

ACCON-S7-EasyLog User Manual

Version 3.0.1

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Note:

We have checked the content of this manual for conformity with the hardware and software described. Nevertheless, because deviations cannot be ruled out, we cannot accept any liability for complete conformity. The data in this manual have been checked regularly and any necessary corrections will be included in subsequent editions. We always welcome suggestions for improvement.

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2 Main view

By using ACCON-S7-EasyLog, it is possible to save and display values of any PLC operands. The read data are stored in a CSV data file which can be e.g. shown and processed further via Excel.

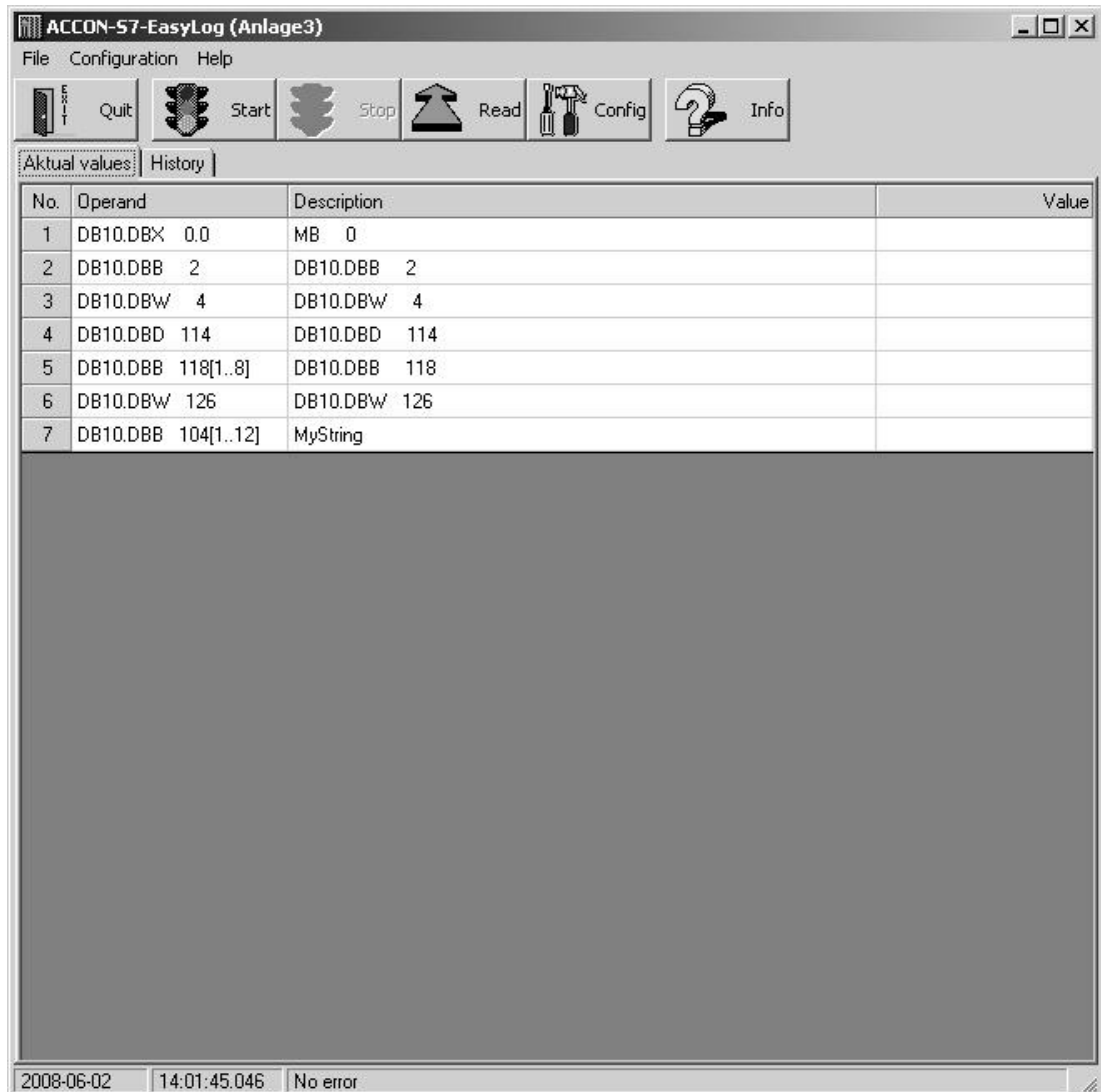


Figure 1: Main view ACCON-S7-EasyLog

The main view of ACCON-EasyLog shows the window for the actual output values of a connected PLC and the window history for the recorded datasets of the log file.

ACCON-EasyLog is controlled via the following buttons:

- »Quit«, quits ACCON-S7-EasyLog
- »Start«, initiates the readout of the parametrized operands' content
- »Stop«, stops the readout of the parametrized operands' content
- »Read«, reads and saves the content of the parametrized operands
- »Config«, opens the configuration window
- »Info«, shows the name, version, copyright, etc.

2.1 Starting parameters of ACCON-S7-EasyLog

Using version 3.0.0 you can call ACCON-S7-EasyLog with starting parameters. So it is possible to start multiple instances of ACCON-S7-EasyLog, each with different configurations. You can add the parameters to the program shortcut.

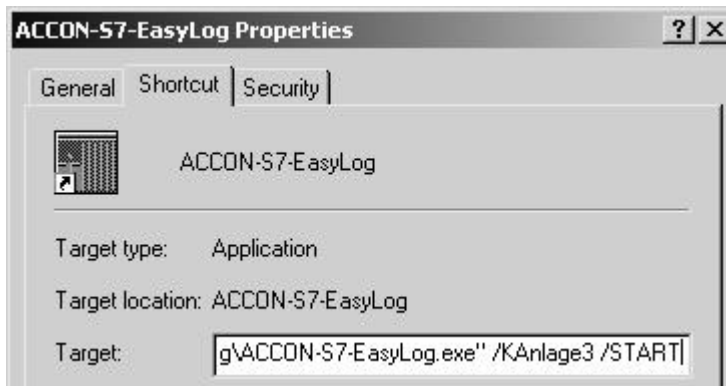


Figure 2: Shortcut with starting parameters

Possible parameters:

/K** The entered configuration will be used. You have to use the name of an already created configuration. Otherwise the last configuration is used.

/START: Connection to PLC will be established, immediately. If any error occurs the program is constantly trying to connect to the PLC.

/STOP: Connection to the PLC will be disconnected

Example: »"C:\ACCON-S7-EasyLog.exe" /KAnlage3 /START«

ACCON-S7-EasyLog will be started with the configuration »Anlage3« (facility3), automatically.

The parameters are separated by a blank and started by the sign »/«. You have to look that there is no blank within a parameter.

3 Configuration

3.1 Administrate configurations

By using ACCON-S7-EasyLog from version 2.5.2 it is possible to use up to 16 different configurations. Select them via **Configuration > Configuration administration**.

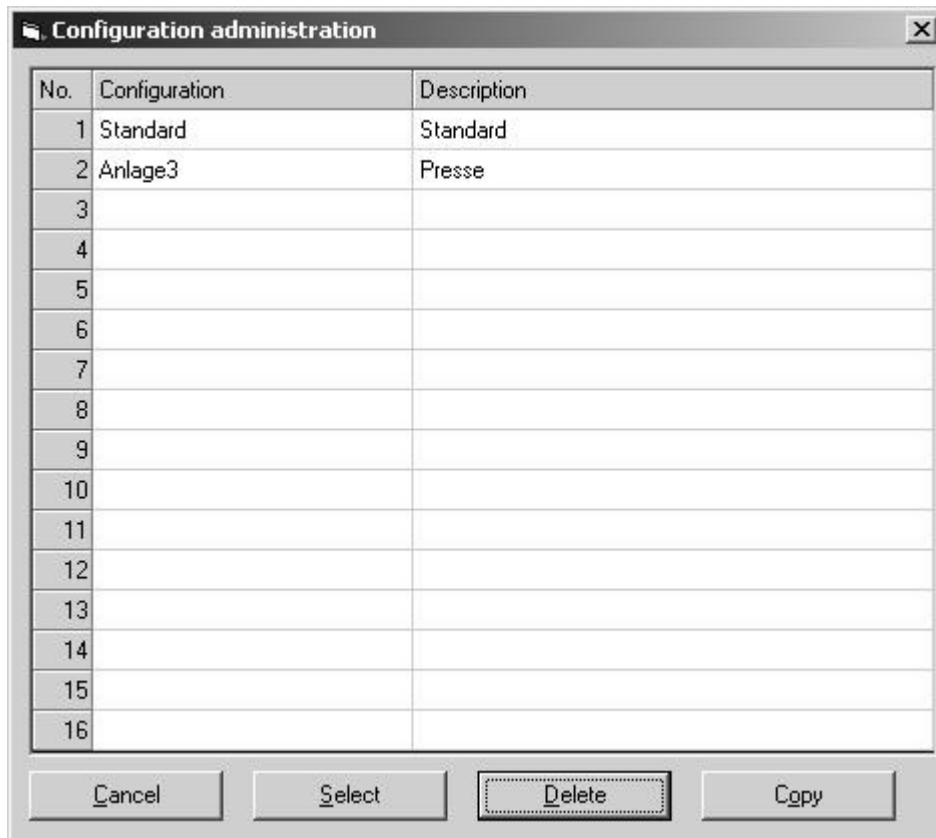


Figure 3: Administrate configurations

Configurations of older installations (< version 2.5.2) will be detected automatically and can be used again.

Via **Configuration administration** you can call the settings. With the button »Copy« you can save an existing configuration. The configurations 2-16 can be deleted or renamed by pressing [F2].



The configuration »Standard« can neither be deleted nor be renamed!

With the button »Select« the marked configuration will be accepted. Every single configuration has its own settings and operand table.

By going to **Configuration > Change selected configuration** the respective settings can be adjusted.

The active configuration will be shown in the headline of ACCON-S7-EasyLog if you do not use the standard configuration.

3.2 Basis configuration

To create a new configuration press »Config« in the main view. Then a window with the tab »Basis configuration« opens.

The screenshot shows the 'ACCON-S7-EasyLog configuration' window with the 'Basis configuration' tab selected. The window is divided into several sections:

- Device configuration:** Contains four input fields: 'Device number' (value: 1), 'PLC number' (value: 2), 'Rack number (optional)', and 'Slot number (optional)'.
- Protocol configuration:** Contains four input fields: 'Query interval [s]' (value: 1), 'Save interval [s]' (value: 1:00), 'Trigger bit', and 'Acknowledgement bit'.
- Archiving configuration:** Contains a list of radio button options:
 - Show only data
 - Time-controlled saving
 - Time-controlled saving with setting acknowledgement bit
 - Saving via trigger bit without acknowledgement
 - Saving via trigger bit with resetting trigger bit
 - Saving via trigger bit with setting acknowledgement bit** (selected)
 - Reading and saving data at the push of a button
- More settings:** Contains a checkbox labeled 'Only read data if trigger condition is fulfilled' which is currently unchecked.

At the bottom of the window, there are four buttons: 'OK', 'Cancel', 'Read PLC info', and 'AGLink40_Config'.

Figure 4: Basis configuration ACCON-S7-EasyLog

3.2.1 Device configuration

The desired device number (see button »AGLink40_Config«) and PLC number is shown here. When communicating via PROFIBUS-CP (e.g. CP342-5) you can optionally indicate the PLC's rack and slot number. If you do not enter any values, so the CPU will be directly accessed.

3.2.2 Protocol configuration

The query interval in seconds indicates in which time interval the data from the parametrized operands should be read out.

The save interval indicates in which time interval the data from the parametrized operands should be read out.

You have to enter the save and read interval in the format HH:MM:SS.

E.g. Enter: »00:01:00« → Display: »1:00« → Execution every minute

Trigger bit: Signal bit to start the recording. Has to be set by the PLC and can be reset by ACCON-S7-EasyLog (saving via trigger bit with resetting trigger bit).

Acknowledgement bit: Signal bit for the acknowledgement when the recording has been executed. Will be set by ACCON-S7-EasyLog and can be analyzed in the PLC program. Should be 0 when setting the trigger bit.

3.2.3 Archiving configuration

The following archiving configurations can be selected:

- »Show only data«
Only the read out data will be shown and not saved.
- »Time-controlled saving«
The data will be saved within a set time interval (up to 24 hours).
- »Time-controlled saving with setting acknowledgement bit«
The data will be saved within a set time interval (up to 24 hours). ACCON-S7-EasyLog sets the acknowledgement bit from 0 to 1. The PLC has to set the bit to 0 that the cycle can start again from the beginning.
- »Saving via trigger bit without acknowledgement«
Data will be saved when the trigger bit in the PLC changes from 0 to 1.
- »Saving via trigger bit with resetting trigger bit«
Data will be saved when the trigger bit in the PLC changes from 0 to 1. When saving is complete the trigger bit will be reset by ACCON-S7-EasyLog.
- »Saving via trigger bit with setting acknowledgement bit«
Data will be saved when the trigger bit changes from 0 to 1. ACCON-S7-EasyLog sets the acknowledgement bit from 0 to 1. That the cycle can start again from the beginning, the PLC has to set both bits to 0.
- »Reading and saving data at the push of a button«
The data will be read by pressing a button and saved depending on the settings of the data name.

When the option »Only read data if trigger condition is fulfilled« is activated the program checks if the trigger bit is set to 1. The values of the parametrized operands will only be read and saved when the trigger bit changes its status from 0 to 1 (rising edge).

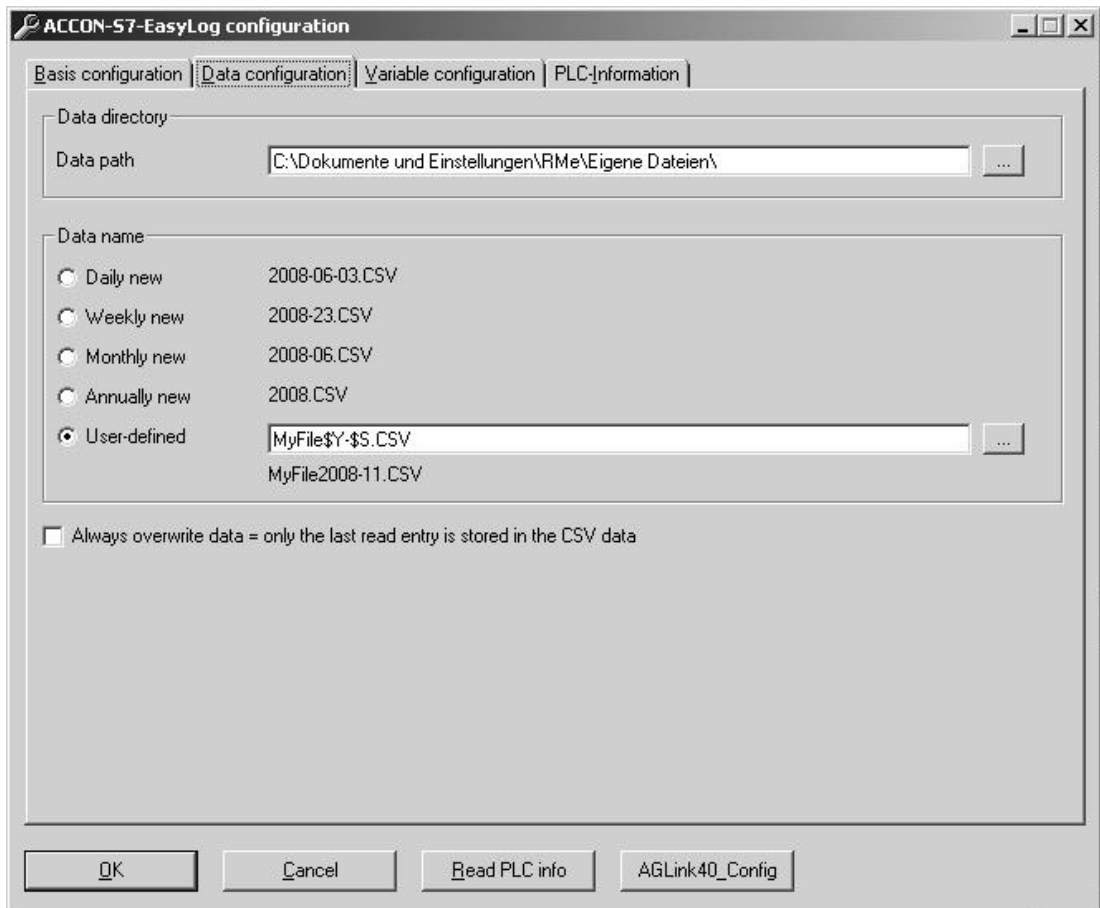


Figure 5: Data configuration ACCON-S7-EasyLog

The option »Always overwrite data = only the last entry is stored in the CSV data« means the following:

Always the last logged values will be stored in the indicated CSV data file. Previous values will be overwritten by new values. So you can process actual values by importing them to e.g. Excel.

3.2.4 Data directory

Here you have to indicate in which directory the CSV data file should be saved.

3.2.5 Data name

Using this function it is possible to define the form of the CSV data file. You have a better overview of the data files and you can assign them accurately.

User-defined input of the data name with respective placeholders:

\$Y = Year four-digit
 \$M = Month two-digit
 \$D = Day two-digit
 \$W = Calendar week two-digit
 \$H = Hour two-digit
 \$N = Minute two-digit
 \$S = Second two-digit
 \$X = Date in the form YYYY-MM-DD
 \$T = Time in the form HH.MM.SS

If a respective data file already exists the data will be added. If not the data file will be created.

3.3 Configuration of variables

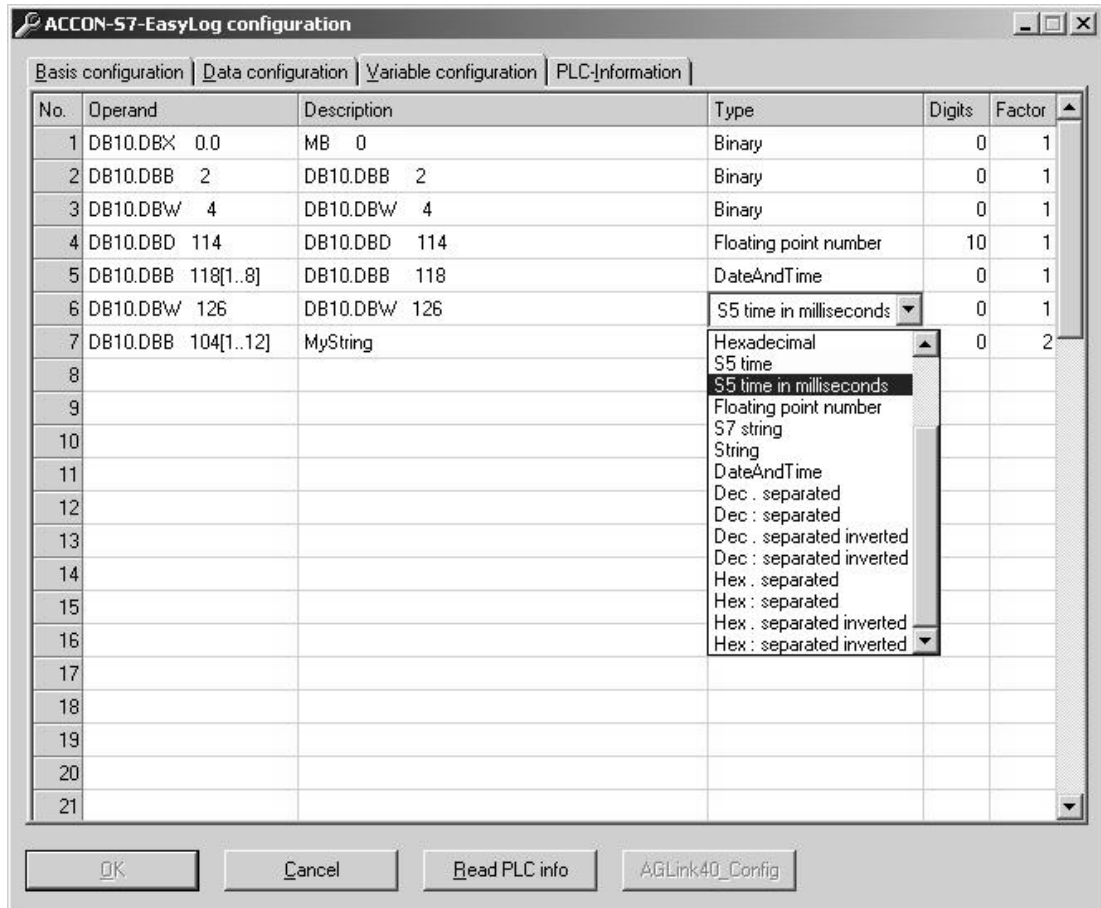


Figure 6: Variable configuration ACCON-S7-EasyLog

A maximum of 64 variables can be created.

The S7 operand address can be entered in the field »Operand«.

A free selectable name for an operand can be entered in the field »Description«.

In the field »Type« you can choose the operand type (e.g. Bool, String, etc.)

The field »Digits« shows the digits with which the operand should be displayed and recorded.

In the field »Factor« you have to enter the factor with which the read out value of the operand should be divided. You can use this to display S7 analog values correctly.

S7 data type	Operand	Pos. types	Example	Digits	Factor
BIT	DB10.DBX0.0	Binary Bool	0/1 true/false	0	1
BYTE	DB10.DBB0	Binary Decimal with prefix Decimal without prefix Hexadecimal	10000000 -128 128 0x80	0..10	1..
WORD INT	DB10.DBW0	Binary Decimal with prefix Decimal without prefix Hexadecimal	1000 -128 128 0x80	0..10	1..
S5TIME	DB10.DBW0	S5 time S5 time in milliseconds	S5T#500ms 500	0..10	1..
DWORD DINT	DB10.DBD0	Binary Decimal with prefix Decimal without prefix Hexadecimal	1000 -128 128 0x80	0..10	1..
REAL	DB10.DBD0	Floating point number	1,001	0..10	1..
STRING (Look for page 12)	DB10.DBB0[1..10]	S7-String String	MyString MyString	0	1
ARRAY	DB10.DBB0[1..10]	Dec. separated Dec: separated Dec. separated, inver. Dec: separated, inver. Hex. separated Hex: separated Hex. separated, inver Hex: separated,	0.1.10 0:1:10 10.1.0 10:1:0 00.01.0A 00:01:0A 0A.01.00 0A:01:00	0..10	1..

		inver.			
DATE_AND_TIME	DB10.DBB0[1..8]	DateAndTime	1990-01-01 00:00:00.000	0	1

Remember when using type »S7-String« that the size of an array has to be 2 bytes longer than indicated in STEP7. Because the first 2 bytes contain the length information and the desired string begins with byte 3.

Example: MyS7String [30] with the address DB1.DBB 0 has to be entered in the field »Operand« the following way: " DB1.DBB0[1..32]".

3.3.1 PLC-Information

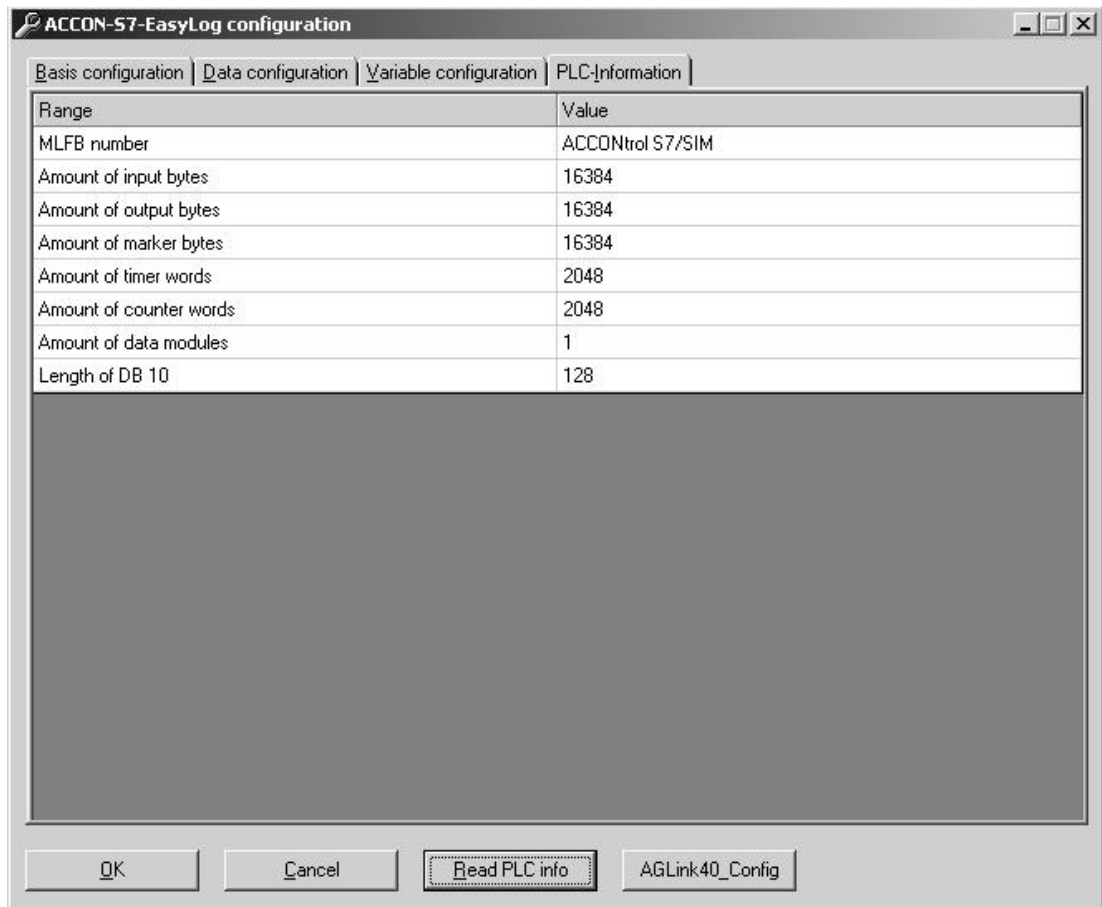


Figure 7: PLC information ACCON-S7-EasyLog

By pressing the button »Read PLC info« technical information of the connected PLC will be read out and displayed.

3.4 Notes for the use with Excel

The advantage of the directly read out data is that you can save and import them as a CSV data file to Excel without additional efforts.

E.g. you can import the CSV data file to Excel via **Data > External Data > Import text file**. Excel can be adjusted that it automatically reads out the CSV data file. (see Figure 10).

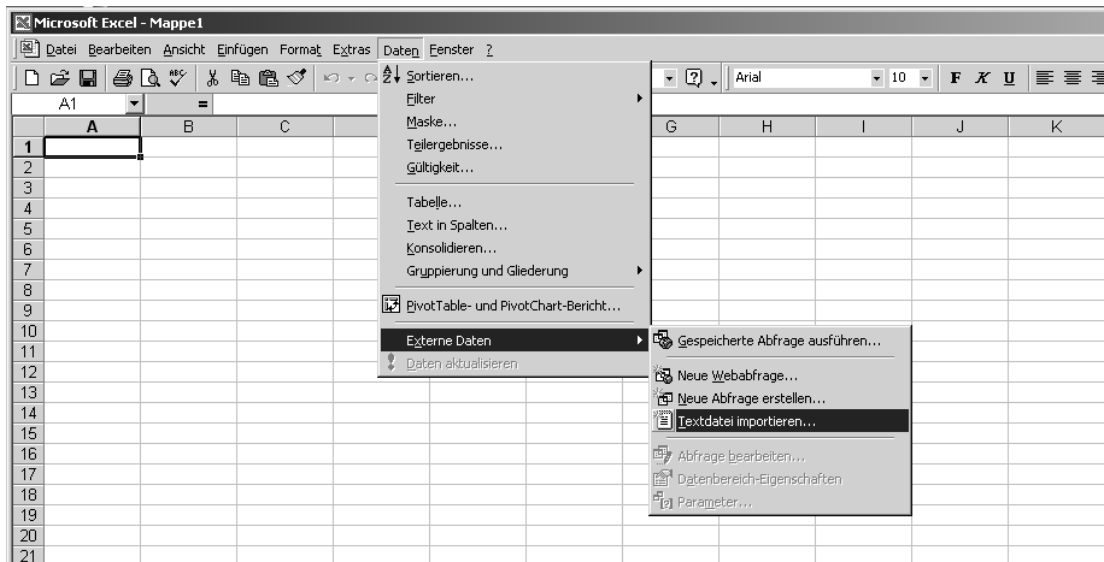


Figure 8: Import CSV data file to Excel

	A	B	C	D	E	F	G	H
1	Datum	Uhrzeit	Text	Text	Soll Temperatur 1	Soll Temperatur 2	Soll Temperatur 3	Soll Temperatur 4
2	22.10.2007	12:00:08	Test String 1	Test String 2	21	22	23	24
3	22.10.2007	12:02:07	Test String 1	Test String 2	21	22	23	24
4	22.10.2007	12:03:00	Test String 1	Test String 2	21	22	23	24
5	22.10.2007	12:27:17	Test String 1	Test String 2	21	22	23	24
6	22.10.2007	12:29:19	Test String 1	Test String 2	21	22	23	24
7								
8								
9								
10								
11								
12								

Figure 9: Excel

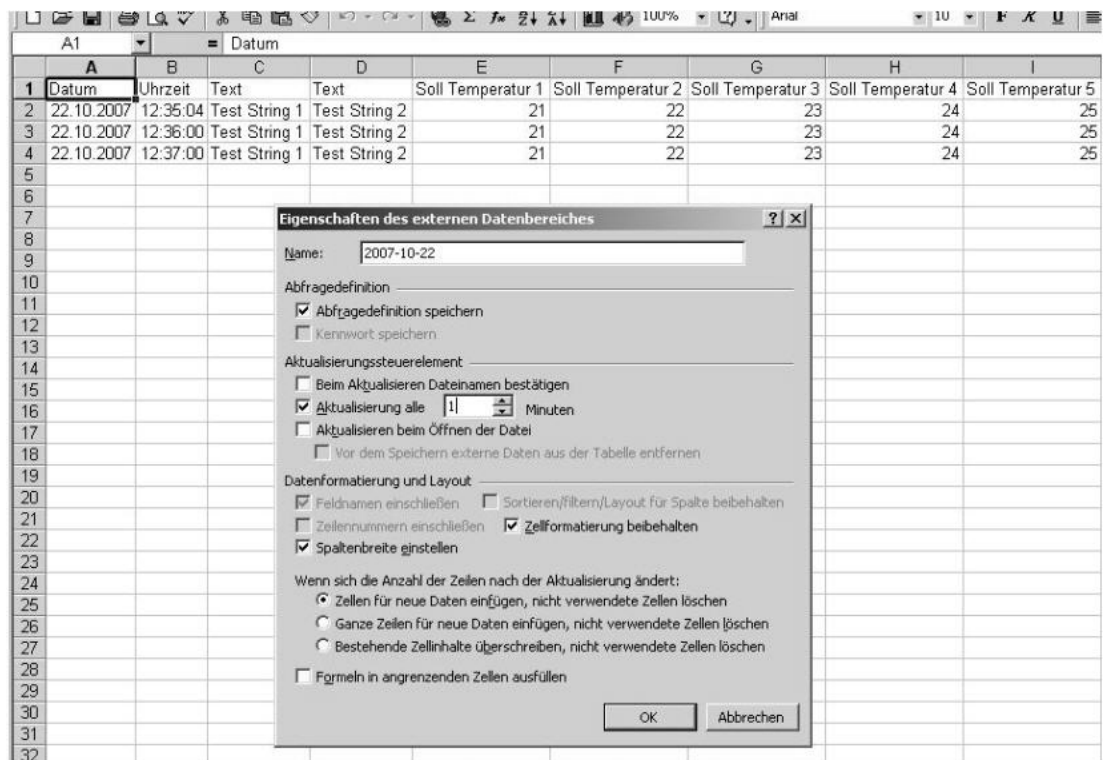


Figure 10: Settings of the external data range

4 ACCON-AGLink 4.0 Configuration

Press the button »AGLink40_Config« in the configuration menu to get to the communication settings. You can connect up to 16 PLC devices e.g. via ACCON-NetLink-PRO or ACCON-NetLink-USB.

4.1 S7-MPI

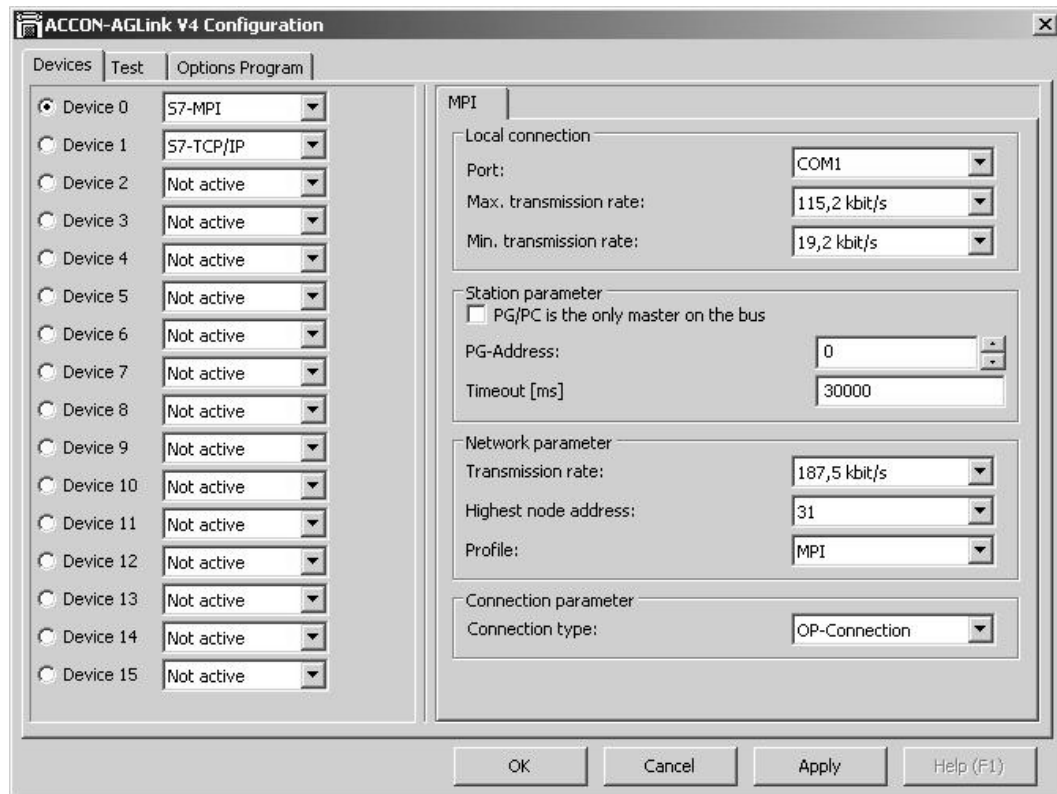


Figure 11: S7-MPI

The group »Local connection« contains parameter of the serial interface. The serial interface at which the used adapter is attached to the PC, do you adjust under »Port«. The speed of the serial connection between the PC and the adapter is adjusted under »Max. transmission rate« and »Min. transmission rate«. The data connection with the adapter is always built up with the highest possible speed. If only a certain transmission rate shall be used, then put both parameters on the same value. The ACCON-MPI-Adapter supported all of the given transmission rates. The Siemens PC adapter supports only 19200 and 38400 (take care on the switch position at the PC adapter). For the possibilities of other adapters you have to look into the respective manuals..

The group »Station parameter« contains settings for the attached adapter. The switch »PG/PC is the only master on the bus« is an additional security function which only then must be activated if exclusively Slaves are attached. Under »PG-Address« the bus address of the adapter at the MPI bus is given. The address has to be in the range of 0 up to the value adjusted under »Highest node address«. A MPI address must be unique within one MPI bus.

The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased at problems, for example with high response times in the MPI bus.

The group »Network parameter« contains parameter of the attached adapter regarding the MPI bus. With »Transmission rate« the speed used at the MPI bus is

adjusted. The value at »Highest node address« sets the highest available address at the MPI bus. It must be guaranteed that the same highest node address is set at all participants. With »Profile« the parameter for the PROFIBUS will be set. These are profile specific time parameter.

The group »Connection parameter« contains settings of the attached adapter regarding connections be built on. The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

4.2 S7-NetLink

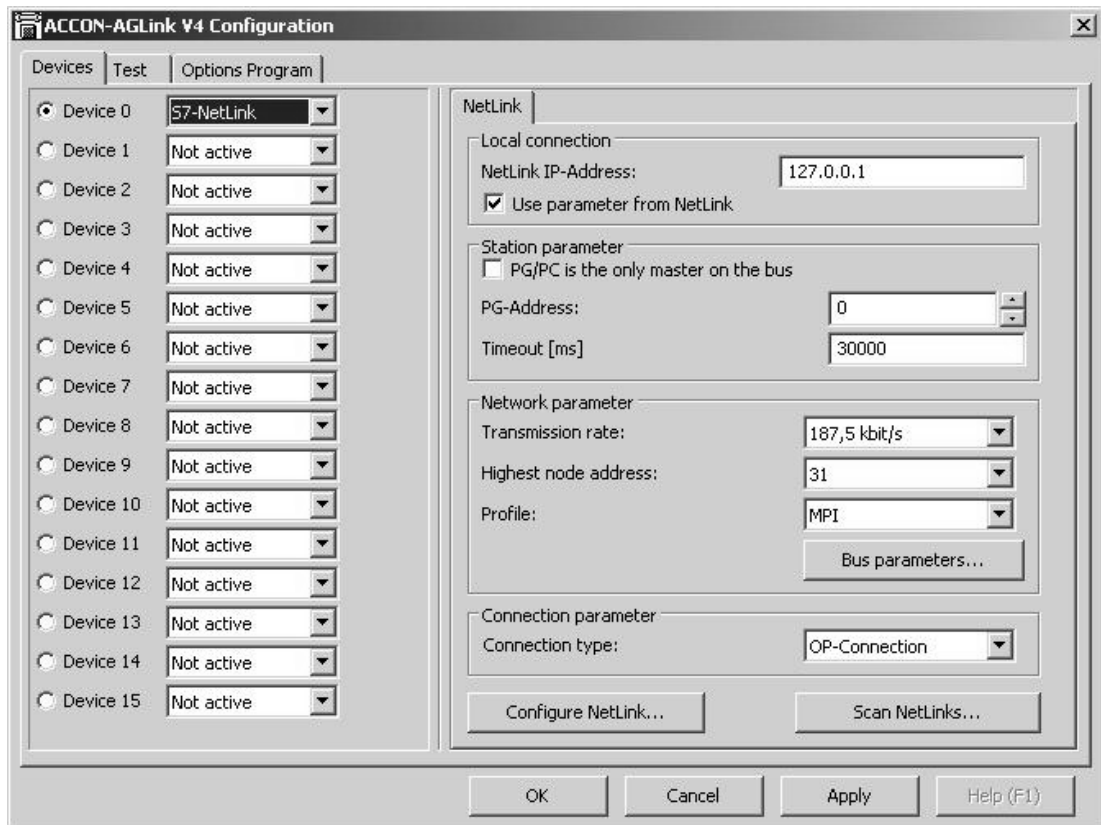


Figure 12: S7-NetLink

The group »Local connection« contains parameters of the ACCON-NetLink.

The IP address of the ACCON-NetLink is put in the field »NetLink IP address«.

No new bus parameters are transferred to the ACCON-NetLink if the switch »Use parameter from NetLink« is set. The bus parameters stored in the ACCON-NetLink are used instead of the values shown here. This affects the settings for »Address«, »Transmission rate«, »Highest node address« and »Profile«.

The group »Station parameter« contains the station-related parameter of the ACCON-NetLink.

The switch »PG/PC is the only master on the bus« is an additional security function which has to be activated if only Slaves are attached.

Under »Address« the address is given to the PROFIBUS card. The address must be in the area of zero up to the value adjusted under »Highest node address« being put. Addresses have to be unique within one PROFIBUS.

The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased at problems, for example with high response times in the PROFIBUS.

The group »Network parameter« contains the net-related attitudes of the ACCON-NetLink.

With »Transmission rate« the speed used at the PROFIBUS is adjusted. The value at »Highest node address« sets the highest available address at the PROFIBUS. It must be guaranteed that the same highest node address is set at all participants.

With »Profile« the parameter for the PROFIBUS will be set. These are profile specific time parameter.

The group »Connection parameter« contains settings of the attached adapter regarding connections be built on.

The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

By pressing »Configure NetLink...« the program tries to reach and parametrize the connected ACCON-NetLink. Using the button »Scan NetLinks...« all connected ACCON-NetLinks are shown in a separate window can be parametrized there, too.

4.3 S7-NetLink-PRO

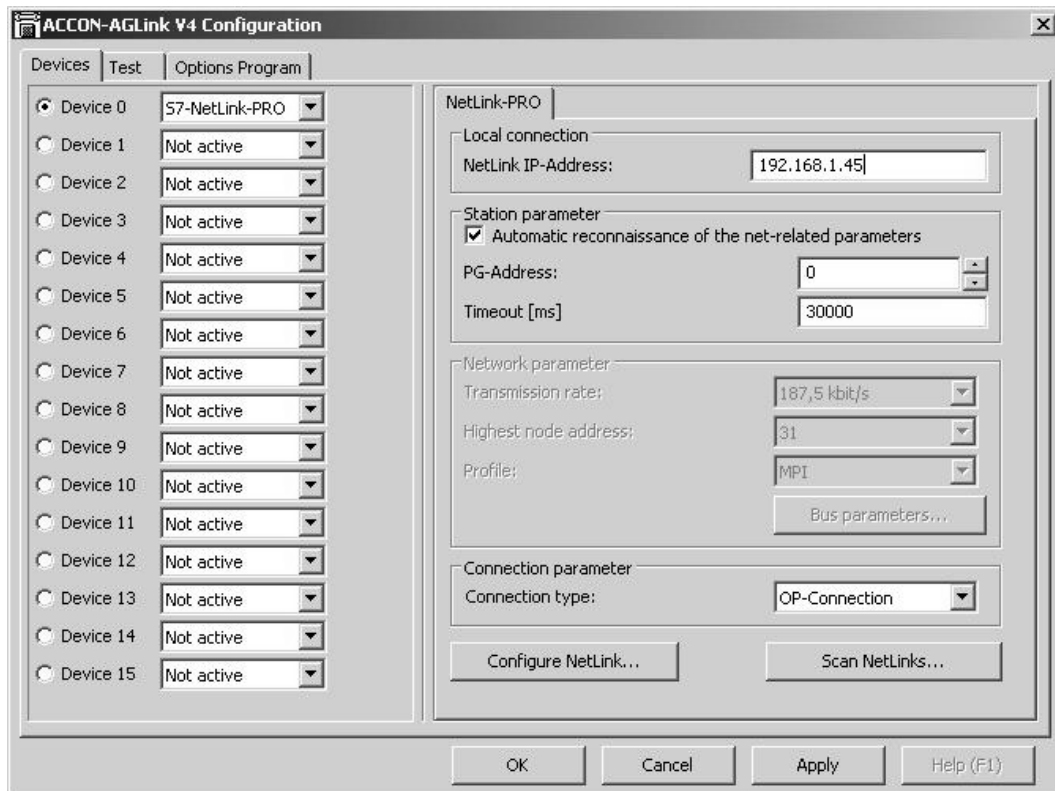


Figure 13: S7-NetLink-PRO

The group »Local connection« contains parameters of the ACCON-NetLink-PRO. The IP address of the ACCON-NetLink-PRO has to be put in the field »NetLink IP address«.

The group »Station parameter« contains the station-related parameter of the ACCON-NetLink-PRO. The switch »Automatic reconnaissance of the net-related parameters« means that the bus parameters transferred to the ACCON-NetLink-PRO are not used if the ACCON-NetLink-PRO is able to detect the bus parameters itself. This affects the settings for »Address«, »Transmission rate«, »Highest node address« and »Profile«. Under »PG-Address« the address is given to the PROFIBUS card. The address must be in the range of 0 up to the value adjusted under »Highest node address« being put. Addresses have to be unique within one PROFIBUS.

The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased when having problems, e.g. with high response times in the PROFIBUS.

The group »Network parameter« contains the net-related attitudes of the ACCON-NetLink-PRO. With »Transmission rate« the speed used at the PROFIBUS is adjusted. The value at »Highest node address« sets the highest available address at the PROFIBUS. It must be guaranteed that all participants have the same highest node address. With »Profile« the parameter for the PROFIBUS will be set. These are profile specific time parameters.

The group »Connection parameter« contains settings of the attached adapter regarding connections be built on. The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

By pressing »Configure NetLink...« the program tries to reach and parametrize the connected ACCON-NetLink. Using the button »Scan NetLinks...« all connected ACCON-NetLinks are shown in a separate window can be parametrized there, too.

4.4 S7-NetLink-USB

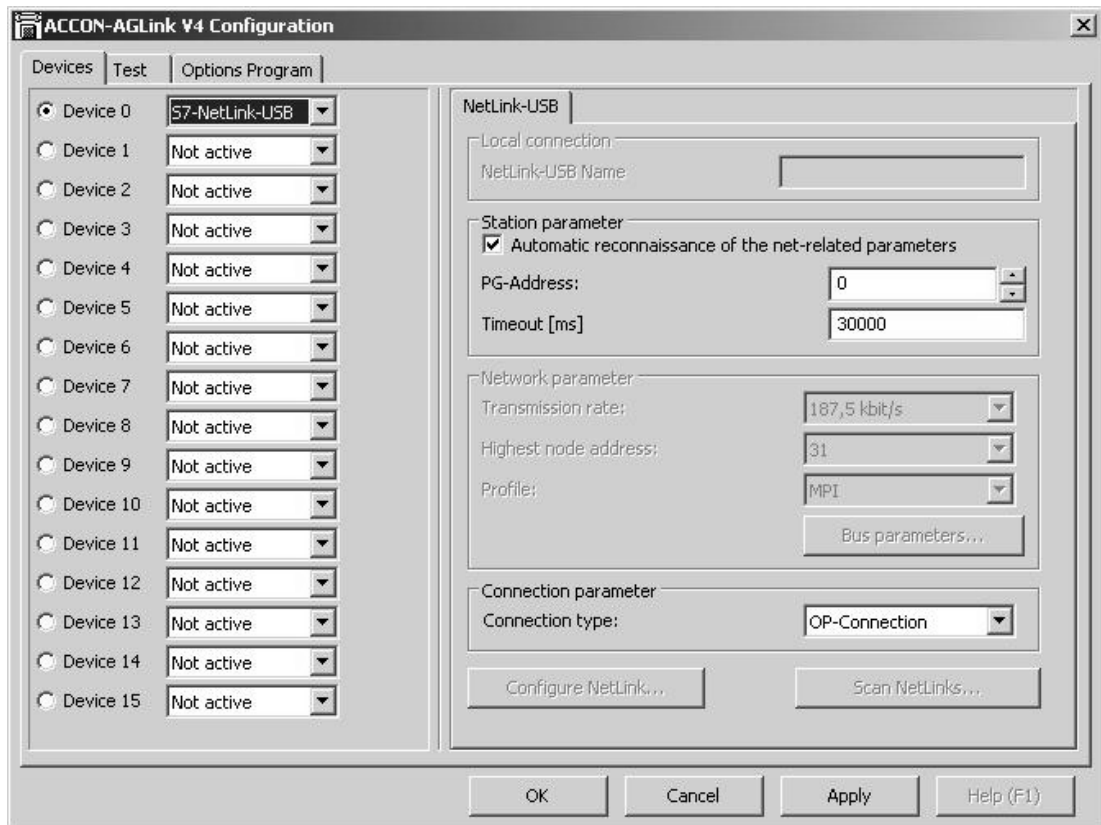


Figure 14: S7-NetLink-USB

The group »Local connection« contains parameter to the ACCON-NetLink-USB. The Name of the ACCON-NetLink-USB has to be put in the field »NetLink USB Name«. This option is not available at present. It is intended for the future to distinguish between multiple ACCON-NetLink-USB connected to one PC.

The group »Station parameter« contains the station-related parameter of the ACCON-NetLink-USB.

The switch »Automatic reconnaissance of the net-related parameters« means that the bus parameters transferred to the ACCON-NetLink-USB are not used if the ACCON-NetLink-USB is able to detect the bus parameters itself. This affects the settings for »Address«, »Transmission rate«, »Highest node address« and »Profile«. Under »PG-Address« the address is given to the PROFIBUS card. The address must in the range of 0 up to the value adjusted under »Highest node address« being put. Addresses have to be unique within one PROFIBUS.

The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased when having problems, e.g. with high response times in the PROFIBUS.

The group »Network parameter« contains the net-related attitudes of the ACCON-NetLink-USB. With »Transmission rate« the speed used at the PROFIBUS is adjusted. The value at »Highest node address« sets the highest available address at the PROFIBUS. It must be guaranteed that the same highest node address is set at all participants. With »Profile« the parameter for the PROFIBUS will be set. These are profile specific time parameters.

The group »Connection parameter« contains settings of the attached adapter regarding connections to be built on.

The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

By pressing »Configure NetLink...« the program tries to reach and parametrize the connected ACCON-NetLink. Using the button »Scan NetLinks...« all connected ACCON-NetLinks are shown in a separate window can be parametrized there, too.

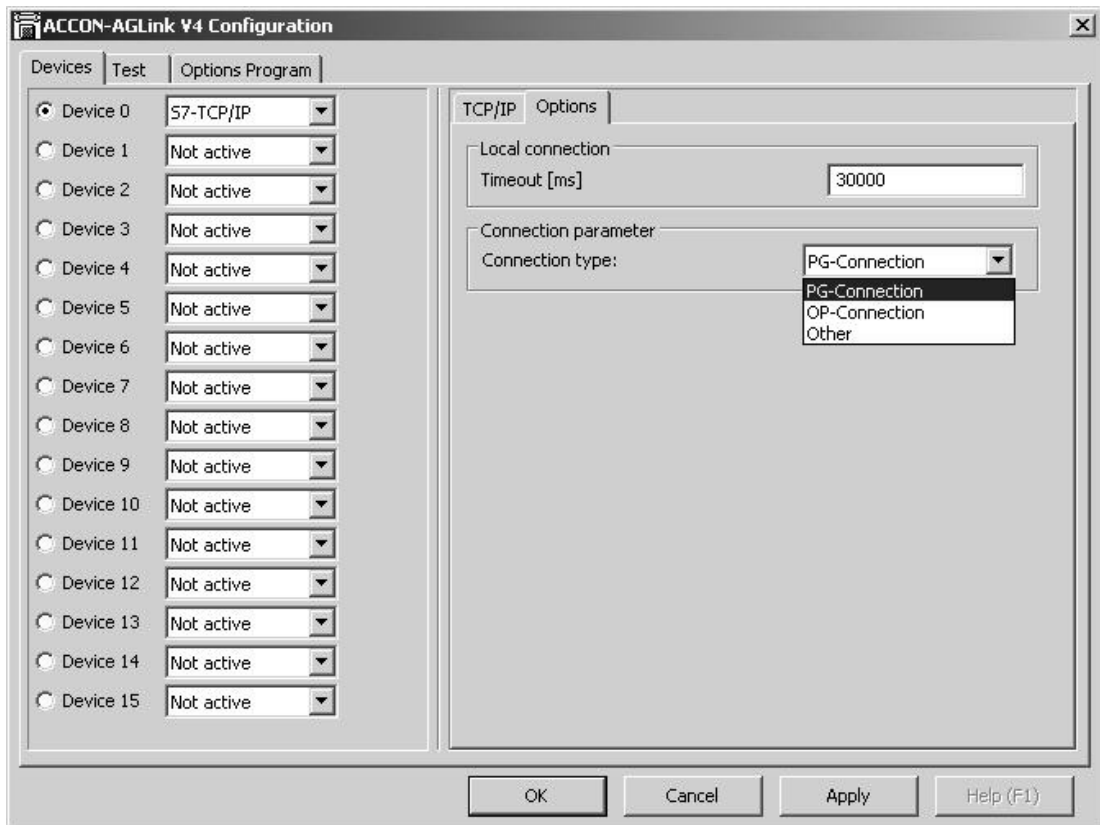


Figure 16: S7-TCP/IP, options

The group »Local connection« contains parameter of the local network interface.

The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased at problems, for example with high response times in the MPI bus.

The group »Connection parameter« contains settings regarding connections be built on. The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

4.6 S7-PC/CP

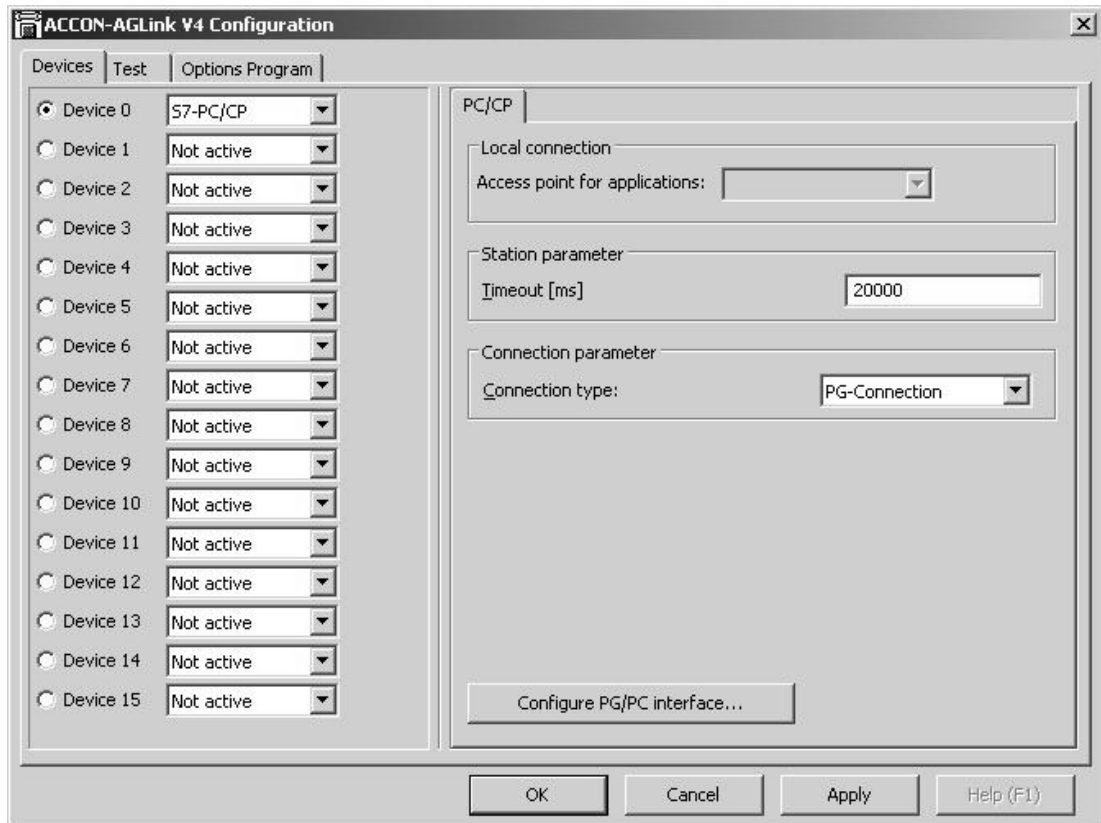


Figure 17: S7-PC/CP

The group »Local connection« contains the Access Point of the Application which should be used. The current selected communication device (CPxxxx) is additionally shown. You can only select allowed and configured access points. Any change on this, e.g. adding a new access point, changing the configuration or setup the communication devices, are done in the applet »Set PG/PC Interface« in the control panel.

The group »Station parameter« contains the local settings. The parameter »Timeout« sets the connection timeout. The value is indicated in milliseconds. The value can be increased when you have problems e.g. with high response times at the PROFIBUS.

The group »Connection parameter« contains settings regarding connections be built on. The »Connection type« sets the type of connections to be built on. The adjusted value doesn't have influence on the communication possibilities.

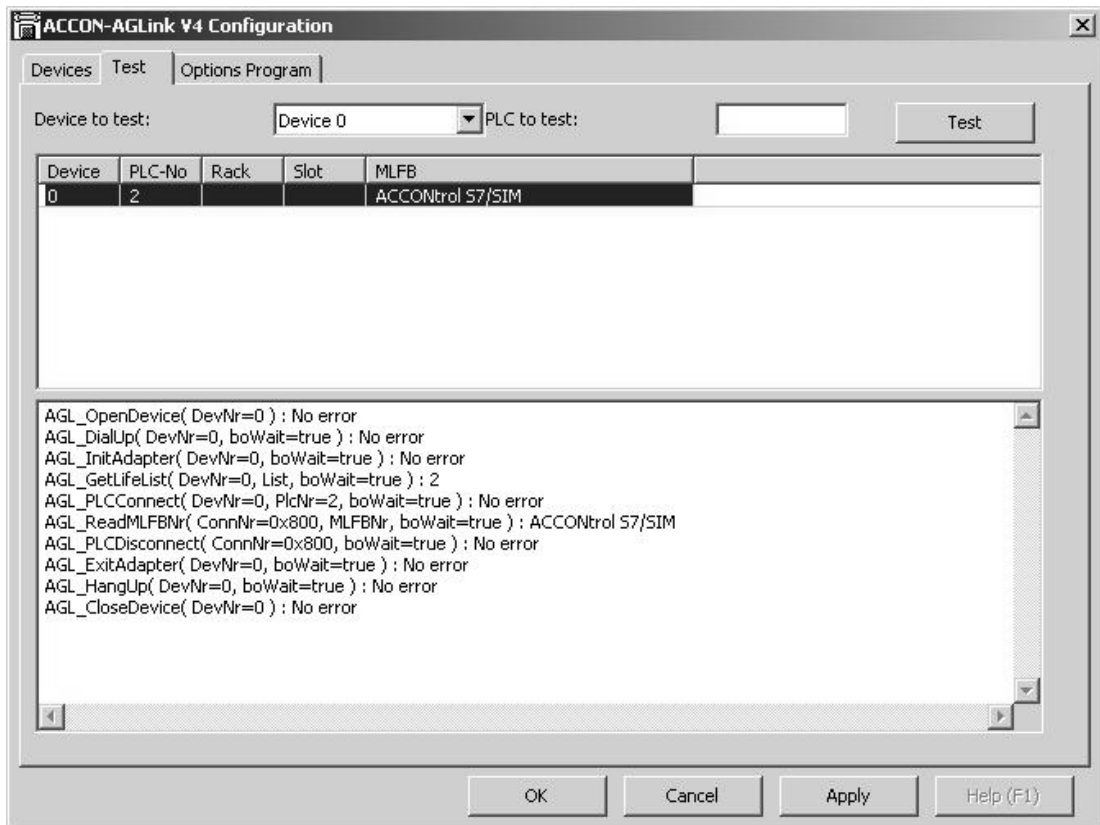


Figure 18: ACCON-AGLink 4.0 connection test

Going to the tab »Test« you can check if the connected device works correctly. If the communication settings are correct, the MLFB numbers of the reachable CPUs which are adjusted via the device are shown.

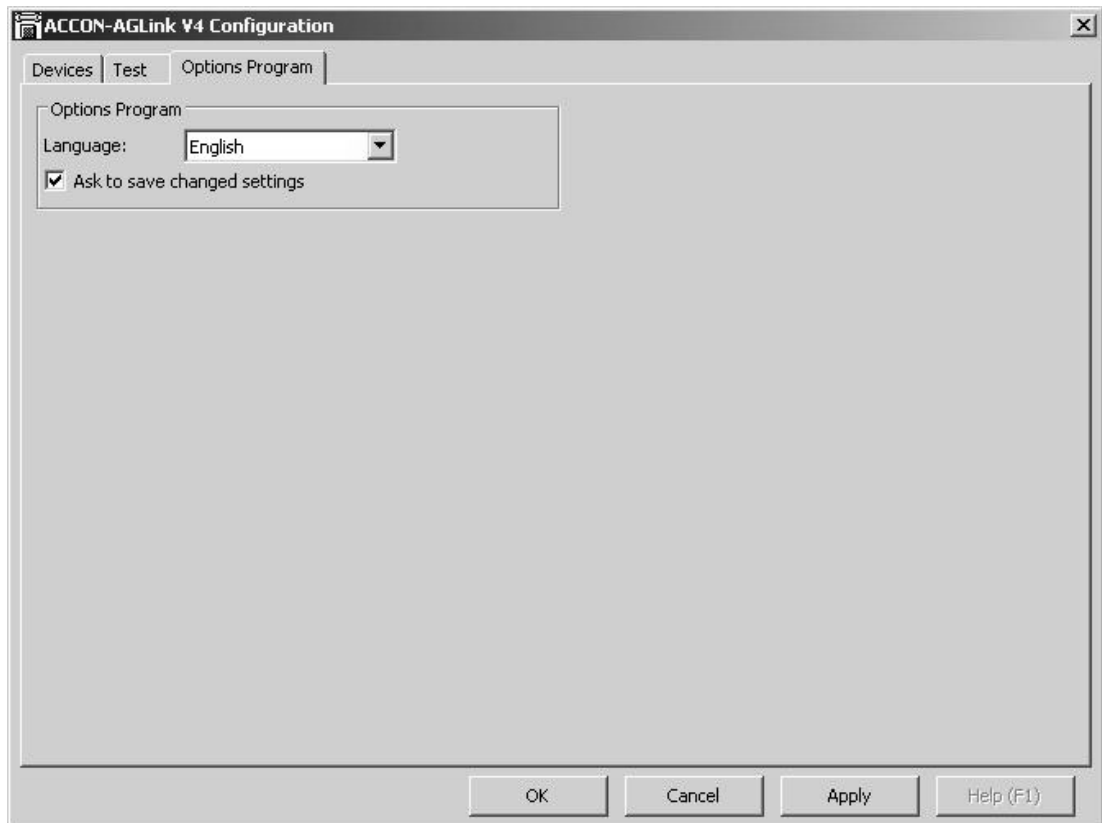


Figure 19: ACCON-AGLink 4.0 configuration, options

Here you can switch between German and English.

5 Installation

- Insert the DELTALOGIC Automatisierungstechnik-CD into your CD-drive.
- Start the file »SetupS7EasyLog.exe«. Located in the CD menu under »Software\ACCON-S7-EasyLog\«. You can find it in the explorer under »CD-drive:\Software\ACCON-S7-EasyLog\«, too.
- Choose the respective installation type:



5.1 Demo version

If running ACCON-S7-EasyLog in demo mode a small note appears all 5 minutes which says that you are running only a demo. But there are no further restrictions.

5.2 Licence with USB dongle

To complete the activation you have to plug in the supplied USB dongle. After a short and automatic authorization you can start ACCON-S7-EasyLog.



*When using ACCON-S7-EasyLog the USB dongle has to be **always** plugged in!*

If the USB dongle was not detected correctly or not plugged in, the following message appears:



5.3 Licence with software authorization

When calling ACCON-S7-EasyLog the next time, the following dialog appears.



Figure 20: Unregistered version

Please click on »Schlüssel eingeben« (enter key) to reach the next dialog:

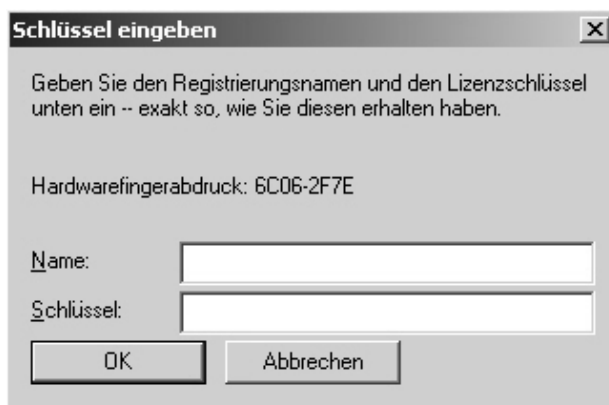


Figure 21: Hardware fingerprint

Please send the information above to reg@deltalogic.de:

Licence number: e.g.. 99990-06789

Name: e.g. Name

Hardware fingerprint: e.g. 6C06-2F7E



Please copy the name and the key directly from our e-mail to prevent wrong input.

As soon as we have received the above-mentioned information you will get an e-mail from us including the activation key. Enter the name in the field »Name« and the key in the field »Schlüssel«.

When clicking »OK« the following message has to appear:

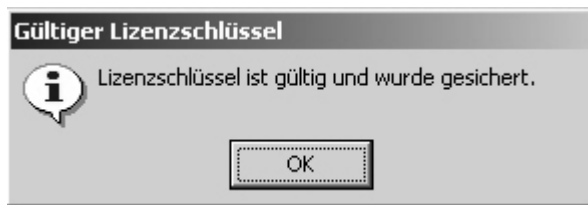


Figure 22: Valid licence key

So the activation is complete and you can use ACCON-S7-EasyLog from now on as a full version.

But if this message appears:

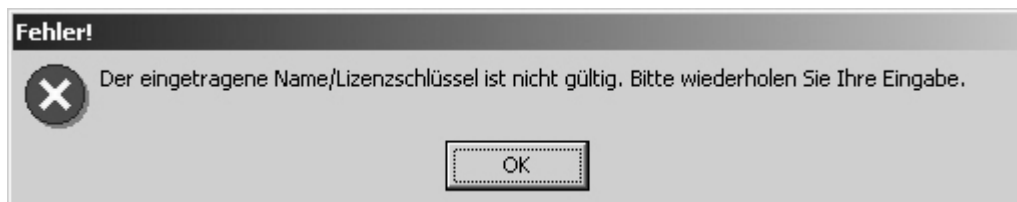


Figure 23: Invalid licence key

You have to check if the »Name« and »Licence key« were correctly entered. If so please compare your hardware fingerprint with the one from our e-mail and turn to our technical support.