. Keep this manual in a place where it is always accessible to all users.
- Proper transportation, handling and storage, placement and installation of this product are prerequisites for its subsequent flawless and safe operation.
- This user manual contains the most important information for the safe operation of the device.
- The user manual, in particular the safety notes, must be observed by all personnel working with the 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 device is designed for use in the industry.
- The device is state-of-the-art and has been built to the latest standard safety requirements. However, dangerous situations or damage to the machine itself or other property can arise from the use of this device.
- The device fulfills the requirements of the EMC directives and harmonized European standards. Any modifications to the system can influence the EMC behavior.

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 ProComm plus

2.1 Hardware

Use the programming cable from Schleicher company to connect the operating device to the programming interface of the PLC.

2.2 Software

The ProComm plus protocol allows access to data objects in the PLC. The programming software "Prodoc Plus" saves the data objects into a file. TSwIn reads the global variables from this file and places them into the variable list to make them available for further use. The variable list can not be changed.

2.3 Data Types

The length of a variable is determined by the length defined in the programming software Prodoc Plus. The data types Timer and Counter are not supported.

2.3.1 Single Variables

You can access byte, word and double-word type variables. Floating point numbers are interpreted in IEEE format. The variable type REAL is required for this purpose.

2.3.2 String Variables

For string variables, use the variable type ARRAY [0..X] OF BYTE (where X stands for the length of the string).

2.4 Programming

2.4.1 Protocol Parameters

With the protocol parameters, you can adapt the communication of the controller used.

2.4.1.1 Baud Rate

This parameter specifies the communication rate.

Table 2-1 Baud rate

Configurable Values (Baud)	Default Value
9600	
19200	
38400	X

2.4.1.2 Maximum Waiting Time For Response

This parameter specifies how long the operating device waits for a response from the controller.

Table 2-2 Maximum waiting time for response

Configurable Values	Default Value
100 ms to 25500 ms	1000 ms

2.4.1.3 Delay until Connection Set-Up

This parameter specifies the waiting time after which the operating device starts the communication.

Table 2-3 Delay until connection set-up

Configurable Values	Default Value
5 s to 255 s	5 s

2.4.1.4 Path for Variable List sr.csv

This parameter specifies the directory in which the variable list sr.csv is stored.

To select a directory, click the Browse button.

The variable list sr.csv is automatically created by the programming software Prodoc Plus.

2.4.2 Polling Area

Define the polling area using three single variables.

For these variables, use the variable types as shown in the following table.

Table 2-4 Polling area

Element of the Polling Area	Data Type
Write Coordination Byte (WCB)	BYTE
Message Channel	WORD
Status LEDs for Function Keys	ARRAY [0..X] OF BYTE

2.4.3 Status Messages

Use the data type ARRAY [0..X] OF BYTE for the parallel message system.

With X, you specify the length of the message system. Note that one byte represents eight parallel messages.

2.4.4 Date and Time

Use the data type ARRAY [0..X] OF BYTE to transfer the date and time information.

For X, use either the value 7 to display only the last two digits for the date (example: 01) or the value 8 to display all four digits (example: 2001).

2.4.5 Tables

Tables can not be displayed.

2.4.6 Physical Connection

Plug-in connections on the operating device for connecting to controllers with various communication modules.

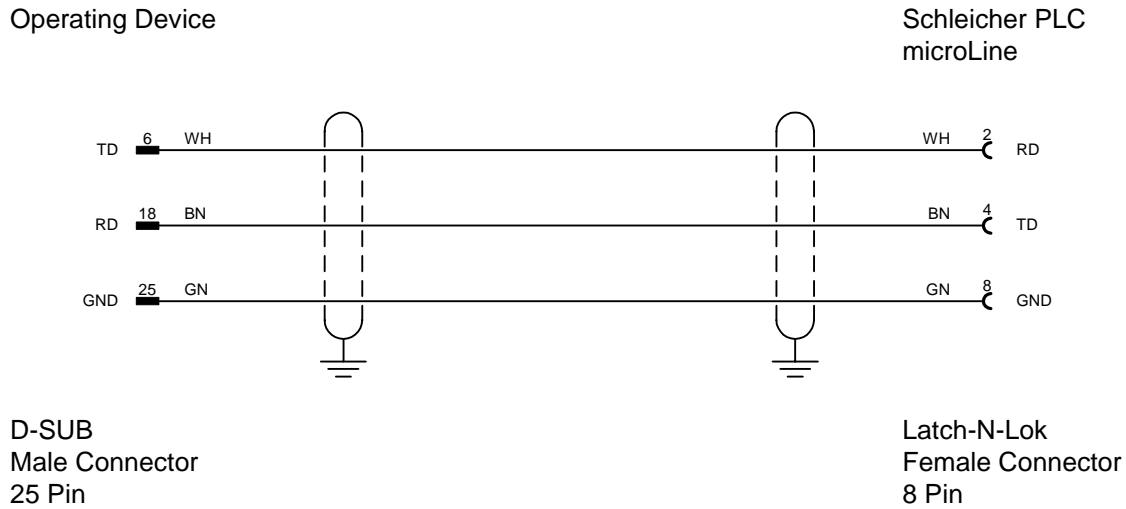
2.4.6.1 Pin Assignment for Operating Devices with an Universal Interface

Table 2-5 Pin assignment RS232

Pin	Designation	Function
6	TD	Transmitted Data
15	CTS	Clear to send
17	RTS	Request to send
18	RD	Received data
25	SGND	Signal Ground

2.4.6.2 Cable SER1 RS232 - Schleicher microLine

The following cabling diagram applies to operating devices with an universal interface **only**.



2.5 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 ProComm plus error messages

Code	Subcode	Error Type	Possible Cause
50		Error on protocol level	
	03	Framing error on serial interface	
	05	CRC error on serial interface	
	06	Parity error on serial interface	
	50	Unable to assign memory	
60		Error on hardware level	
	01	Timeout: No response from PLC	Cable break
			No connection to PLC
Wrong baud rate			

Table 2-6 ProComm plus error messages

Code	Subcode	Error Type	Possible Cause
70		Other errors	
	High Byte 0x01	ProConOs' protocol server is busy	
	High Byte 0x02	Unknown request command	
	High Byte 0x40	No access rights	
	High Byte 0x20	Note the value in the low byte Low Byte 0x04 = No data available in PLC. Low Byte 0x08 = Too many data in PLC.	

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