

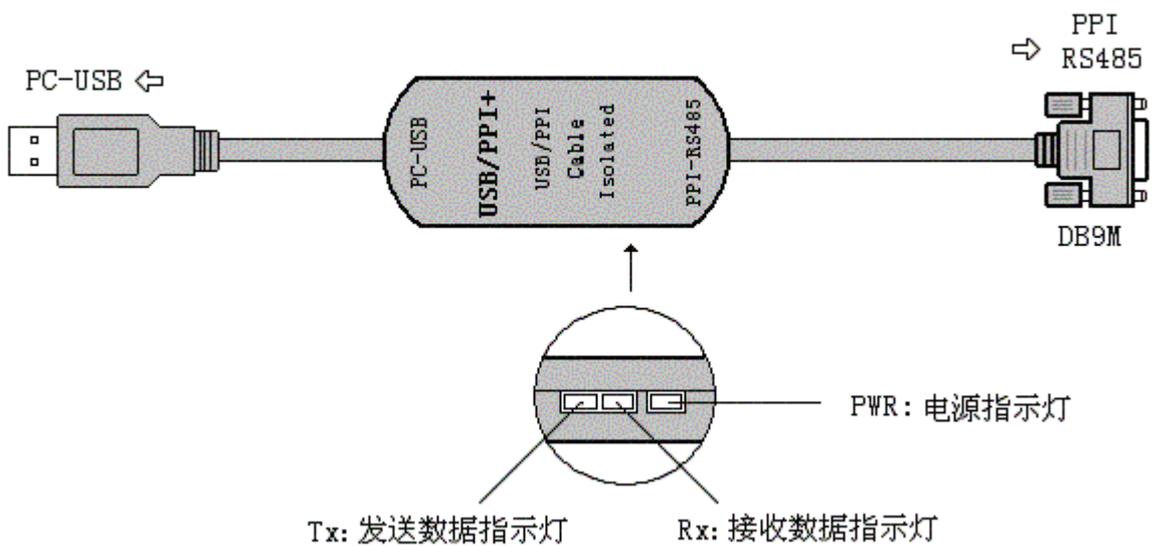
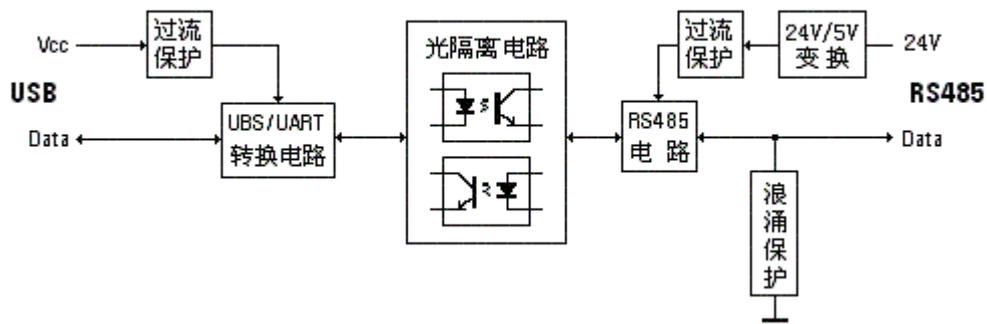


## **User's Guide for USB/PPI+ Programming Cable**

### **Summary:**

USB/PPI+ is the programming cable in which USB interface provided the serial connection, RS485 signal conversion and PPI protocol conversion. Under the control of computer-driven driver, the programming cable makes it possible for the computer's USB interface to simulate the traditional serial (known as COM interface), thus various existing programming software such as communications software, monitoring software and other applications can be normally used. The working power supply of this cable is directly from the USB port and the programming port of the PLC. The two-color LED on the converter box indicates data's transceiving status.

### **Outline configuration:**



signals definition of the RS485-Block (DB9M) of the USB/PPI+

pins	signal	Description
3	RxD/TxD+	Data Line B (RS485 signal positive)
8	RxD/TxD-	Data Line A (RS485 signal negative)
7	P24V	24V power positive
2	M24V	24V power negative(RS485 logic ground)

### **Features and technological index:**

- Support USB/PPI+ operating system: Windows2000/XP (WinNT4/95/98/Me/DOS not included )
- Support USB/PPI+ programming software version: STEP7 Micro / WIN V3.2 and above.
- Fully compatible with USB V1.1 norms and USB CDC V1.1
- USB bus powered and PLC programming port 24 V power supply
- Optical isolation voltage: 1000 VDC ((up to 3000 VDC, it should be declared when making an order)
- Baud rate: 300 bps ~ 1Mbps automatically adapt to the standard baud rate
- Support UART data format: data bits: 7-8; stop bit: 1, 2; check-bit: odd / even / no parity
- Support long-distance communications, the largest communications is two kilometers (9600 bps)
- Each PC only supports one USB cable programming
- Working temperature: -20 ~ +75 °C
- Cable length: 3m; Color: black

### **Usage:**

USB device drivers should be installed before using USB/MPI+ programming cable, which are available on the CD-ROM sold together with the cable. And for the specific installation steps, please refer to the instruction files on the CD-ROM drivers, and details are not necessarily listed here.

After completing Driver installation, the corresponding COM port for the USB/PPI programming cable will be displayed in the "Device Manager" of Window. The step next is just to choose this COM port in the programming software and other application software and keep other communication parameters as in the Default settings. And the following steps are exactly the same as in the traditional programming cables with RS232 interfaces. Here are requested to indicate that "USB" option in the local communications interface setting which the software is not support to the programming cable.

If the COM port in the programming software with "\*" symbols, such as "\* COM3", it's shown that the COM port have faults. Quit the software and plug a USB plug or re-install the USB driver.

This cable do not support the 187.5 Kbps baud rate as the same with the Siemens PC / PPI programming cable which with the RS232 interfaces.

Please note that Siemens COM port in programming software is up to support the option to COM8. But the ports more than COM8 are able to choose but in fact can not be used!

Note: To communicate with the latest introduced Siemens S7-200CN CPU; the following conditions must be met:

1, Programming software version: STEP7 Micro / WIN V3.2 and above.

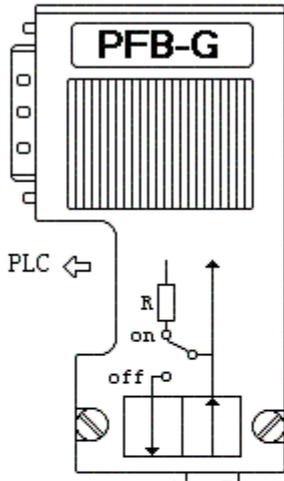
2, Set up the programming software as Chinese state.

**Long-distance communications:**

The largest communications range between the USB/PPI+ and PLC are up to 2 kilometers (9600 bps), when external plus terminals 120 ohm resistance is needed to connect between the pin3 and pin8 of the RS485 ports (DB9 Male) to eliminate signal reflection, but also a 24 VDC power between the pin2 and pin7. And a PFB-G Bus Isolators is needed to install at the end of PLC. 0.22 mm<sup>2</sup> or more unshielded twisted pair lines are used for Communications. When the distance is Over 2,000m, a RS485 repeaters (model: E485GP, products of FOURSTAR as well), can be installed in the bus for extending the distance.

Please Note: USB interface cable cannot be extended.

开关位置=on  
有终端和偏置电阻

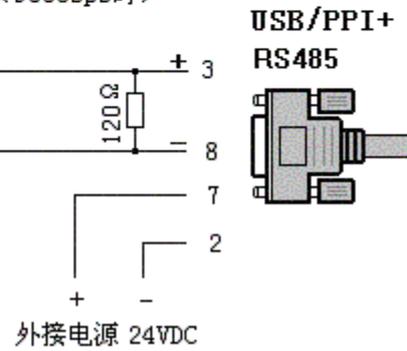


PLC端需经PFB-G总线隔离器连接，并将最后一个PFB-G的终端电阻设置开关拨到“ON”，其它节点的拨到“OFF”

最多可连160台PLC（每台需经PFB-G隔离）

通信线采用截面积为 $0.22\text{mm}^2$ 以上的屏蔽双绞线

最大通信距离2km（9600bps时）



USB/PPI+  
RS485

