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»Product: SMT100
»Interface: RS485
(ASCII text
commands)

» Application
Note AN005
SMT100 ASCII Text
Command Guide

english



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Application Note AN005

Introduction

The SMT100 is a soil moisture sensor capable of measuring soil moisture and soil temperature. The SMT100 is available with a RS485 ASCII interface for easy operation with simple text commands.

RS485 ASCII configuration

The SMT100 ASCII uses these serial port settings:

<i>Baudrate:</i>	<i>9600</i>
<i>Parity:</i>	<i>None</i>
<i>Command termination</i>	<i>CR, LF or CR+LF</i>
<i>Response termination</i>	<i>CR+LF</i>
<i>Seperator between command and address</i>	<i>“!” (exclamation mark) or “,” (comma)</i>

RS485 ASCII examples

The following communication examples are explained in detail

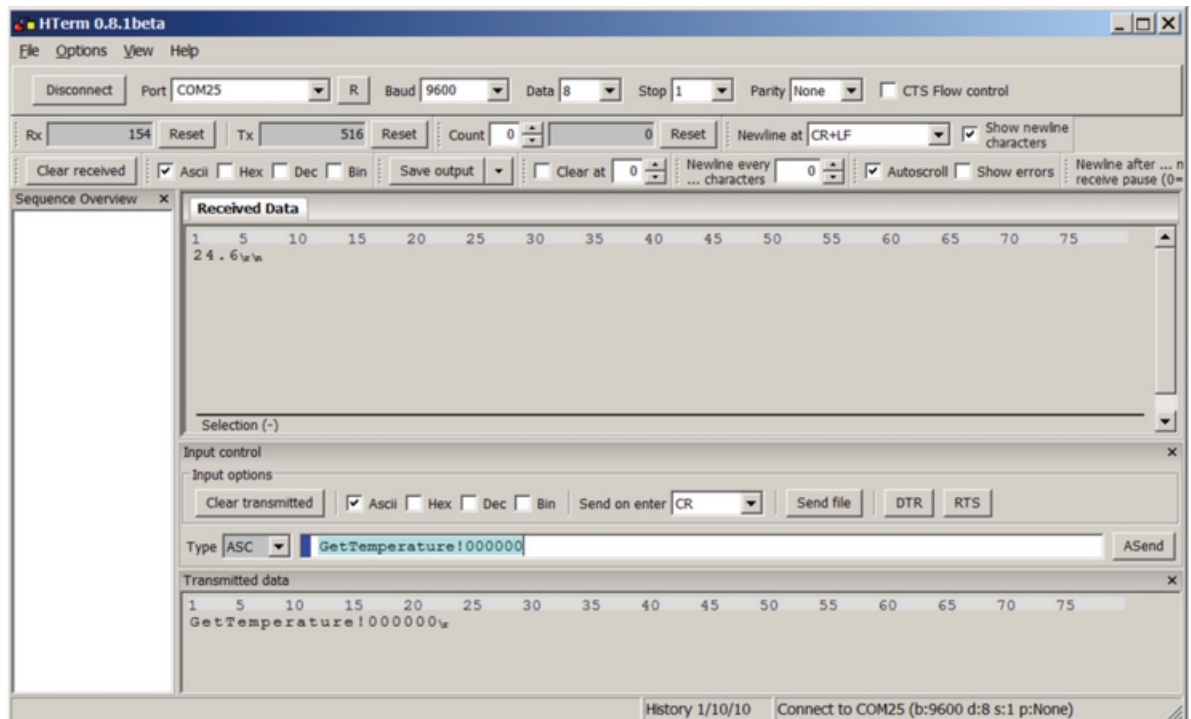
- Read temperature value from SMT100 sensor via broadcast address 000000
- Read address of SMT100 sensor
- Set address of SMT100 sensor
- Read temperature value from SMT100 sensor via an individual address

Software and Hardware

- Terminalprogram HTerm
- TRUEBNER USB to RS485 interface

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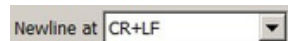
Read temperature value from SMT100 sensor via broadcast address 000000



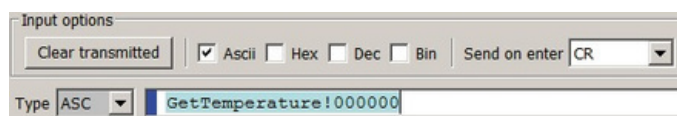
- Choose COM Port (e.g. COM25, check device manager for appropriate COM port), set baudrate to 9600 and press connect button.



- Newline at CR+LF



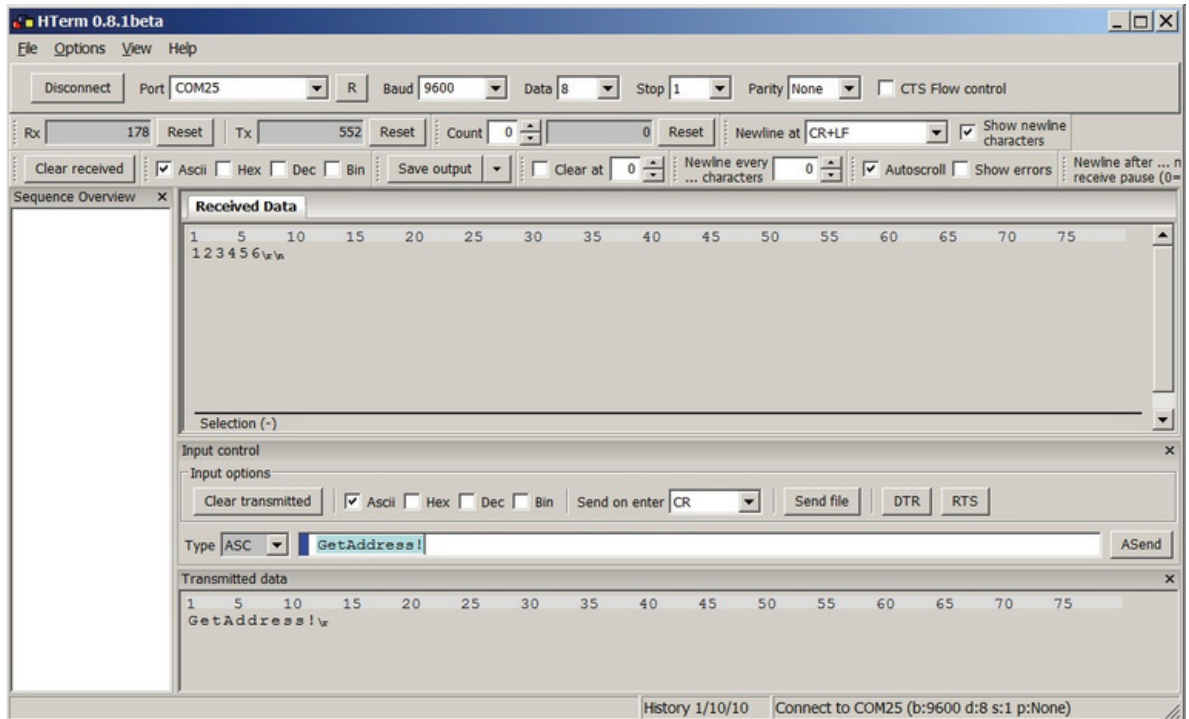
- Send on enter: CR



- Type in command and press enter.
- Important: Connect only 1 sensor to the RS485 interface for this command

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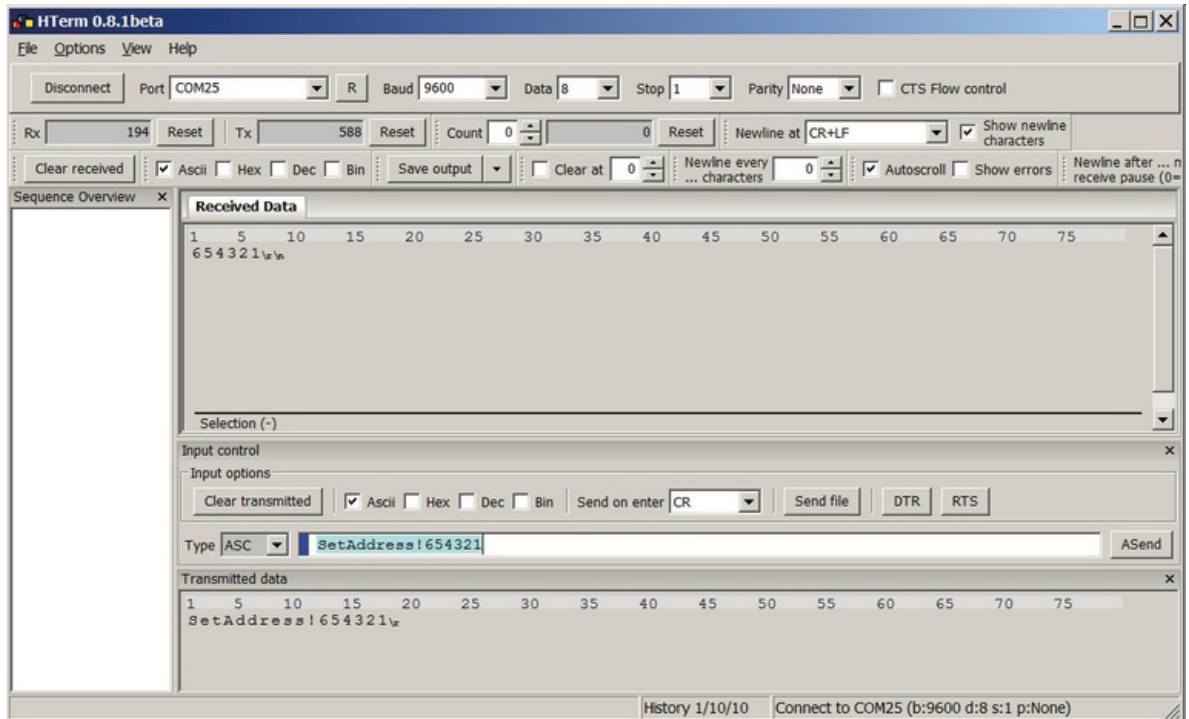
Read address of SMT100 sensor



- Address consists of a maximum of 6 digits
- Important: Connect only 1 sensor to the RS485 interface for this command

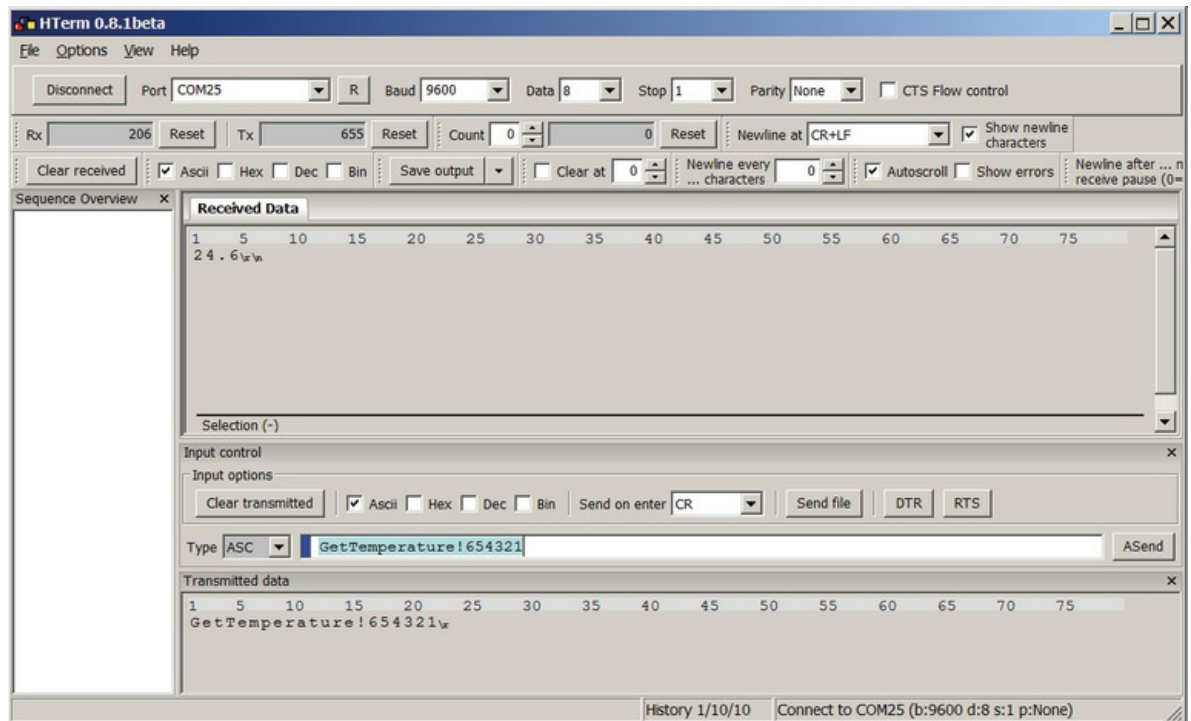
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Set address of SMT100 sensor



- Address consists of a maximum of 6 digits
- Important: Connect only 1 sensor to the RS485 interface for this command

Read temperature value from SMT100 sensor via individual address



- Multiple sensors (each with a different address) can be connected to the RS485 bus
- Other commands are
 - q GetWaterContent!address (volumetric water content in %)
 - q GetCounts!address (raw measurement data as number)
 - q GetPermittivity!address (dielectric coefficient)
 - q GetFirmwareVersion!address (firmware version number)