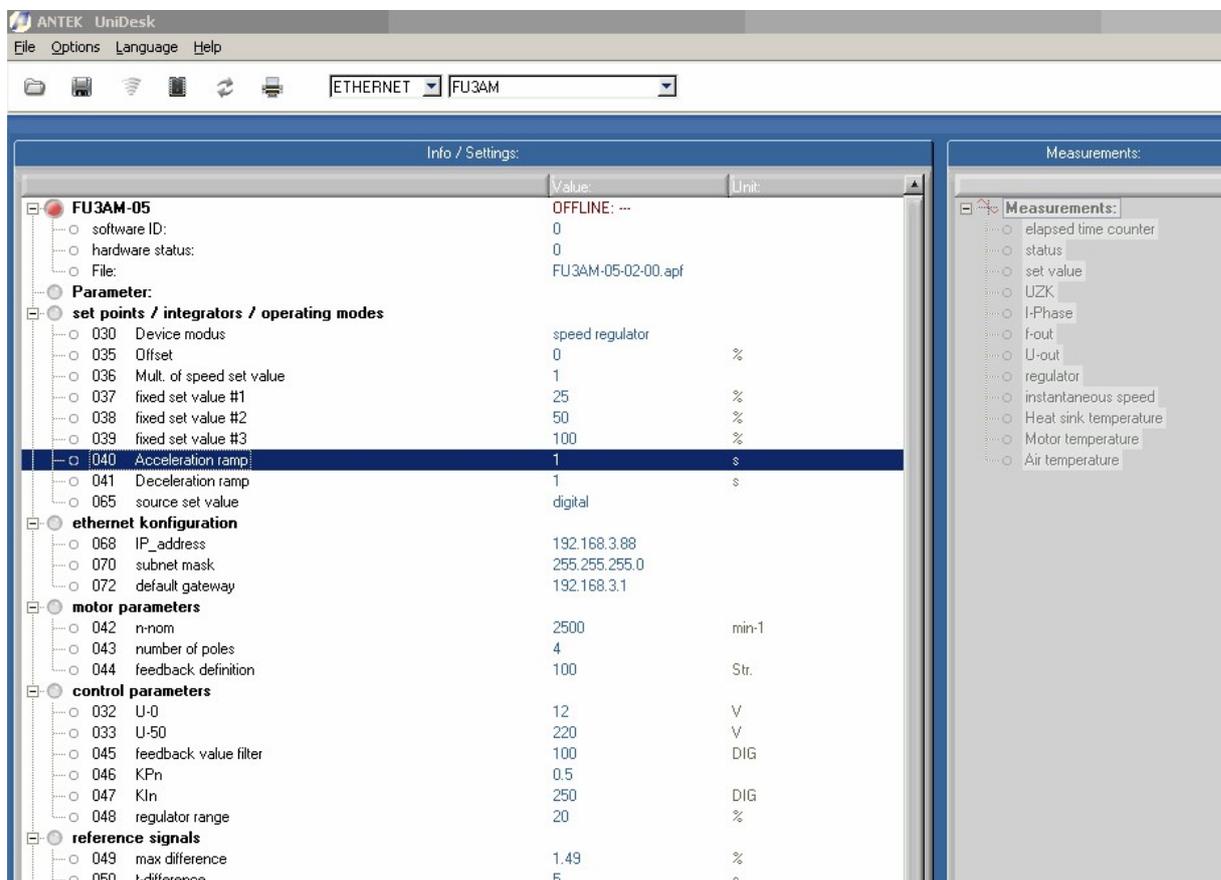


Description

Operation software

UniDesk

V3.0.x



PC- Monitor- and Parameterizing-Software for ANTEK Devices

Technical Description	Operating software UniDesk
Document	R0087FGB
Version	01/24

Content:	Page
1. PREFACE AND GENERAL	6
1.1 SHORT DESCRIPTION	6
1.2 ADVANTAGES:	6
2. SAFETY INSTRUCTIONS	7
2.1 DEVICE REACTIONS	7
2.2 NONLIABILITY	8
3. INSTALLATION	9
3.1 SYSTEM PREMISES	9
3.2 INSTALLATION OF CD	9
3.3 DOWNLOAD AND INSTALLATION FROM INTERNET	9
3.4 DEINSTALLATION	9
3.5 INSTALLATION OF NEW DEVICE CONFIGURATIONS ¹	9
4. DEVICE CONNECTING	10
5. OPERATING	11
5.1 MAIN WINDOW	11
5.2 PROGRAM START	12
5.3 ELEMENTS AND FUNCTIONS	12
5.3.1 DEVICE AND FILE INFORMATION	12
5.3.2 MEASUREMENT WINDOW	13
5.3.3 PARAMETER RANGE	13
5.3.3.1 Editing of Single Parameters	13
5.3.3.2 Working with Parameter Records	14
5.3.4 SHORT DESCRIPTION OF THE PARAMETERS	14
5.3.5 SWITCHOVER „MEASUREMENT WINDOW – ERROR MEMORY WINDOW“	14
5.3.6 ONLINE / OFFLINE	16
5.3.6.1 Online Mode	16
5.3.6.2 Offline Mode	16
5.3.6.3 Switching Offline → Online	16
5.3.6.4 Switching Online → Offline	16
5.3.7 MENU BAR	16
5.3.7.1 File	16
5.3.8 OPTIONS	17
5.3.8.1 Environment	17
5.3.8.2 RS485	18
5.3.8.3 Ethernet	18
5.3.8.4 Protocol	19
5.3.8.5 Language	20
5.3.8.6 Help	20

6. TROUBLESHOOTING	21
---------------------------	-----------

7. INDEX	22
-----------------	-----------

-Errors and omissions excepted, subject to change--

ANTEK GmbH
Im Köchersgrund 1
71717 Beilstein

 +49 7062 94060
 info@antek-online.de
 www.antek-online.de

1. Preface and General

1.1 Short Description

The operating software UniDesk permits parameterizing and monitoring the microcontroller-controlled ANTEK devices.

1.2 Advantages:

- ◆ An operating software for all ANTEK devices
- ◆ A clearly structured main window with all important information elements discerned at a glance
- ◆ Multilingual (device dependent)
- ◆ Automatic interface selection
- ◆ Automatic device identification
- ◆ During the parameterizing functions the monitor function continues to run in parallel
- ◆ Connection via each standard RS232/RS485 or Ethernet interface
- ◆ Monitoring of the parameter integrity, i.e. write operations are checked for technical plausibility.

2. Safety Instructions

2.1 Device Reactions

During the parameter adjusting action the connected device changes its properties!



There may be written into the device only parameters of which the User has convinced himself and beforehand that the device reaction does not cause any dangerous operating status. Consequently all parameters must be checked beforehand prior to writing a complete parameter record.

The User must have an extensive knowledge of the total plant in which the device to be parameterized is integrated, in order to have the possibility of estimating the danger states which could result there from.

The universal structure of UniDesk permits no statements of general value about possible reactions of the device and/or of the plant. The User must acquire the necessary knowledge contained in the documentation of the device and of the plant. If necessary, additional information is to required from the manufacturer of the device or from the manufacturer of the total plant.

In the following we give a non-exhaustive list of examples of danger points:

Parameterizing on...	Possible Danger	Remedy
Autoreset	Injury of persons as well as material damage due to self-starting of the machine or of parts of the machine.	Parameterize autoreset only in case of drives where self-start does not present any danger.
Rated values, rated value offsets, rated value multipliers	Injury of persons as well as material damage due to sudden modification of rpm, torques, voltages, currents, or similar.	Parameterize the device in the inactive status only (e.g. device locking). Change by small step sizes only and then check the result.
Operating mode	Injury of persons as well as material damage due to sudden modification of the device.	Parameterize the device in the inactive status only (e.g. device locking). Parameterize only when all premises for new operating mode are fulfilled.
Limits e.g. for maximum currents, temperatures, voltages or similar.	Injury of persons as well as material damage due to the fact that the device does not keep any longer certain safety limits.	In cooperation with total plant determine the respective limits (eventually with the safety engineer or with the safety representative). Any overstepping of and any falling below these limits may not take place.

Parameterizing on...	Possible Danger	Remedy
Balancing parameters	Injury of persons as well as material damage due to a faultily balanced device.	Carry out the device balance only when the device is separated from the total plant and if appropriate metering means are available for guaranteeing the success of the balancing.

Caution:

Generally the parameters written into a device react immediately, i.e. ramps, time delays and similar elements are ineffective in most of the cases.



Consequently parameters may only be written when the device is inactive (e.g. in case of device locking).

2.2 Nonliability

UniDesk is a free-of-charge application software created with a maximum care. Nevertheless, unforeseeable events cannot be excluded in all cases under certain system constellations. Therefore, the use of UniDesk takes place at one's own risk.

Especially any liability is excluded with regard to:

- ◆ data loss;
- ◆ use outage on EDP plants and other operating means;
- ◆ damage issued directly or indirectly in connection with the possible use of UniDesk;
- ◆ false reactions, false interpretations with their consequences caused by false display values or false input values.

3. Installation

3.1 System Premises

PC with Pentium processor or higher
free hard-disk storage = approx. 8 MB
main memory = at least 32 MB
screen resolution = at least 1024x768
Microsoft Windows® 7,8,10
CD-ROM drive or internet access
eventually ZIP unpacker
RS232/RS485, USB(COM-PORT) interface

3.2 Installation of CD

Place the CD into the drive. Generally, the installation process starts automatically after a short time. If no "AutoStart" function is activated, carry out the file „setup.exe“. Follow the instructions of the installation program.

When the request appears, click onto „Extract“, and then the installation package adds the device configurations¹ to the installation.

3.3 Download and Installation from Internet

The current UniDesk version can be downloaded from the homepage www.antek-online.de, the password to unpack is "71717", our zip code. Unzip the UniDesk.zip file into a temporary folder, run the setup.exe file and follow the installer instructions.

The current UniDesk can be downloaded from the homepage www.antek-online.de. Unpack the file „UniDesk.zip“ in a temporary folder, carry out the file „setup.exe“, and follow the instructions of the installation program.

After successful installation the temporary folder can be erased.

3.4 Deinstallation

If the setup program is started on a computer on which UniDesk is already installed, the existing installation will not be removed. Please uninstall via the Windows system. This process doesn't take long, but it is a prerequisite for installing a new version without any problems. Parameter set files created by the user remain unaffected during uninstallation.

The device configurations¹ (*.AKF) also remain in the data folder. However, these can easily be deleted manually and added again.

3.5 Installation of New Device Configurations¹

If you do not want to update the entire program package, but only the device configurations¹, please proceed as follows:

Start the file "AKFs.exe" and unpack it into the UniDesk data folder.

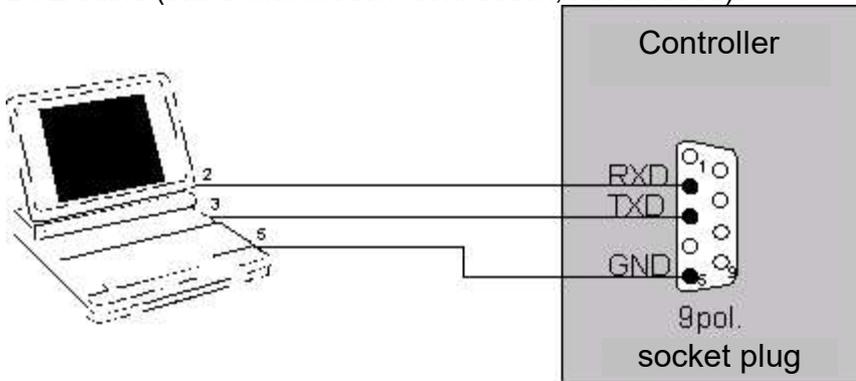
When prompted to extract, enter the path and start.

¹ Device configuration: Information that makes accessible the different ANTEK devices for UniDesk. It is a matter of files with numeric file names and with ending "AKF".

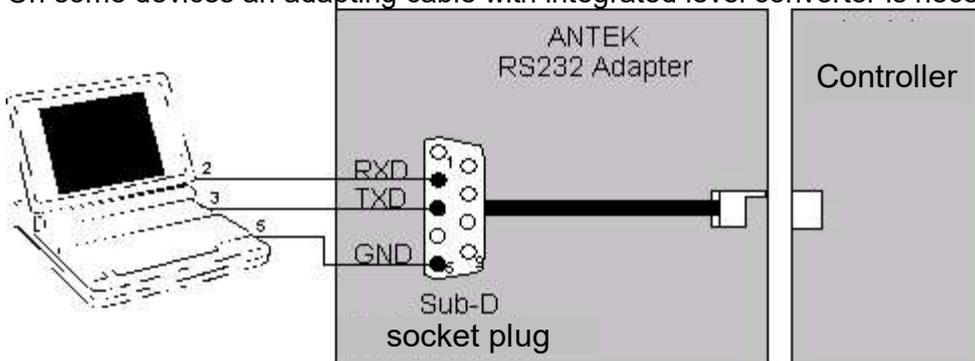
4. Device Connecting

For connecting a device, use a free RS232 interface of your computer. The cable to be used is indicated in the respective device description.

If the device is equipped with a 9-pole SUB-D socket, you need a standard commercial DTE-DCE cable (cable with modem connection, not crossed).



On some devices an adapting cable with integrated level converter is necessary, in addition.



Special forms for the device connection also are possible. For this, see the respective device description.

Notice:

In case of computers without RS232 interface (e.g. some portable computers) a standard commercial USB-RS232 converter can be used.

5. Operating

5.1 Main Window

The screenshot displays the ANTEK UniDesk software interface. The main window is titled "Info / Settings:" and shows a tree view of parameters for a device labeled "FU3AM". The parameters are organized into several categories: "Parameter:", "set points / integrators / operating modes", "motor parameters", "control parameters", and "reference signals". The "motor parameters" section is highlighted in yellow, and the parameter "042 n-nom: nominal speed of the motor" is selected. The "control parameters" section includes parameters like U-0, U-50, t-n-act, KPn, KIn, and regulator range. The "reference signals" section includes max difference and t-difference. The interface also features a "Measurements:" panel on the right, which lists various measurement options such as elapsed time counter, status, set value, UZK, I-Phase, f-out, U-out, regulator, instantaneous speed, Heat sink temperature, Motor temperature, and Air temperature. The top menu bar includes "File", "Options", "Protocol", "Language", and "Help". The toolbar contains icons for file operations and communication, with a red circle highlighting the "RS485" icon. Red circles with numbers 1 through 7 are overlaid on the interface to highlight specific elements: 1 (Help menu), 2 (FU3AM device name), 3 (Value column), 4 (Measurements panel), 5 (Toolbar), 6 (Parameter 038), and 7 (Tree view icon).

Parameter	Value	Unit
CONNECTED: COM 1		
software ID:	105	
hardware status:	302	
Parameter:		
set points / integrators / operating modes		
030 Device modus	speed regulator	
035 Offset	0	%
036 Mult. of speed set value	1	
037 fixed set value #1	25	%
038 fixed set value #2	50	%
039 fixed set value #3	100	%
040 Acceleration ramp	0.1	s
041 Deceleration ramp	0.1	s
065 sov_042 n-nom:	digital	
motor parameters		
042 n-nom: nominal speed of the motor	1500	min-1
043 number of poles	4	
044 feedback definition	100	Str.
control parameters		
032 U-0	16	V
033 U-50	230	V
045 t-n-act	100	DIG
046 KPn	0.19	
047 KIn	50	DIG
048 regulator range	20	%
reference signals		
049 max difference	1.5	%
050 t-difference	5	s

- 1: Menu bar
- 2: Information range: device information, software information and hardware information, file information
- 3: Parameter range
- 4: Measurement window
- 5: Register tabs (for switching over between measurements window and error memory window)
- 6: Short description of the parameters
- 7: Online / Offline
- 8: Toolbox
- 8a: Open the parameter record file
- 8b: Store the parameter record file
- 8c: Read out the device
- 8d: Write to the device
- 8e: Re-load the previous parameter record file
- 8f: Print the parameter record file
- 8g: Button for switching over between the protocols RS232 ↔ RS485
- 8h: Address field for RS485 Devices, Labeling field for Ethernet devices (IP-Adress)

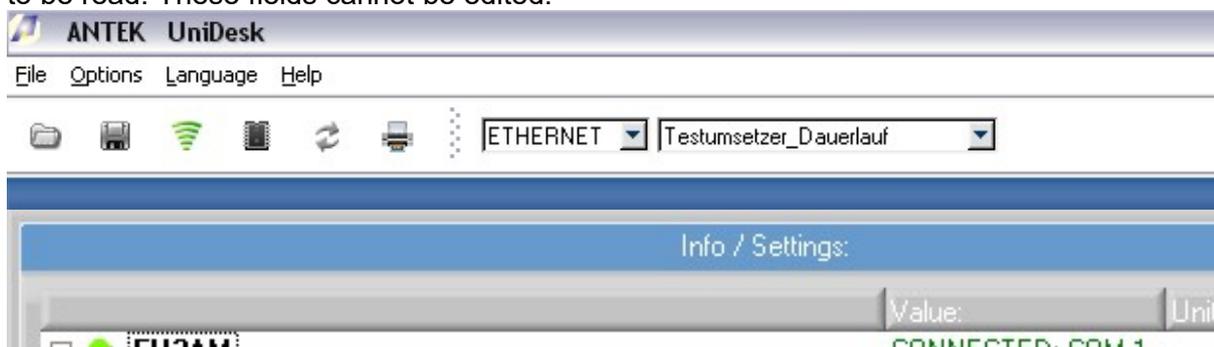
5.2 Program Start

After the program start UniDesk automatically searches for a connected device. In case an ANTEK device is found on an interface, the parameters of the device are shown; in the other cases the window remains empty.

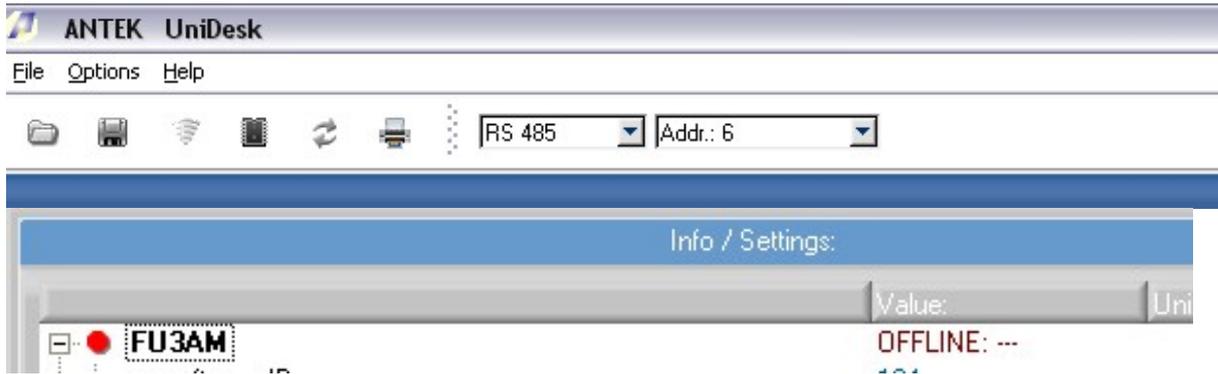
5.3 Elements and Functions

5.3.1 Device and File Information

The connected device is displayed in the range ②. In addition, in the range ② the firmware version of the microcontroller in the device, as well as the hardware version of the device are to be read. These fields cannot be edited.



When a parameter record file has been loaded (see chapter 5.3.3.2) the range ② contains the name of the file under the item „File“. Within the range ② the software identification and the hardware status can be read under the status in which the parameter record file has been created. UniDesk is in the “OFFLINE“ status.



5.3.2 Measurement Window

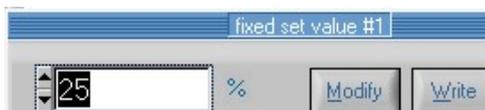
In the measurement window ④ the current measured-data of the device can be read. The updating rate depends on the number of the values which are to be monitored and on the capacity of the PC. On average it is approx. 1s. The content of this window is device-specific and noneditable.

5.3.3 Parameter Range

The range ③ shows the changeable parameters of the device. At the moment of program start or when a new device is connected, the parameters are read by the device and are displayed in this window.

5.3.3.1 Editing of Single Parameters

A double-click onto the wished parameter line opens the editing window. Alternatively it is possible to position the marking on the wished parameter line with the help of the keyboard and to open the editing window with the help of the key "Enter".



Here the new value can be entered into the number field via keyboard or can be modified by means of the buttons UP/DOWN.



If the wished parameter only permits discrete alternatives for selection, the editing window will have a field DROP/DOWN.

The 3 buttons in the editing window have the following functions:

Modify The entered value is taken over into the parameter window, but is not yet written into the device. The editing window will be closed. (Key function: Enter)

Write The entered value is written directly into the device; the update of parameter window takes place. The editing window remains open. (Key function: Alt-W)

Cancel The entered value is rejected; the closing of the editing window takes place. (Key function: Esc or Alt-C)

5.3.3.2 Working with Parameter Records

Complete parameter records are transferred by means of the keys ⓐ ... ⓔ:

Reads the connected device into the parameter window ③. If the parameter window already included data elements, these data elements will be overwritten. When connecting a device this takes place automatically.

Disconnects the connected device and UniDesk. Then an announcement in the notification area shows that the device is in "offline" mode

Writes the total content of the parameter window into the connected device.

Reads data elements out of a parameter record file (*.apf) and enters the data elements into the parameter window. If the parameter window already included data elements, these data elements will be overwritten.

Writes the data elements from the parameter window into a parameter record file (*.apf). After indication of the file name a free comment text can be entered.

Loads the last-called parameter record file into the parameter window. This function is very useful when writing parameter file records in several ANTEK devices of a same type.

5.3.4 Short Description of the Parameters

A short description of the parameters appears in field ⑥. The display contains the respective description of the parameter on which the mouse pointer is placed. This means to get the short description, the mouse pointer must only be positioned onto the concerned line within the parameter window ③, within the measurement window ④ or within the error memory window.

○ 037	N-1	5.01	%
○ 038	N-2	50	%
○ 039	N-3	100	%
○ 040	tH	0.1	§
○ 041	tR	0.1	§
○ 065	Sollwertqu-		
○ 068	IP-Adresse:	analog	
Ethernet-Konfigur Netzwerk-Adresse des Frequenzumrichters			

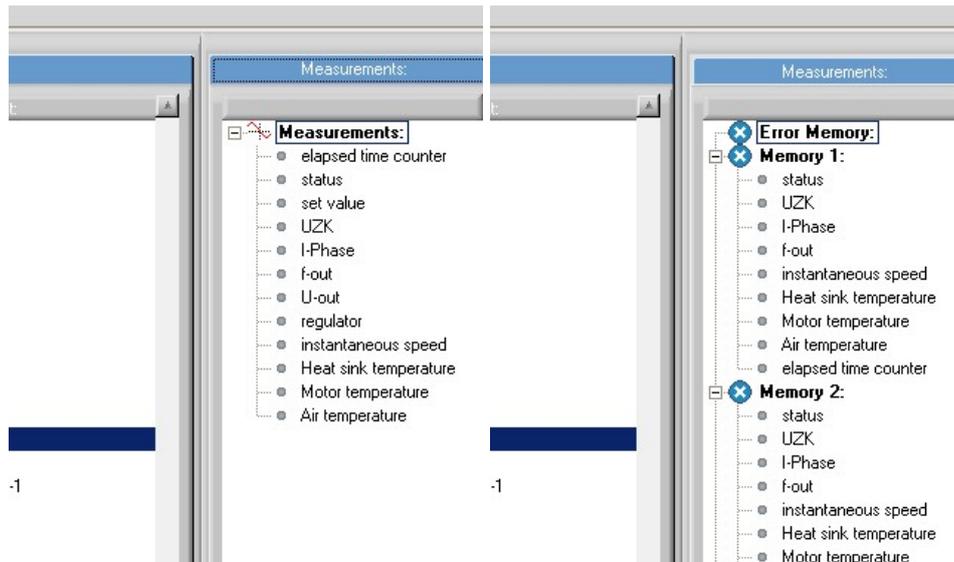
Notice:

The short descriptions are device-dependent. It can happen that short descriptions do not exist for all parameters.

This function can be deactivated in the „Program Options“. See chapter: 5.3.8

5.3.5 Switchover „Measurement Window – Error Memory Window“

The register tabs ⑤ permit switching over the window ④ to the error memory window „Fault memory“ or switching back the measurement window „Measurements“.



Notice:

A error memory does not exist for each device. In this case the error memory window remains empty.

5.3.6 Online / Offline

The operating mode is displayed in the status field : / :

A green point within means a junction exists between the device and the PC.

UniDesk is in the "ONLINE" mode.

A red point within means that the junction to the device is interrupted.

UniDesk is in the "OFFLINE" mode.

5.3.6.1 Online Mode

- ◆ UniDesk has a junction by data circuit to a connected device.
- ◆ The updating of the data in measurement window and in error memory takes place.
- ◆ The data in the parameter window can be written into the device.

5.3.6.2 Offline Mode

- ◆ No data junction to the device.
- ◆ The data in the measurement window and in the error memory window is frozen.

5.3.6.3 Switching Offline → Online

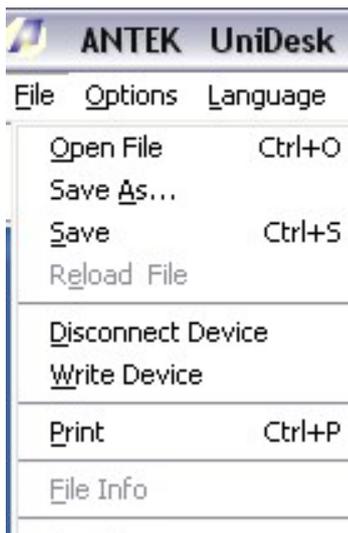
- ◆ Automatically when connecting a device.
- ◆ When actuating the button „Read Device“ and when a device is found.

5.3.6.4 Switching Online → Offline

- ◆ Automatically when interrupting a junction to the device (or when switching off the device).
- ◆ When opening or re-loading a parameter record file.

5.3.7 Menu Bar

5.3.7.1 File



The menu items „Open File“, „Save File“, „Read Device“, „Write Device“ and „Reload File“ have the same meaning as the respective buttons a ... e.

„Print“ calls the print routine. A tabular printout is produced and that contains the data from the parameter window. If UniDesk is „ONLINE“, the error memory window will also be printed.

If a parameter record file has been loaded in UniDesk, the free file comment will also be printed out. The printout takes place in the selected respective language.

„File Info“ shows the free comment text from the parameter record file. This menu item only is available when a parameter record file has been loaded.

„Quit Program“ ends UniDesk.

5.3.8 Options



Some parameters can be protected by a password. Only after having entered the correct password via this menu item, the parameters become visible and can then be edited. When entering any false password (or by a dummy input) the protected parameters are hidden automatically.

If protected parameters are available in individual case, and which the respective password is, that must be agreed on with ANTEK.

Password protected parameters are presented in parameter window ③ with a key symbol

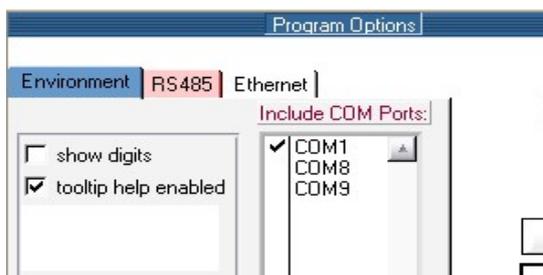


After having entered the correct password, the function „AutoWrite“ will also be enabled: within the editing window the values are sent immediately to the device without any key depression. This function must be used with care, since doing this some unintentional values can quickly be written into the device.



a further selection window, within which it will be on of the parameters, and to vary the settings for

5.3.8.1 Environment

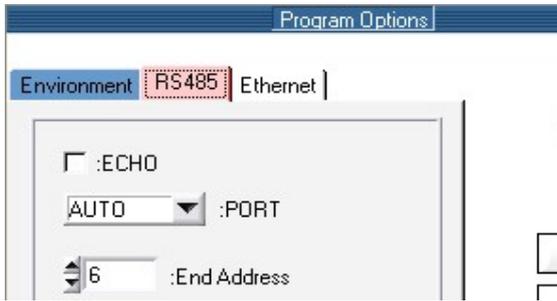


After having deactivated the checkbox, short descriptions of the parameters are no longer displayed.

It is also possible, by activation of "showdigits" to display the values of the parameters show in digits. The selection box "Include COM Ports" is used to select the COM port on which UniDesk is seeking for connected devices.

Note: Disabled COM ports are no longer available for the RS485 connection (see section 485). To ensure a faster connection to recording, it is advantageous to determine the connection to COM ports directly.

5.3.8.2 RS485



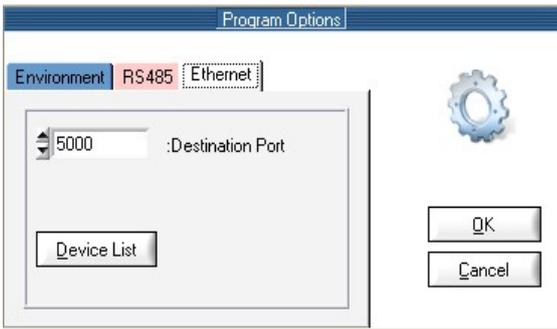
UniDesk can also actuate devices connected via RS485 BUS. For this, the BUS must be connected via a RS485↔RS232 interface transducer to an interface RS232 of the computer.

The checkbox ECHO is to be activated when the transducer RS485 ↔ RS232 is not able to hide its sent data on the reception line.

PORT permits adjusting the port for the RS485 junction. If the setting AUTO has been chosen, all COM ports of the PC will be integrated into the junction searching. For a quicker junction setup it will be advantageous to determine the COM port directly.

In the field „End Address“ the maximum address searched-for on the port is to be adjusted. A maximum of 128 devices can be connected to the port (addresses [0...127]). Here also it will be advantageous for a quicker junction setup to choose the highest address which has to be activated on the BUS.

5.3.8.3 Ethernet



ANTEK devices with which it is possible to communicate over the Ethernet are configured which the tab "Ethernet". Under destination port, the port address is set which the UniDesk needs to communicate with the network the connected ANTEK - devices.

Note: The port address in the unit must be identical to the input port address in UniDesk and should be chosen so that a conflict will be avoided with other services



After selecting "Device List" will appear in the configuration menu, the IP addresses are recorded contiguous with an assigned device name. The device name is used for the selection of the devices on the menu bar with which UniDesk establishes a connection. Via the button "Add" registered address and their assigned device name is taken over in the field "IP Address" in the following list. The host portion of the IP address must match the host portion of the computer on which UniDesk is installed. A no longer needed device is removed from the list after selecting the button "Remove". Using the "Up" and "Down" buttons

It is possible to sort the values entered. A final "OK" saves the values in a file. The "Cancel" button closes the menu without making any changes.

5.3.8.4 Protocol

Depending on the type of device it can be selected the appropriate interface protocol. The selection can be made via the toolbar in the corresponding drop-down box. For this purpose, the desired connection RS232, RS485 or Ethernet can be selected.



If a RS485 junction is active, during the first junction setup each device found on the RS485 BUS will be entered into the list element of the toolbox. With the DropDown element each device that is active on the BUS can be selected. If further devices are subsequently added to the BUS, the BUS must be re-read-in. This can be carried out by actuating the button "Disconnect" in the toolbox and then by re-activating the "Connect".

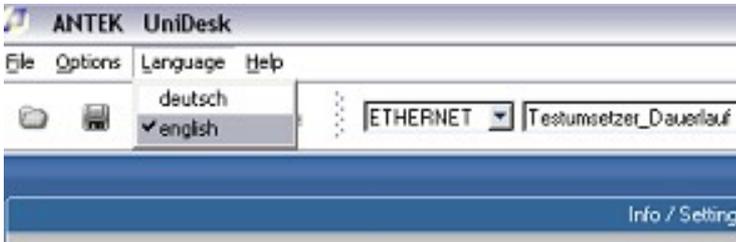


ANTEK - devices that are connected over a network are also activated by using the drop-down box to connect. Each device name has its own IP address deposited (see 5.3.8.3 Ethernet).



5.3.8.5 Language

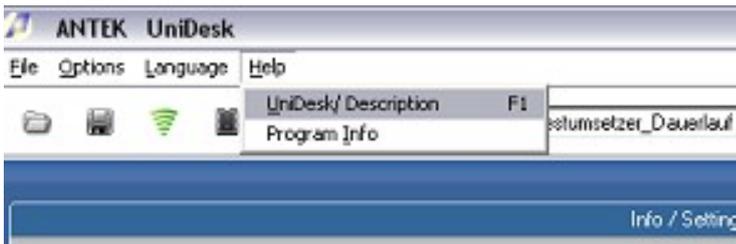
This menu permits selecting the language for the parameter texts and the short descriptions to be displayed. Which languages are available? This depends on the respective device. When only one language is available, this menu item is deactivated.



All letterings of the buttons and all menu inputs always are in English.

5.3.8.6 Help

Help contains the menu item „Program Info“, and „Program Info“ indicates the respective version of UniDesk.



6. Troubleshooting

Error	Possible Cause	Recovery
UniDesk goes not to online	<ul style="list-style-type: none"> ◆ No device is connected. ◆ Device is switched off. ◆ Wrong junction cable. ◆ Interface on PC seized by other software (or also by 2nd instance of UniDesk). 	<ul style="list-style-type: none"> ◆ Check the connection. ◆ Supply the device with current. ◆ Use the correct cable (compare with chapter 4). ◆ Carry out UniDesk once only. End any other software allocated to the interface.
	<i>If RS485 protocol is activated</i>	
	<ul style="list-style-type: none"> ◆ RS485 ⇔ RS232 transducer without any echo compensation. ◆ End address in UniDesk adjusted to a level that is too low. ◆ False COM Port adjusted 	<ul style="list-style-type: none"> ◆ Activate „ECHO“ in the UniDesk under „Options“ ⇔ „RS485“. ◆ In the UniDesk under „Options“ ⇔ „RS485“ „End Address“ adjust the address to a larger value. ◆ Set the COM Port (see 5.3.8) onto „AUTO“. When the search is completed adjust the respective COM Port.
<i>If Ethernet connection is activated</i>		
	<ul style="list-style-type: none"> ◆ Device and UniDesk have uneven port addresses ◆ false IP Address ◆ Port blocked by firewall 	<ul style="list-style-type: none"> ◆ In UniDesk under “Options“ ⇔ “Ethernet“ control Port-address ◆ Under Menu “Options“ ⇔ “Ethernet“ ⇔ “Devicelist“ IP check address ◆ Release port-address in firewall
Error message „No configuration available“	UniDesk does not know the connected device.	Download and install the newest device configuration (see chapter 0)
Error message „Device and configuration file not compatible“	The connected device and the loaded parameter configuration are not suited each other, and parameters cannot be written into the device.	Carry out „Read Device“ for taking over the configuration of the device.

7. Index

- AKFs 9
- Application software 8
- Autoreset 7
- Connection 10
- Device and File Information 12
- Device information 6, 7, 14
- Editing window 13
- Error memory window 12, 14, 16
- Error message 21
- File comment 16
- Installation** 9
- Interface 6, 10, 21
- Language 16
- Measurement window 12, 13, 14, 16
- Measurements window 12
- Menu 12, 16
- Offline 12, 16
- Online 12, 16, 21
- Operating** 11
- Operating mode 7, 16
- Parameter 6, 7, 8, 12, 13, 14, 17, 21
- Parameter range 12, 13
- Parameter record file 12, 14, 16
- Parameter window 13, 14, 16
- Password 17
- Print 16
- Rated values 7
- Register tabs 12, 14
- Safety instructions** 7
- Short description 6, 12, 14
- System permises 9
- UniDesk-Version 9