

USB/MPI+ V4.0 Programming Cable Driver Procedure Setting Guideline

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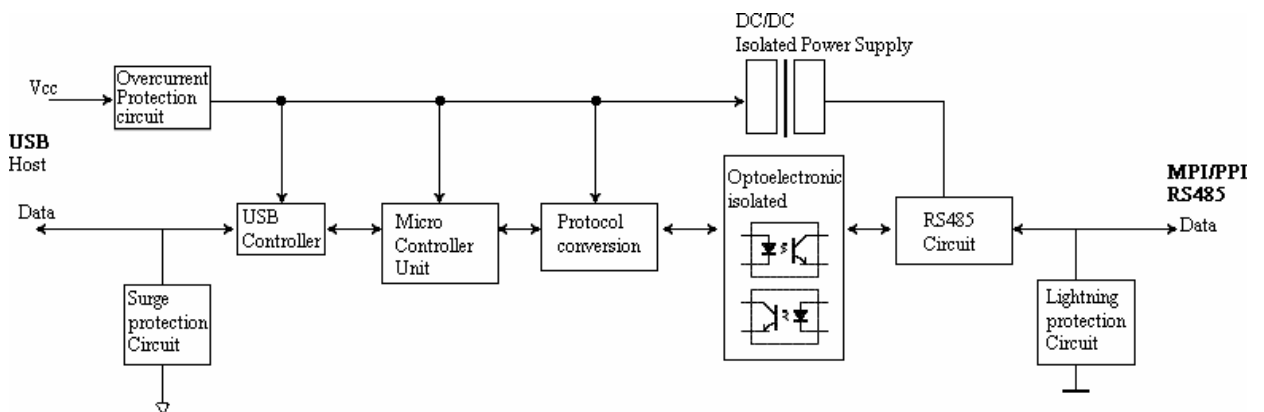
Introduction

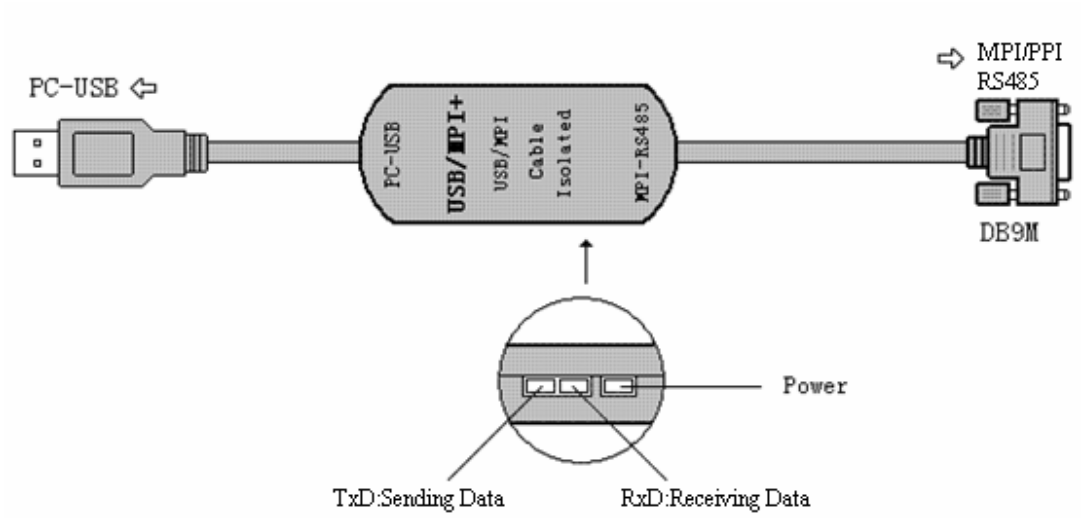
USB/MPI+ V4.0 is the USB to MPI and PPI protocol adapter, support S7-300/400 PLC MPI or S7-200 PLC PPI communication. It's the same as Siemens PC Adapter USB except that this USB/MPI+ V4.0 doesn't support profibus communication. Its driver is the Siemens PC_Adapter_USB driver, and choose **the USB port, not the COM port.**

The working power supply of this cable USB/MPI+ V 4.0 is directly from the USB port, but not the PLC programming interface.

USB/MPI+ V 4.0 is the optoelectronic isolated adapter for industrial design. There is anti-surge& anti-lightning protection circuit for the USB and RS485 interface. It support hot plug. It's suitable for S7-300/400/200 series PLC. In particular, it applies to the strong interfere industrial scene and the safeguard in the circuit guarantees the safely running of the system.

USB/MPI+ principle and figure structure:





Indicator	ON	Flash	Off
PWR USB	Power On	Error	Error Or Power off
RxD	Error	Data exchange from PLC	Not Connected
TxD	Error	Data exchange to PLC	No Data exchange

Indicator State

Functions

- Support Windows2000/Windows XP/Vista
- Support STEP7 V5.2 and higher,STEP7 Micro/Win 4.0 and higher
- Fully compatible with USB V2.0
- Power supply by USB port(100mA). with overcurrent Protection and Surge Protection
- High optoelectronic isolation voltage up to 1000VDC
- The USB port design with surge protection.
- The RS485 port design with overcurrent protection and lightning protection: $I_{pp}=100A(10/700\mu s,4KV)$.Accord to the standard:ITU-TK20/21,VDE0433. $\pm 15KV$ ESD Protection.
- Baud rate of MPI port on PLC: 19.2Kbps,187.5Kbps,1.5Mbps. automatically adjust.
- Baud rate of PPI port on PLC: 9.6Kbps,19.2Kbps,187.5Kbps. automatically adjust.
- Support long distance communication up to 1000m
- Working temperature -20~+75°C
- Length 3 meters.Color:black
- One pc supports one USB programming cable only

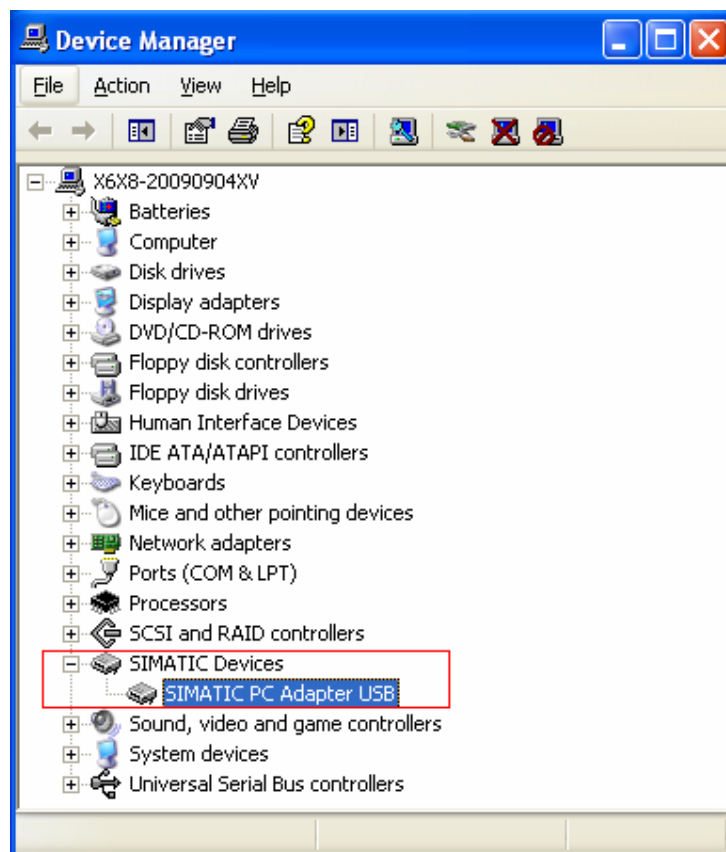
Usage:

After you install the STEP7 or STEP7 Micro/WIN programming software, then please install the Siemens PC_Adapter_USB driver for the USB/MPI+ V4.0 which is included in the CD. Also you could download the latest PC_Adapter_USB driver from Siemens website:

http://support.automation.siemens.com/CN/llisapi.dll/csfetch/27062840/PC_Adapter_USB_102007.zip?func=cslib.csFetch&nodeid=27061861

After the driver is installed, it will appear “USB” option in the “Local Connection” of “Set PG/PC interface” in the STEP 7 programming software and then choose this USB port.

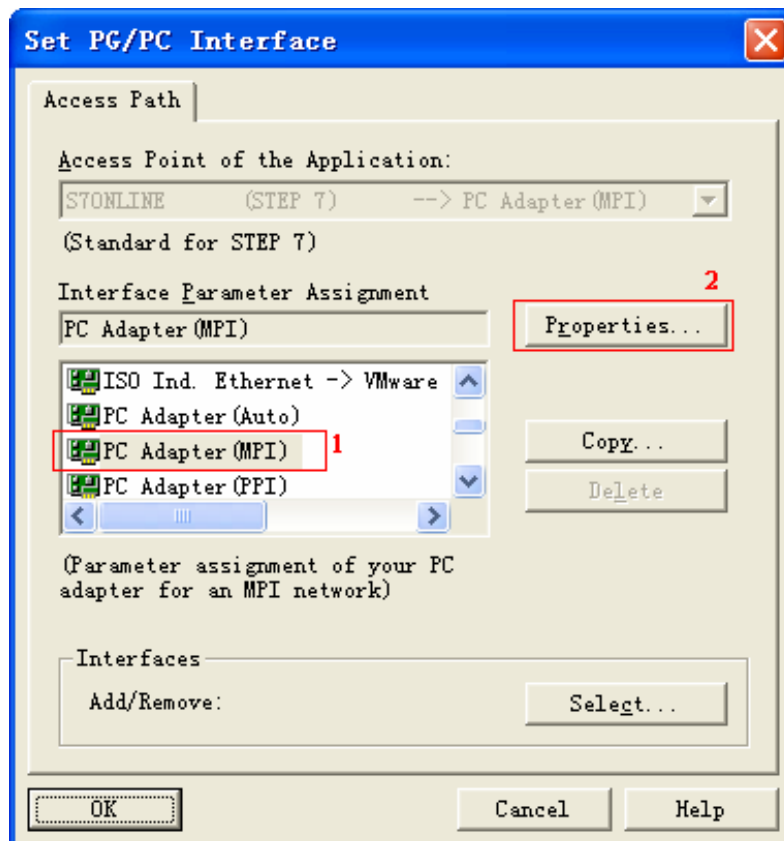
Check whether the USB/MPI+ V4.0 work normally after the driver is installed: right click “My Computer” -> Properties->Hardware->Device Manager, and insert the USB/MPI+ V4.0 into USB port of computer, it will appear a new device in the device manager as following picture. This shows the hardware and driver work normally.



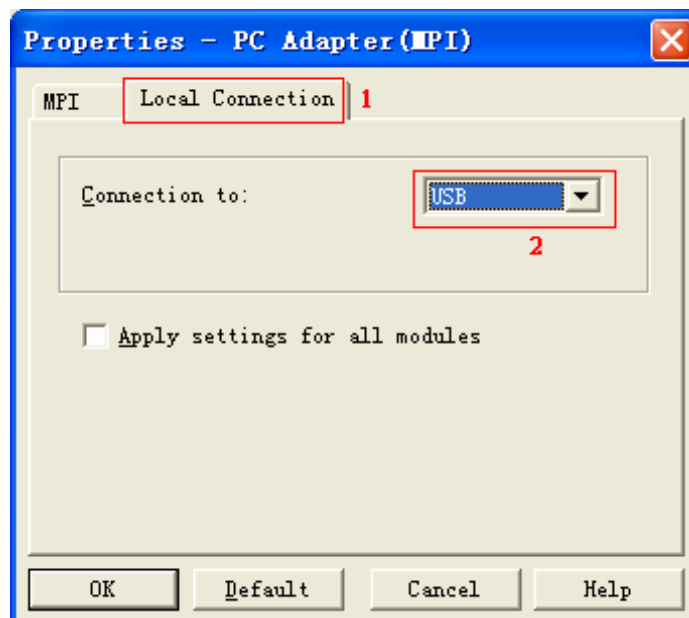
The STEP 7 setting for S7-300/400 PLC communication:

Open the STEP7 programming software main form (SIMATIC Manager), click “Set PG/PC Interface...” of “Options” menu.

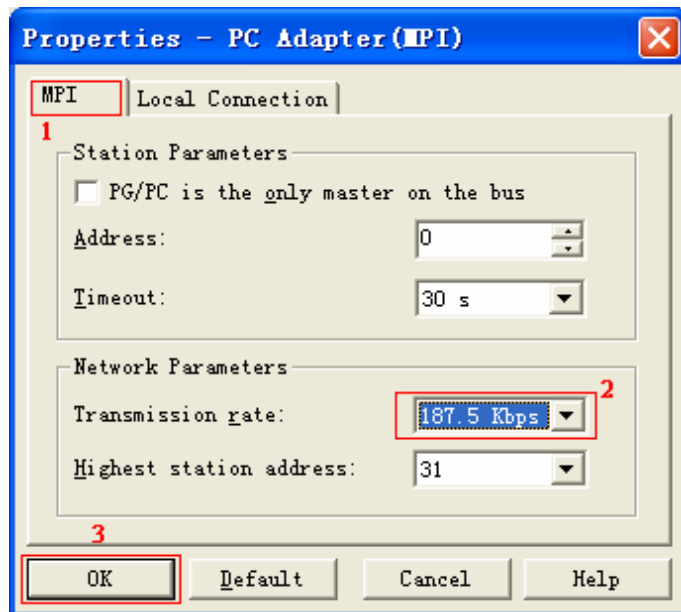
1. Choose "PC Adapter (MPI)" or "PC Adapter (Auto)", click "Properties" and open the "local connection" and "MPI" parameters setting interface. This adapter doesn't support "PC Adapter (PROFIBUS)" option.



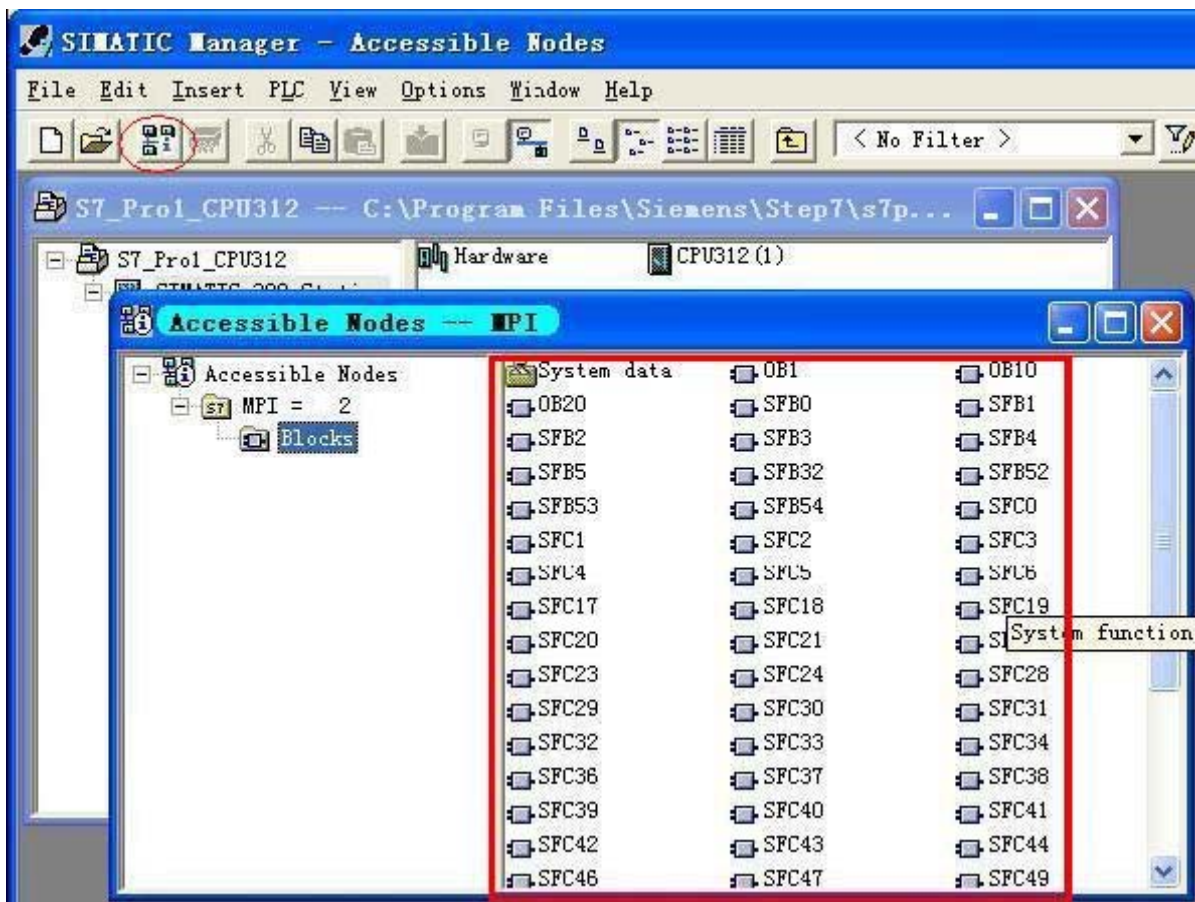
2. Click the "Local Connection" tab and choose "USB".



3. Click top "MPI" tab. You could set the baud rate as 187.5Kbps or 19.2Kbps or 1.5Mbps, USB/MPI+ V4.0 adapter can automatically adjust the baud rate of MPI port. Other parameters are default. Click "OK" to return the previous menu and main form.



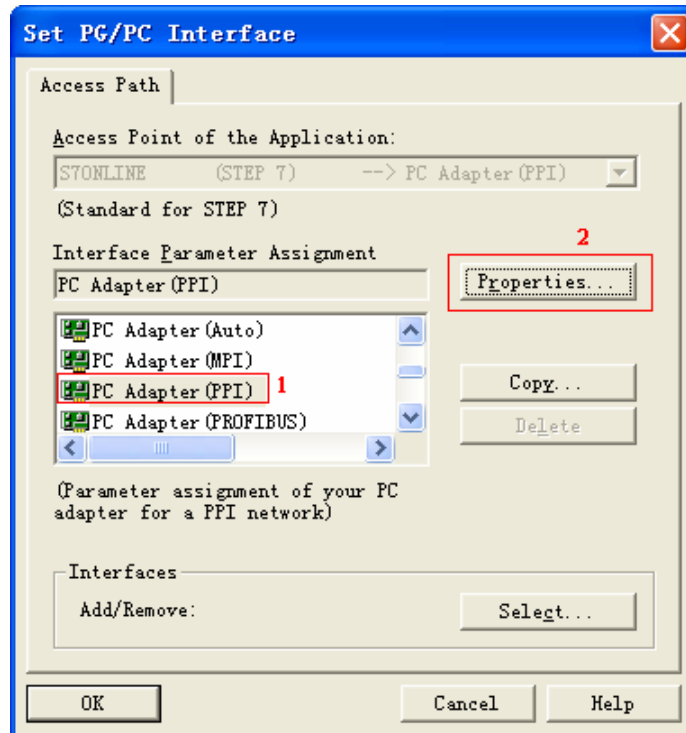
4. After the USB/MPI+ V4.0 connect the USB port of computer and MPI interface of S7-300/400PLC, click the following red circled button in the "SIMATIC manager". If it appears the red squared data, it shows the online test is OK. Now the setting is finished.



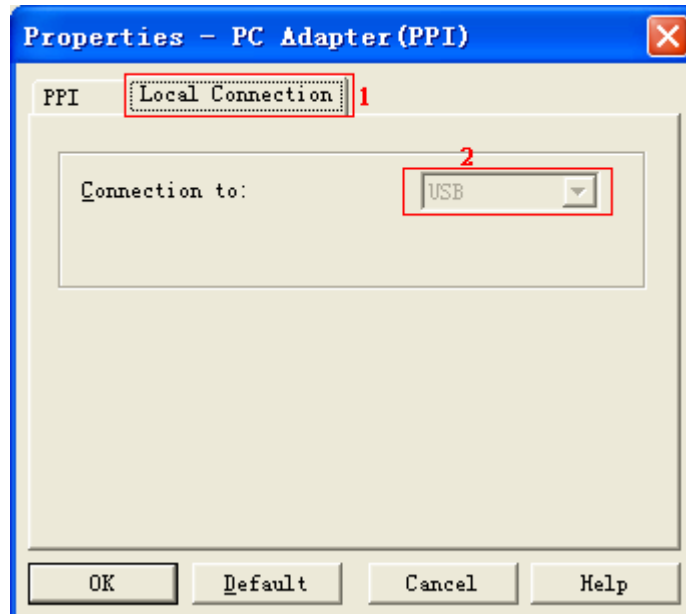
The STEP7 Micro/WIN setting for S7-200 PLC communication:

Open the STEP7 Micro/WIN programming software main form, click the “Set PG/PC Interface”.

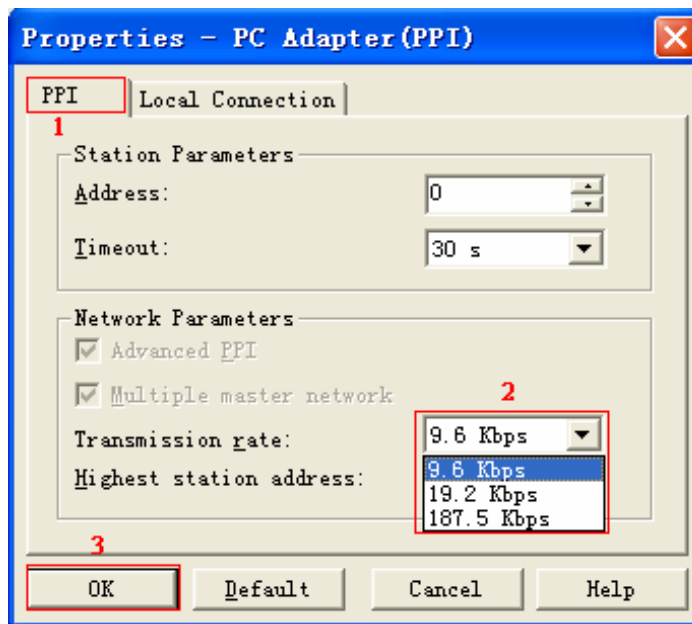
1. Choose “PC Adapter(PPI)”, click “Properties” and open the “Local Connection” and “PPI” parameters setting form.



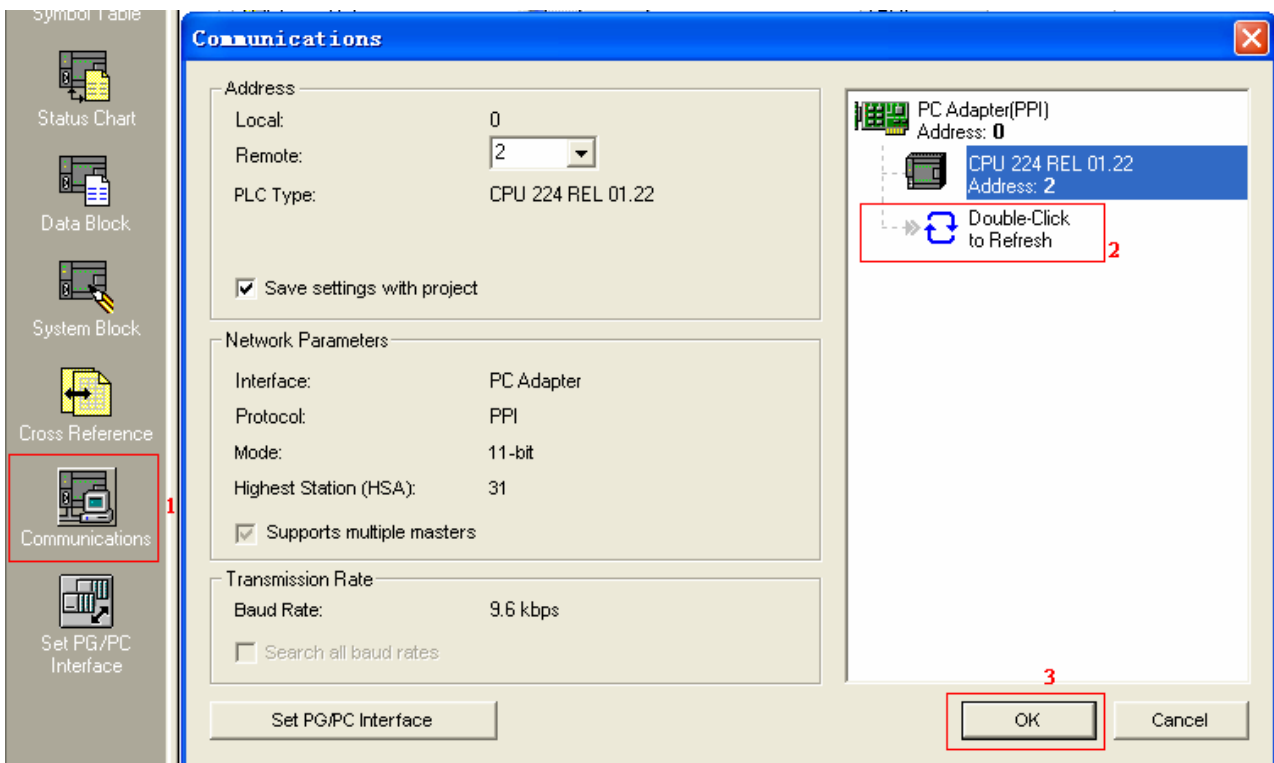
2. There is only “USB” option in the “Local Connection”, can’t be changed.



3. Click top “PPI” tab, set the baud rate as the same as the baud rate of PLC. Other parameters are default. Click “OK” to return the previous menu and main form.

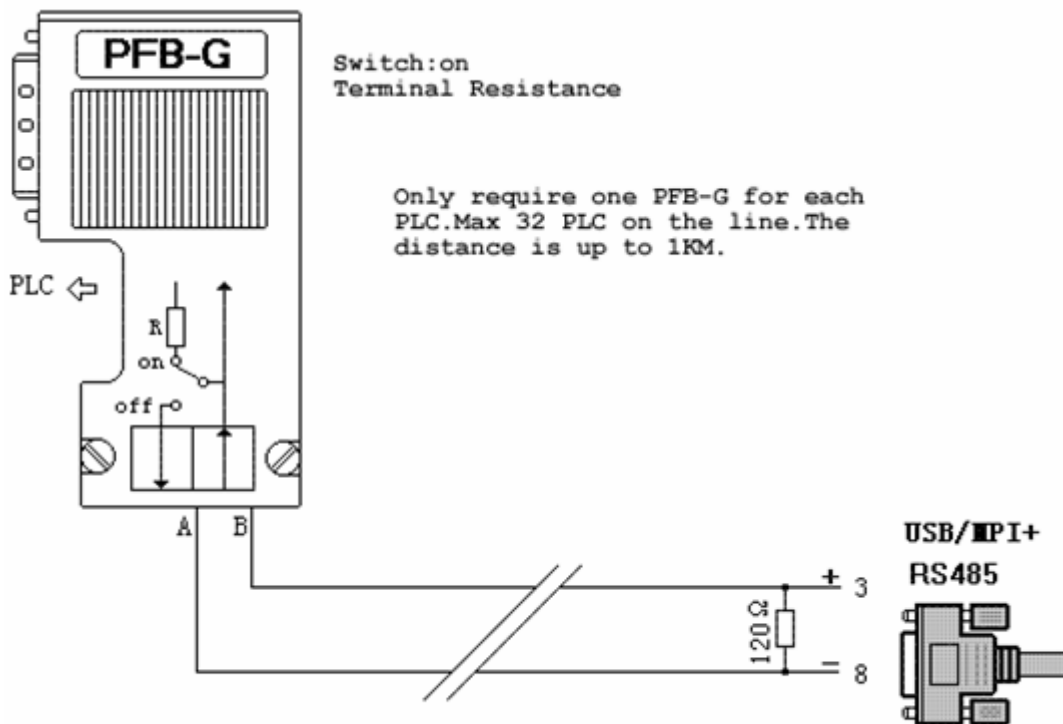


4. After the USB/MPI+ V4.0 connect the USB port of computer and PPI interface of S7-200 PLC, click the “Communications” button in the main interface and then double click “Double-Click to Refresh” icon, then can find the PLC. Choose this PLC and click “OK” button to return the main form.



About Long Distance Communication

For USB/MPI+ V4.0, the largest communication distance is up to 1000m at the communication speed of 187.5Kbps. It needs to splice 120ohm terminal resistance between 3 and 8 pin on the RS485 port(DB9 Male) to eliminate signal reflection. But requires one PFB-G for each PLC.



Rejection provision

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