

TRP-C39S

User's Manual

Fiber to RS-232/422/485 Isolated Converter, SC Single Mode



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1. Introduction

The TRP-C39S fiber converter allows RS-232/422/485 signals to be bi-directionally converted to fiber optic and extended the line signal distance up to 40KM over single mode. By using fiber optic transmission technology TRP-C39S secures a stable and error free data transmission over the industrial environments. The high bandwidth fiber connections solve problems with electrical noise and different ground potentials over long transmission. TRP-C39S support auto configuration in data format, baud rate and RS-485 data direction flow control, it also provides with 3000V DC isolation and internal surge protection. The industry DIN rail and panel mounting design enable user a fast and professional installation.

1-1.Features

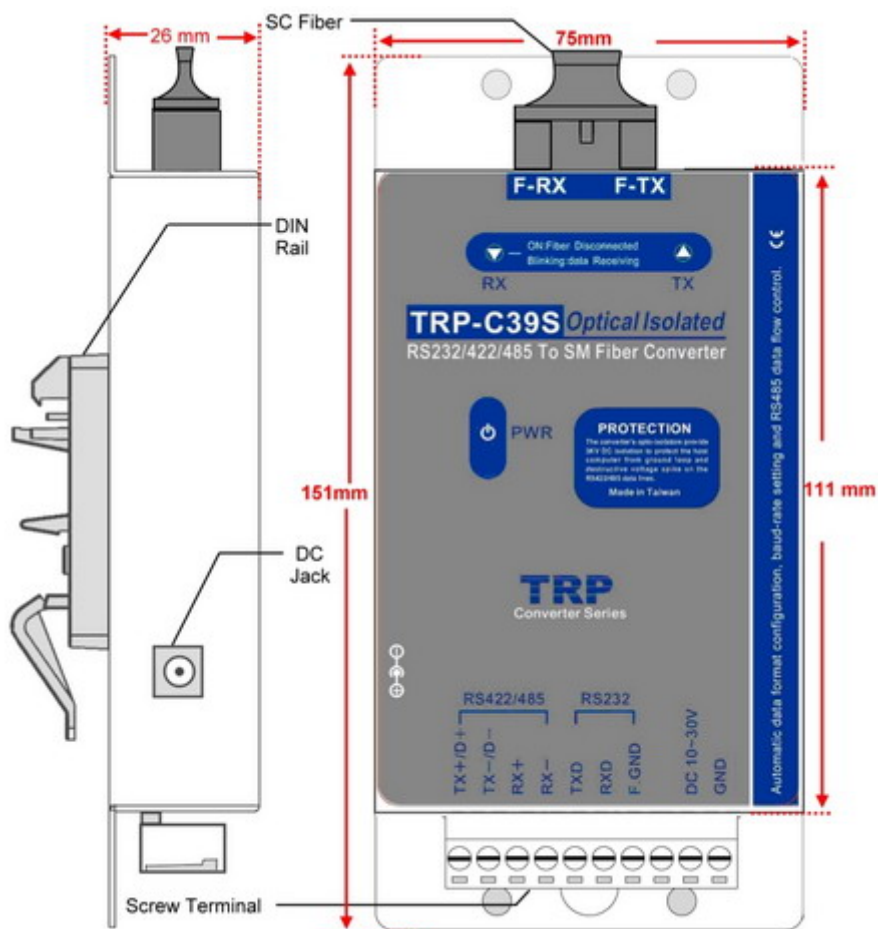
- Wide input range DC power supply.
- SC single mode fiber port.
- Auto direction flow control on RS-485.
- Auto RS-232/422/485 signals switching.
- Auto data format detecting.
- Auto baud rate switching from 300bps to 115.2Kbps.
- Support 3000V DC isolation protection.
- Support surge protection on RS-422/485 data lines.
- Power/TX/RX mode LED indicator.
- Fiber transmission distance up to 40KM.
- DIN rail or panel mount support.

1-2.Specifications

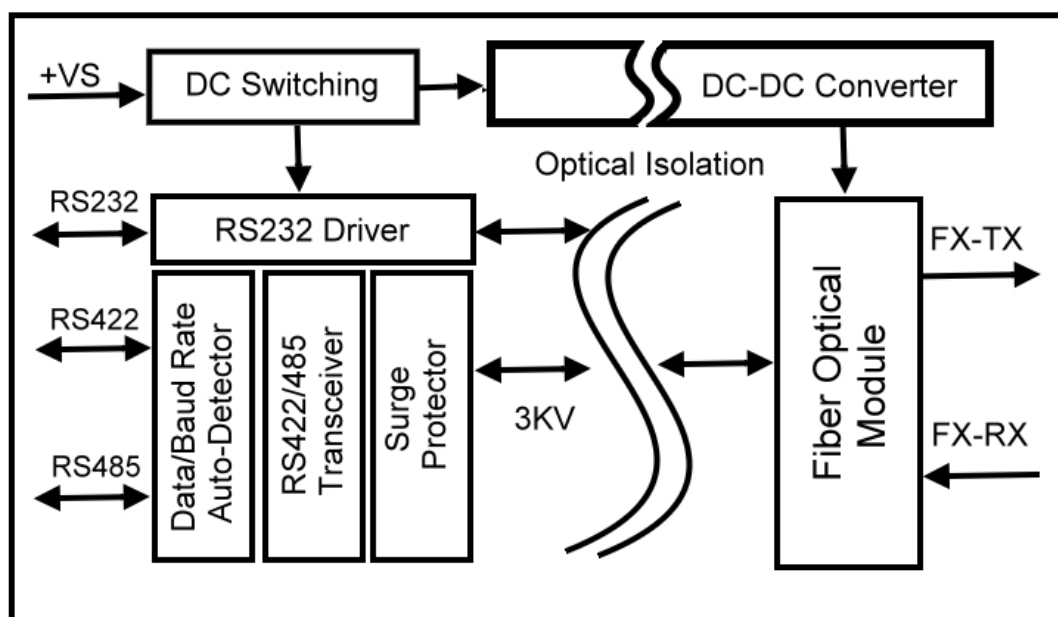
- Power Input Voltage: DC +10V to +30V.
- Interface: RS-232/422/485 auto switching.
- RS-232: 3 full-duplex (TXD, RXD, GND).
- RS-422: Differential 4 full-duplex wires.
- RS-485: Differential 2 half-duplex wires.
- Cable: Fiber cable (9/125um).
- Wavelength: 1310(FPLD) nM.
- Distance: Fiber up to 40KM and RS422/485 up to 4000ft. (1200M).
- RS-422/485 line protection: Against surge, short circuit, voltage peak.
- Connection type: Screw terminal for maximum AWG #12~30 wires.
- Power supply: Screw terminal, or external DC adapter.
- Power consumption: 1.6W.
- Isolation Voltage: 3000V DC.
- Operating environment: 0 to 60C.
- Storage temperature: -20 to 70C.
- Humidity: 10-90% Non-condensing.
- Dimension: 151 mm X 75mm X 2 6mm.
- Weight: 388g.

2. TRP-C39 Hardware Description.

2-1. TRP-C39S panel layout



2-2. Block Diagram



2-3. LED Indicator

PWR LED: System is ready.

RX LED: Data receiving.

TX LED: Data transmitting.

3. Install TRP-C39S

3-1. Power connection

The TRP-C39S is equipped with a 2-pin terminal block and power jack. Power can be supplied from terminal block or external power adapter and supports wide input range from + 10~30V. When power is correctly supplied the PWR LED will lighting and indicates the system is up. It is highly recommended use the power jack specification 5.5*2.1*12mm if the power supply is from external DC plug.

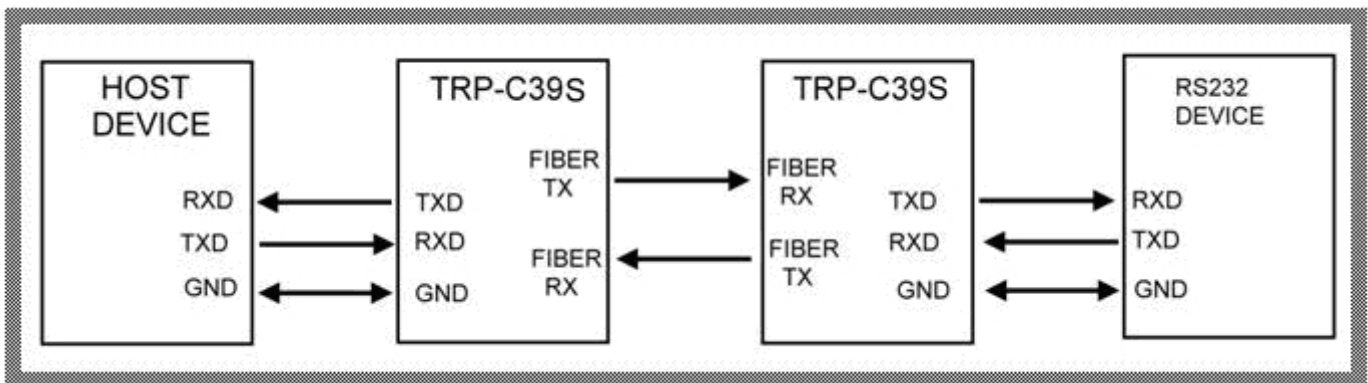
Warning: User can only choose one of following 2 power sources.

1. External DC adapter. 2. Screw terminal DC input

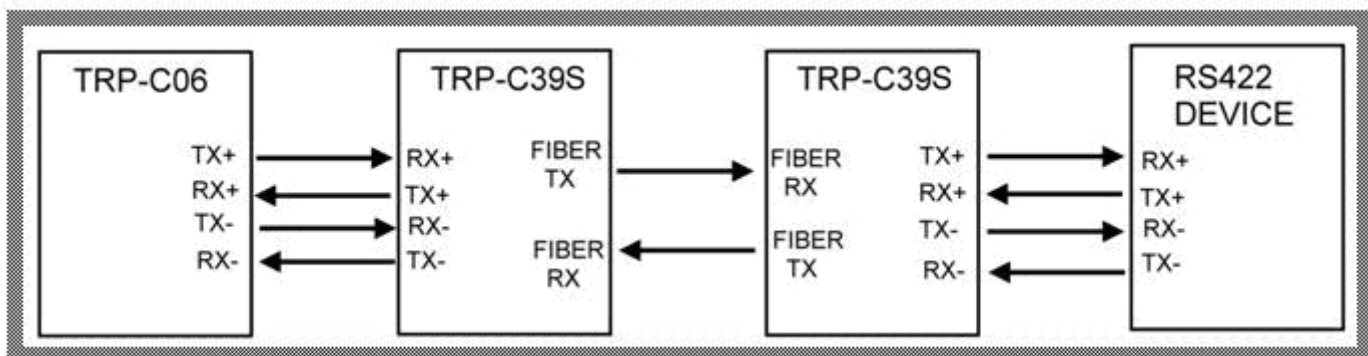
Do not use both power input simultaneously.

3-2. RS-232/422/485 serial devices connection

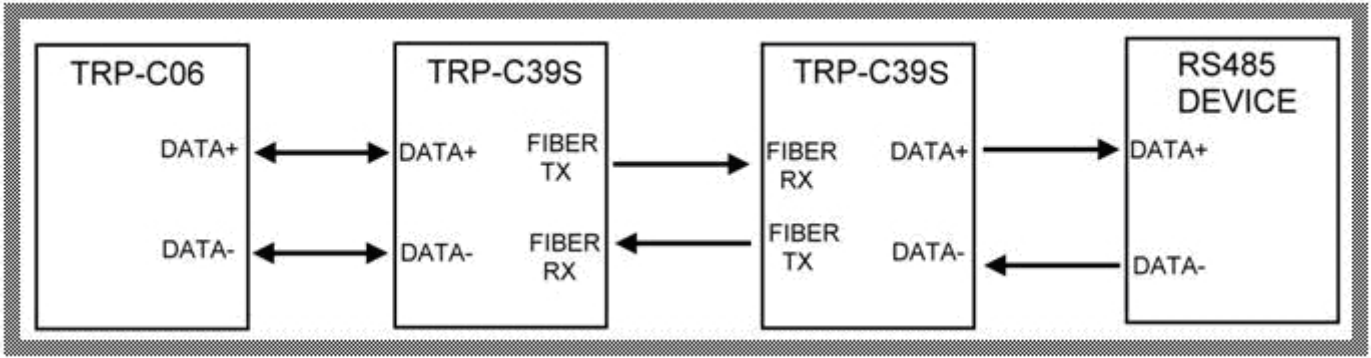
3-2-1.RS-232 wiring connection



3-2-2.RS-422 wiring connection



3-2-3.RS-485 wiring connection



4. How to test TRP-C39S

Trycom Technology Co.,Ltd offers demo and test utility, these utilities may help user to demo and test TRP-C39S fast and easily. User may download the utilities from Trycom web site www.trycom.com.tw. The testing utility includes.

RS-422 test utility:

Test422.exe for DOS.

DEMO.exe for Windows.

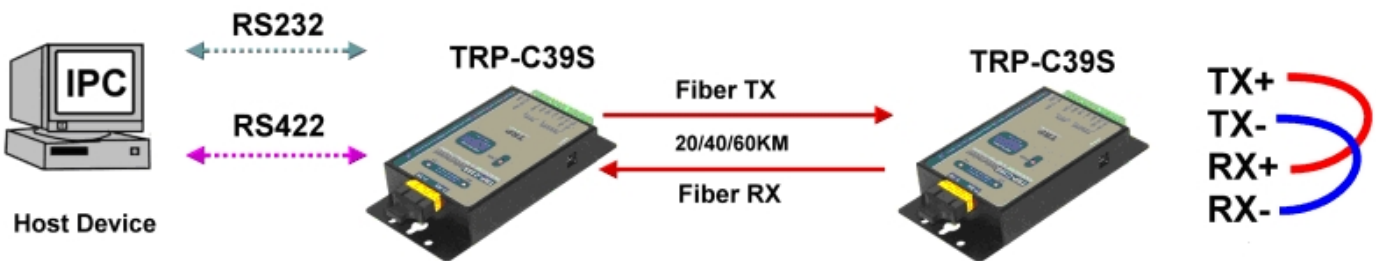
RS-485 utility:

Test485.exe for DOS.

TRPCOM for Windows.

4-1. RS-422 loop back Test

Refer to wire connection as below.



STEP1:Run the “DEMO.EXE” utility (See the Figure 1).

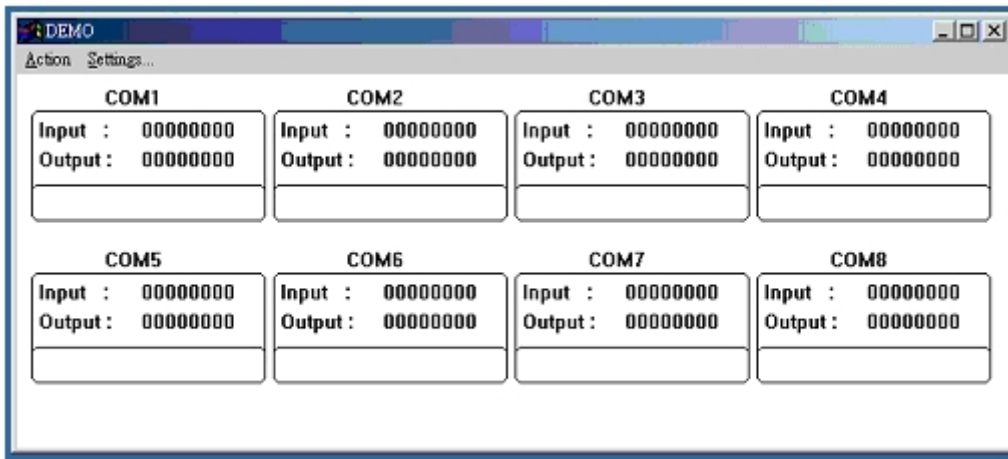


Fig.1

STEP2: Click the “Setting” to set the RS-422 loop counter (See the Figure 2); the demo setting screen will shown as Fig.2.

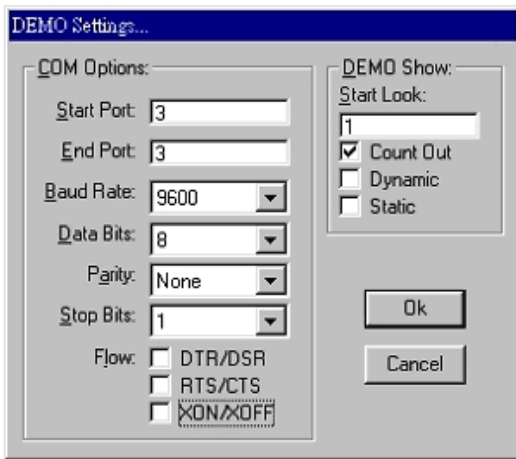
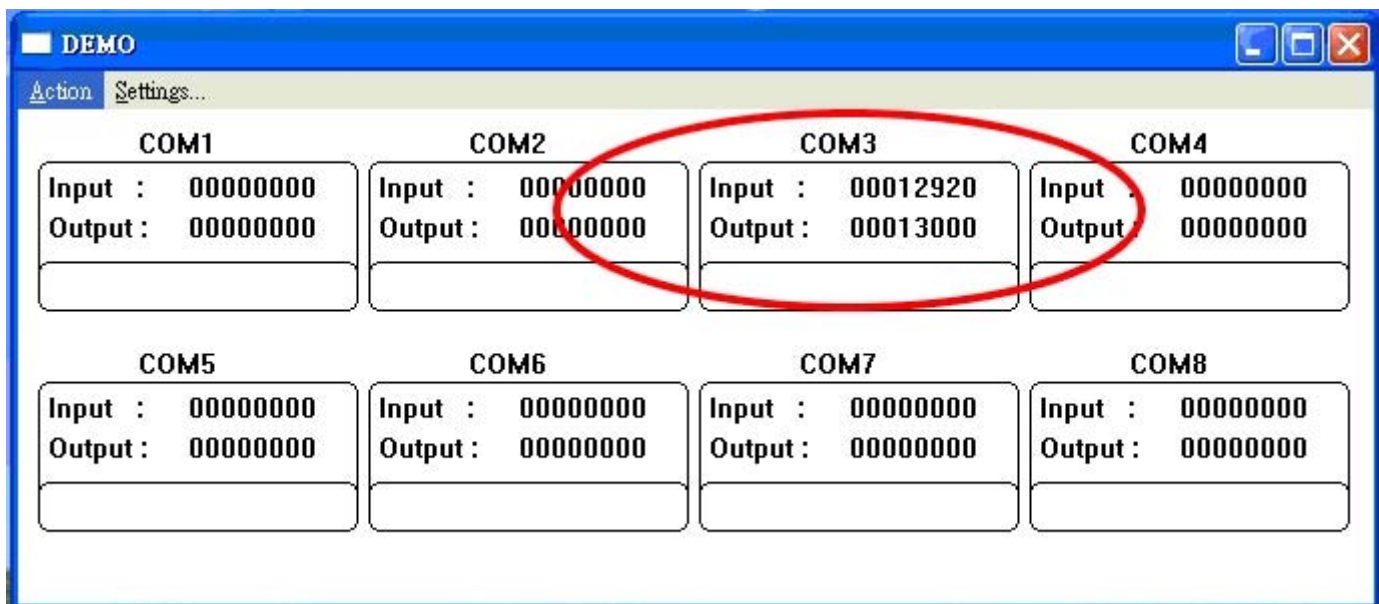


Fig.2

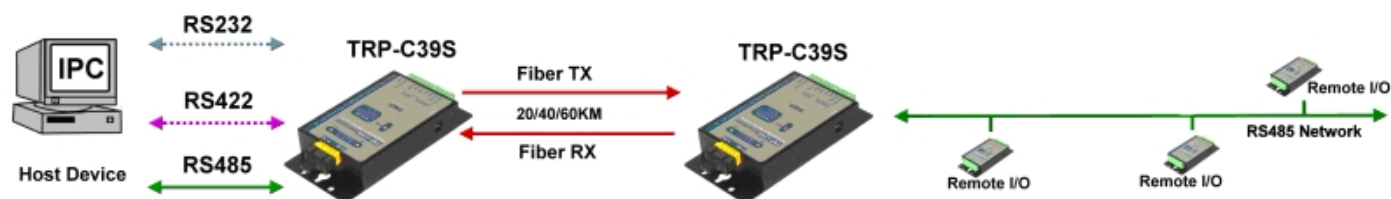
*Please note: “COM3” is an example of COM port number; the real COM number is assigned by your PC after the installation.

STEP3: Click the “OK” the utility will show the input and output status.



4-2. RS-485 test

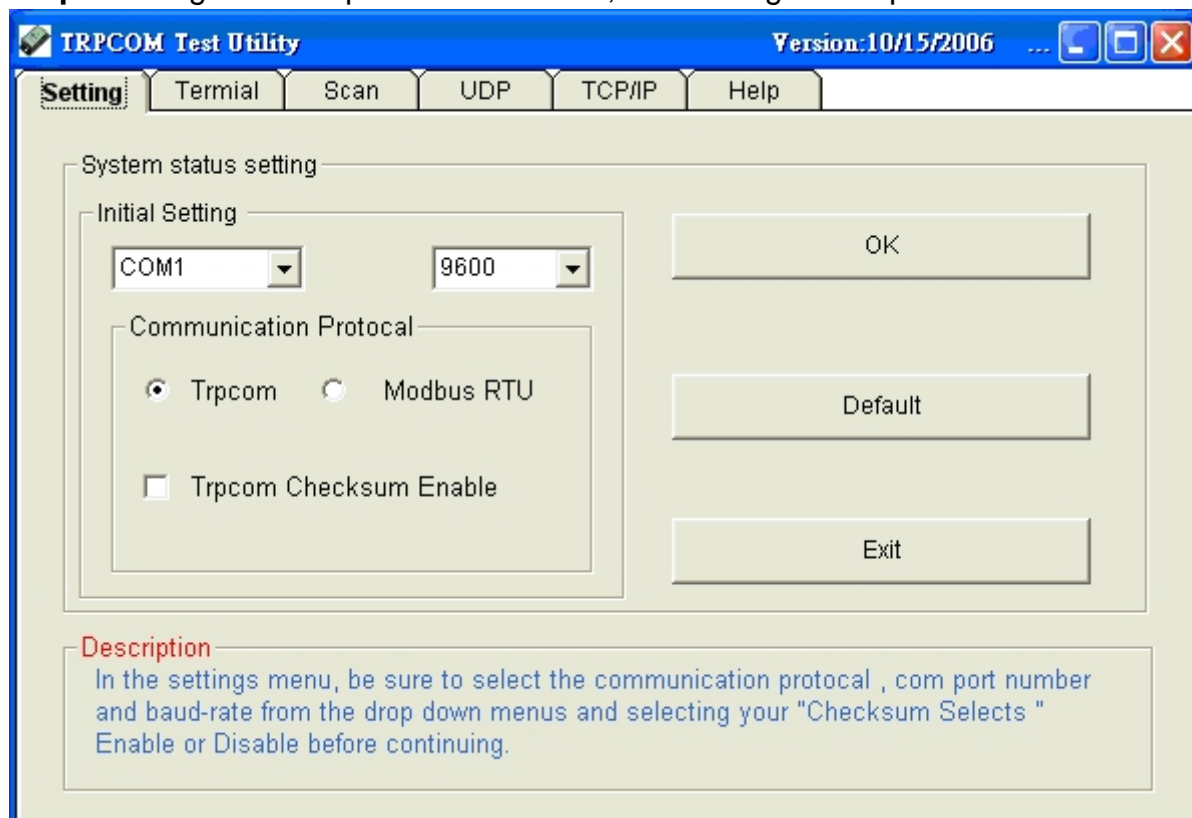
Refer to 4-2-3 for RS-485 wire connection. User may also directly link TRP-C39S to Trycom Remote IO modules, the wiring connection is as below.



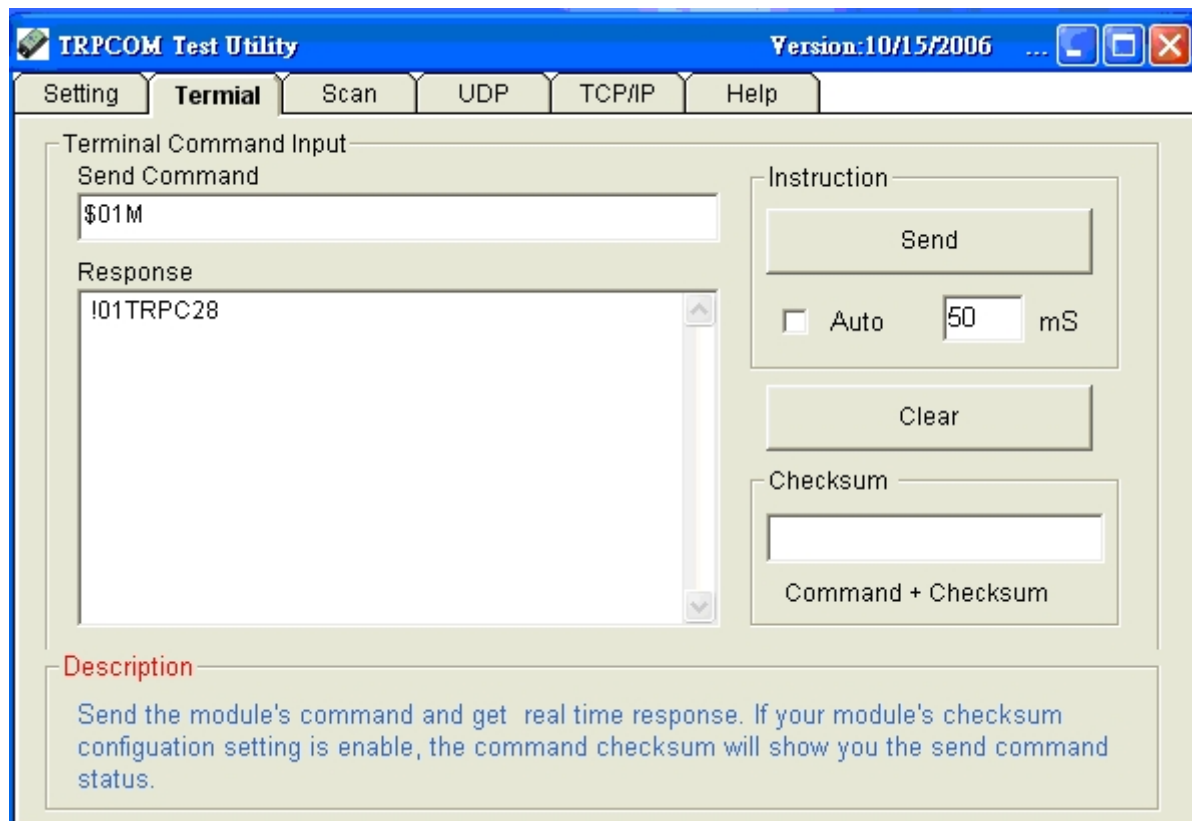
Step1. Install TRPCOM utility.

TRPCOM is a test utility which may help user to test TRP-C39S with RS-485 device easily. Double click "Setup.exe", the install Wizard will guide you to complete the installation.

Step2. Configure COM port and baud rate, after configuration press "OK" to the next screen.



Step3.Send command "\$01M" and press "Send"



Step4. Data response received

Test complete.