Software description
AIPEX LITE V3

Version: 2023/27
Part no.: 205359
Translation of the "Original Dokumentation"

AMKmotion
MEMBER OF THE ARBURG FAMILY

Notes on this document

Name: PDK_205359_Software_AIPEX_LITE_V3

Version:

Version: 2023/27		
Chapter / Topic	**Change**	**Letter symbol**
Notes on this document	new AMKmotion Design	LeS

Previous version: 2019/45

Product version:

Product	Firmware Version (Part no.)	Hardware Version
PC software	AIPEX LITE V3.04 18/47 (207210)	Windows PC

Reservation: We reserve the right to modify the content of the documentation as well as the delivery options for the product.

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For fast and reliable troubleshooting, you can help us by informing our Customer Service about the following:

- Type plate data for each unit
- Software version
- Device configuration and application
- Type of fault/problem and suspected cause
- Diagnostic messages (error messages)

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Content

1 AIPEX LITE V3

AIPEX LITE V3 is a part of the AMK Software AIPEX PRO V3 but you can also install it separately. The functionality of AIPEX LITE V3 is comparable with the AIPEX PRO V3 functionality 'Direct mode'.

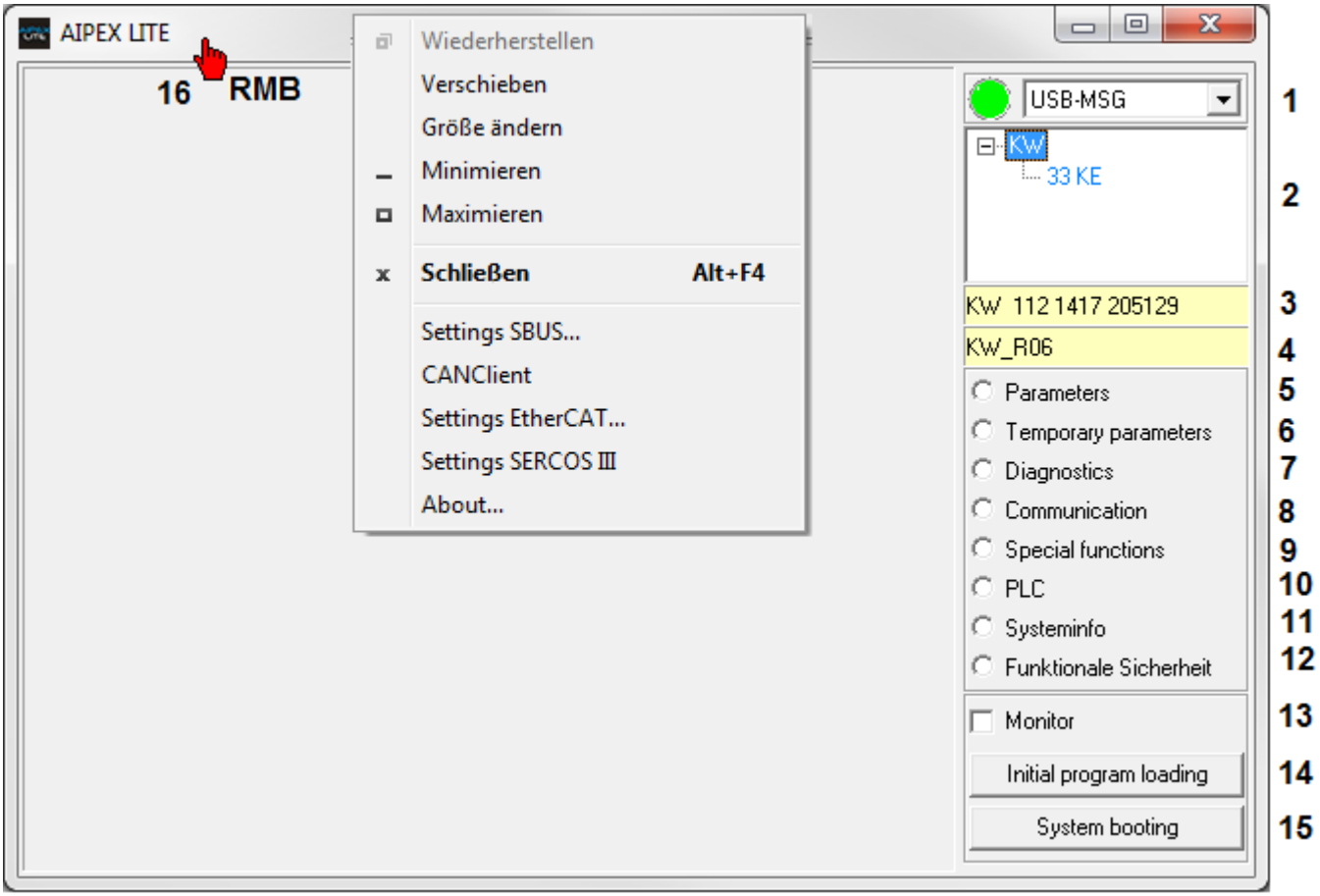
Differences between AIPEX LITE V3 and AIPEX PRO 'Direct mode'

- AIPEX LITE V3 is only in English available
- The function 'Download parameter set to the device' is not available
- Customer specific password protection is available

1.1 Installation

- The software must be installed on a 100% compatible PC running under Windows® 2000/XP/Vista/7.
- To install, launch the file: 'start.exe'

1.2 Overview



No.	Functionality
1	Activated interface between PC and device Green: Link to the device available Red: Link to the device not available
2	Display of online available devices
3	Firmware Version
4	System Name
5	Display and input possibility for parameter values Siehe 'Parameter' auf Seite 8.

No.	Functionality
6	Display and input possibility for temporary parameter values Siehe 'Temporary parameters' auf Seite 13.
7	Display of diagnosis messages and the functions error clear Siehe 'Diagnostics' auf Seite 14.
8	Display and input possibility for bus parameters Siehe 'Communication' auf Seite 15.
9	Set up functions Siehe 'Special functions' auf Seite 17.
10	Display of PLC program information and the functions plc handling Siehe 'PLC' auf Seite 19.
11	Display of System information and additional system handling Siehe 'System info' auf Seite 20.
12	Option 'Safety Functionality' Siehe 'Functional safety' auf Seite 22.
13	Cyclic display of actual online values Siehe 'Monitor - System booting - Inital loading' auf Seite 23.
14	Function 'Initial program loading' The 'Initial program loading' function resets AMK devices into their initial status (delivery status). After a completed initial program loading, a system reset needs to be done. Prerequisites for the initial program loading: A direct connection between PC and AMK device, additional password input. Siehe 'Monitor - System booting - Inital loading' auf Seite 23.
15	Function 'System booting' A 'System booting' is carried out on the selected device. A 'System booting' causes a recalculation of the data management. (Actual values are maintained, drive bus continues running...) Siehe 'Monitor - System booting - Inital loading' auf Seite 23.

1.3 First Steps with AIPEX LITE V3

- Link the PC with the device, following possibilities are available
  - Siehe 'COM interface' auf Seite 27.
  - Siehe 'CAN interface' auf Seite 26.
  - Siehe 'USB interface' auf Seite 43.
  - Siehe 'Ethernet interface' auf Seite 32.
  - Siehe 'SERCOS III interface' auf Seite 41.
- Start AIPEX LITE V3
- Click with the right mouse button onto the AIPEX LITE V3 window head
- Choose via the menu 'Communication settings' (16) your physically available link
- Close the program AIPEX LITE V3
- Switch on the device
- Start AIPEX LITE V3
- Wait until the interface has done the initialization (LED display change from 'red' to 'green')
- To work with a defined device, you have to mark this device inside the field 2. (You can only see several devices if the system have an active fieldbus connection)

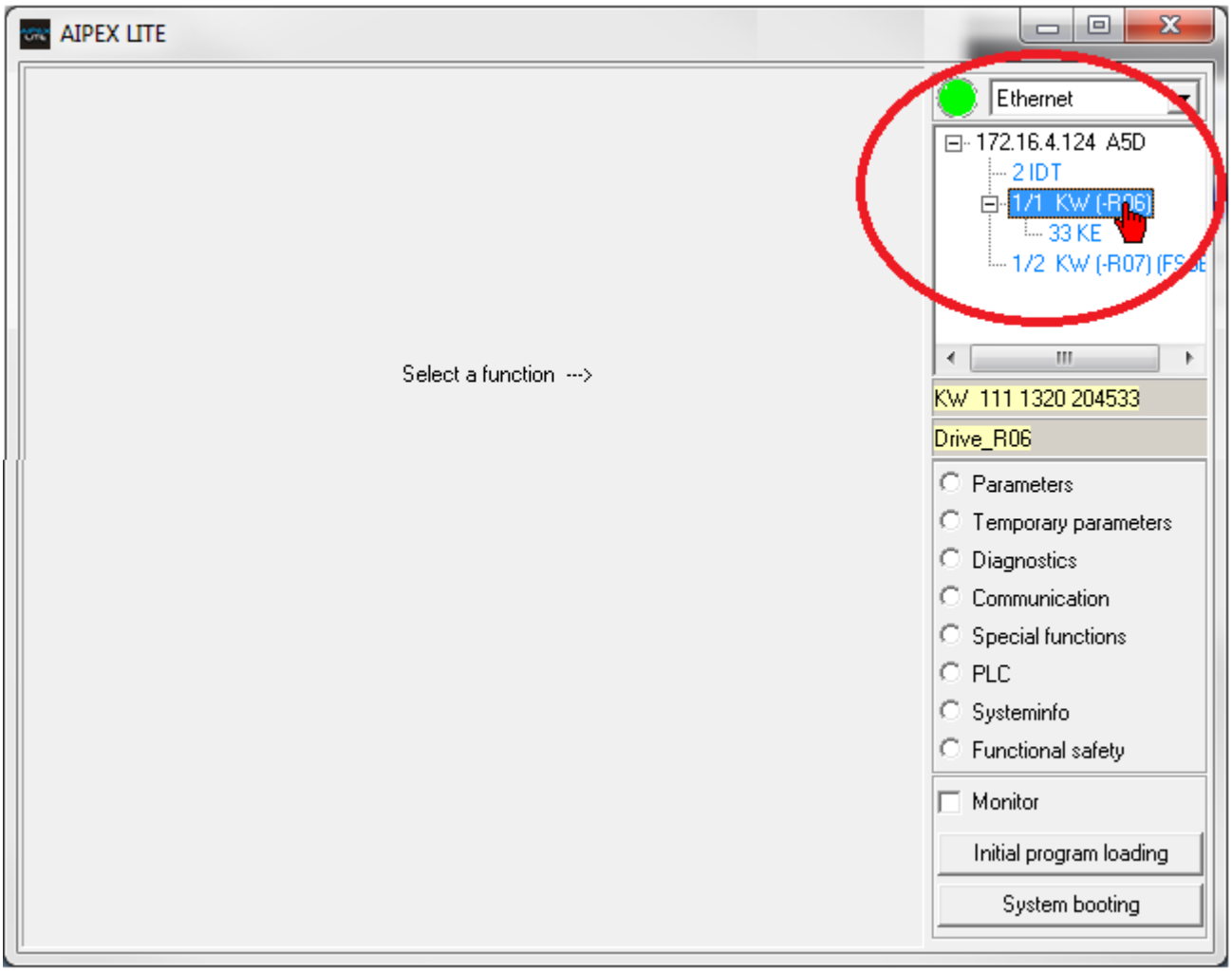
1.4 Customer specific password protection

If the ID32821 'Password' protection is active you can only read values with AIPEX LITE V3. If you want to write values, you have to enter the customer specific password.

To release the write function, you have to open the menu 'Systeminfo' and use the button **'Password Device'** .

1.5 Activate the connection

In the following, read the explanation on how to access the connected AMK devices with 'AIPEX LITE V3'.



All active interfaces (connections between PC and AMK devices) are offered for selection.

Select the desired interface.

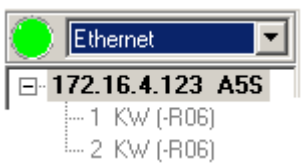
Status indicator:

Green = Connection established

Red = Connection not established or interrupted

EtherCAT devices are displayed immediately.

For other drive buses, such as the ACC bus, you have to click on the corresponding Bus Master.

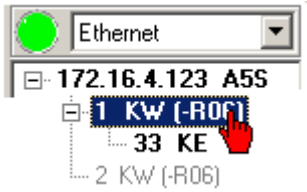


Status grey: Device data has not yet been read out.

Status black: Device data has been read out and saved on the PC. By double-clicking a black device, the data is read out anew.

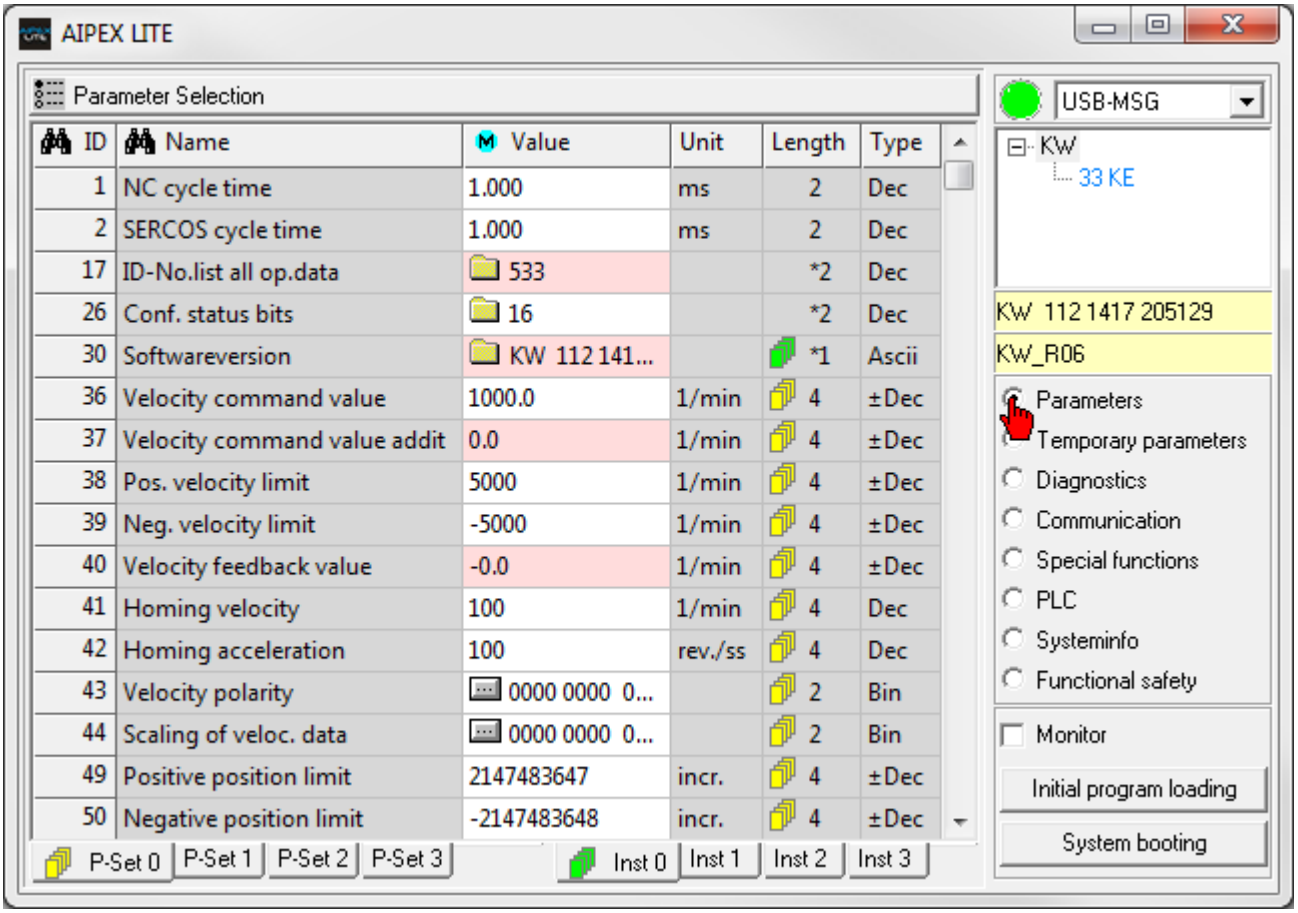
Example:

The supply module KE 33 is connected via ACC bus.



2 Functions

2.1 Parameter



ID	Name	Value	Unit	Length	Type
1	NC cycle time	1.000	ms	2	Dec
2	SERCOS cycle time	1.000	ms	2	Dec
17	ID-No.list all op.data	533		*2	Dec
26	Conf. status bits	16		*2	Dec
30	Softwareversion	KW 112 141...		*1	Ascii
36	Velocity command value	1000.0	1/min	4	±Dec
37	Velocity command value addit	0.0	1/min	4	±Dec
38	Pos. velocity limit	5000	1/min	4	±Dec
39	Neg. velocity limit	-5000	1/min	4	±Dec
40	Velocity feedback value	-0.0	1/min	4	±Dec
41	Homing velocity	100	1/min	4	Dec
42	Homing acceleration	100	rev./ss	4	Dec
43	Velocity polarity	0000 0000 0...		2	Bin
44	Scaling of veloc. data	0000 0000 0...		2	Bin
49	Positive position limit	2147483647	incr.	4	±Dec
50	Negative position limit	-2147483648	incr.	4	±Dec

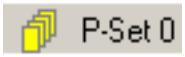
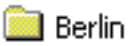
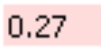
'Parameter' displays available offline and online values of the device selected in the device tree.

2.1.1 Parameter - Manual

Changes in the 'Parameters' are not effective immediately in the drive. It belongs to the parameter group what you have to do to activate.

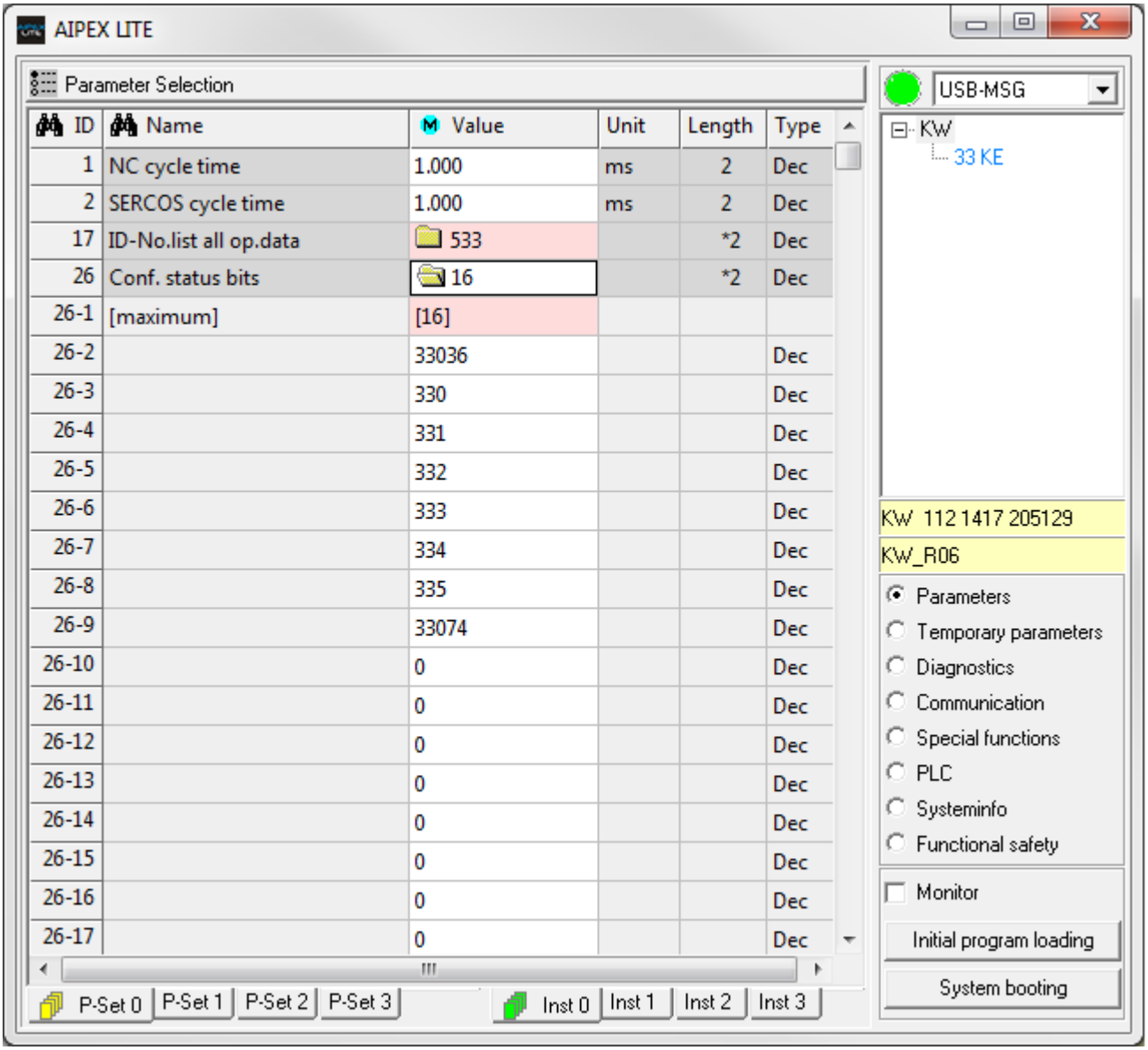
- Group Global and Instance: Logic Voltage (24 VDC) off/on
- Group Drive specific: Controller enable RF off/on

Icon	Meaning
Parameter Selection	Window: Parameter selection and System internal parameters
ID	Search: ID number
Name	Search: Parameter name
Value	Online value (value which is stored at the AMK device)
Value	Offline value (value which is stored at the PC)
	Upload (from device to PC) / Download (from PC to device) selected parameter

Icon	Meaning
	Upload (from device to PC) / Download (from PC to device) complete parameter set
	Parameter set
	Instance (used for bus parameters)
	Selection list input possibilities
	List Parameter
	Pink background: Read only parameter

Field	Explanation
ID	Parameter number
Name	Designation of the parameter
Value	Current value of the parameter Folder icon = Parameter list
Unit	Unit of the parameter
Length	Data length of the parameter in byte • 1 byte • 2 byte • 4 byte
Type	Display of the parameter • Dec: decimal • ±Dec: decimal signed • Bin: binary • Hex: hexadecimal • Ascii: Ascii string
Remark	Text field, freely usable by the user
Background colour in the column "Value"	White: Value can be modified Pink: Value cannot be modified (write-protected or formal)
Text colour in the column "Value"	Blue: Value was modified, but not yet saved Black: Value is unchanged since the last saving Red: This is a system parameter (can be modified only if enabled)
Icon in column "Length"	Yellow: Parameter is specific for the parameter set Green: Parameter is specific for the instance

2.1.1.1 Display and structure of lists



ID	Name	Value	Unit	Length	Type
1	NC cycle time	1.000	ms	2	Dec
2	SERCOS cycle time	1.000	ms	2	Dec
17	ID-No.list all op.data	533		*2	Dec
26	Conf. status bits	16		*2	Dec
26-1	[maximum]	[16]			
26-2		33036			Dec
26-3		330			Dec
26-4		331			Dec
26-5		332			Dec
26-6		333			Dec
26-7		334			Dec
26-8		335			Dec
26-9		33074			Dec
26-10		0			Dec
26-11		0			Dec
26-12		0			Dec
26-13		0			Dec
26-14		0			Dec
26-15		0			Dec
26-16		0			Dec
26-17		0			Dec

Lists

- Lists are indicated by the folder icon in 'Value' column.
- For non-ASCII lists, the number of list elements is indicated next to the icon. For ASCII lists, the text content is displayed here.
- All lists can be displayed in expanded form by a double-click in the 'Value' column. The number of maximum possible list elements is shown in the first line underneath. All further lines display the list content by elements.
- The display of the list elements can be structured by entering own values in the columns lengths (1, 2, 4) and type (Dec, Hex, Bin, Ascii).

Entering values

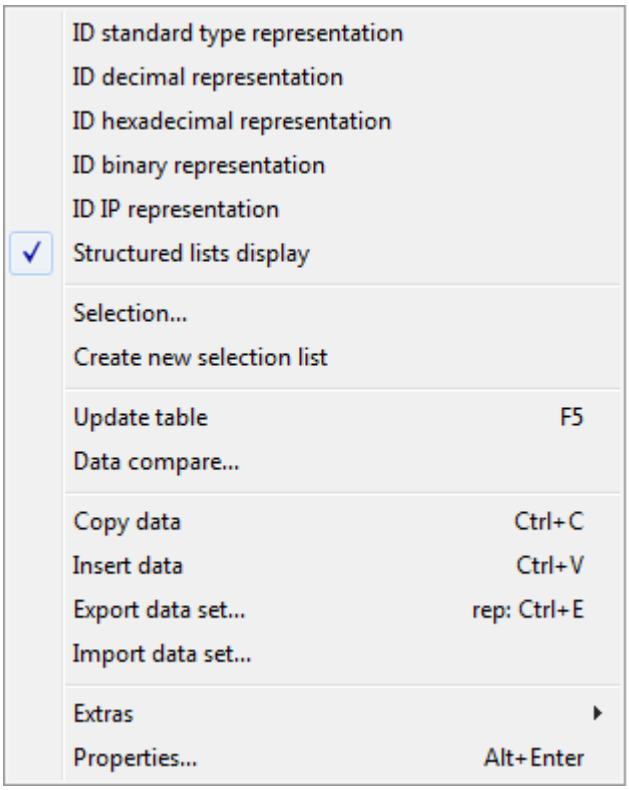
- The value of modifiable parameters can be edited directly in the table. Each input is completed by pressing the **'Enter'**.
- The input needs to be appropriate for the displayed data type.
- Some parameters have a minimum and a maximum limitation of the value. If these are breached during input, an error message is displayed.

Modifying lists

- For non-ASCII lists, entering a value next to the folder icon changes is current list length. The value may not be longer than the maximum list length.
- For ASCII lists, the input next to the folder icon is interpreted as a string and the list is modified appropriately.
- In expandable lists, the list elements can be modified directly. The input needs to be appropriate for the displayed data type of the element or in case none exists, fit the list.

2.1.1.2 Parameter context menu

Select the tab 'Parameter'. By selecting any parameter with the right mouse button, the context menu opens.

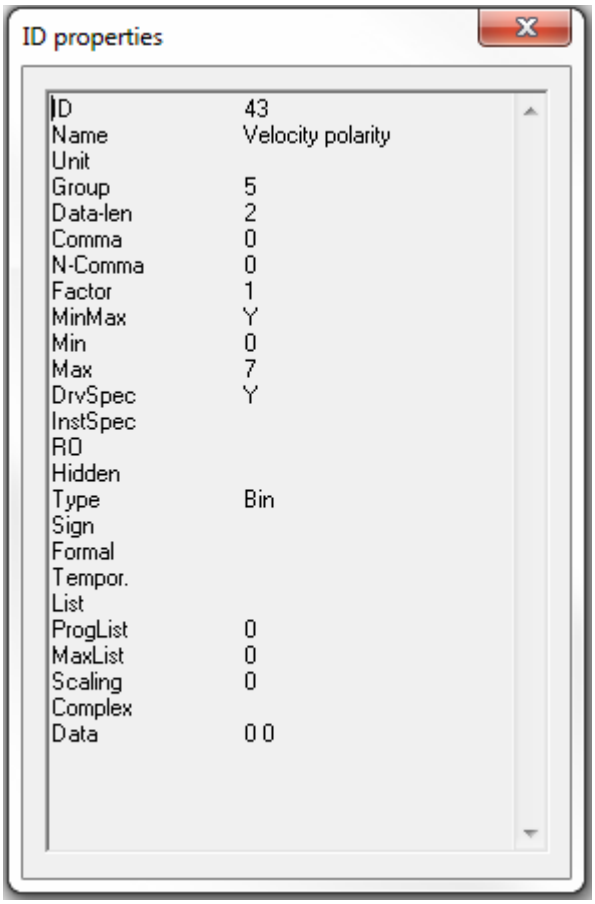


Field	Explanation
Displaying ID in the standard type	The selected parameter will be displayed as indicated in the ID Properties .
Display ID decimally	The selected parameter will be displayed decimally.*
Display ID hexadecimally	The selected parameter will be displayed hexadecimally.*
Display ID binary	The selected parameter will be displayed binary.*
Structured list displays	If 'Show lists with structure' is activated in the context menu, the user can specify 'Name', 'Value', 'Unit length' (e.g. user lists).
Selection	Opens the window 'Parameter selection'.
Save ID in selection list	The number of the selected parameter is saved in the currently specified 'own list'. It is of no importance if the 'own list' is active.
Update display	Updating the online values. All values are discarded and read in anew from the connected drive.
Data compare	The content of the currently displayed parameter set can be compared with an already saved one.
Download/Copy project parameters set	With this menu item, the selected parameter is transferred between data set and online device. If the selection is in the column of the device data set, the parameter is copied from the offline data set to the online device. If the selection is in the column of the online data set, the parameter is saved from the online device to the offline data set. The name of the menu item changes, depending on the selected column.

Field	Explanation
Copy data	The contents of currently marked parts of the parameter table are copied to the Windows clipboard and thus are available as insertable text for many applications, such as text programs. If complete lines are marked in the table, an internal copy of this parameter is made as well.
Insert data	If there is an internal copy of parameters, then its content is inserted in the corresponding parameter. If no internal copy exists, then the content of the Windows clipboard is inserted unchecked as text as of the currently selected point in the table.
Export data set	With using the function 'Export data set', a XML file of the actual marked device will be generated and exported to the pc hard disk.
Import data set	By using the function 'Import data set' all existing and writeable data of an external XML file will be imported.
Properties	Display of the properties and attributes of the selected parameters.

* This excludes ASCII lists

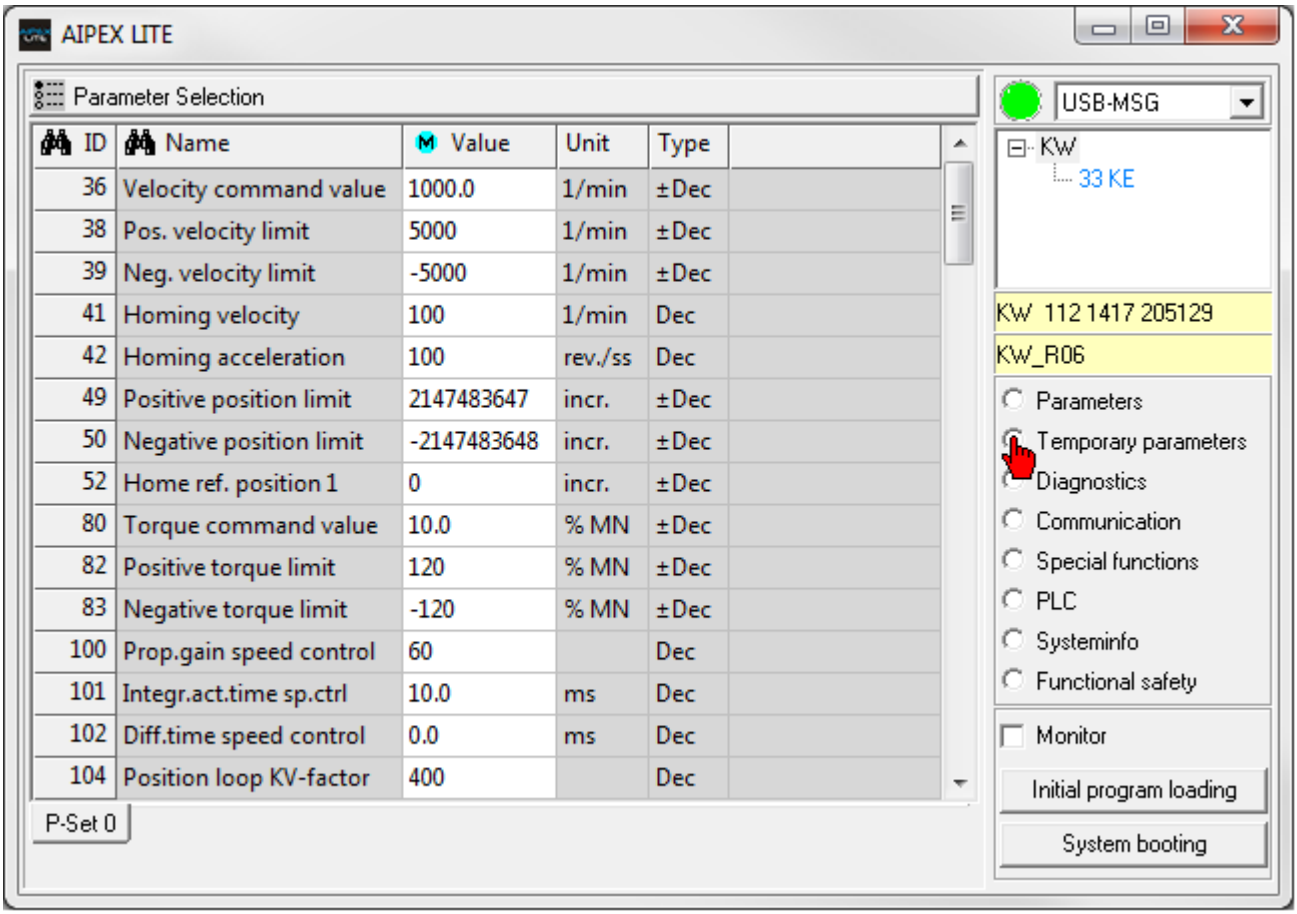
2.1.1.3 ID Properties



ID Properties	
ID	Parameter number
Name	Parameter name
Unit	Unit
Group	Parameter group
Data-len	Data length of the parameter in byte
Comma	Power of 10 scaling factor X (for 10 to the power of X)
N-Comma	Decimal places for parameter value display
Factor	Scaling factor in 10 to the power of X
MinMax	Minimum value / maximum value available

ID Properties	
Min	Minimum input value
Max	Maximum input value
DrvSpec	Drive-specific parameter
InstSpec	Instance-specific parameter
	[Not DrvSpec and not InstSpec = Global parameter]
RO	Read Only
Hidden	System-internal parameter
Bin	Input format binary
Hex	Input format hexadecimal
Ascii	Input format ASCII
Sign	Input format signed
Formal	Process date, entered value are not saved remanent.
Tempor.	Temporarily adjustable
List	Parameter is of the type list
ProgList	Current list length
MaxList	Maximum list length
Scaling	Quantification type
Complex	Type complex list
Data	Parameter value

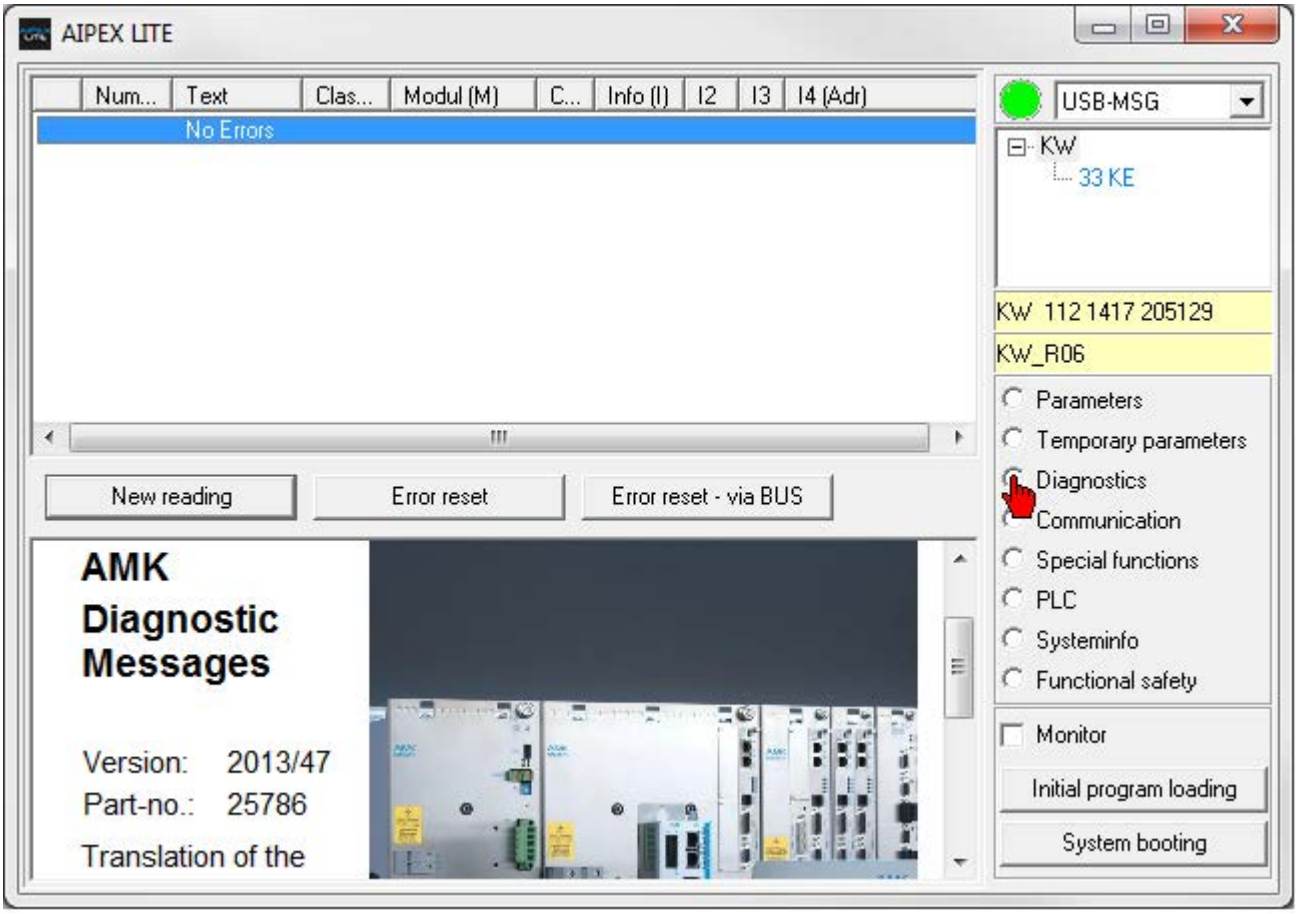
2.2 Temporary parameters



Changes in the 'Temporary parameters' are effective immediately in the drive.
In the selection list, only parameters are offered that can be modified temporarily.
All modified values are displayed in green font.

When the 'Temporary parameters' window is closed, you can specify whether or not the changes should be saved permanently.

2.3 Diagnostics



With 'Diagnostics', the diagnostic messages can be read out from the selected device.

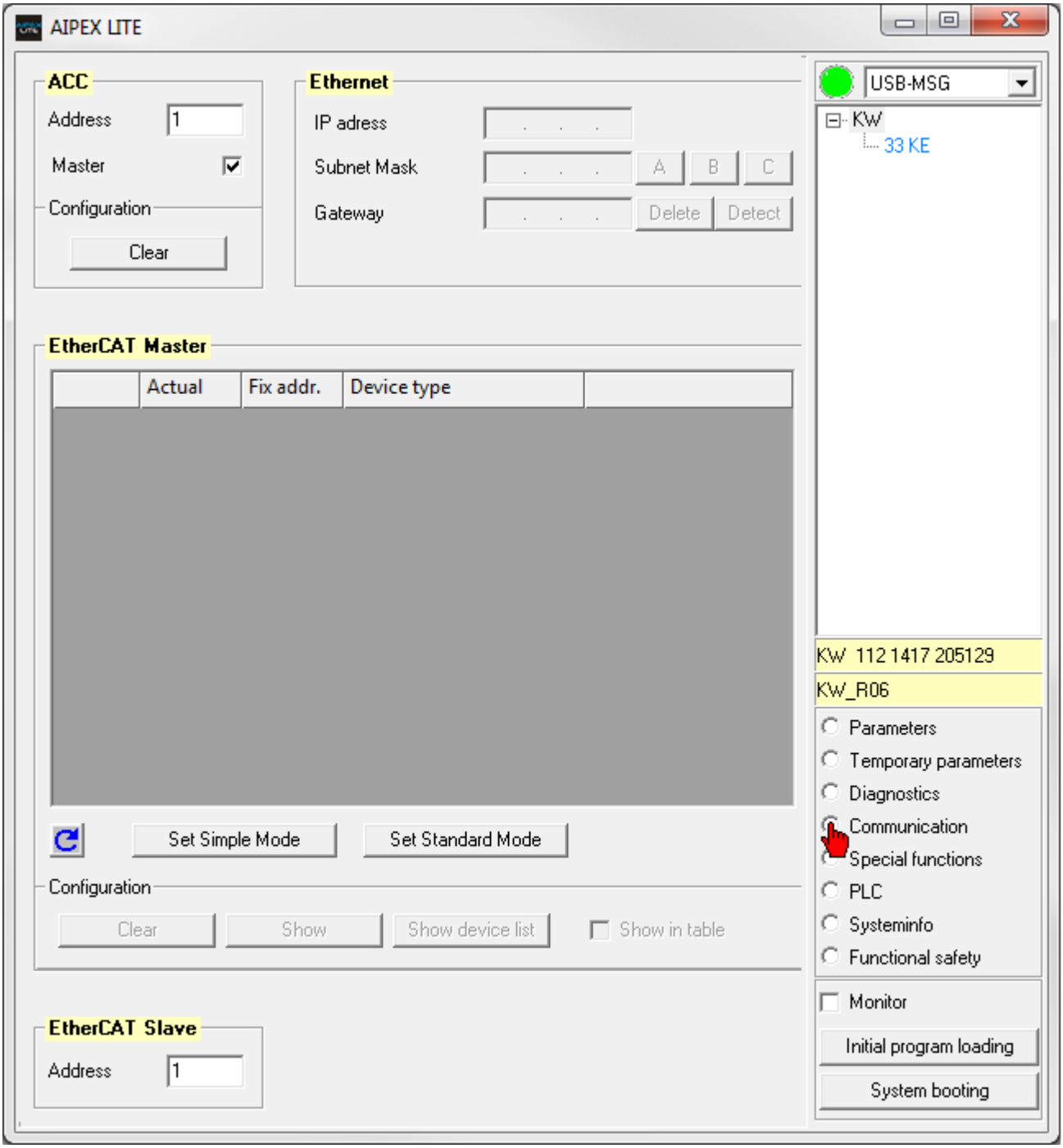
Click on each message to receive an explanation for it. You get further information if you analyse Info (I), I2 and I3
The first message of the list is the main activator of the fault; further displayed numbers might be resulting errors which will not appear any longer after rectifying the cause of the first diagnostic message.

Button **'New reading'**
Diagnostic messages will be read out from the selected device.

Button **'Error reset'**
The errors will be deleted in the selected device .

Button **'Error reset - via BUS'**
The errors of all devices of a bus line will be deleted. To do this, select the bus in the device tree.

2.4 Communication



ACC bus (instance 0)

Address: ACC bus device address (ID34023)

Master: Click in the checkbox to declare the device as ACC bus master. (ID34025)

Configuration: Button **'Clear'** delete the ACC bus configuration (ID34036)

Ethernet

IP address: Display and input box for the device IP address

Subnet mask:

Button **'A'** / Class A network / 255.0.0.0

Button **'B'** / Class B network / 255.255.0.0

Button **'C'** / Class C network / 255.255.255.0

Gateway:

Button **'Delete'**: Deactivates the current gateway setting.

Button **'Detect'**: Set the address of the current gateway of the PC in the Gateway setting of the selected device (this address is often, but not always, identical for both devices).

EtherCAT Master

Column 1 : Physical position after the EtherCAT master

Symbol  EtherCAT Bus status Operational (XML Configuration file valid)

Symbol  EtherCAT Bus status Operational (XML Configuration file not valid)

Column Actual: Current EtherCAT address

Column Fix addr.: Manual input of the EtherCAT address by the user (fixed address)

Column Given: Address information which are saved in the automatically generated XML network file

Column Device type: Device type and EtherCAT revision stand

Button **'Direction sign'**: Refresh the device list.

Button **Set Simple Mode**: Deletes the 'Fix' addresses in all slaves.

Button **Set Standard Mode** The 'Fix' slave addresses will be set to the actual Position value.

Configuration

Button **'Clear'**: Deletes the current EtherCAT configuration.

Button **'Show'** : Reads out and displays the current device configuration from the parameters (ID).

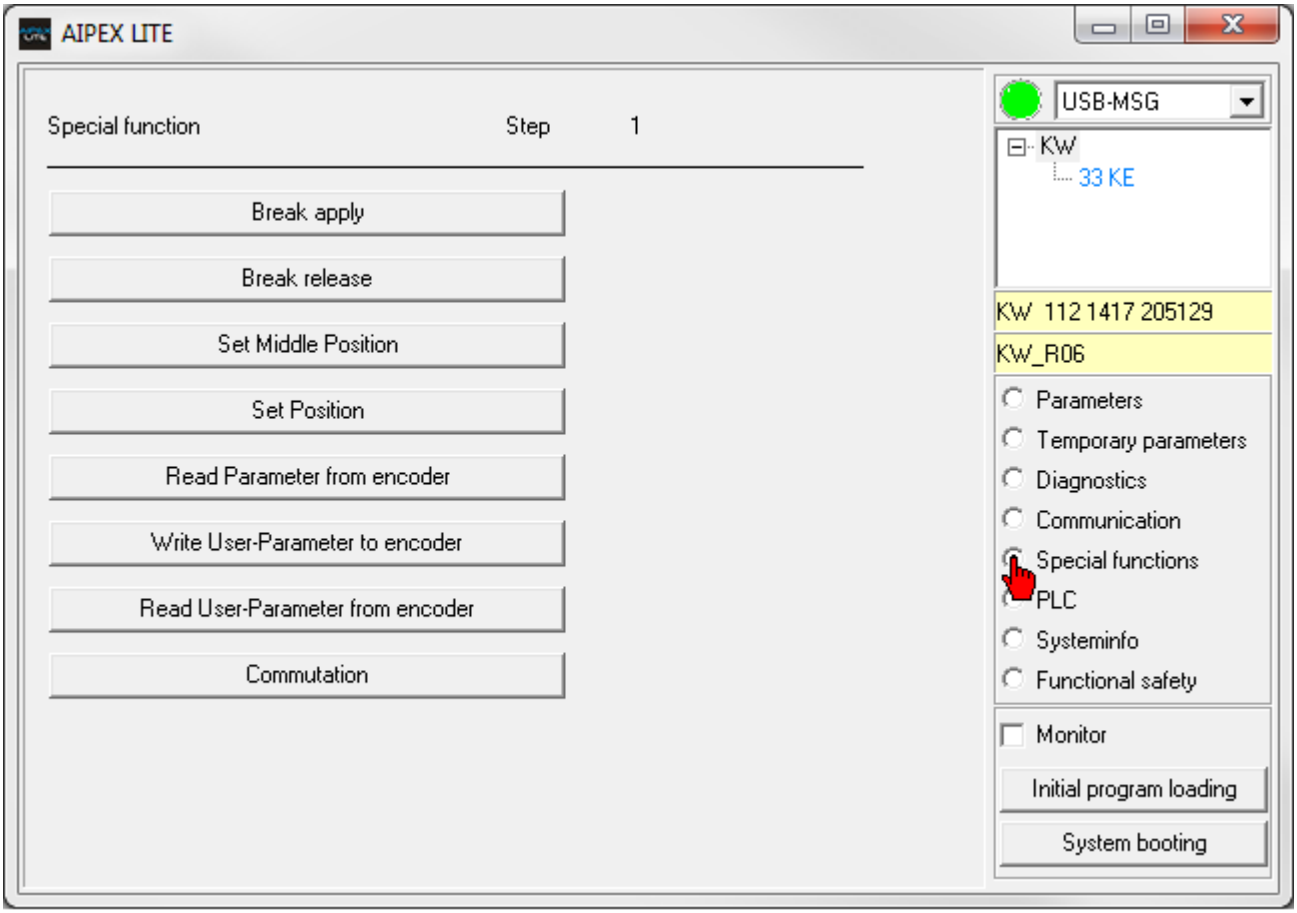
Button **'Show device list'**: Extracts the device list from the current device configuration and displays it in the editor.

Check box **'Show in table'**: Additional column 'Given' and 'Device type'.

EtherCAT Slave

Display and input box for the EtherCAT slave address.

2.5 Special functions



Button **'Brake apply'**

Motor holding brake will be closed

For converters with the option "power output stage enable EF" or "STO" the brake can only be controlled if the power output stage enable is set.

Button **'Brake release'**

⚠ DANGER	
	**Risk of injury from hanging axes** The optional motor brake is a holding brake and does NOT provide sufficient protection for persons. Hanging axes can fall and lead to severe injury. **Steps to prevent:** • All hanging axes must be mechanically secured against falling with a fall arrester or a supplementary external brake, for instance. • People must not stand under hanging loads

Motor holding brake will be opened.

For converters with the option "power output stage enable EF" or "STO" the brake can only be controlled if the power output stage enable is set.

Button **'Set Middle Position'**

Reserved for AMK internal use!

Button **'Set Position'**

Reserved for AMK internal use!

Button **'Read parameter from encoder'**

Drive must not be energized!
The service command must not be executed if the drive is in control mode. Controller enable must be off (RF = 0).

The parameter values set via are read from the absolute encoder memory and stored in the current set.

Button **'Write User-Parameter to encoder'**

Drive must not be energized!
The service command must not be executed if the drive is in control mode. Controller enable must be off (RF = 0).

Drive must stop!
The service command may only be executed if the drive is at a standstill. Caution in the case of motors are on external forces, eg hanging axes. If external forces affect an axis, the user must ensure that the axis can not move while the service command is active.

The current values of the entered in are written in the absolute encoder memory.

After the have been written in the encoder, mains off / on must be carried out.

Button **'Read User-Parameter from encoder'**

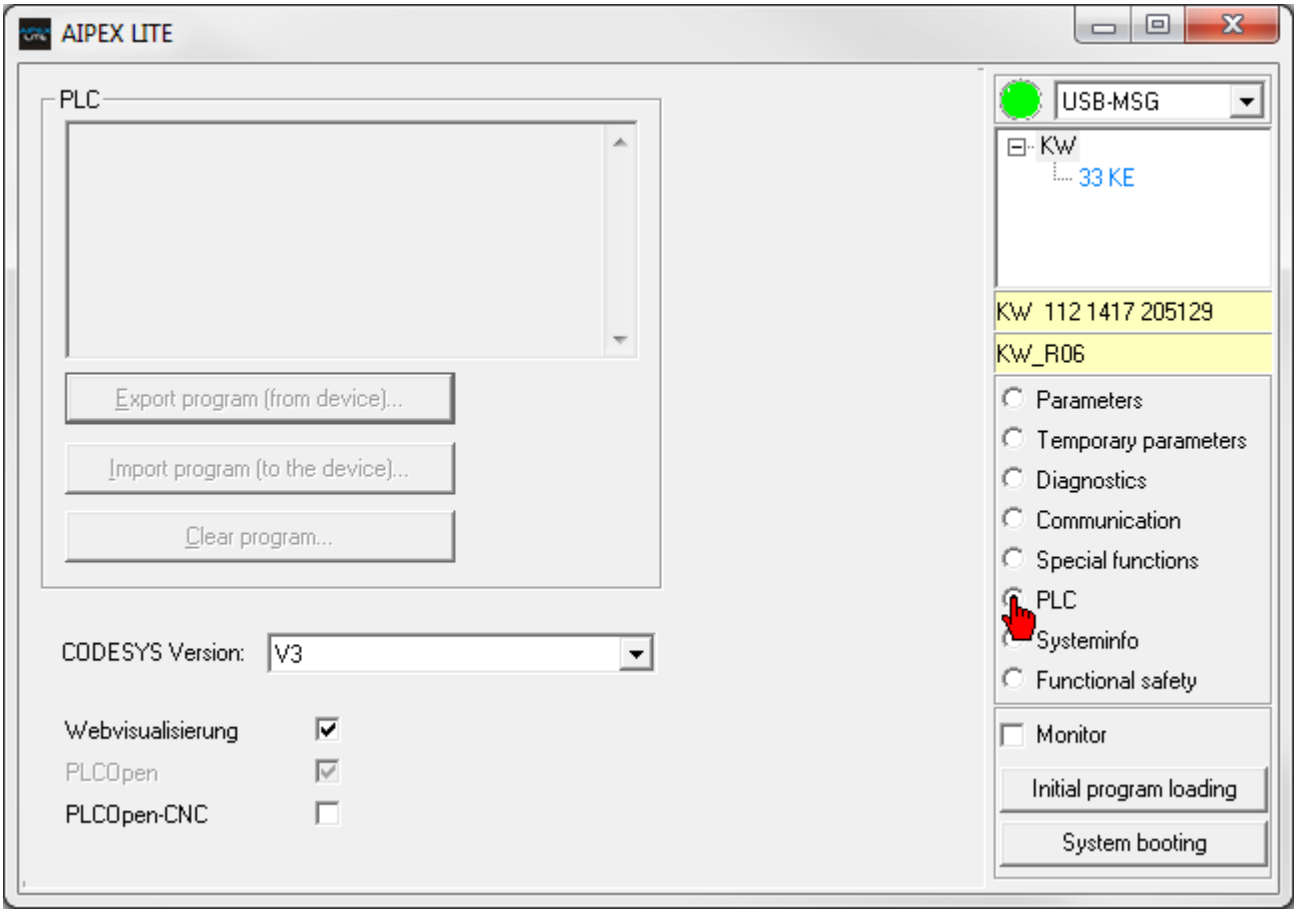
Drive must stop!
The service command may only be executed if the drive is at a standstill. Caution in the case of motors are on external forces, eg hanging axes. If external forces affect an axis, the user must ensure that the axis can not move while the service command is active.

The parameter values set via are read from the absolute encoder memory and stored in the current set.

Button **'Commutation'**

Reserved for AMK internal use!

2.6 PLC



PLC
Display of the ID34172 'PLC project info'. The following data can be entered and displayed using the CODESYS PLC editor (menu item **Project** -> **Project information**).

- Date
- Project name
- Title
- Version
- Author
- Comment

The function **'Import program (to the device)'**and **'Clear program'** are protected by AMK service password.
The PLC program is saved in ID34159 'PLC files'.

Button **'Export program (from device)'**
The PLC program is read by the selected device and saved in a freely selectable directory on the PC hard disk.
(A file with the suffix *.bin is created)

Button **'Import program (to the device)'**
The PLC program is read from a file (PC hard disk) and written into the selected device.
Only *.bin PLC files exported by AIPEX PRO can be imported.

Button **'Clear program'**
The PLC program will be deleted in the selected device.

CODESYS Version

Choose the CODESYS Version which should be used later at the controller.

The A4 and A5 controller default setting is CODESYS V2.
The A6 and iSA controller default setting is CODESYS V3.

Controller options

Valid for CODESYS V3.

The installed controller options at factory setting can be disabled and enabled by using the checkboxes.

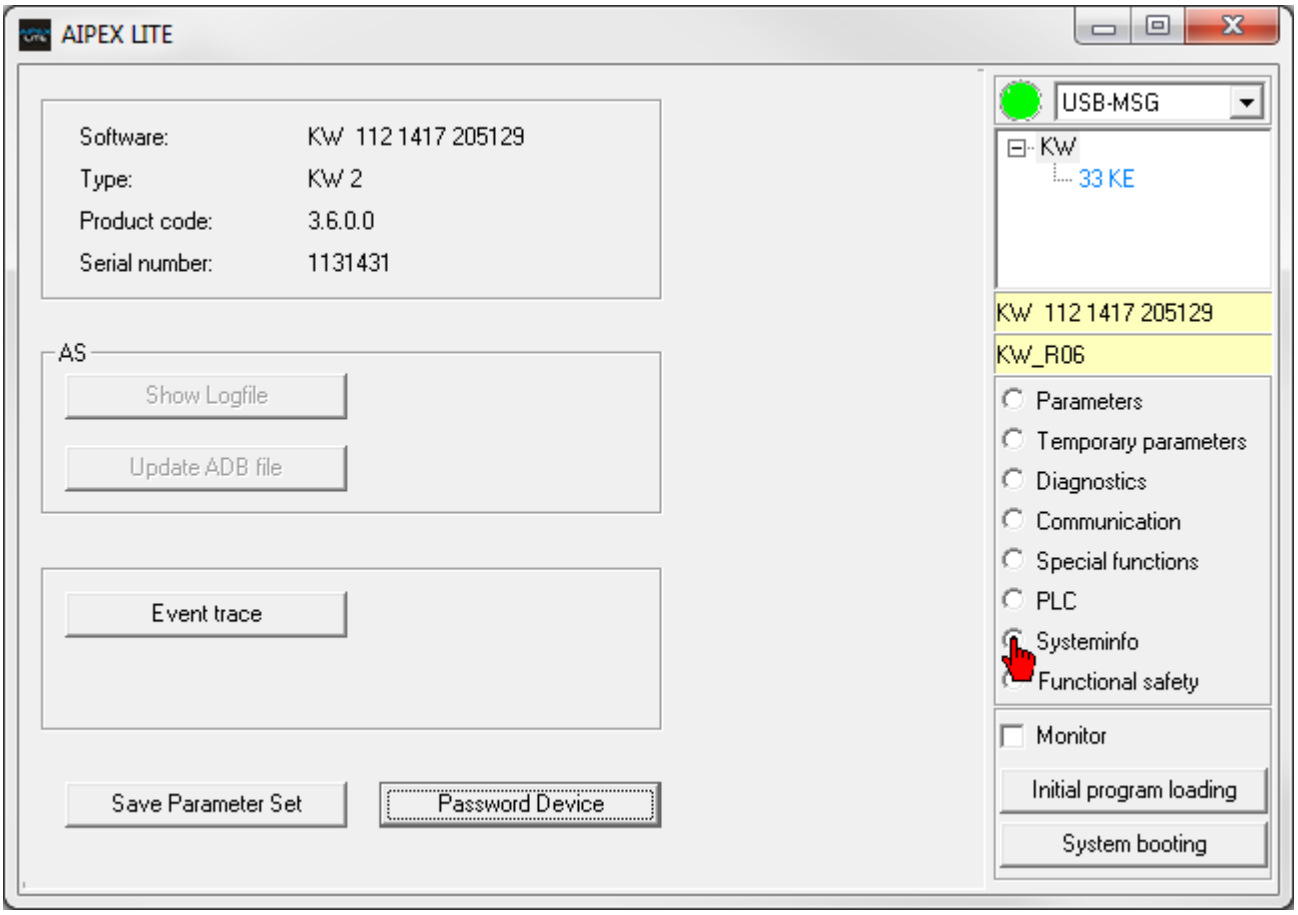
After dis- or enabling the options, the controller must be restarted (24 VDC OFF / ON).

Example:

For an ISA controller with additional option PCO (PLCopen) and option VIS (visualization) uses the target system: ArmPLCopenControlWithVisu V3.

After disabling the checkbox 'PLCopen' the device will be a iSA controller with additional option VIS (visualization) with target system: ArmControlWithVisu V3.

2.7 System info



Systeminfo

Following information will be displayed for the selected device:

- Software
- Type
- Product code
- Serial number

AS - AMKAMAC controller

Button **'Show Logfile'**

The Logfile of the currently selected controller will be displayed.

Button **'Update ADB file'**

The ADB file of the currently selected controller will be updated.

Button **'Event trace'**

The ID34088 'Event trace' of the currently selected device will be displayed.

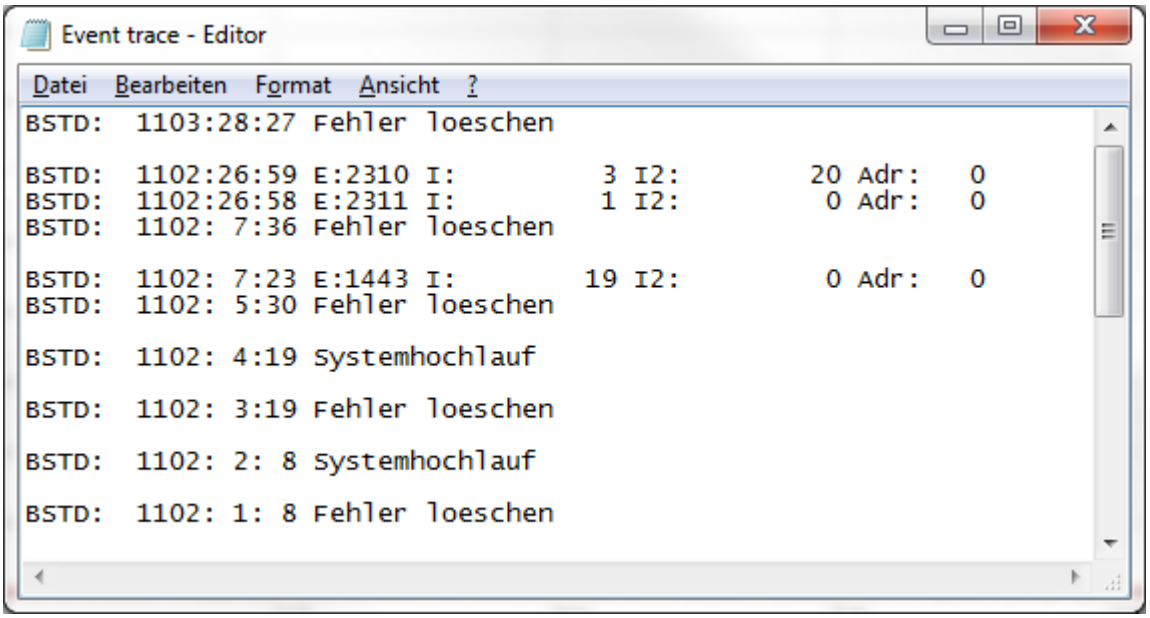
Event trace...

The 'Event trace' menu can be used to read the contents of ID34088 'Event trace' and view it as text in the text editor. This function can also be called up in offline mode if a project data set exists.

The ID34088 'Event trace' of the currently selected device will be displayed.

The list is created in LIFO mode (last in, first out) so that the last entry is seen first.

The number of saved errors depends on the type of device.



BSTD: Operating hours

E: Error message number

I: Additional Information

Adr: Device Address

Button **'Save Parameter Set'**

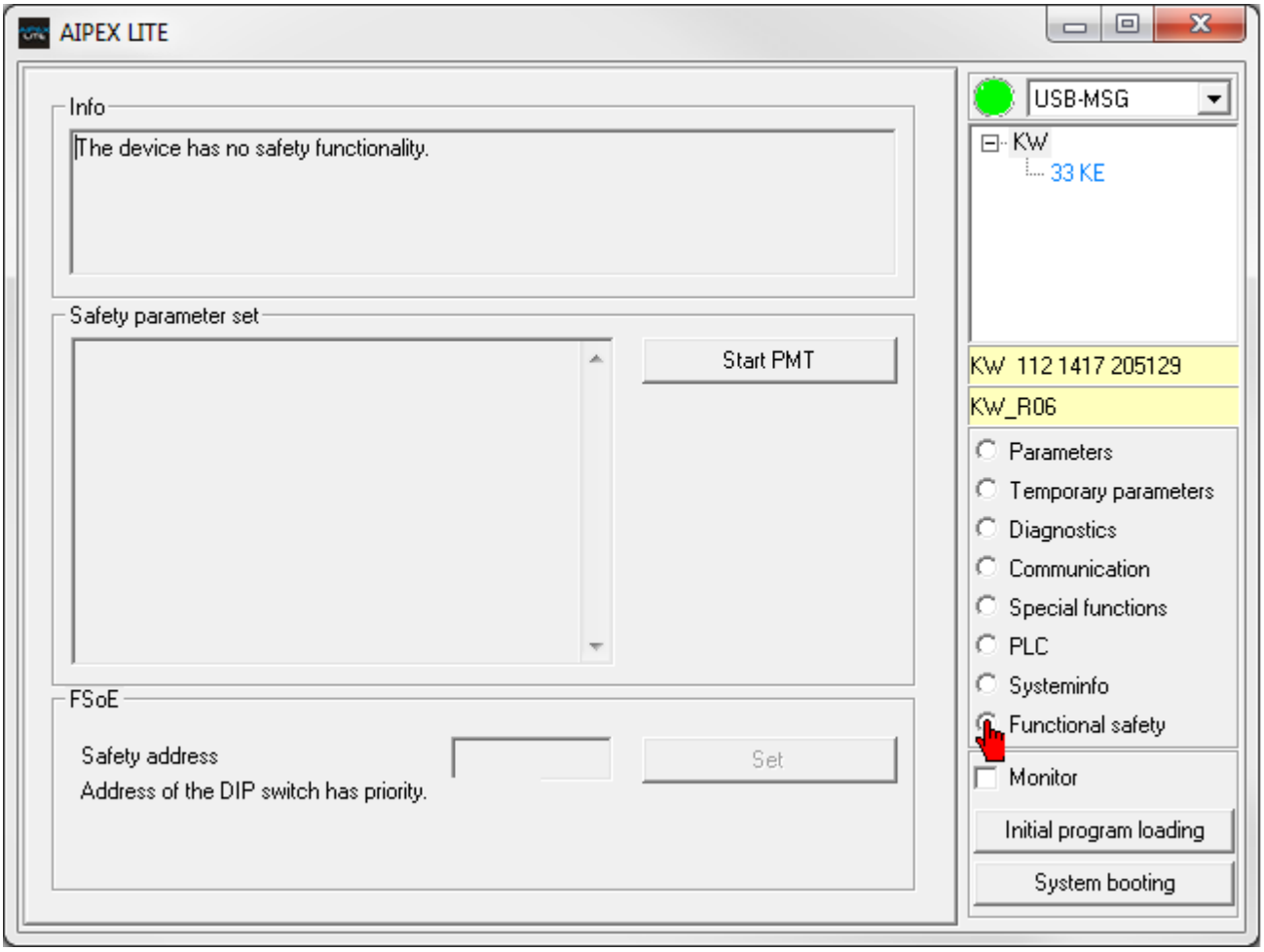
The parameter set of the currently selected device will be saved to the PC.

You can reopen the created file with the Software AIPEX PRO to display the parameter set.
It is not possible to download the saved *.apu parameter set to a device.
If you want to save and download a parameter set, you have to use the Software AIPEX PRO.

Button **'Password Device'**

If the ID32821 'Password' protection is active you can only read values with AIPEX LITE. If you want to write values, you have to enter the customer specific password.

2.8 Functional safety



Window content 'Info'
The field displays the status of the connection, and also the information if the linked device has a safety board or not.
Version: Firmware safety board
Matching template device version (firmware safety board)

Window content 'Safety parameter set'
Displays the safe parameter set check sum (CRC) and the used template.

CRC-parameter set: Check sum (CRC) customer specific safe parameter set
Fitting template: Matching template device version (firmware safety board)
CRC-template: Check sum (CRC) template
CRC-verification: Check sum (CRC) customer specific safe parameter set + serial number device

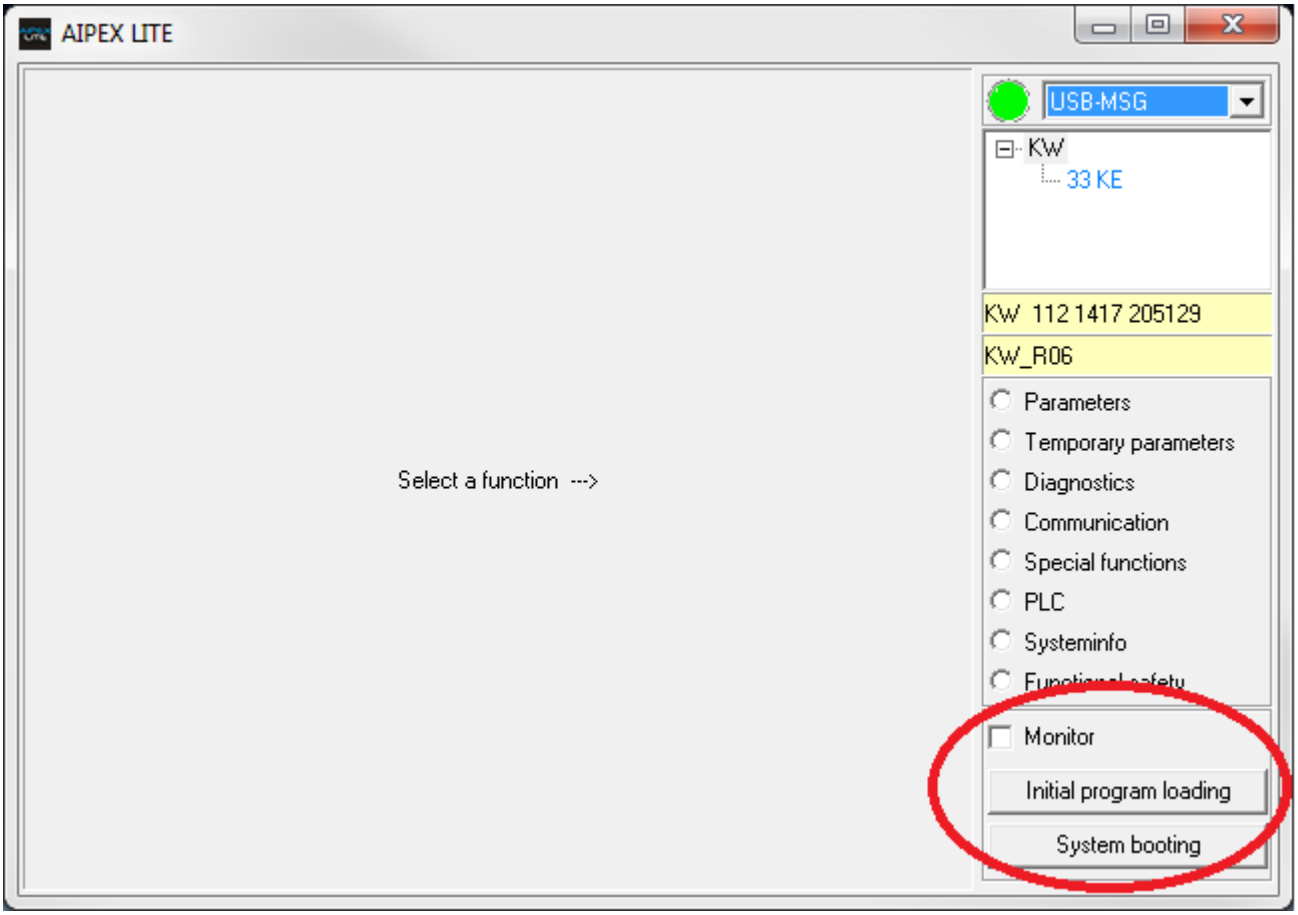
The button **'Start PMT'** calls the software SafePMT (Safe parameter editor).

FSoE
The entered FSoE adress transfer with the button **'Set'** in die ID33201 'Safety address'.

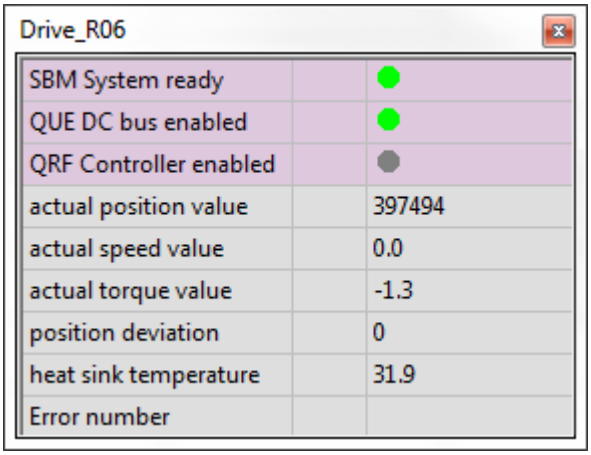
The address setting by DIP switch is prior to addresses via parameter and can not be over written.

During firmware update or initial program loading, the address parameter ID332201 will be reset to 0.

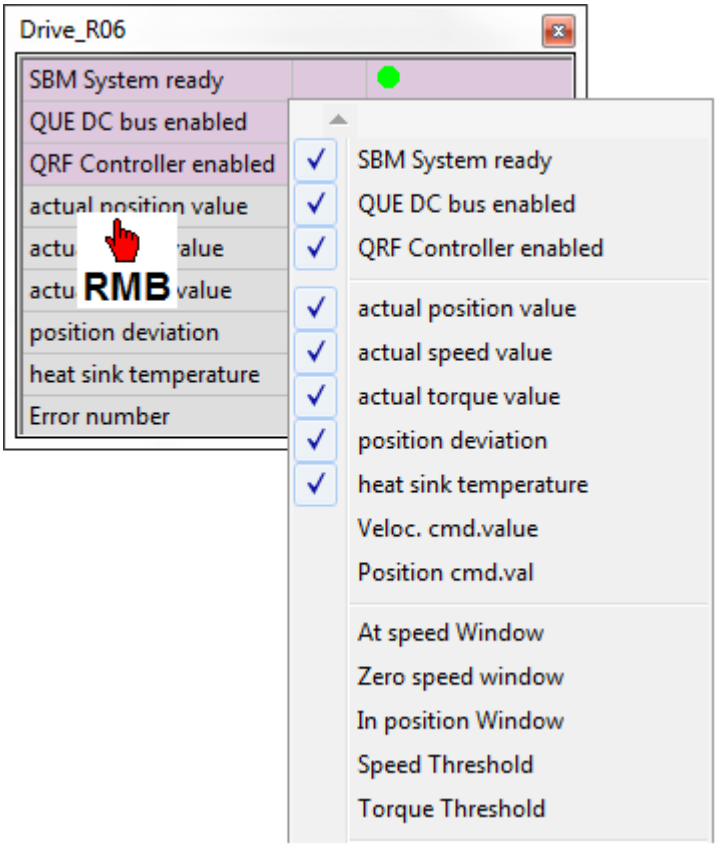
2.9 Monitor - System booting - Inital loading



The **'Online Monitor'** is a dynamic display of device data and statuses. A cyclic, but temporally undefined display of the values follows.



By clicking the right mouse button on the **'Online Monitor'** a context menu opens that allows further display values to be taken into the 'Monitor'.



Parameter

With the field **'Parameter'** you can dynamic display any parameter.

Enter in the second column, the parameter number that should be displayed.

Dynamic display values, special for ACC bus

The content of the dynamic display of the 'Message 16' can be modified by ID32785 'Message 16'.

The content of the dynamic display of the 'Message 32' can be modified by ID32786 'Message 32'.

Example: ID32786 = 40 (actual speed); The actual speed is displayed dynamically by selecting 'Message 32'.

ByIn/Out, wIn/Out, dwIn/Out are PLC variables. Enter in the second column, the index of your PLC variable that should be displayed.

Example: In the PLC (controller configuration), the Word wOut4 is configured. Enter 4 as the index.

Function **'System booting'**

A 'System booting' is carried out on the selected device.

A 'System booting' causes a recalculation of the data management. (Actual values are maintained, drive bus continues running...)

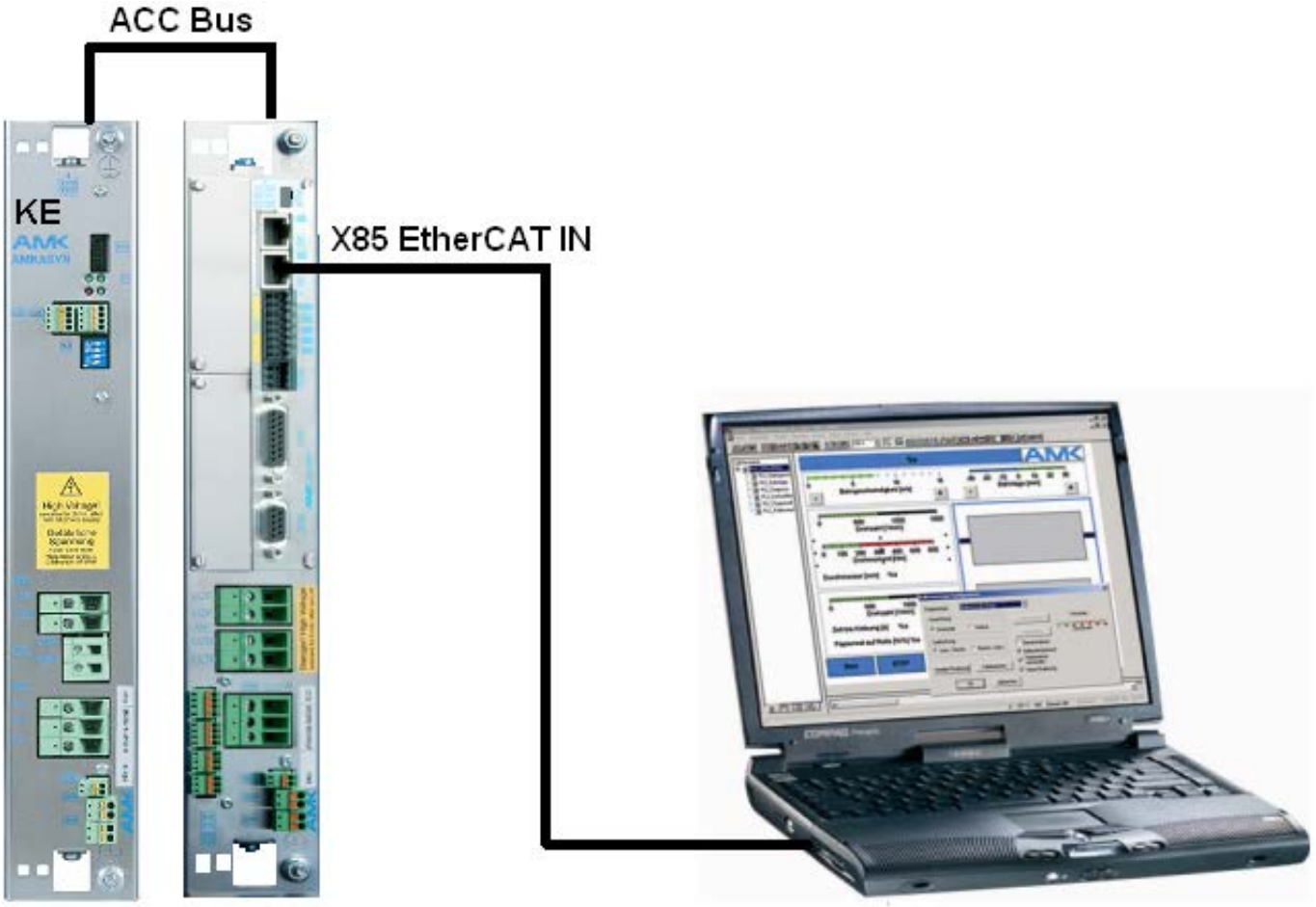
Function **'Initial program loading'**

The 'Initial program loading' function resets AMK devices into their initial status (delivery status).

After a completed initial program loading, a system reset needs to be done.

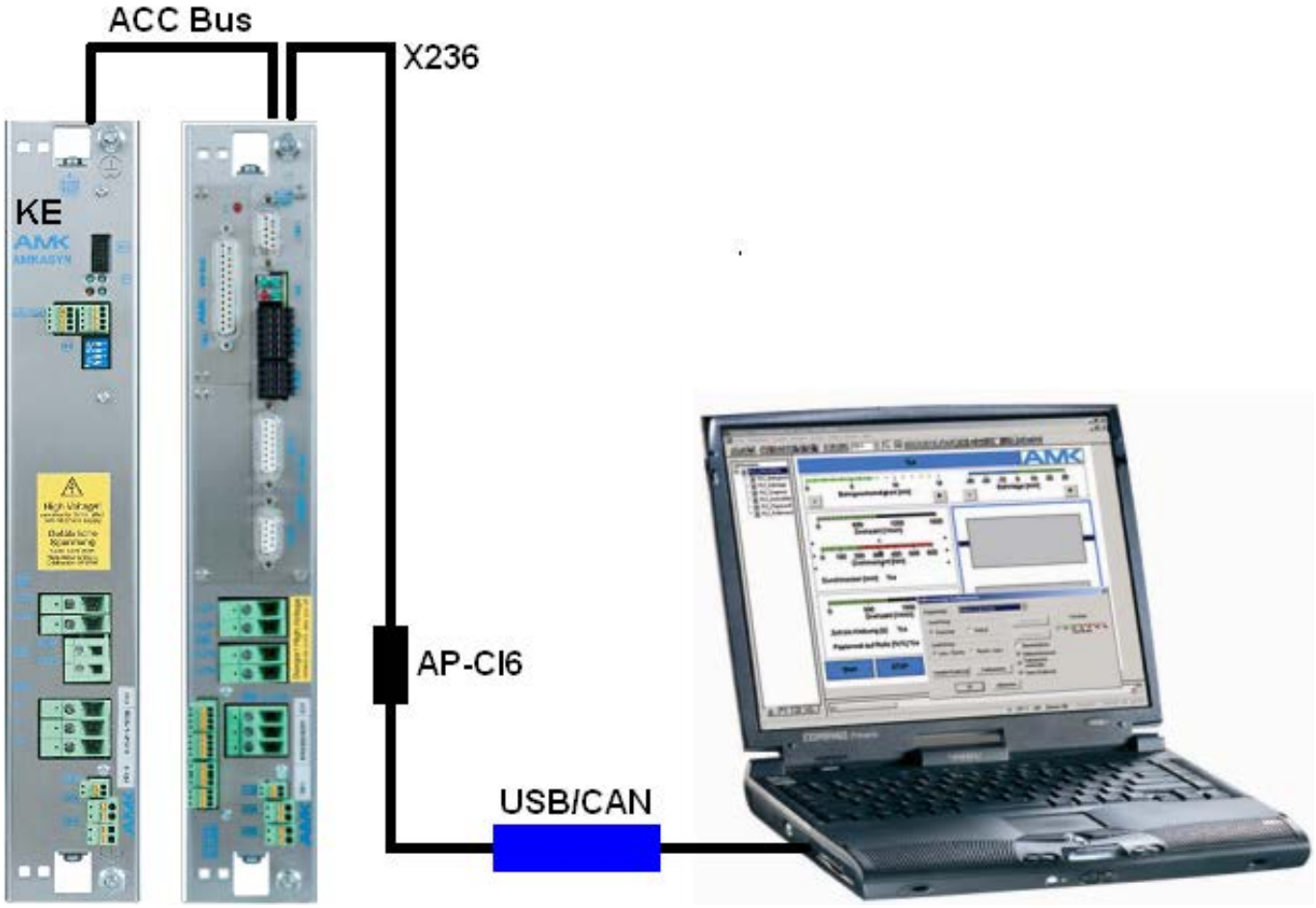
Prerequisites for the initial program loading: A direct connection between PC and AMK device, additional password input.

3 Communication PC - AMK device



Siehe 'CAN interface' auf Seite 26.
Siehe 'COM interface' auf Seite 27.
Siehe 'EtherCAT interface' auf Seite 31.
Siehe 'Ethernet interface' auf Seite 32.
Siehe 'SERCOS III interface' auf Seite 41.
Siehe 'USB interface' auf Seite 43.

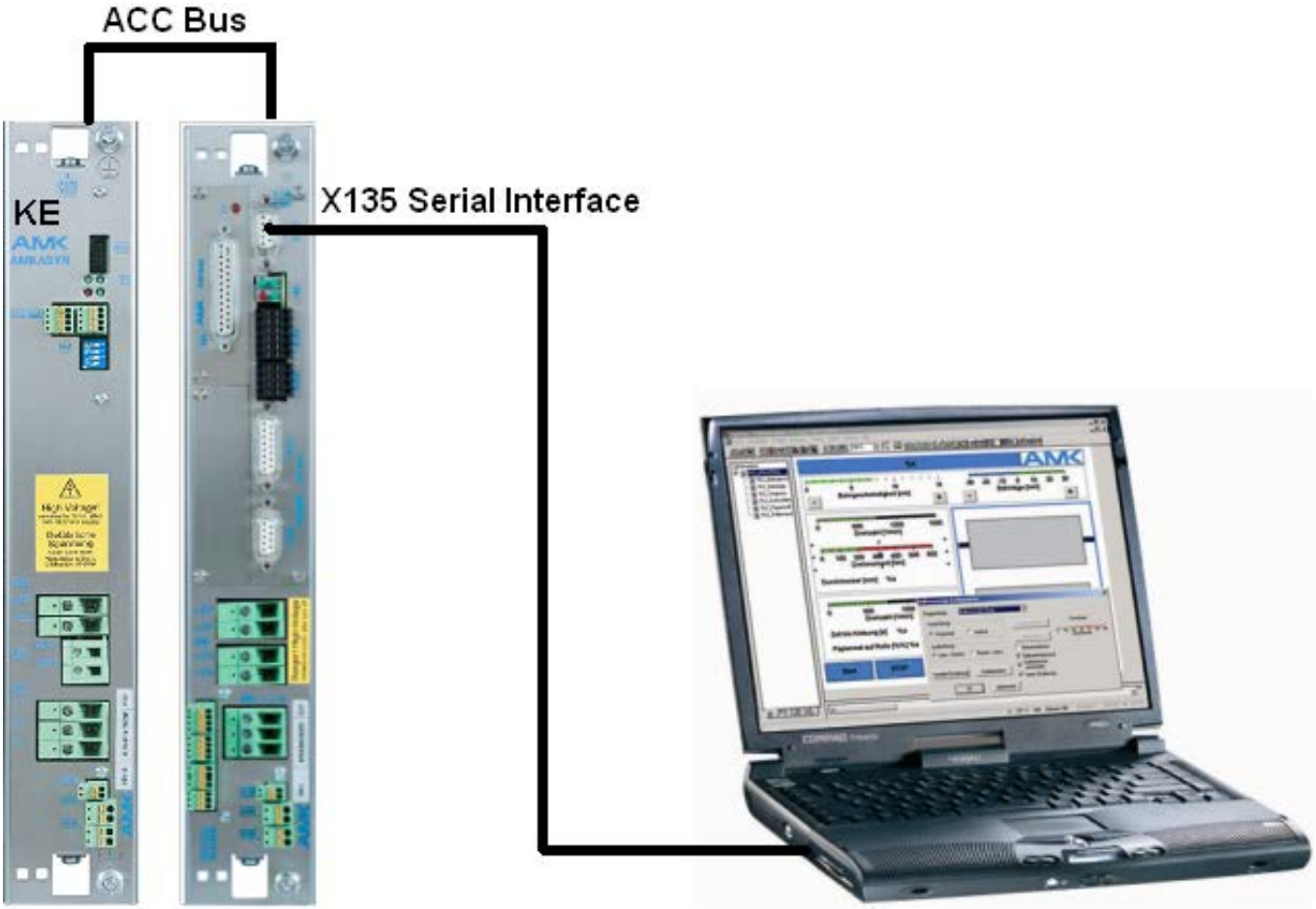
3.1 CAN interface



Example:
KE with ACC bus and KW with KW-R03 (comparable with KU-/KW-R03(P) and KU-/ KW-R04).

Converter:
AMK USB-CAN converter (part-no. O755). (Includes connection cables and termination resistors for 'KE/KW' series and also for 'Decentralized drive technology'.

3.2 COM interface



Example:

KE with ACC bus and KW with KW-R03 (comparable with KU-/KW-R03(P) and KU-/ KW-R04).

It is possible to get access over ACC bus to other devices. In this case the connected controller card must be defined as ACC bus master.

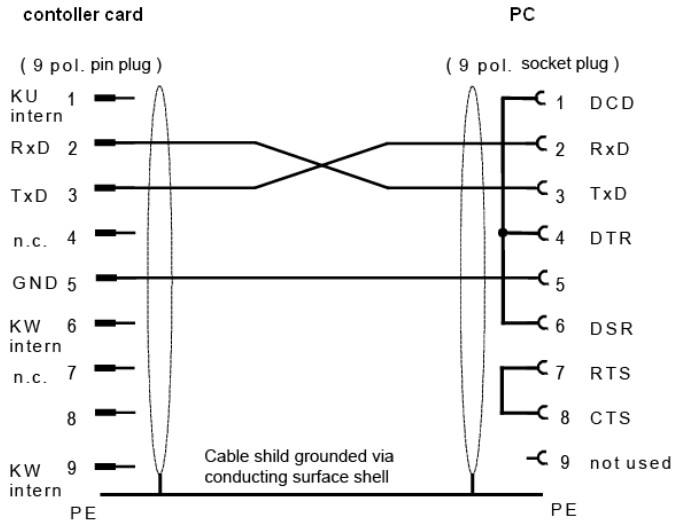
Cable:

- Serial interface cable AMK part-no. O576
- AMK USB-RS232 converter AMK part-no. 200770

3.2.1 Serial AMK cable RS232 (PC-AMK)

The AMK serial interface cable RS232 (AMK part-no. O576) connects the serial interface of the AMK KU-/ KW devices with the serial interface of the PC.

Property of serial interface cable:

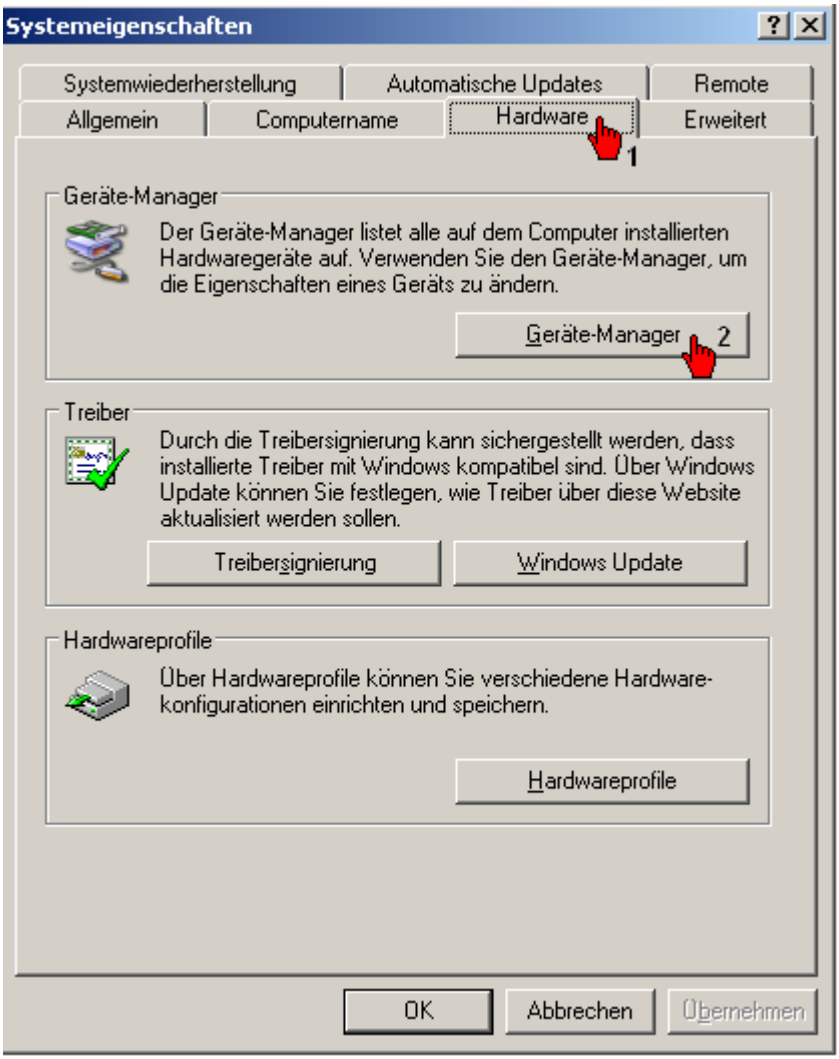


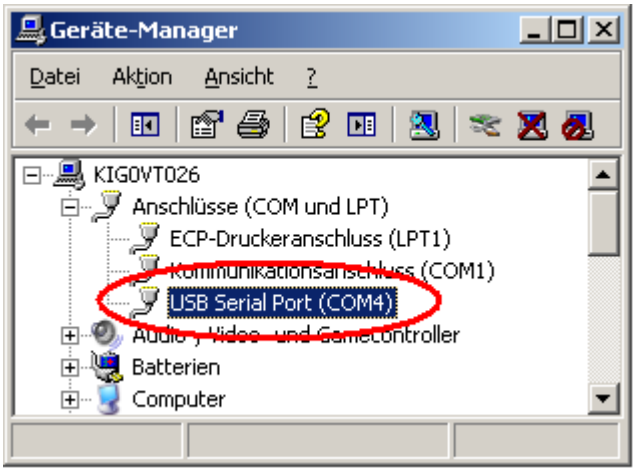
3.2.2 USB-RS232 Interface

The AMK USB-RS232 converter (AMK part-no. 200770) connects the serial interface of the AMK KU-/ KW devices with the USB interface of the PC.

Example Windows XP

During the driver installation of a AMK USB-RS232 converter, an additional virtual COM interface is generated by the PC. The interface number can be read out. Open **'Windows'** -> **'System Properties'** -> **'Hardware'** -> **'Device Manager'** -> **'Ports (COM and LPT)'**.

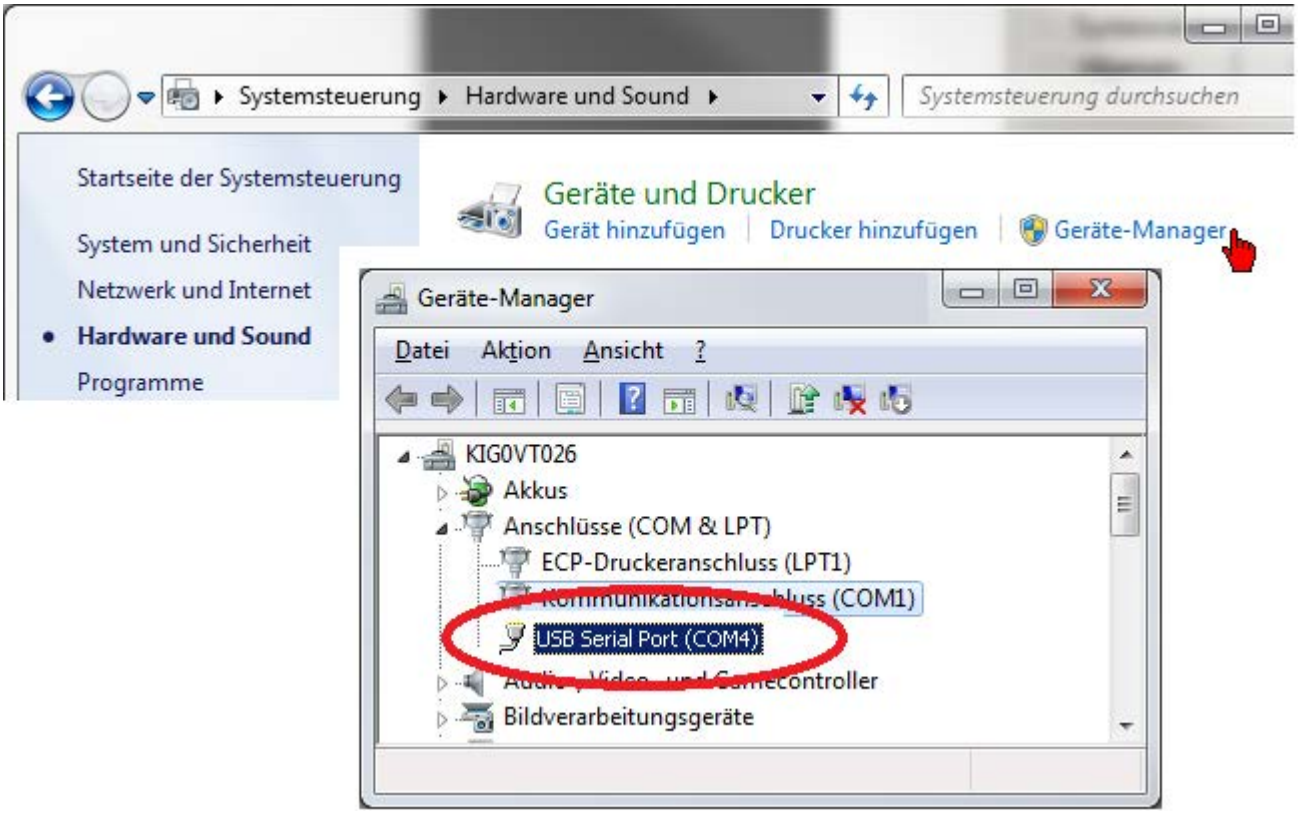




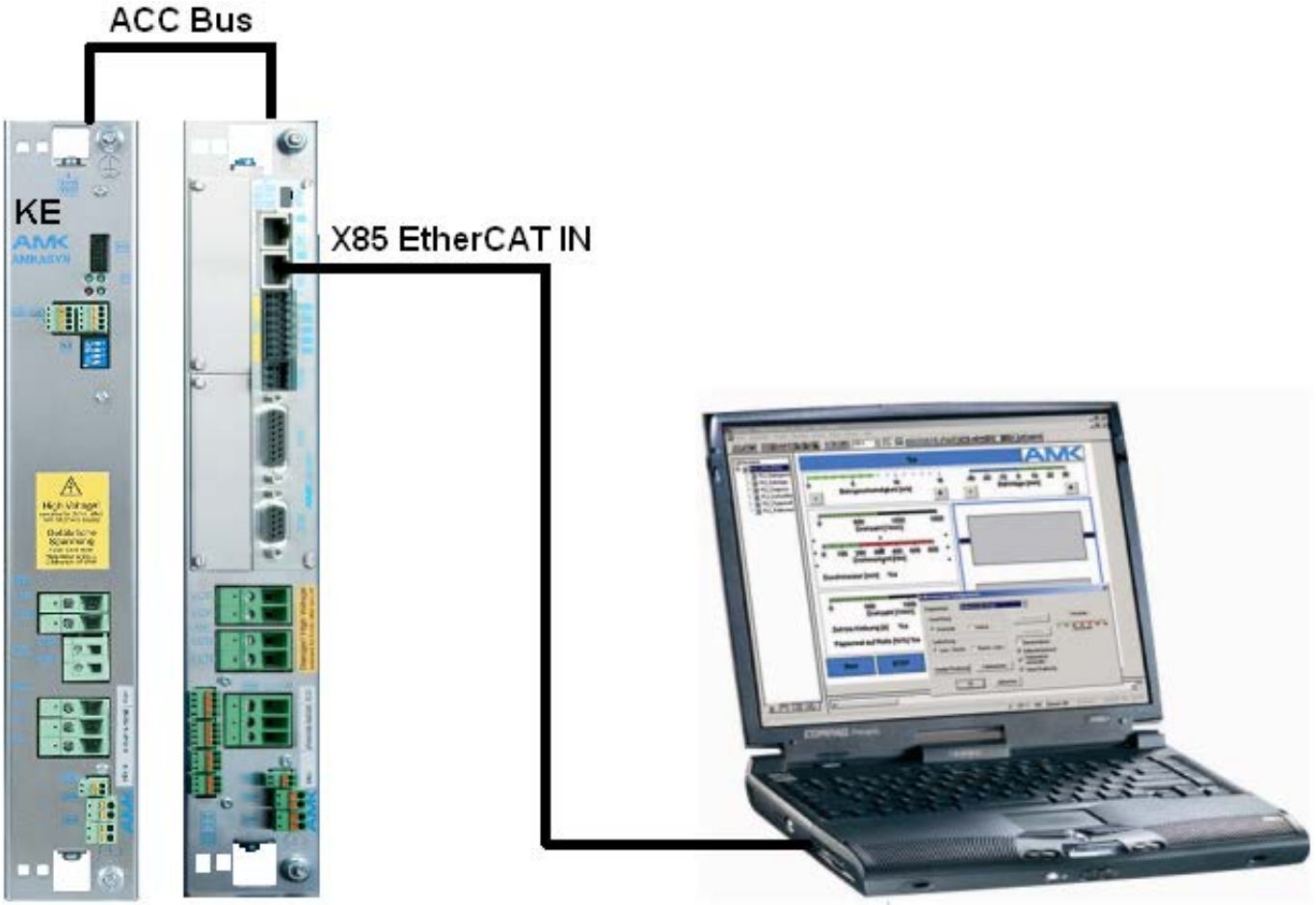
Example Windows 7

Invoke the Windows menu **'System control'** -> **'Hardware and Sound'**.

Invoke the **'Device-manager'**.



3.3 EtherCAT interface



Example:

KE with ACC bus and KW with KW-R06 (comparable with KW-R07, KW-R16 and KW-R17).

Access is possible via the EtherCAT connection to all connected modules. You can also access ACC bus slave devices via the ACC bus connection of the controller card.

Cable:

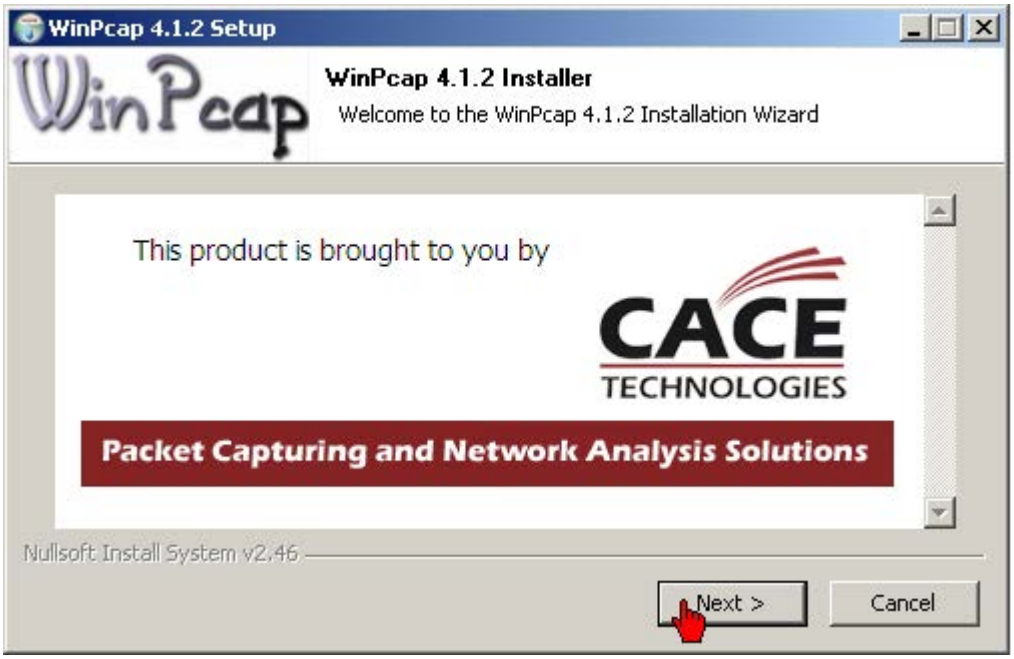
Ethernet Standard RJ45 Twisted Pair Patch cable.

An Ethernet cable with an M12 connector is required for the connection to the 'Decentralized drive technology':

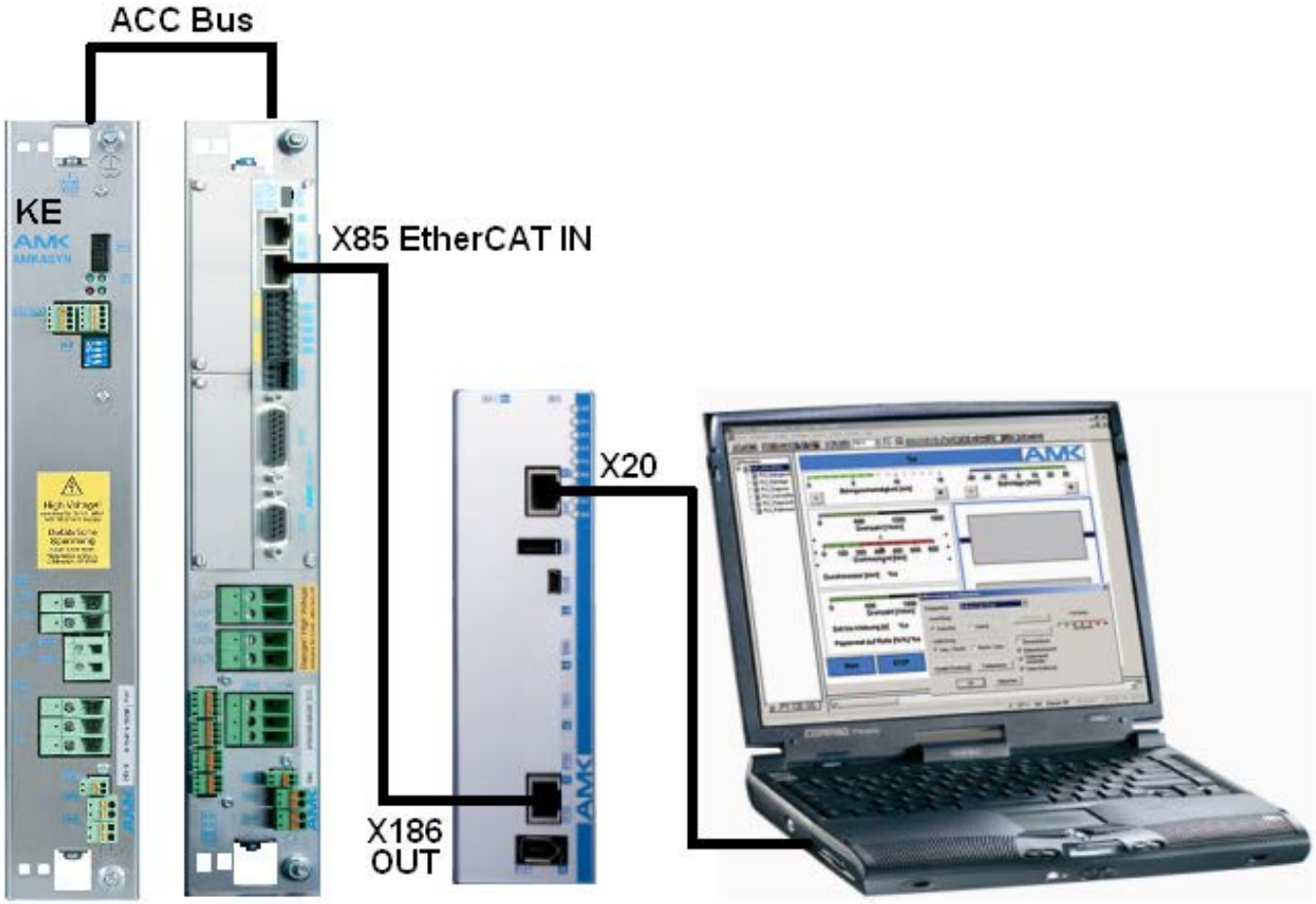
See device description AMK Part no. 203445 Decentralized drive technology iC / iX / iDT5, chapter: Cables for EtherCAT connector [X85] and [X86].

Prerequisite:

WinPcap will be automatically installed with AIPEX PRO



3.4 Ethernet interface



Example:

Controller, KE with ACC bus and KW with KW-R06 (comparable with KW-R07, KW-R16 and KW-R17).

Access is possible via the EtherCAT connection to all connected modules. You can also access ACC bus slave devices via the ACC bus connection of the controller card.

Cable:

Ethernet Standard RJ45 Twisted Pair Patch cable.

If your PC not automatically crossed a Twisted Pair Cable, use a RJ45 Crosscable for the connection.

With an active firewall, the following releases are necessary:

- TCP Port 700
- TCP 50.001
- UDP Port 40.000
- Broadcast on

The Ethernet interface is always active.

PC adjustment for Point - to - Point connection

The standard address 192.168.0.1 is saved in the AMKAMAC compact controller. The address belongs to the net address range of the subnet mask 255.255.255.0.

For a successful communication, the PC and compact controller need to lie in the same address range.

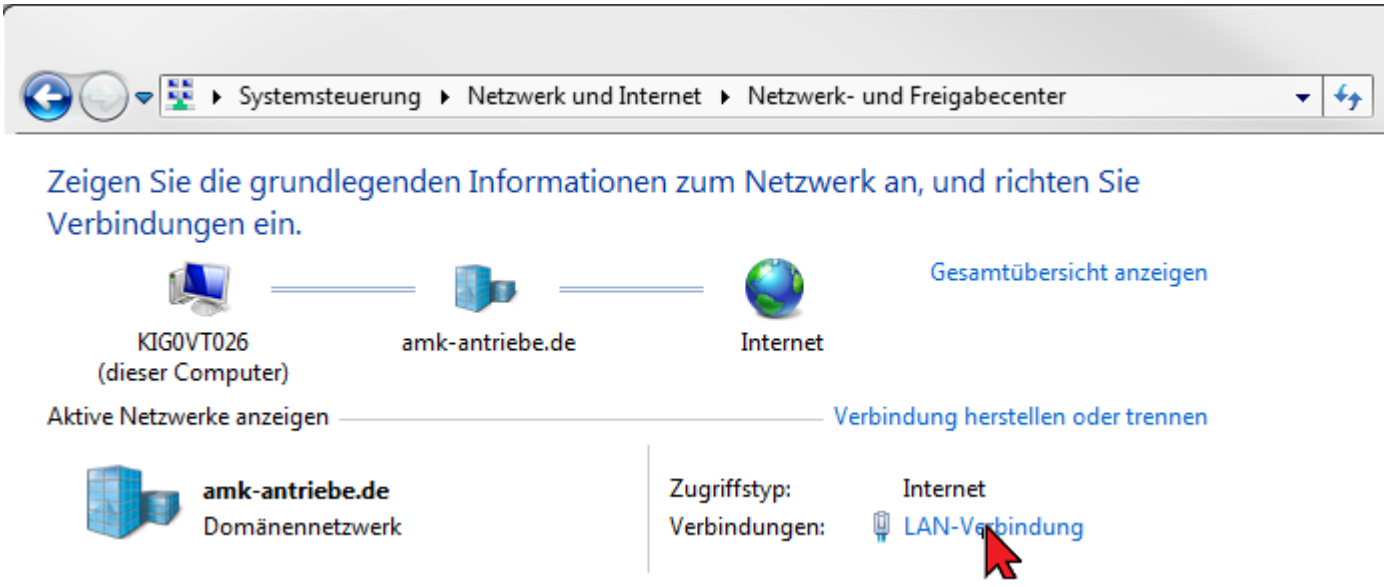
In the following, instructions are provided on how you save a fixed IP address in your PC along with the corresponding subnet mask.

If you use the combination PC -- (company-) network -- AMK Controller, you have to adjust the controller IP address onto the (company-)network adjustments.

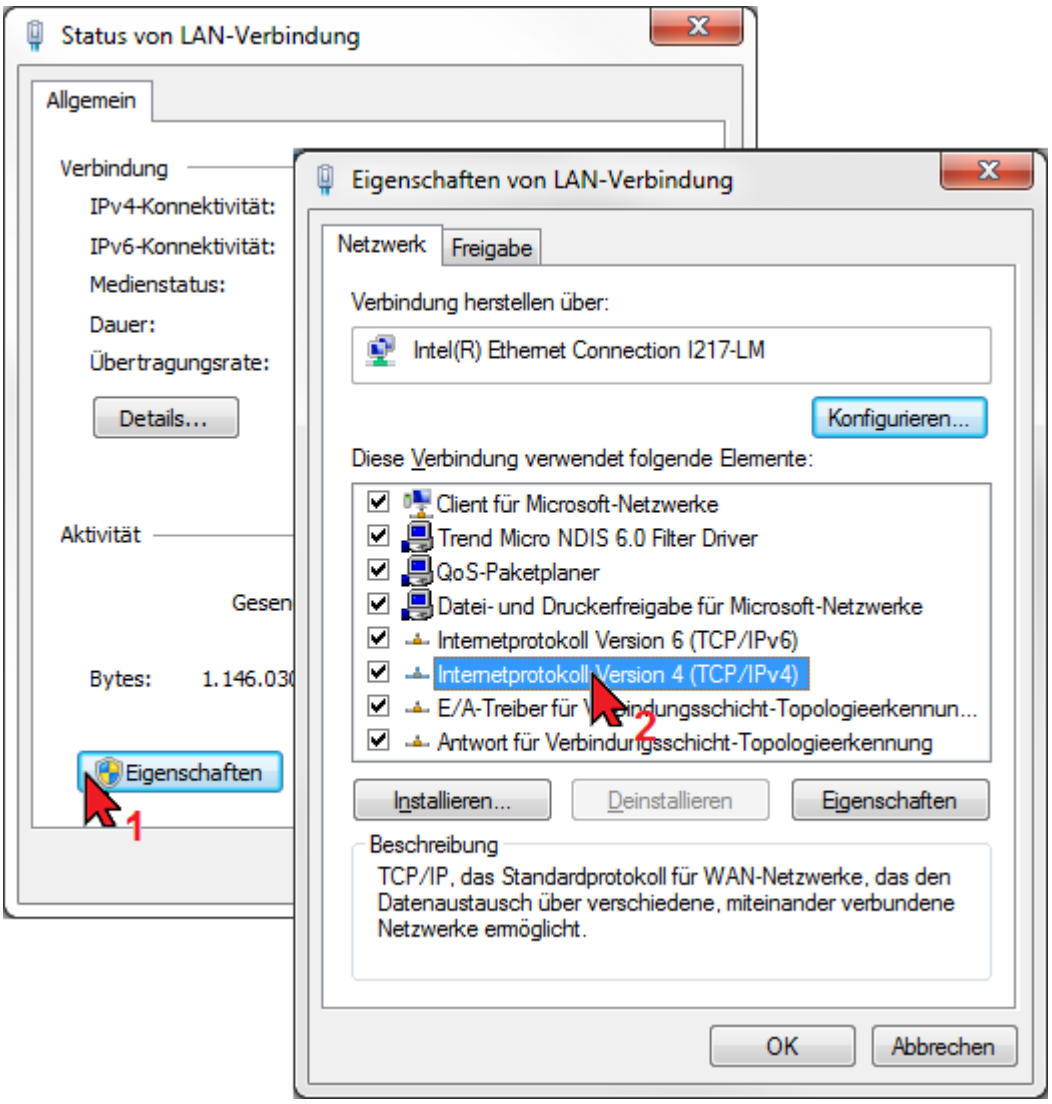
Example Windows 7

Invoke the Windows menu **'Systemsteuerung'** -> **'Netzwerk und Internet'** -> **'Netzwerk- und Freigabecenter'** Open your active LAN connection by clicking on it.

No active LAN connection: Invoke the menu **'Adaptereinstellungen ändern'** .



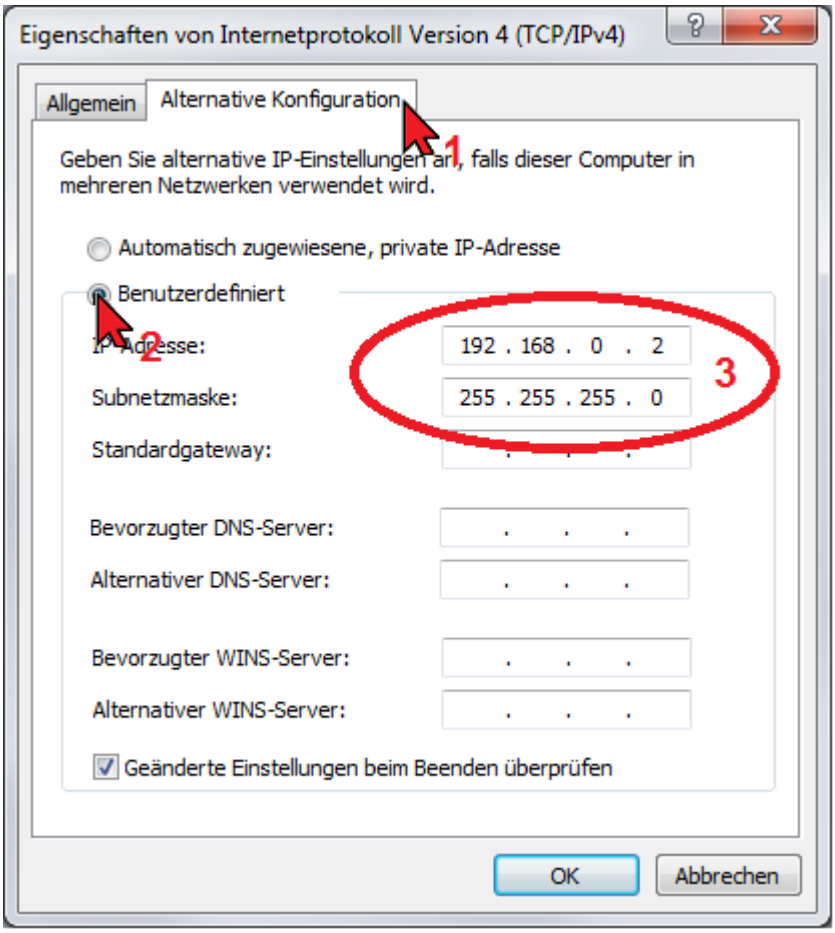
Open the Window **'Internetprotokoll Version 4 (TCP/IPv4)'**



Enter in the tab **'Alternative configuration'** under **'User defined'** the 'IP address 192.168.0.2' and the 'subnet mask 255.255.255.0'.

Confirm by pressing **'OK'**.

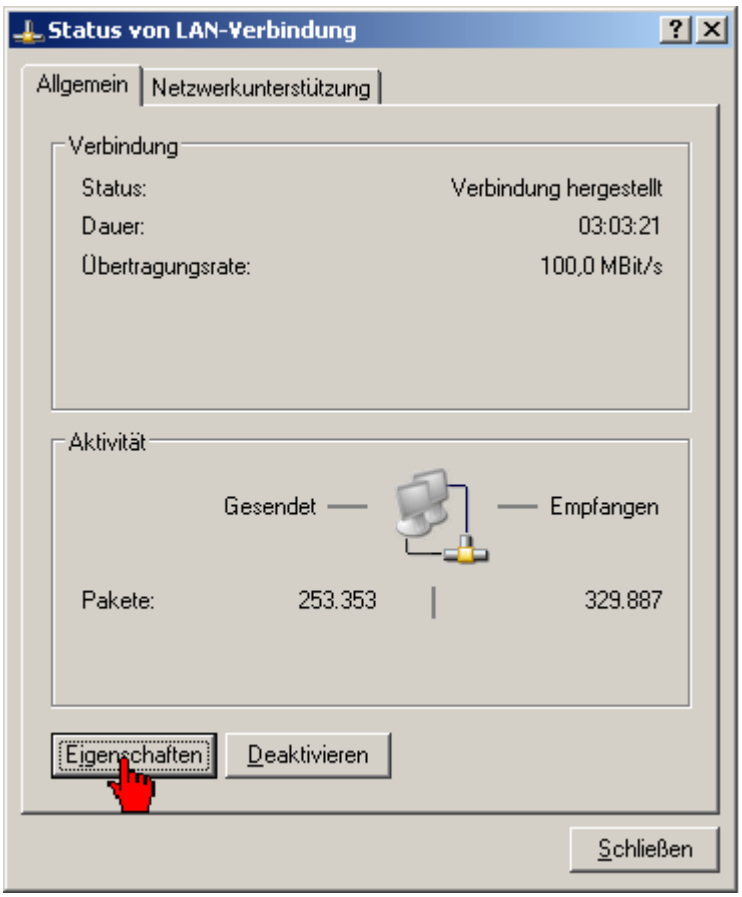
The connection initialisation goes faster if you use the tap 'Allgemein' to enter your IP address. But in this case you always have to change the IP address manually if you change between company network and controller.



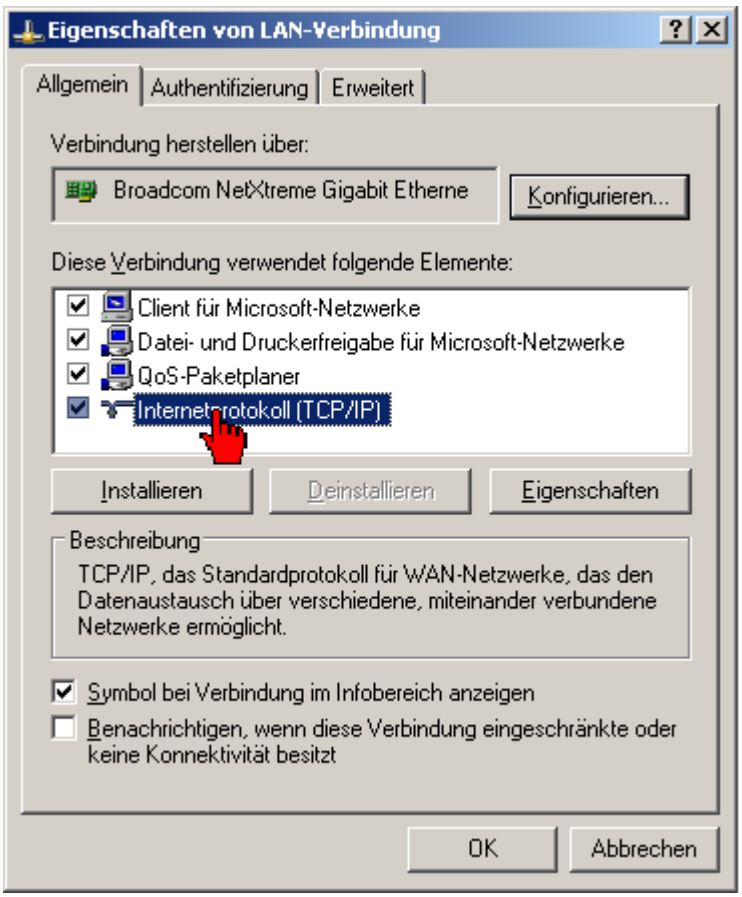
Example Windows XP

Invoke the Windows menu **'Network connections'**. Open your active LAN connection by clicking on it.

Select the button **'Properties'**.



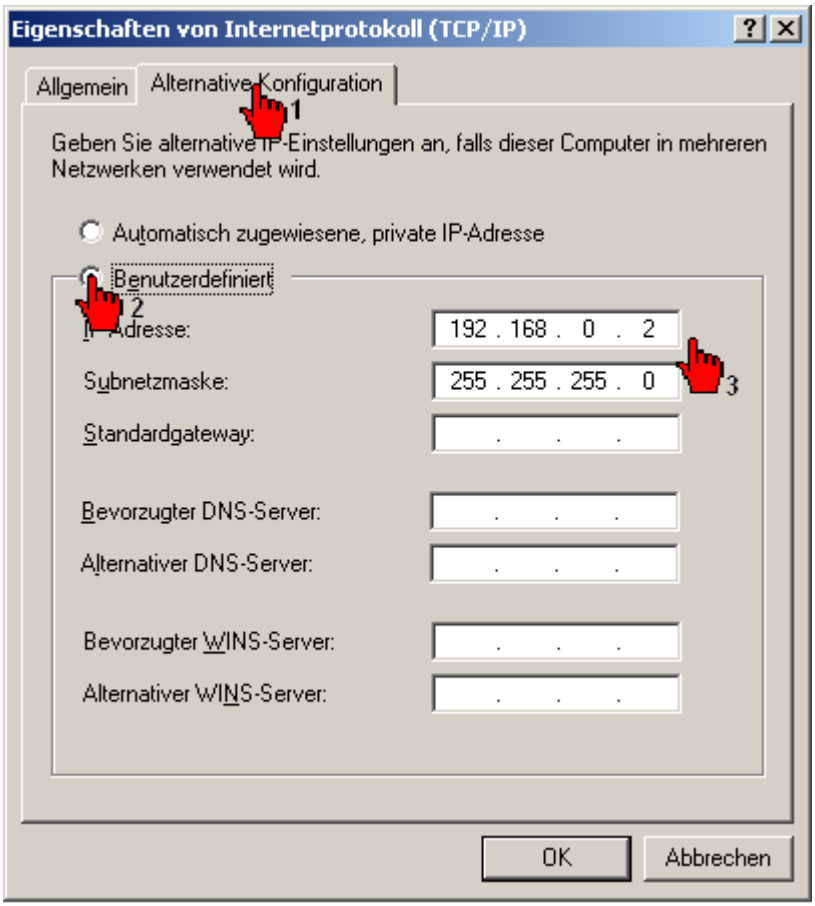
Open the properties of the **'Internet protocol TCP/IP'** by clicking on it.



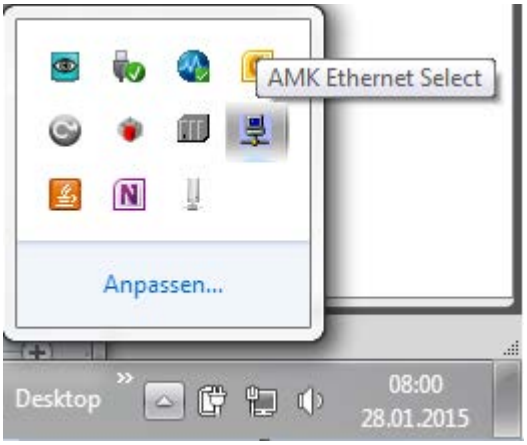
Enter in the tab **'Alternative configuration'** under **'User defined'** the 'IP address 192.168.0.2' and the 'subnet mask 255.255.255.0'.

Confirm by pressing **'OK'**.

The connection initialisation goes faster if you use the tap 'Allgemein' to enter your IP address. But in this case you always have to change the IP address manually if you change between company network and controller.

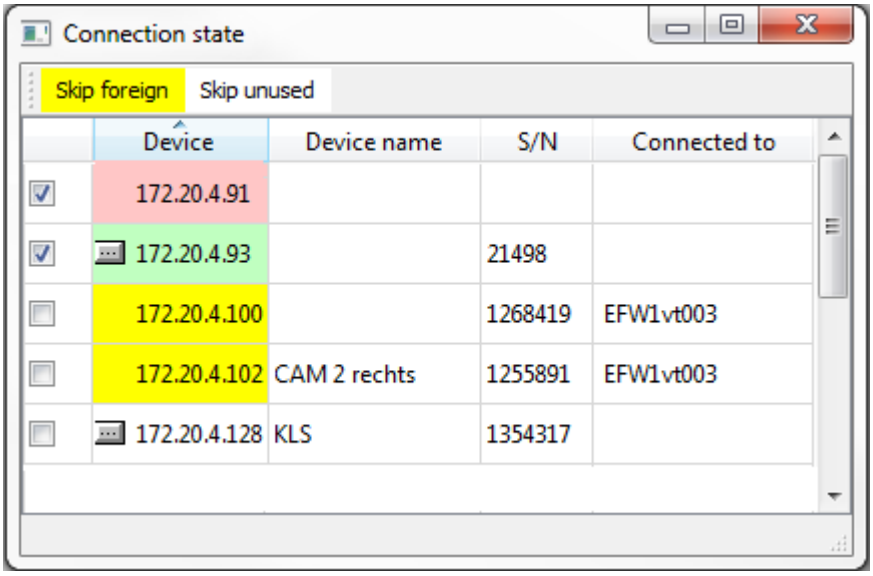


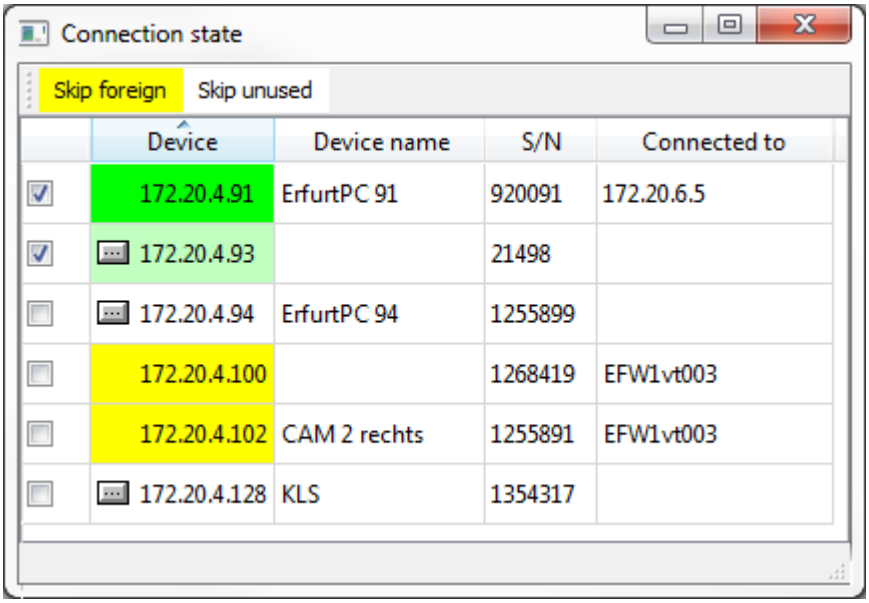
With active Ethernet communication, you will find **'AMK Ethernet Select'** in the Windows Task bar. Select the icon **'AMK Ethernet Select'** to open the **'Connection state'** dialog box.



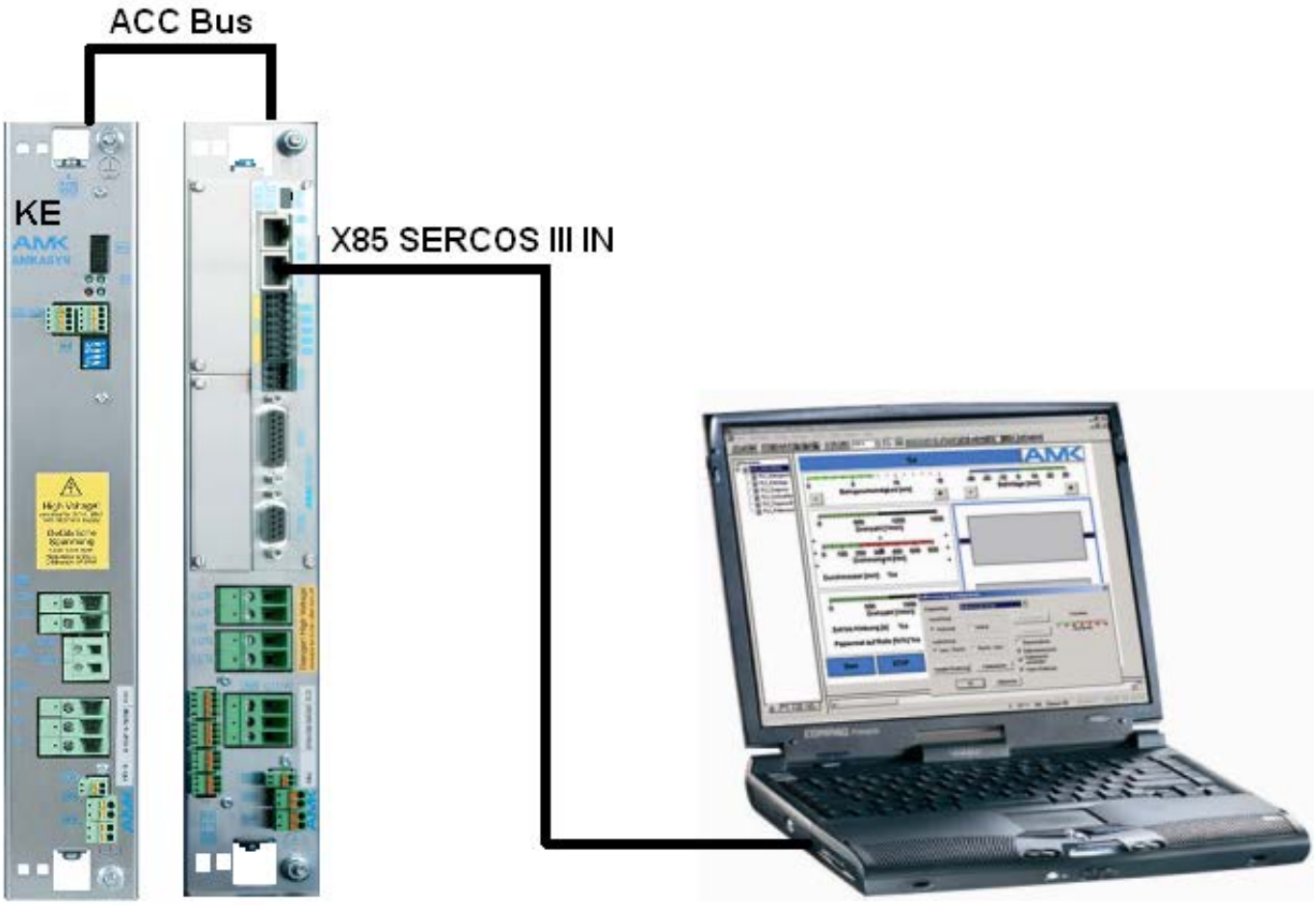
All active and manually created AMK Ethernet devices are displayed that were created in the title bar **device**. Select the device with which you want to establish a connection.

Colour status	Meaning
Red	Device cannot be reached via Ethernet
Yellow	Device is connected with a different PC
Light Green	Device is connected with your PC
Green	Device is connected with your PC and it is being actively accessed to the device
White	Device is not connected





3.5 SERCOS III interface



Example:

KE with ACC bus and KW with KW-R06 (comparable with KW-R07, KW-R16 and KW-R17).

Access is possible via the SERCOS III connection to all connected modules. You can also access ACC bus slave devices via the ACC bus connection of the controller card.

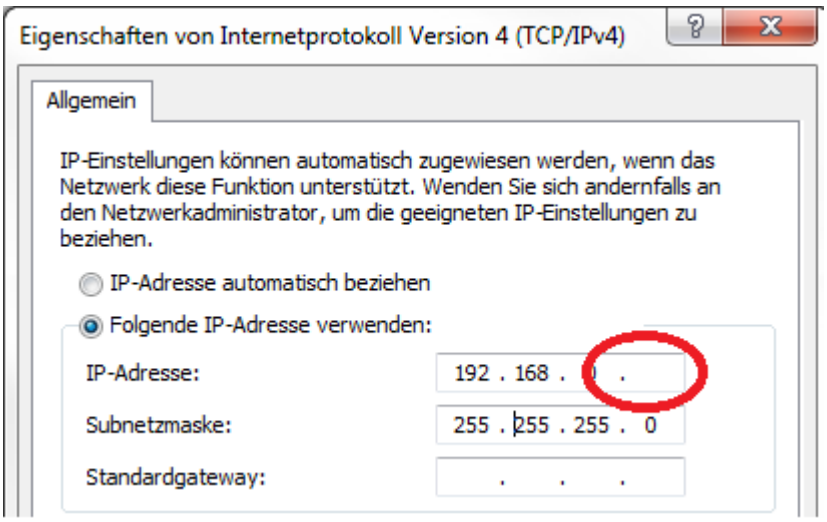
Cable:

Ethernet Standard RJ45 Twisted Pair Patch cable.

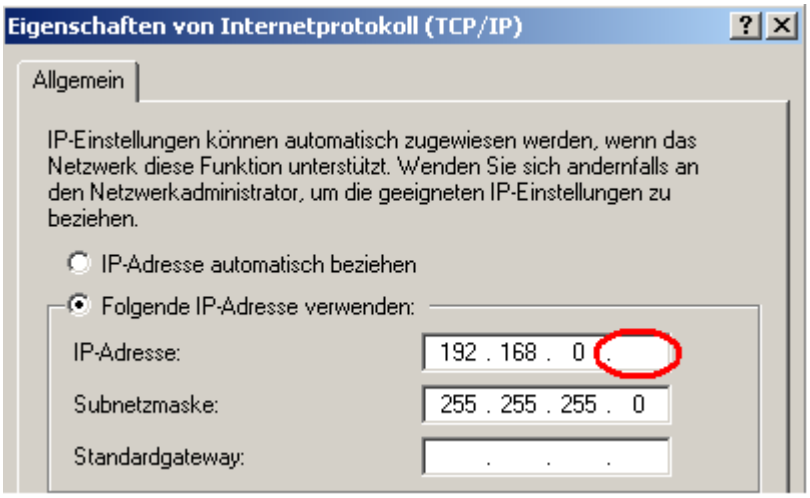
PC adjustment: Enter a fix IP address which is not used by a SERCOS III node.

The SERCOS III node addresses are fixed given to 192.168.0.X.

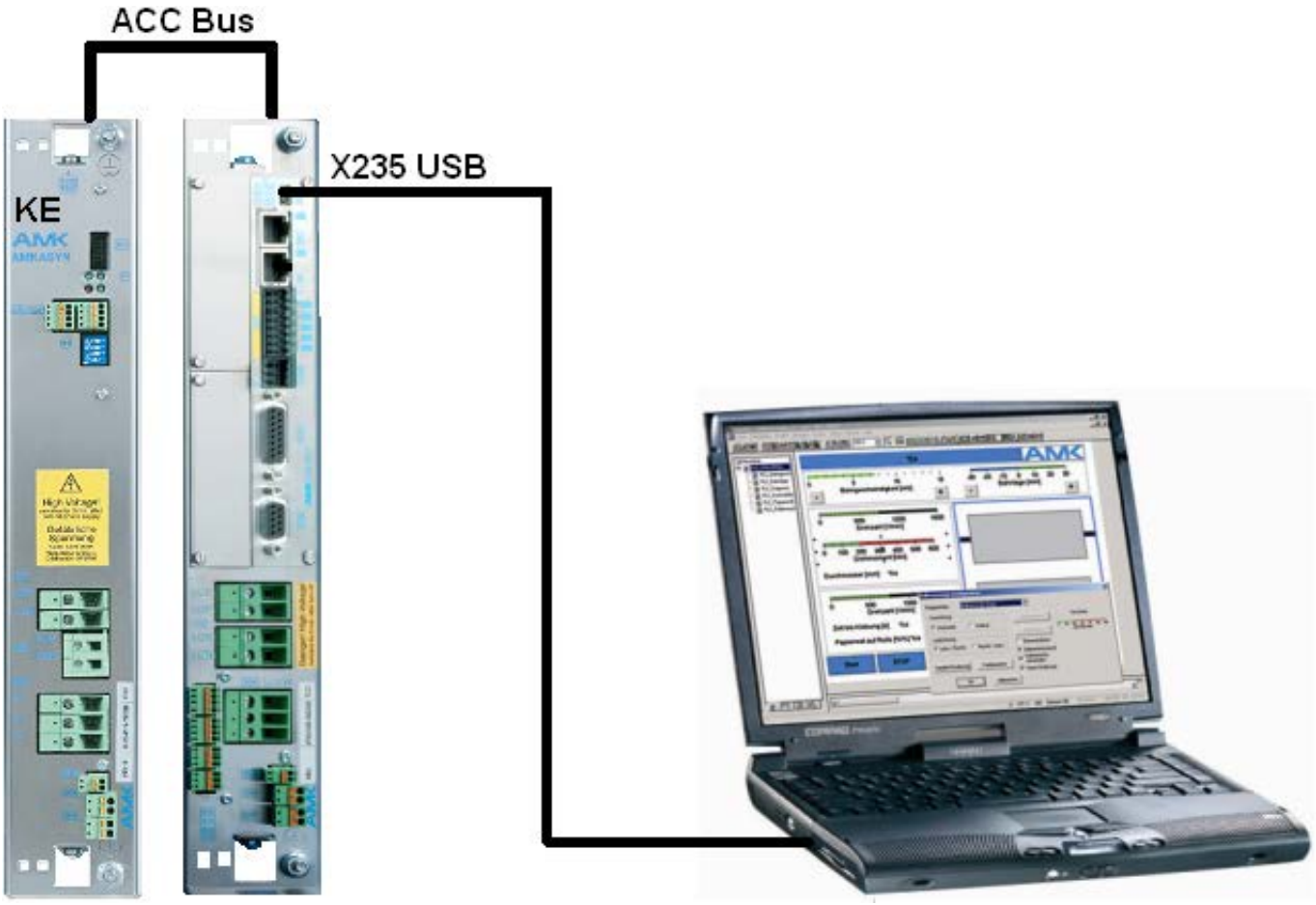
Windows 7



Windows XP



3.6 USB interface



Example:
KE with ACC bus and KW with KW-R06 (comparable with KW-R07, KW-R16 and KW-R17).
You get also access to ACC bus slave devices via the ACC bus connection of the controller card.

Cable:
AMK USB cable with ferrite core 3 m (AMK part-no. 47058).

Your opinion is important!

With our documentation we want to offer you the highest quality support in handling the AMKmotion products.
That is why we are now working on optimizing our documentation.
Your comments or suggestions are always of interest to us.
We would be grateful if you take a bit of time and answer our questions. Please return a copy of this page to us.

e-mail: Documentation@amk-motion.com
or
fax no.: +49 7021/50 05-199

Thank you for your assistance.
Your AMKmotion documentation team

1. How would you rate the layout of our AMKmotion documentation?

   (1) very good (2) good (3) satisfactory (4) less than satisfactory (5) poor

2. Is the content structured well?

   (1) very good (2) good (3) moderate (4) hardly (5) not at all

3. How easy is it to understand the documentation?

   (1) very easy (2) easy (3) moderately easy (4) difficult (5) extremely difficult

4. Did you miss any topics in the documentation?

   (1) no (2) if yes, which ones:

5. How would you rate the overall service at AMKmotion?

   (1) very good (2) good (3) satisfactory (4) less than satisfactory (5) poor

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