



User's Guide for USB/PPIM+ Programming Cable

Summary:

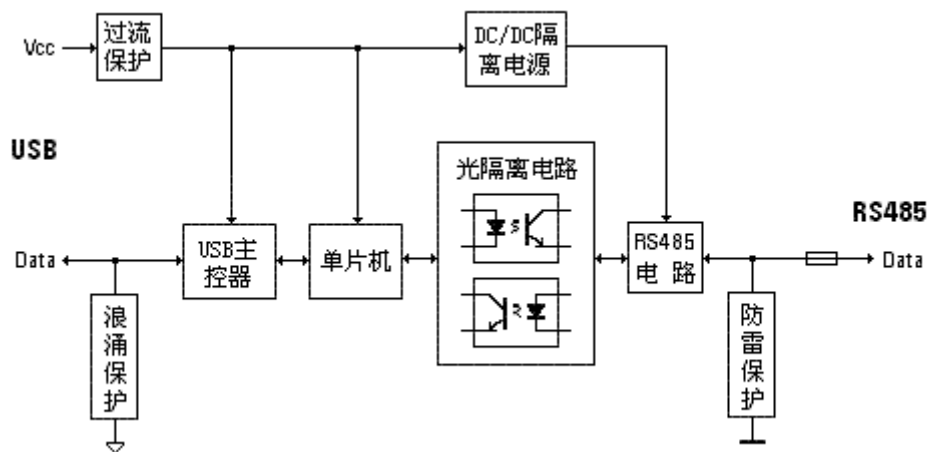
USB / PPIM + is the PPI Multi-Master programming Cable which with USB interface, to realize the level conversion and various of PPI protocol conversion from USB to RS485. Many cheap USB / PPI cable on the market simulate USB to virtual serial (COM port) to realize the communications, it's commonly known as "pseudo-USB interface". The cable only convert the level from USB to RS485, can only support the normal PPI Protocol. But the USB / PPIM + is the real USB interface cable, without installing drivers, directly use the USB option in STEP7 Micro /

WIN software, support PPI, Advanced PPI, and Multiple Master Network Protocol. The cable support the 187.5 Kbps high-speed communications, and take charge of the Multiple Master Network.

This cable is 100% compatible with Siemens PPI Multi-Master USB Cable 6 ES7 901-3DB30-0XA0, and the only difference is that the work power supply from the computer's USB port through the DC / DC isolation, no longer powered by the PLC port. It's easy to extend communications distance of the RS485 without considering the power supply. The two-color LED on the converter box indicates data's transceiving status.

USB/PPIM+ is designed for industrial-type photoelectric isolation cable. USB port and RS485 ports are equipped with surge protection and anti-lightning protection circuitry, which can be Hot plug. It's applicable to the entire Siemens S7-200 Series PLC It's particularly suited to the industrial scene which the communications interface is more easily damaged because of the greater interference. The protection circuit ensures the safe operation of the system.

Outline configuration:



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

pin	signal	Description
3	RxD/TxD+	Data Line B (RS485 signal positive)
8	RxD/TxD-	Data Line A (RS485 signal negative)
5	GND	DGND

Features and technological index:

- support USB / PPIM + operating system: Windows2000/Windows XP
- support USB / PPIM + programming software version: STEP7 Micro / WIN V4.0 and above, without installing drivers, directly use the USB option in Local Connection.
- USB is fully compatible with USB V1.1 norms and USB V2.0
- USB bus-powered, 5 VDC, the power consumption is about 100 mA, with over current protection
- optical isolation voltage: 1000 VDC (up to 3000 VDC, it should be declared when making an order)
- USB port with anti-surge protection, RS485 port with 500 W anti-lightning protection and over current protection

- support PPI baud rate: 9.6 Kbps, 19.2Kbps, 187.5Kbps
- support the communication protocol: PPI, senior PPI, multi-master PPI.
- support long-distance communications, the largest communications distance is 2,000 meters (9.6 Kbps) or 1 km(187.5Kbps).
- each PC only supports a USB cable programming
- temperature: -20 ~ +75 °C
- Cable length: three meters, colors: black

Usage:

1, Enter STEP7 Micro / WIN programming software and click "Settings PG / PC interface", check the "PC / PPI cable (PPI)" and click "Properties..." button.

2,Select "USB" option in "Local Connection".

3, Set up the Station Parameters settings in "PPI" as following: Address: 0, Timeout: 1s .

Set up the Network Parameters in "PPI" in accordance with the needs of you. You can choose any of the following:

Advanced PPI: check the Advanced PPI.

Multiple Master Network: check Multiple Master Network.

General PPI: do not check any of option, which is the default option.

select a baud rate as the same with the PLC. If you do not know that the PLC baud rate can be arbitrary choice one.

Click "OK" button to return to the main menu interface.

4, click on the main menu interface of "communication" button to enter the PLC interface connection, check the "search all baud rate" box, and then double-click on the "Double-click refresh". After a while of searching ,the PLC model And address and other information will display on the software, it's means that connect successfully with the PLC. Click the "confirmation" button to conduct upload, download, and other operating.



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

- 1, Programming software version: STEP7 Micro /WIN V4.0 SP3 and above.
- 2, Set up the programming software as Chinese state.

PPI Multi-Master Cable of *USB/PPIM+* no longer support the early version of the low CPU21X series PLC.

PPI Multi-Master Cable of *USB/PPIM+* do not support Freeport communication and MODEM communication.

Long-distance communications:

The largest communications range between the USB/PPIM+ and PLC are up to 2 kilometers (9.6K bps) or 1 km(187.5Kbps),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. And a PFB-G Bus Isolators is needed to install at the end of PLC. 0.22 mm² or more unshielded twisted pair lines are used for Communications. When the distance is longer than the length of cable, a RS485 repeaters (model: E485GP, products of FOURSTAR as well), can be installed in the bus for extending the distance.

Because the power of USB / PPIM + all supplied from the USB ports of the computer, you do not need to consider power supply when extended the length of cable. It's better than the similar products of Siemens.

Please Note: USB interface cable cannot be extended.

