truebner

true excellence in instrumentation

» Product: SMT100

» Interface: RS485

(ASCII text commands)

» Application Note AN005

SMT100 ASCII Text Command Guide

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english

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:

Baudrate:	*9600*
Parity:	*None*
Command termination	*CR, LF or CR+LF*
Response termination	CR+LF
Seperator between command and address	"!" (exclamation mark) or "," (comma)

RS485 ASCII examples

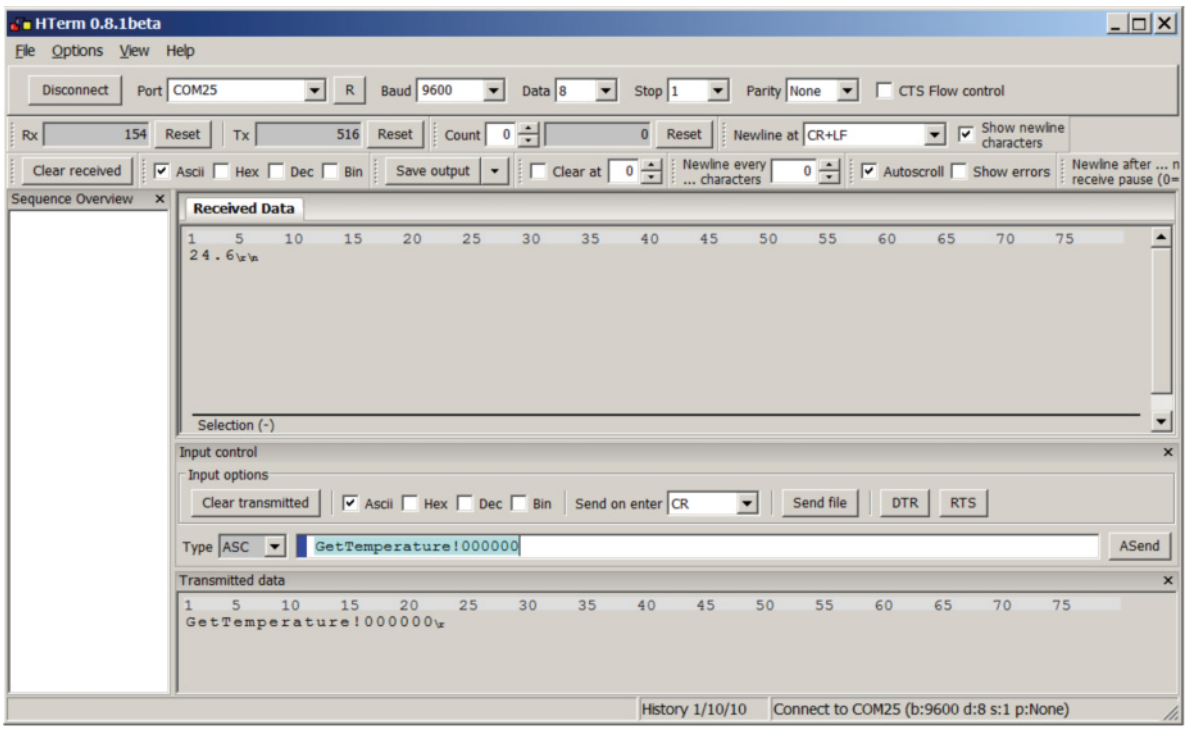
The following communication examples are explained in detail

- 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

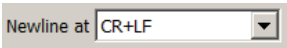
- Terminalprogram HTerm
- TRUEBNER USB to RS485 interface

Read temperature value from SMT100 sensor via broadcast address 000000

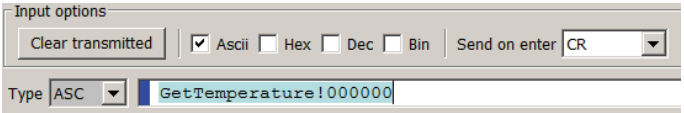


- Choose COM Port (e.g. COM25, check device manager for appropriate COM port), set baudrate to 9600 and press connect button.

- Newline at CR+LF

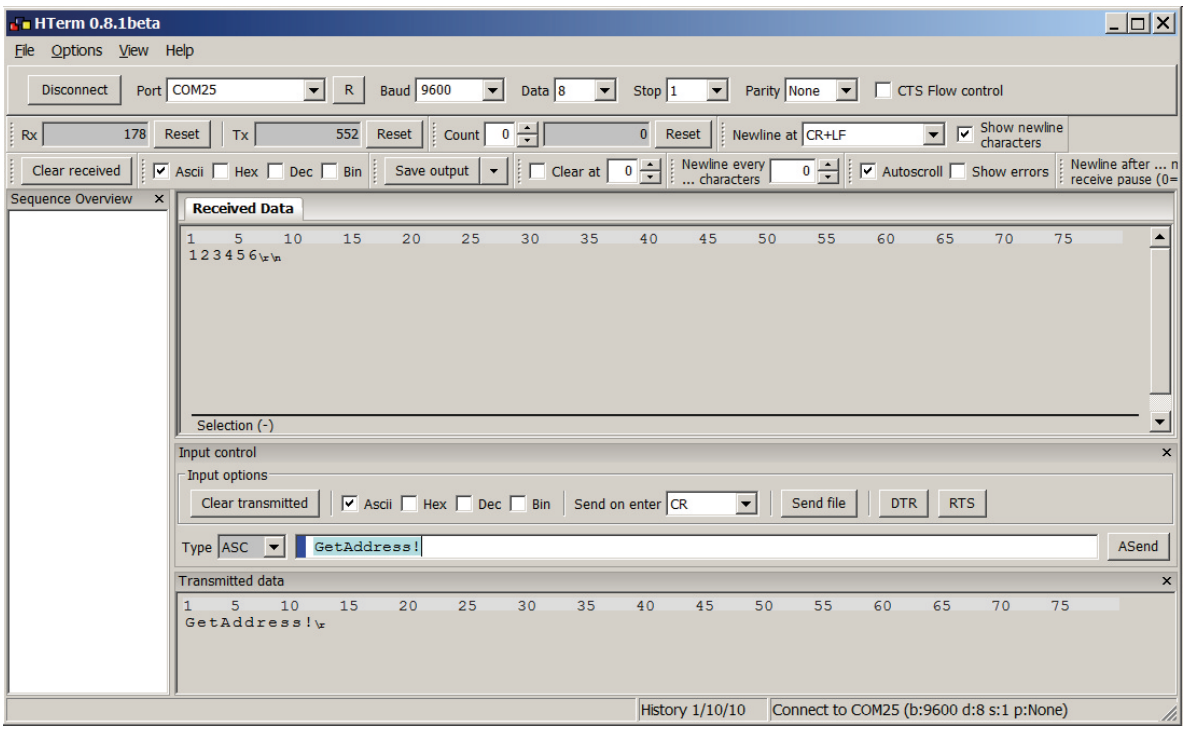


- Send on enter: CR



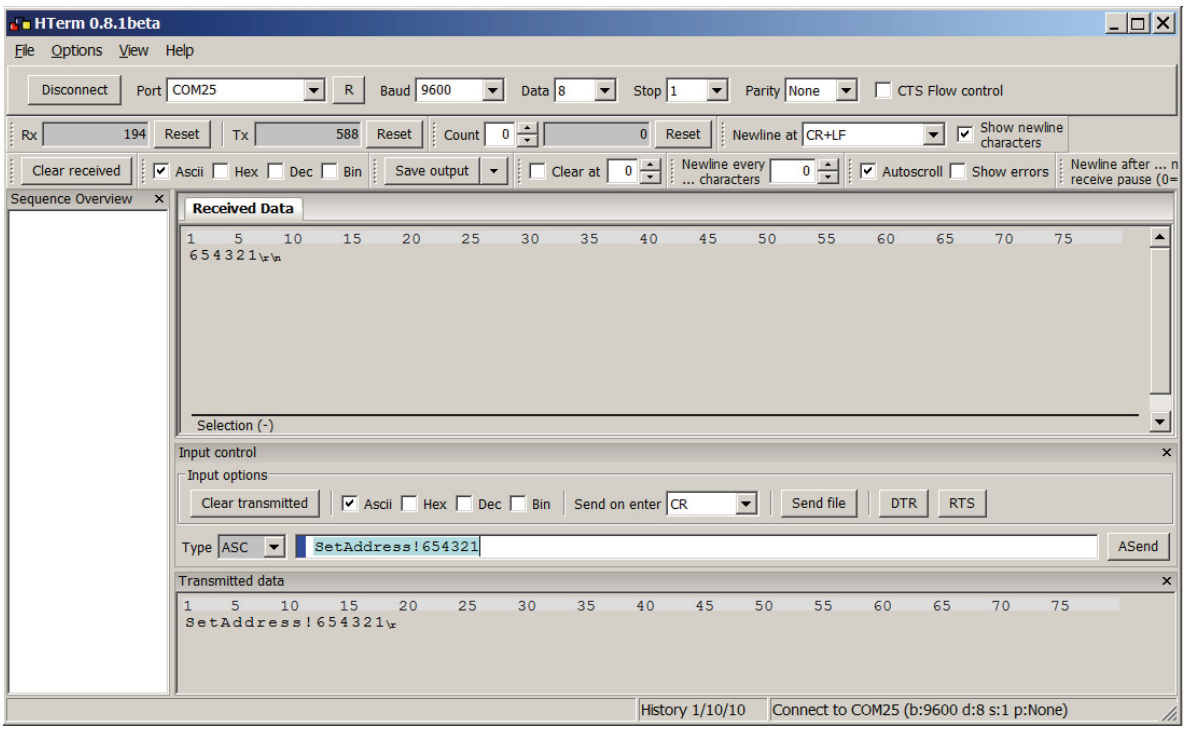
- Type in command and press enter.
- **Important: Connect only 1 sensor to the RS485 interface for this command**

Read address of SMT100 sensor



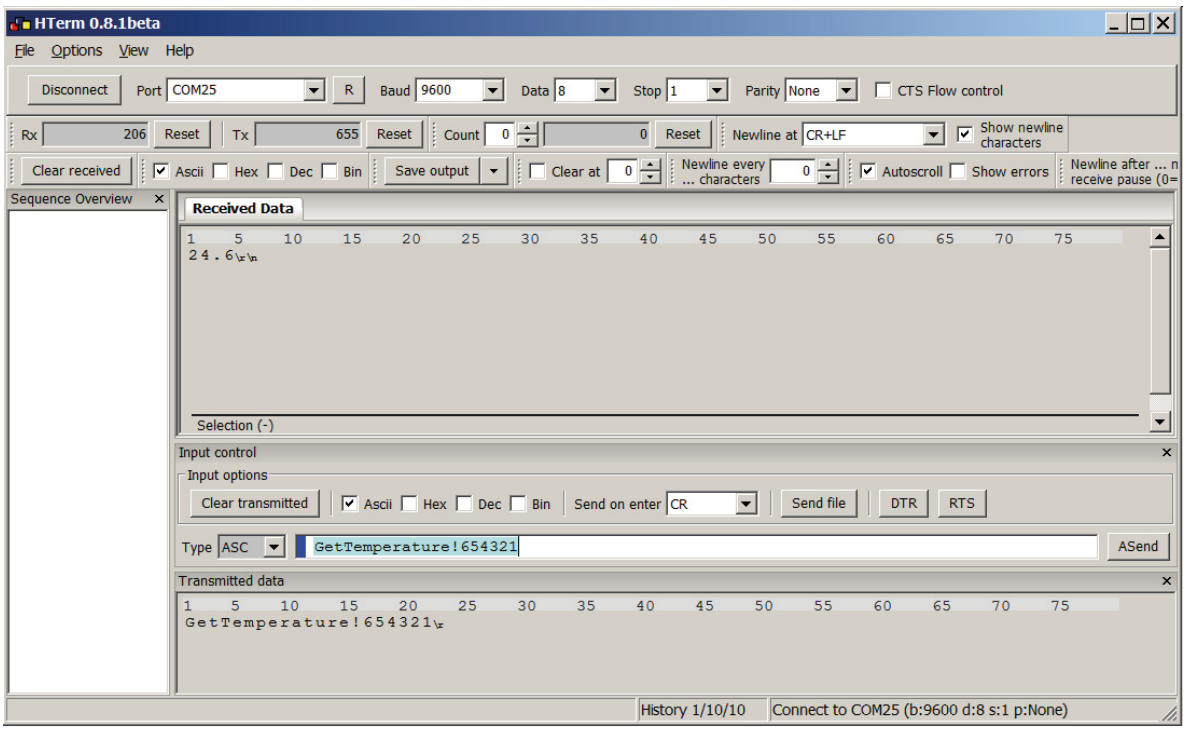
- Address consists of a maximum of 6 digits
- **Important: Connect only 1 sensor to the RS485 interface for this command**

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)