

micon AD

Parameters Configuring Software for Software A-D Converter

User's Manual

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Table of Contents

1	STARTING THE PROGRAM	3
2	PARAMETERISATION	5
2.1	General Notes	5
2.2	User Defined Characteristics	5
2.3	Limit Settings	6
2.3.1	Upper and Lower Limits	6
2.3.2	Critical Values	7
2.3.3	Priorities	7
2.4	Display Settings	8
2.4.1	Display	8
2.4.2	Update Rate	10
2.4.3	Other Settings	11
2.4.3.1	Bargraph	11
2.4.3.2	Signed	11
2.4.3.3	Suppress Preceding Zeros	11
2.4.3.4	Output Rounded	11
2.4.3.5	Special Char for '-1'	12
2.4.3.6	Decimal Places	12
2.4.3.7	Output Increment	12
2.4.3.8	Number of Values for Averaging	12
2.4.3.9	Blink Rate	12
2.5	Status Outputs	13
3	SAVING AND LOADING CONFIGURATIONS	14
3.1	Save Configuration	14
3.2	Load Configuration	14
4	VERSIONS OVERVIEW	15

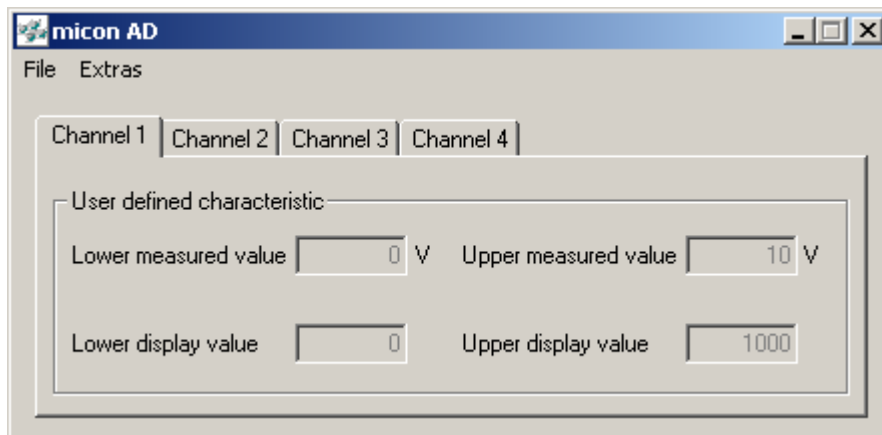
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Parameters Configuring Software for Software A-D Converter

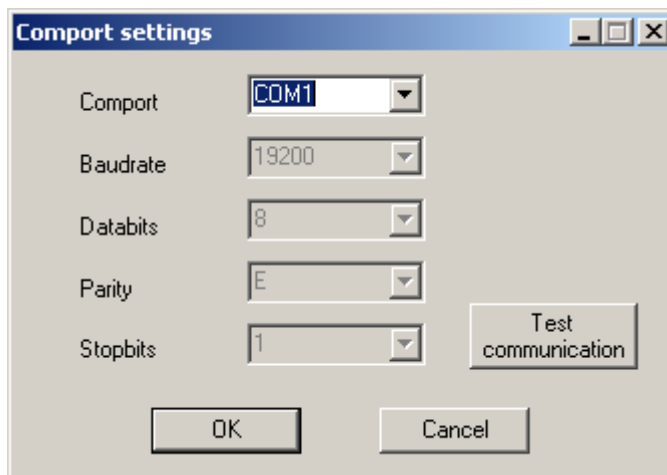
1 Starting the Program

Run the “setup.exe” file included on the installation floppy disk to install the program, and follow the instructions, which appear at the monitor.

Connect the display unit via a serial cable (RS232) to the PC and start the software:



Afterwards, the connection to the display should be checked. Therefore select the item *Comport* of the *Extras* menu:



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Parameters Configuring Software for Software A-D Converter

The A-D converter communicates with the PC via an RS 232 interface. In order to assure error-free data exchange, both devices must be configured with identical interface parameter settings. Due to the fact that the interface parameters for the A-D converter are fixed and cannot be changed, these settings are also unalterable in the PC software. The only setting, which needs to be selected, is the COM port, which will be used for communication. Any one of the eight ports, COM1 through COM8, can be selected. Select the port, which you will use at your PC.

The *Test communication* button can be used to determine whether or not the COM port can be initialised, and whether or not data exchange is error-free.

If an error message appears, the most probable cause is a faulty or failed serial connection between the two devices, or incorrectly configured interface parameters. Inspect the cable and check the parameter settings. The connector pin assignments for the interface cable are included in the user's manual for the display unit. Make sure that the interface is not currently being used by another device.

After a successfully test of the communication, confirm your settings with the *OK* button.

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Parameters Configuring Software for Software A-D Converter

2 Parameterisation

2.1 General Notes

The software A-D converter is equipped with four mutually independent measuring channels. Each channel can be individually configured with the parameter configuration software. Each respective channel must be selected for configuration with the appropriate index cards in the user interface (labelled *Channel 1* through *Channel 4*).

The current display configuration is transmitted to the software by selecting the item *Read configuration* of the *File* menu.

The current software settings can be transmitted to the display unit at any time by selecting the item *Transmit configuration* of the *File* menu. Only then, the display unit works with the current settings.

2.2 User Defined Characteristics

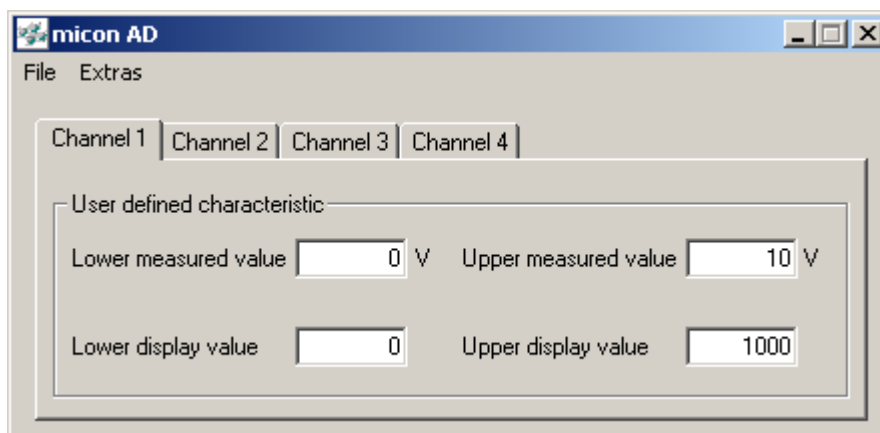
The required linear output curve can be defined with the four date entry fields with the following designations: *Lower measured value*, *Lower display value*, *Upper measured value* and *Upper display value*.

Note:

Enter whole numbers only! Refer to chapter “Decimal Places” regarding output values with places to the right of the decimal point.

Example:

Using a voltage sensor with an output range of 0 to 10 V, a value of “0” is to be displayed for 0 V, and a value of “1000” for 10 V.

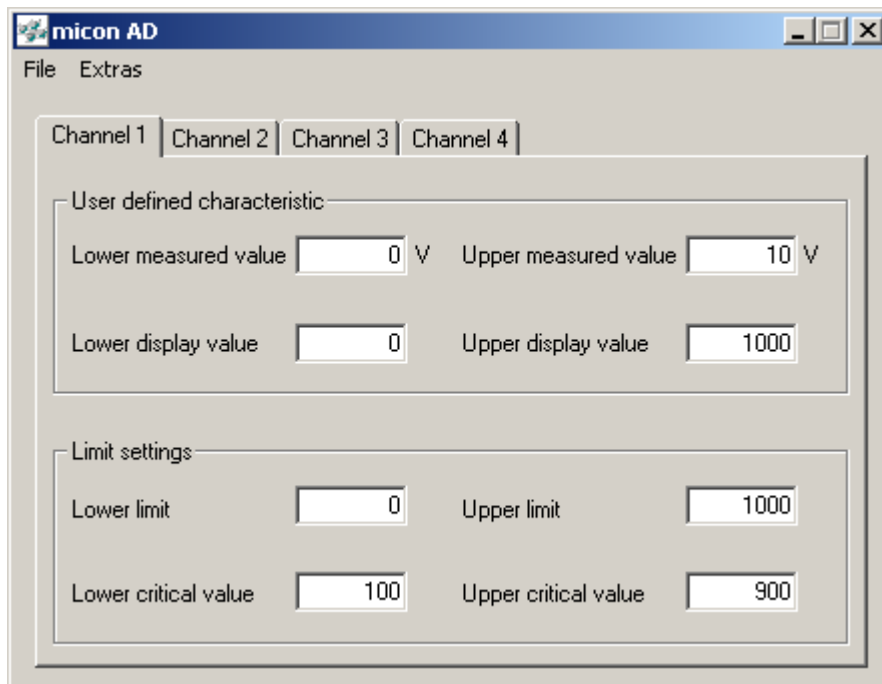


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Parameters Configuring Software for Software A-D Converter

2.3 Limit Settings

The selection of the option *Limits* of the *Extras* menu expands the dialog to do additional settings.



2.3.1 Upper and Lower Limits

The *Upper limit* and *Lower limit* entry fields can be used to define upper and lower range limits. If the range defined by these values is exceeded or fallen short of, a corresponding symbol appears at the display.

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Parameters Configuring Software for Software A-D Converter

2.3.2 Critical Values

The *Upper critical value* and *Lower critical value* entry fields can be used to define two threshold points. If the range defined by these values is exceeded or fallen short of, the display starts blinking.

2.3.3 Priorities

The upper and lower limits take precedence over the critical values, i.e. if the upper critical value is greater than the upper limit, the display will never blink, because overranging is already indicated before the critical point is exceeded.

The same applies to the lower critical value and the lower limit.

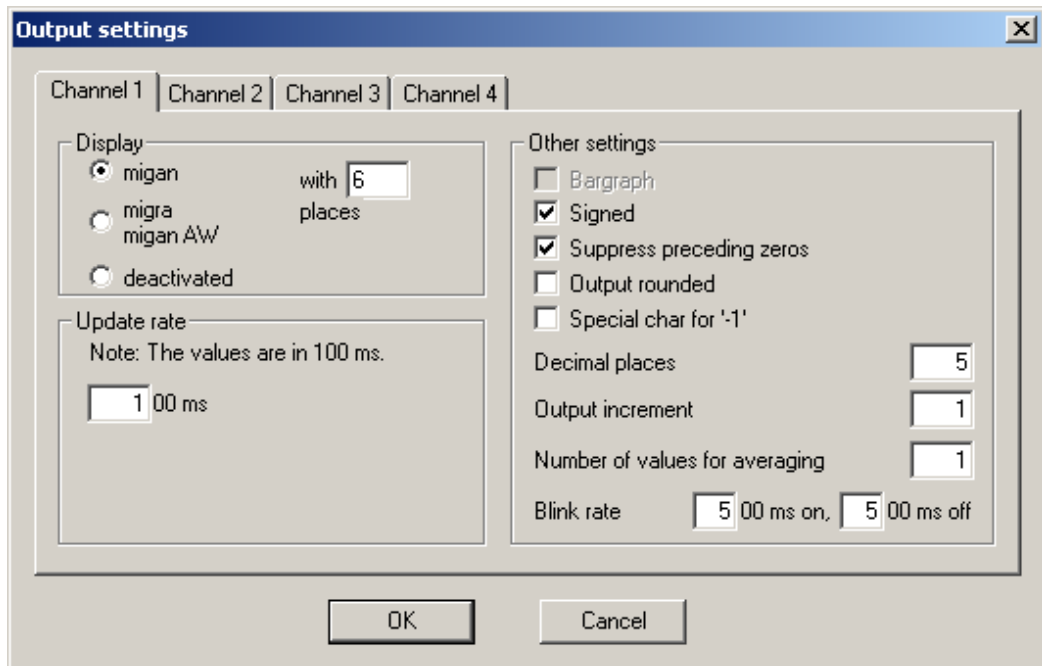
This feature can be taken advantage of if no critical point is required which would result, if violated, in a blinking display.

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Parameters Configuring Software for Software A-D Converter

2.4 Display Settings

Select the item *Display settings* of the *Extras* menu to do these settings:



2.4.1 Display

The A-D converter can be used with three types of displays: migan displays (7 segment), migra displays (dot matrix) and migan AW displays (7 segment, dot matrix). The utilised display type must be activated at the A-D converter. The option “*deactivated*” disables the respective channel.

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Parameters Configuring Software for Software A-D Converter

Places

Input the number of digits of your large format display:

Device type migan:

The value must correspond with the physical number of digits.

Example:

Values between “0.00” and “5.00” shall be displayed. Please input the value “3” in the field “Places”.

Device type migra:

The output values are displayed via variables which are specified with the display configuration (see manual “migra AD”). The number of places must correspond with the length of this variable. A decimal point is also counted as a character.

Example:

Values between “0.00” and “5.00” shall be displayed. Please input the value “4” in the field “Places”.

Device type migan AW:

A decimal point is also counted as a character (like type “migra”).

Example:

Values between “0.00” and “5.00” shall be displayed. Please input the value “4” in the field “Places”.

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Parameters Configuring Software for Software A-D Converter

2.4.2 Update Rate

The update rate specifies how often the display will be updated. Differentiation must be made between the two display types in this respect.

migan

The update rate is always a multiple of 100 ms for migan display units. The selected rate must lie within a range of 100 ms to 25.5 s (i.e. entries of "1" to "255" are possible).

migra

In the case of migra display units, the update rate depends upon the display unit's basic refresh rate that varies in accordance with the migra device configuration.

The migra requires a given amount of time in order to evaluate and display received data frames.

Depending on the selected font size, the minimum value is automatically calculated but can also be entered manually in the field *other time*.

migan AW

If using a migan AW (= migan for outside use, 7 segments, dot matrix) the setting "200 mm / migan AW" must be selected.

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Parameters Configuring Software for Software A-D Converter

2.4.3 Other Settings

2.4.3.1 Bargraph

This checkbox is used to specify whether the read-out will be displayed as a simple numeric value (checkbox not activated), or as a bargraph (checkbox activated).

This option is only available if a migra display unit is utilised, and must be configured accordingly in the migra project file.

2.4.3.2 Signed

This checkbox specifies whether or not a preceding plus or minus sign will be included in the display (checkbox activated = with plus or minus sign).

If the checkbox is not activated, no differentiation is made between positive and negative values, i.e. negative values are displayed exactly the same as positive values

If the *Signed* checkbox is activated, plus and minus signs are displayed at migra display units, although only the minus sign appears at migan display units (it is not possible to display a plus sign at a 7 segment display.)

2.4.3.3 Suppress Preceding Zeros

This checkbox is used to determine whether or not preceding zeros are displayed (checkbox activated = suppress preceding zeros).

2.4.3.4 Output Rounded

This checkbox is used to determine whether or not the output value of the last display digit shall be rounded up.

Example: Actual value = 7.5 -> output value = 8

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Parameters Configuring Software for Software A-D Converter

2.4.3.5 Special Char for '-1'

This checkbox is used to determine, if instead of the string '-1' an adequate special char shall be displayed. At this, there is one more digit available for displaying values.

2.4.3.6 Decimal Places

This entry field is used to determine how many places to the right of the decimal will be included in the display of the output value. In principle, the A-D converter only works with whole numbers. However, in order to be able to display numbers with one or more places to the right of the decimal, a decimal point is simply inserted at the desired position.

Example:

An output value of 10 V should result in a display value of 5.00. The 10 V output value is assigned to a display value of 500, and *Decimal places* is set to 2.

2.4.3.7 Output Increment

This entry field is used to determine which increment is used for the display value. For example, if the value "5" is entered, the last digit can only display two values (either "0" or "5").

2.4.3.8 Number of Values for Averaging

This entry field is used to determine how many values for averaging are used. For example, a setting of "10" means, the display always shows the average value of the last ten measurements. At this, you can effectuate an attenuation of the reaction, for example to avoid fast alternating display values.

2.4.3.9 Blink Rate

These entry fields are used to determine display performance in the event that the upper critical value is exceeded or the lower critical value is fallen short of. These two values specify on-time and off-time while the display is blinking.

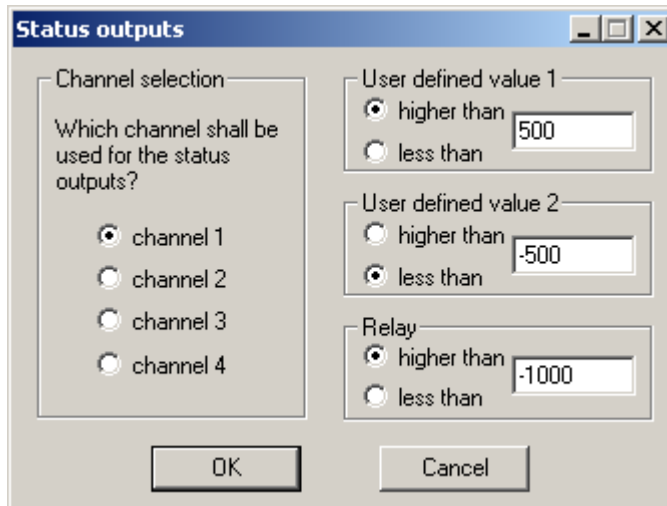
These values are always a multiple of 100 ms and must lie within a range of 100 ms to 25.5 s (i.e. entries of "1" to "255" are possible).

micon AD

Parameters Configuring Software for Software A-D Converter

2.5 Status Outputs

To use these settings, select the item *Status outputs* of the *Extras* menu.



Please notice, that these settings only have an effect on display devices with status outputs (ordering option).

The status outputs can only be assigned to one channel, which can be selected in the area *Channel selection*.

With the help of the two user-defined values (1 and 2), switching thresholds can be set, which activate an output when they are exceeded or fallen short of.

The relay output provides users with a floating contact that can be configured as a normally closed or a normally open contact.

Note:

Refer to the migan AD user's manual for technical data regarding wiring of the status outputs.

micon AD

Parameters Configuring Software for Software A-D Converter

3 Saving and Loading Configurations

Complete configurations can be saved to the hard disk or a floppy disk, which can then be downloaded to the A-D converter at a later point in time.

For example, backup copies can be generated and previous settings can be restored in the event of incorrect configuration (assuming that a backup copy of the previous settings has been generated).

3.1 Save Configuration

Complete configurations can be saved to the hard disk or a floppy disk by selecting the item *Save configuration to file* of the *File* menu. The only required entries include a file name and a directory path. After clicking the *Save* button, the current configuration is saved.

3.2 Load Configuration

Previously saved configurations can be uploaded to the A-D converter by selecting the item *Read configuration from file* of the *File* menu. The corresponding file must be selected to this end. Click the *Load* button to initialize the uploading procedure.

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Parameters Configuring Software for Software A-D Converter

4 Versions Overview

Version	Date	Comments
1.00	7/1/2005	Kreuzer: Document created
1.10	10/13/2009	Kreuzer: Chapter "Display" changed
1.20	2/17/2011	Adaption to micon V3.6 (migan AW added)
1.30	3/19/2013	Company address
1.40	10/17/2013	Logo
1.50	12/11/2017	Change of address

Certified per **DIN EN ISO 9001**.