



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

## » Application Note AN005

### SMT100 ASCII Text Command Guide

english



[www.driesen-kern.de](http://www.driesen-kern.de)

### 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

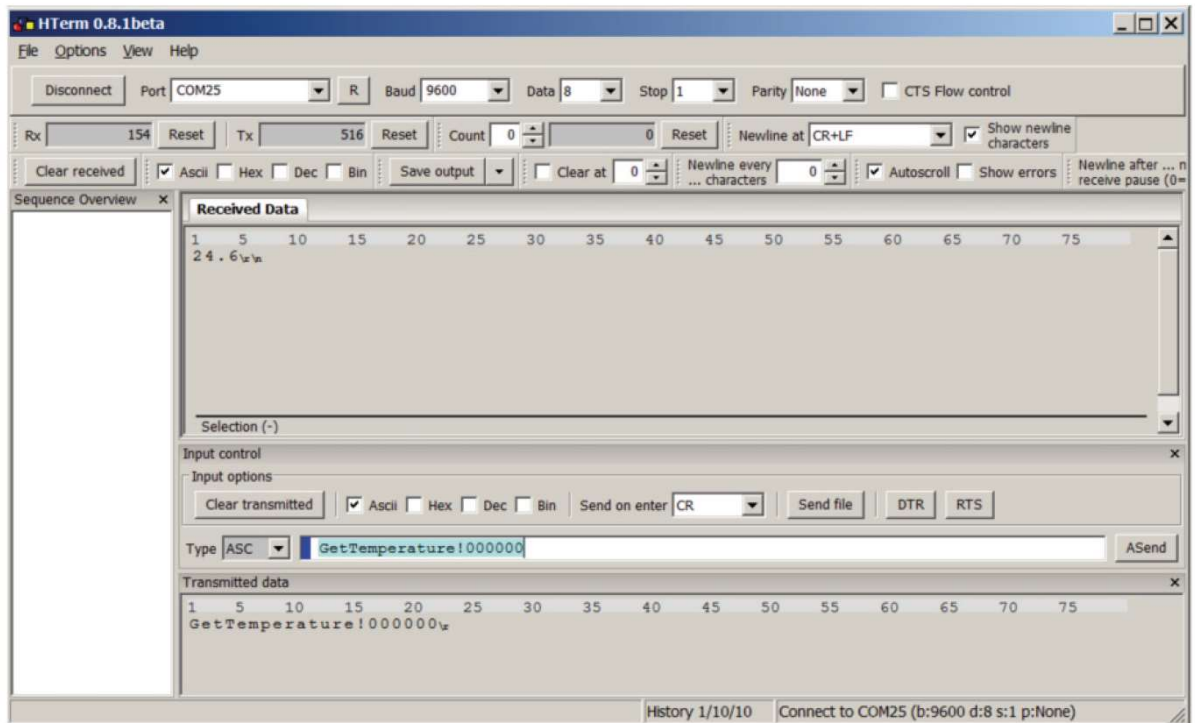
The following communication examples are explained in detail

- 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

## Read temperature value from SMT100 sensor via broadcast address 000000



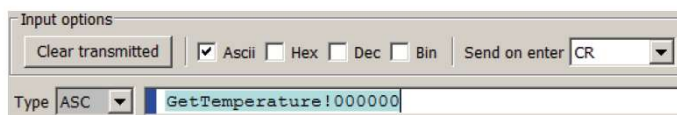
- Choose COM Port (e.g. COM25, check device manager for appropriate COM port), set baudrate to 9600 and press connect button.



- Newline at CR+LF

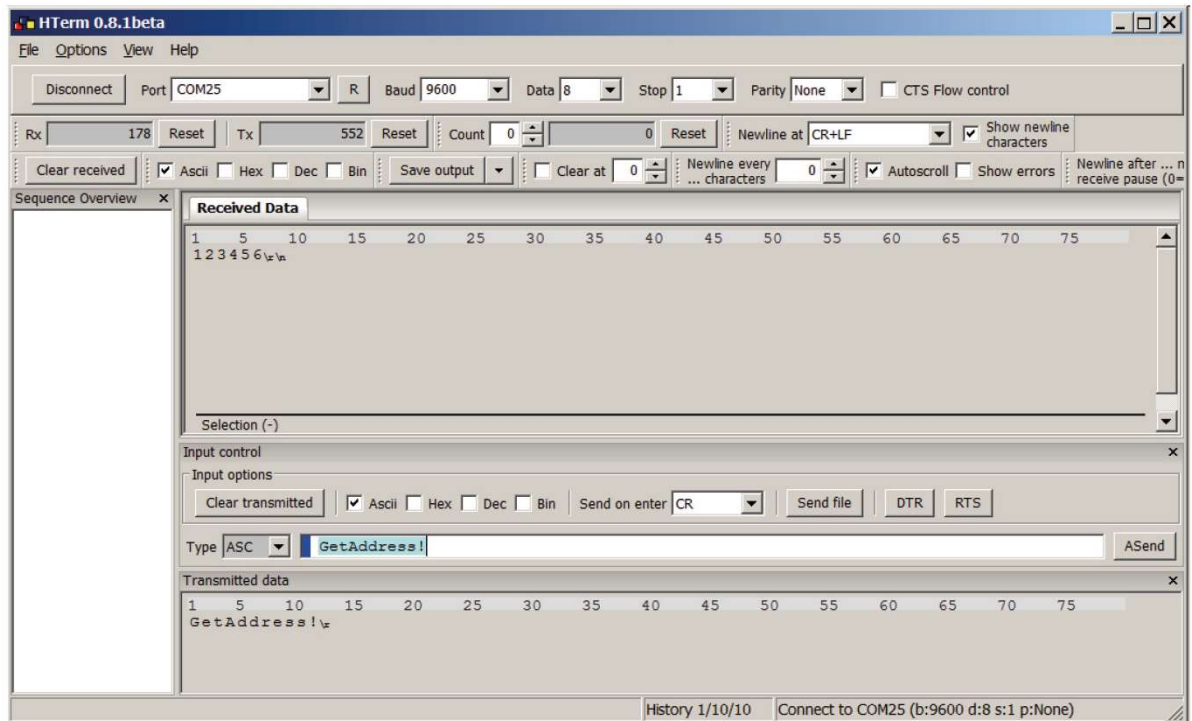


- Send on enter: CR



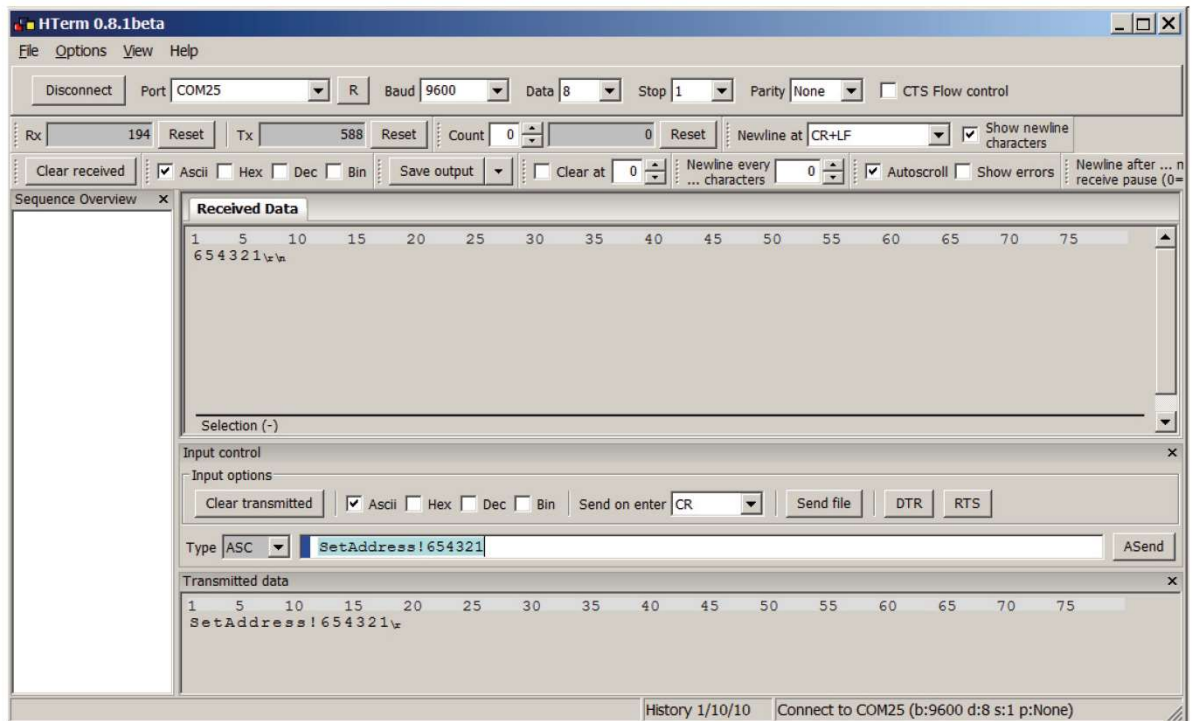
- Type in command and press enter.
- **Important: Connect only 1 sensor to the RS485 interface for this command**

## Read address of SMT100 sensor



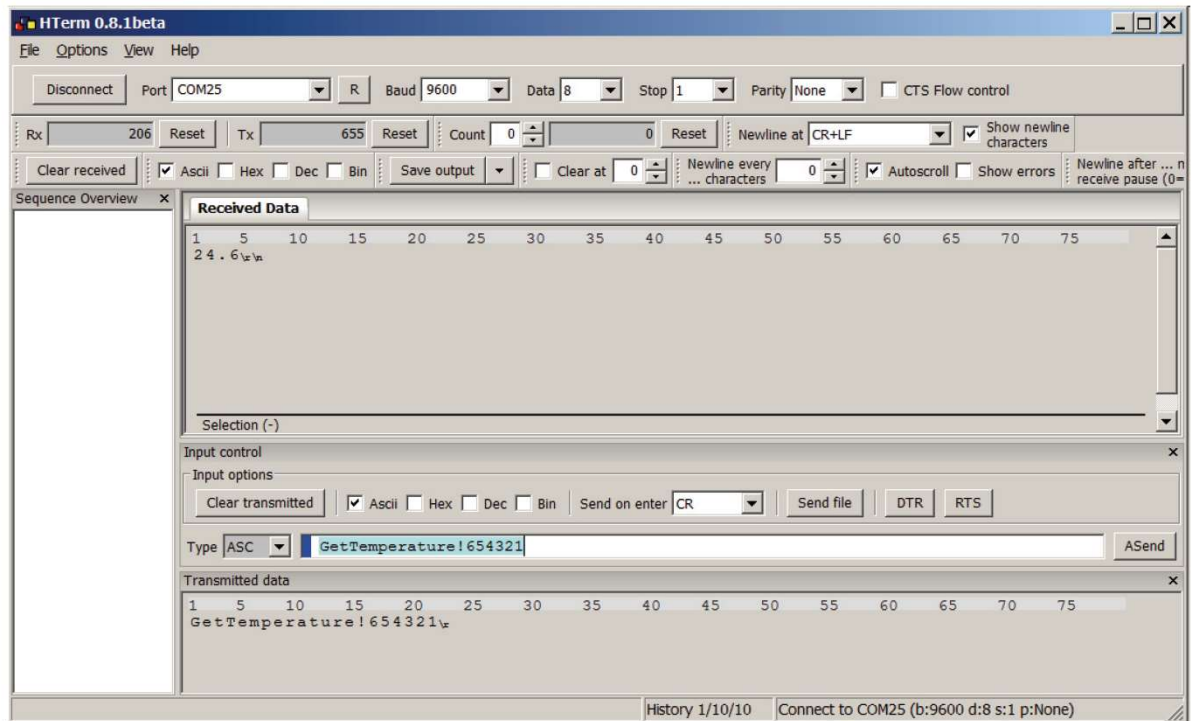
- Address consists of a maximum of 6 digits
- **Important: Connect only 1 sensor to the RS485 interface for this command**

## 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
  - ☐ GetWaterContent!address (volumetric water content in %)
  - ☐ GetCounts!address (raw measurement data as number)
  - ☐ GetPermittivity!address (dielectric coefficient)
  - ☐ GetFirmwareVersion!address (firmware version number)