ASCII Terminal User Manual

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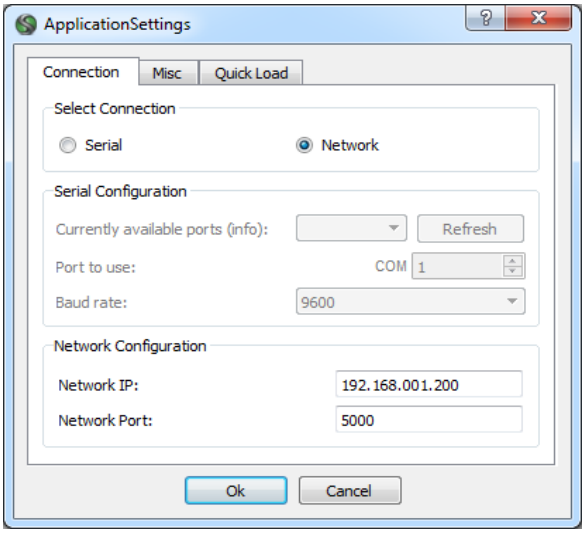
Introduction

This small tool is designed to have quick access to SmarAct devices that are controlled via RS232. You can enter commands to send and see the answers from the device in order to get familiar with the communication quickly. The tool is kept simple and is not suited for automated control.

Setup

In order to communicate with the device you need to configure the address of the device in the Application Settings window (menu “Edit → Settings...”):



RS232 Interface

If you have a MCS with a RS232 interface select “Serial” in the “Select Connection” field.

Here you may select the COM port of the PC and the baud rate. If you don't have a physical COM port you may use a simple USB to RS232 converter. Generally, any virtual COM port is fine.

You may click the refresh button to let the tool detect the COM ports that are currently available on your PC. Please note that this has informational value only. The COM port that the device is connected to must be configured at “Port to use”.

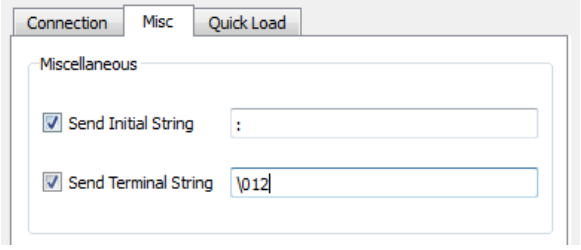
The baud rate must be the same that is configured for the device. The default baud rate is 9600, but may be changed (see interface description).

Ethernet Interface

If you have a MCS with an ethernet interface select “Network” in the “Select Connection” field. Enter the network IP address of the MCS and the TCP port number (default: 192.168.1.200 and 5000).

Other Settings

Command strings of SmarAct devices must be enclosed by an initial and a termination character. Please use the settings as seen in the image.



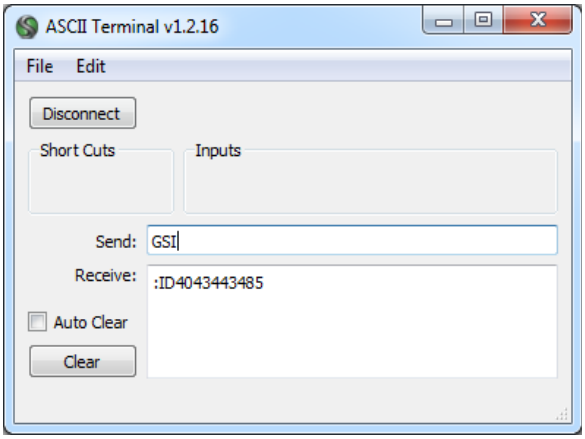
Click Ok to confirm the settings. The tool will save the settings to an xml file in the same directory as the application to be used in any future sessions.

Sending Commands

To start sending commands to the device you need to connect to it by clicking the connect button.

After this, simply enter a command in the Send field and hit return. Note that the tool automatically adds the necessary leading and trailing characters when sending the command.

To quickly clear the send field to type a new command you may press the Esc key.



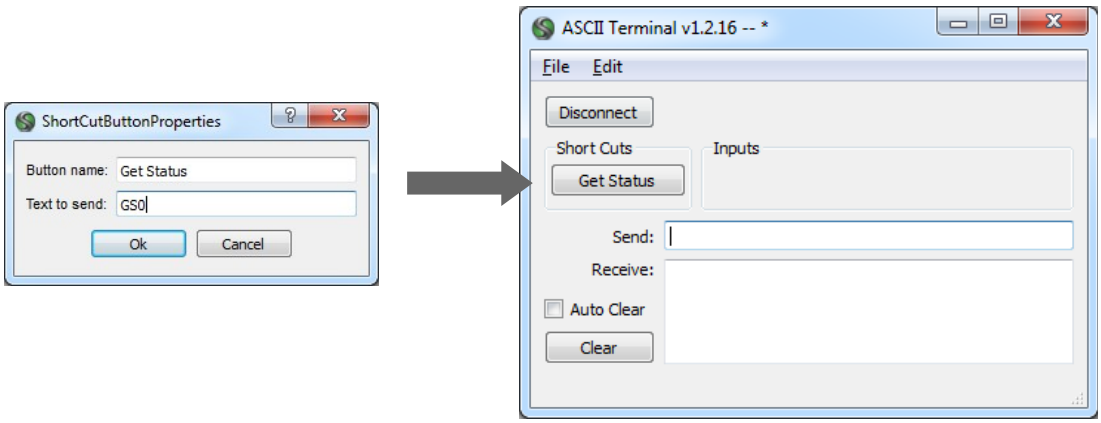
Making Things Easier

Short Cuts

Suppose you want to retrieve the status of a channel of an MCS system. This is probably something you will need often when moving your positioners around. To avoid having to type e.g. `GS0` all the time you may define a short cut.

To create a short cut button right click on the text “Short Cuts” and select “Add Button...”. In the dialog that appears give the button a name and tell it what text you want it to send. Then click Ok.

Now, every time you click the *Get Status* button the command `GS0` is sent to the device. Again leading and trailing characters are automatically added.



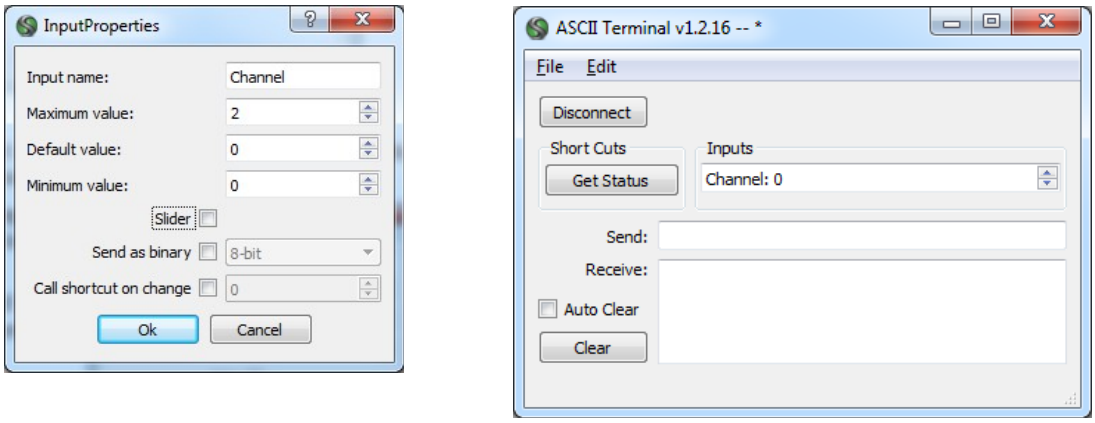
Inputs

Now suppose you are handling more than one channel. Your short cut always retrieves the status information for channel 0. To make this a bit more flexible you may add an input.

To create an input right click on the text “Inputs” and select “Add Input...”. A dialog appears where you can edit the properties of the input. For this example use the settings as seen in the image. Then click Ok.

You can test your new input by typing `GS$0` into the send field and hitting return. The `$0` will be replaced by whatever value your input currently has before the string is sent to the device.

You may update your short cut button to react to the input by right-clicking on it and selecting “Properties...”.



More on Inputs

Inputs are numbered starting from 0. Inserting `$n` into a string will create a reference to the input with the index n. Here are some further examples:

Condition	***String entered***	***String actually sent***
Input 0 has a value of 100.	`SP0,$0`	`SP0,100`
There is no input 5.	`SP$5,100`	`SP,100`
Input 11 has a value of 200.	`MPA0,$11,0`	`MPA0,200,0`
Input 11 has a value of 123, there is no input 110.	`MPA0,$110,0`	`MPA0,,0`
	`MPA0,$(11)0,0`	`MPA0,1230,0`

An input can call a short cut whenever its value changes. Simply check the box in the properties of the input and select the index of the button. Buttons are also numbered starting from 0. Now, an automatic click on the corresponding button is performed each time the value of the input changes.

Configurations

You may save your short cut and input configuration for future sessions by using the file menu. As with the application settings the configuration is stored in an xml file that you may save wherever you want.

You may also manage up to eight quick load slots. The quick load slots can be accessed via “File → Quick Load” or by pressing the corresponding hot key (Ctrl-1 to Ctrl-8). This makes switching between different configurations very fast. To assign a configuration to a quick load slot select “File → Quick Load → Edit Slots...”.

Miscellaneous

Multiple Commands

You may send multiple commands at once to the device by using the following syntax:

`<command1>\012:<command2>`

The tool will add leading and trailing characters around the whole string and send the following to the device:

`:<command1>\012:<command2>\012`

Binary Values

As already seen in the example above you may send binary values in an octal syntax. Any sequence of the form `\nnn` will be transformed into a single character of the octal value given. `\012` (hex `0x0a`) is the line feed character needed to complete a command string.