RS232/RS485 Converter User Guide

. Product introduction

 Bi-direction connectors conver of HEXIN-485A converter is mainly used between main controllers. End to end and end to ends remote teleconnubnication internet is constructed between the main controller and signle panel machine to realise multi-machine recall telecommunication,which is mainly used in industrial automaticak control system, one card universal system,access controller sysrtem, car parking system, Self-served banking system,bus charging system, restraunt system, personnel attendance system and road charging system.

HEXIN-485Aconverter can transfer the TXD and RXD signals of RS-232serial port parallel half duplex RS-485 signal. No need to get through the power, it can get the electricity from the 3 pin of RS-232 interface and at the same time, after 7 pin's requirement of sending RTS, 4pin data terminal prepares DTR to help supplying HEXIN-485A. Automatically process control make you need need to reset and make a easy applicaton of the hardware and software installation.
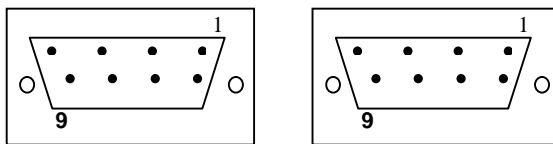
Specification

3、 Serial port feature：Concurrently compatible with RS-232C，RS-485 standard of EIA/TIA.

4、 Electric interface： DB9 hole interface of RS-232 end , DB9 pin connector of RS-485 end, compatible with post (5 connection)

5、 Work methods：asynchronous half duplex

6、 Transmmision media：common wire, doule wire or UTP or Shielding Line

7、 Transmission speed:300~115-21BDS。

8、 Transmission distance：5 meters（RS-232 end）1.200 meters(RS-485end)。

9、 Telecommunication agreement： transparent.

1、 Work environment: -10 to 85 , relative humidity: 5% to 95%。

2、 Signals：RS-232：TXD、RXD、RTS、CTS、DTR、DSR、DCD、CND；

RS-485：Date+、Date-。GND

Connection wire and signals：

RS232 end（DB9Female）   RS485（DB9M Male）

HEIN-III converter connect RS232 interface with DB9 female interface, connects RS485 with DB9 male interface at the other end..

RS232 pin definition

DB9Female	1	2	3	4	5	6	7	8
	DCD	RXD	TXD	DTR	GND	DSR	RTS	CTS

RS485 pin definition

DB9Male	1	2	3	4	5	6
	Data	Data			GND	+12V

There are 2 kinds of power supply： RS-232 directly supply to 3 pinm and 7（RTS）,4（DTR）pin aid to supply to HEXIIN-III.; when RS232 can't work normally, DB9M6（+12V）and 5 pin of GND RS485 can supply.

Installation and Usage

1. Installation：

Prepare 2 pcs UTP before installing HEXIN-485A products；

Close equipment serial port(close the machine);

DCE means of RS-232 interface of HEXIN-485A converter Can direclty insert into DB9M serial port of DTE equipment(e.g. COM port of computer) and get the electricity from TXD、DTR、RTS signals and pls kindly note that the signal frequency should be higher than +5V，if the quipment uses the DCE means，it must be connected as below:

Connection diagram of RS485 euipment and HEXIN-485A:

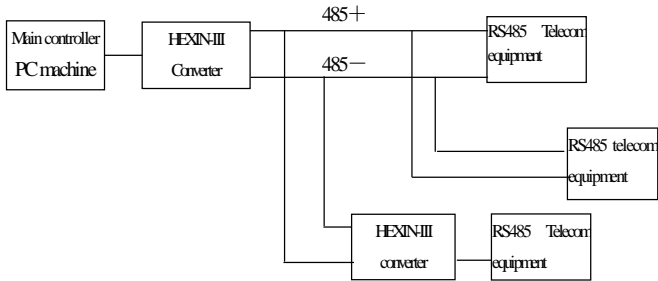| DB9M pin of HEXIN-485A converter	HEXIN-485A 5 connection end	RS485 equipment
Pin1 Data$^-$	Data$^-$	Data$^-$
Pin2 Data$^+$	Data$+$	Data$+$
Pin3	GND	
Pin4	GND	
Pin5GND	$+12V$	GND
Pin6+12V		

2. Usage:

1,RS232 equipment and RS485 equipment telecommunication means are mainly used in the equipment with control equipment

of RS232 interface, controlled equipment of RS485 interface. The two end can't directly connect for the different electric characteristic and HEXIN-485A converter can be used to transparently transfer the RS232 signals to RS485 signals

3.   RS485 Network Application

This means can be adopted when one RS232 mainboard will control more than 32 RS485 subsidy equipment，and the compatible resistance should be added for the prevention of the signal reflection and disturbance. 120 、1/4 watts

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┌──────────────┐    ┌──────────────┐      485+      ┌──────────────┐
│Main controller│──│  HEXIN-III   │───────────────│RS485  Telecom│
│  PC machine  │    │  Converter   │      485-     │  equipment   │
└──────────────┘    └──────────────┘               └──────────────┘

                                                   ┌──────────────┐
                                                   │RS485 telecom │
                                                   │  equipment   │
                                                   └──────────────┘

                    ┌──────────────┐ ┌──────────────┐
                    │  HEXIN-III   │ │RS485  Telecom│
                    │  converter   │ │  equipment   │
                    └──────────────┘ └──────────────┘
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There are 2 main connection methods:

Two HEXIN-485A conveters connect:

HEXIN-485A·······························HEXIN-485A

Data（＋）····························Data（＋）

Data（－）····························Data（－）

GND·····································GND

GND·····································GND

HEXIN-485A connects with RS-485 equipment

HEXIN-485A······························RS485 equipment

Data（＋）····························T+/R+or485+

Data（－）····························T-/Ror-485-

Ⅴ **Problem analysis：**

1. Data communication unsuccessful；

a. To check   RS232 interface wether to be correct.

b. To check   RS485 interface wether to be correct；

c. To check wether RS232 signal frequency（TXD、DTR、RTS
   lower than＋5V，or it is, it can get through power from 6th pin of
DB9M.

2. Data missing or Unrecognizable code

To check wether the speed and format of both ends of data
communication equipment Consistency