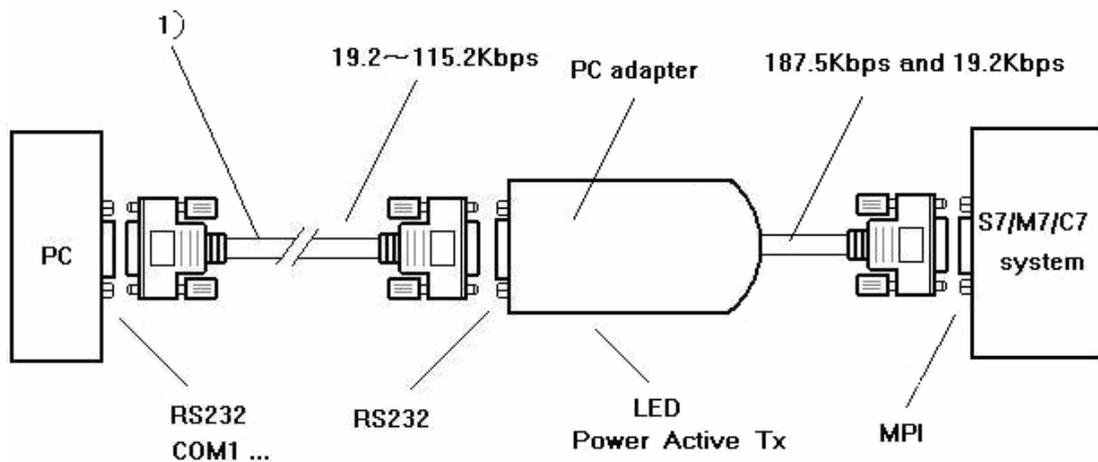


MPI Adapter Manual

MPI Adapter is also called PC Adapter in this manual. It is used to realize translation from RS232 interface to RS485 interface and from RS232 to MPI (MultiPoint Interface) protocol, and used to connect the MPI port of S7-300 / 400 PLC to PC COM port (RS232).

MPI is a type of adapter with photoelectric isolation for industrial design. There is surge protection and the lightning protection circuit in RS232 port and RS485 port, can be safely plugged/unplugged when the power is still on, suitable for the full line of Siemens S7-300/400 PLC and other devices with MPI interface, especially suitable for the industrial field with much EMI interference, the protection measures within the circuit ensure the safe operation of the system..



1) ■MPI RS232 Cable,length is 3 m

Features and main technical parameters:

- ★ Power supply: supplied by the 24VDC from the MPI port of PLC, power consumption about 1W, built-in protection against over-current and surge events
- ★ Isolation voltage: 1000VDC (a special model capable of 3000VDC isolation is available as an option, please indicate when order)
- ★ RS232 port with surge protection, RS485 port with 500W lightning protection and over-current protection
- ★ Baud rate of RS232 port:19.2Kbps~115.2Kbps,standard baud rate adaptive
- ★ Baud rate of MPI port:187.5Kbps and 19.2Kbps adaptive

- ★ Support communication between PLC and HMI.
- ★ LED indicators show the status of power, connection and data transmission
- ★ Operating temperature: -20~75℃
- ★ Outline dimension: 103×50×26mm,total length contain RS232 cable is 3.5m

Signal definition of the RS232 port and RS485 port of the adapter

RS232 (DB9 Male)

Pin.	Signal	Description
1	DCD	No use
2	RXD	RS232 Signal receive
3	TXD	RS232 Signal send
4	DTR	Short circuit with 6
5	GND	RS232 Signal Ground
6	DSR	Short circuit with 4
7	RTS	Sending Request
8	CTS	Clearing Request
9	RI	No use

RS485 (DB9 Male)

Pin.	Signal	Description
1	NC	No use
2	M24V	-24VDC
3	B	RS485+
4	RTSAS	Data receiving control
5	GND	RS485 Signal Ground
6	NC	No use
7	P24V	+24VDC
8	A	RS485-
9	RTS_PG	Data sending control

Description of the LED indicators

Pilot lamp	On	Blinking	OFF
Power	Normal	Failure	Failure or No Connection
Active	Online	Sending data	Offline
Tx	Failure	Sending data	No sending data

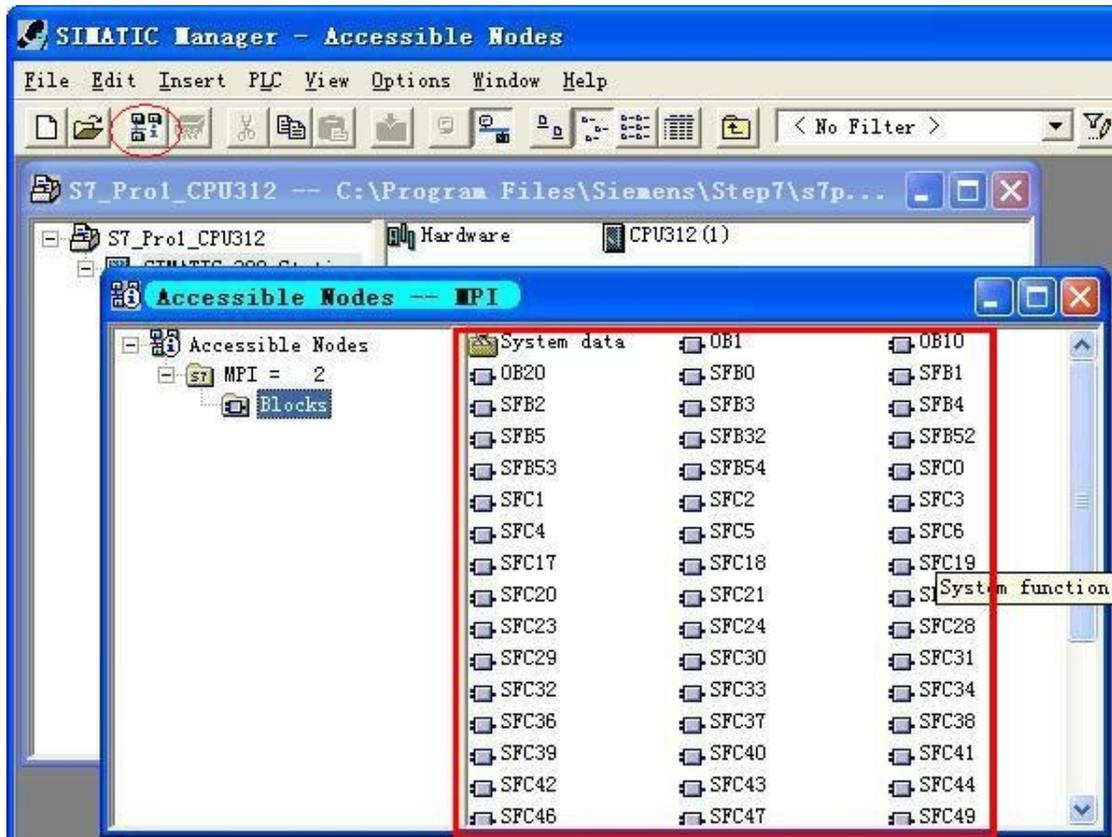
Use the PC adapter with a PC: STEP7 software configuration

Enter the main interface of STEP7 software (SIMATIC Manager) ,Click “Set PG/PC Interface...” in “Options” to enter PG/PC setting interface.

- 1、 Double click “PC Adapter(MPI)” to enter RS232 and MPI interface parameters setting.
This adapter doesn't support “PC Adapter (PROFIBUS)” option.
- 2、 Click “Local Connection” option to set RS232 interface parameters, select the right COM port of PC which connected to MPI adapter(RS232), choose 19200bps or 38400bps as the baud rate of RS232, the MPI adapter will automatically match the baud rate selected.
- 3、 Click “MPI” option to set the parameters of MPI interface of adapter. You can set the

baud rate as 187.5Kbps or 19.2Kbps, and the adapter will automatically match to the baud rate of MPI port. Use default value for other parameters.

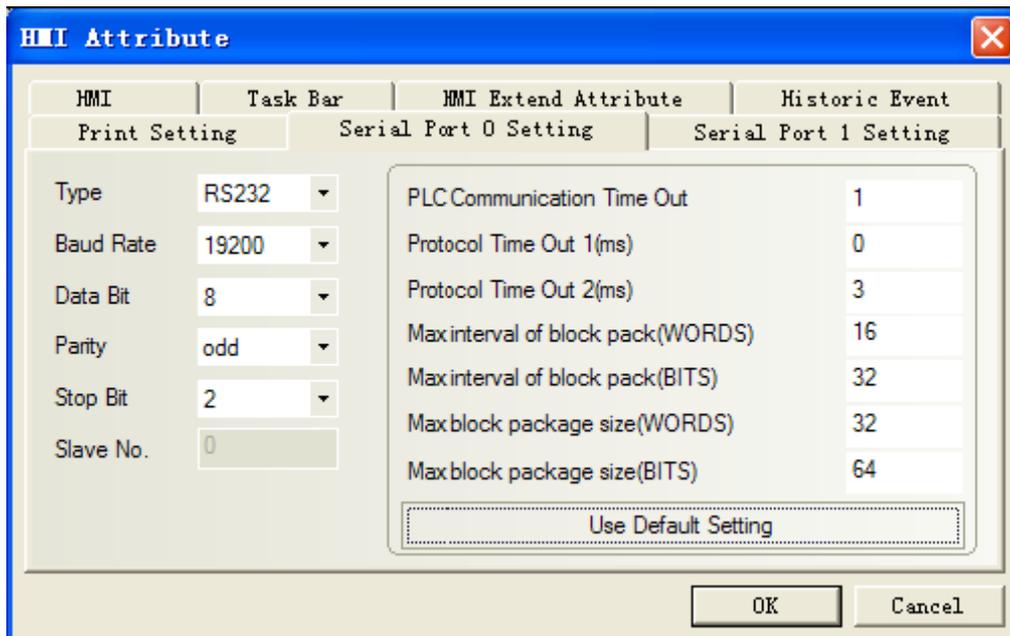
4. Online testing of the communication: use MPI adapter to connect the MPI port of S7-300/400 PLC and RS232 port of PC, click the button in the red circle in main menu interface in following figure, if the data appears in the red box as the figure shows, it means that online test successful. So far, configuration has been completed. You can proceed the operation such as online, program upload, download, monitor and so on.



Use the PC adapter with Kinco® touch panel HMI

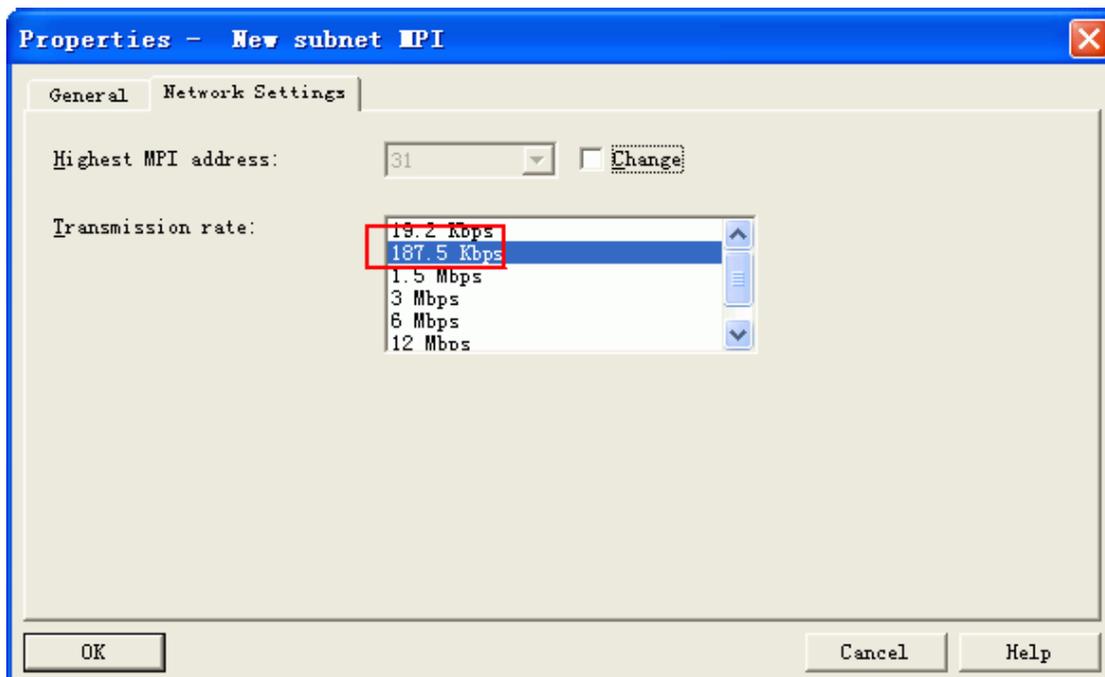
First of all, you need to select "Siemens S7-300/400 (PC Adapter)" from the PLC list when building the project. Then set as following:

1. HMI communication setting: 19200, 8, 2, odd (as following figure); Station No.: 2.
2. PLC must be 187.5K.
3. You must set DB first, or register can not write (DB.DBX, DB.DBW, DB.DBD). The initial address of DBm.DBW and DBm.DBD must be even.

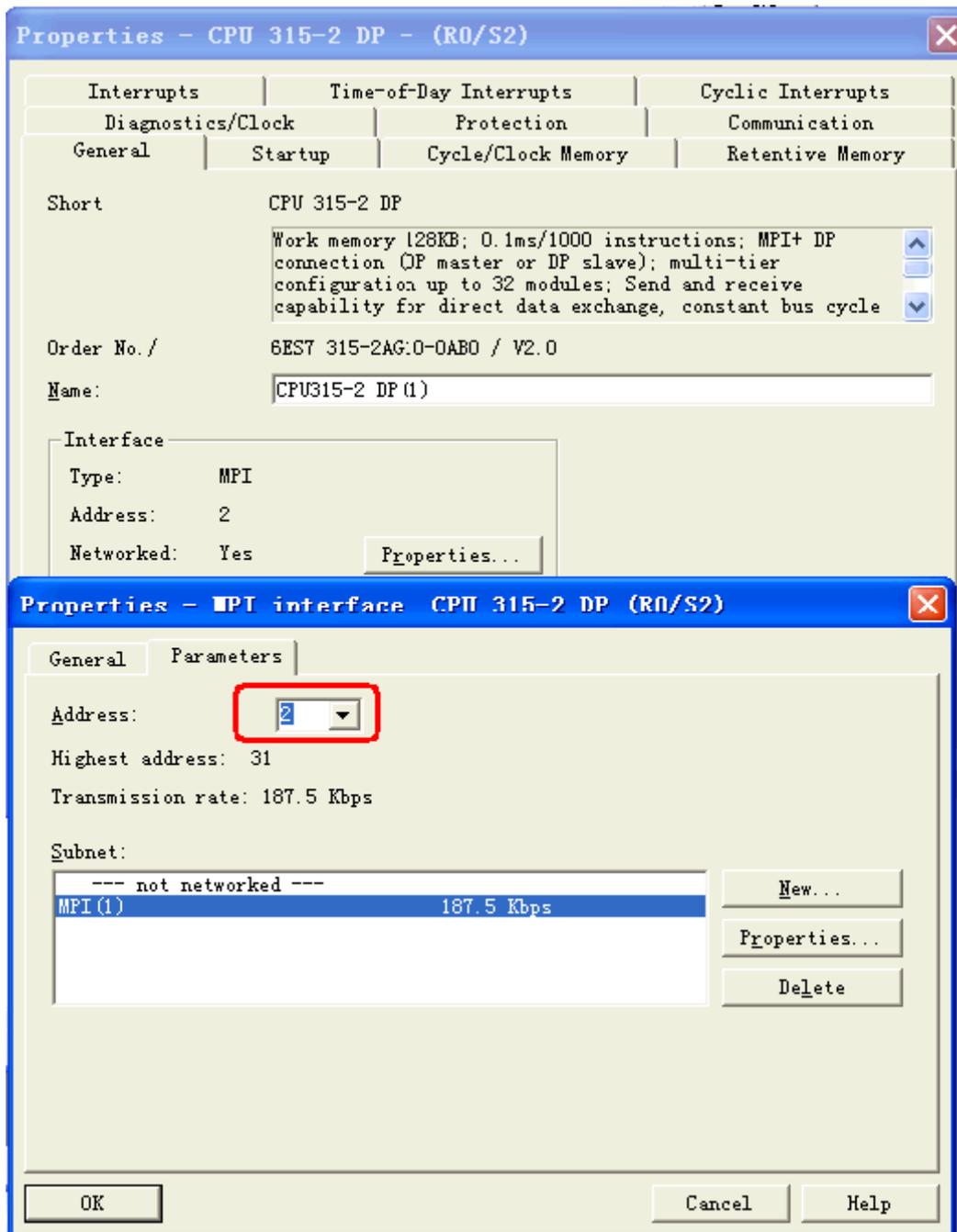


After finishing HMI setting, then set PLC parameters as following:

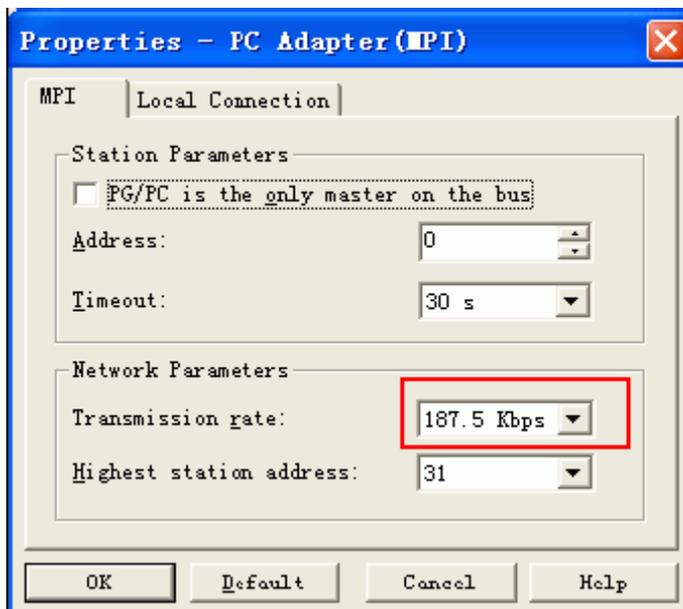
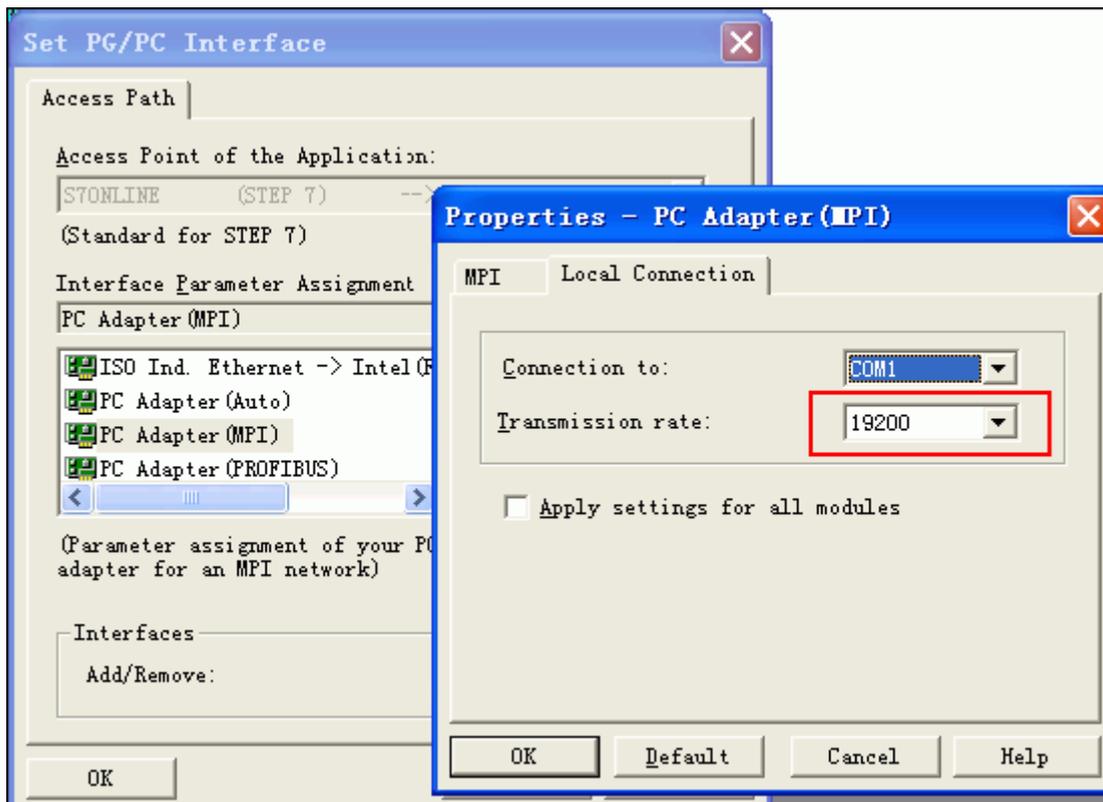
A) MPI transmission rate must be set 187.5k. If the MPI transmission rate is 19.2k, you must change the rate to 187.5k via Siemens adapter (at the hardware attribute):



B) MPI address must be 2.



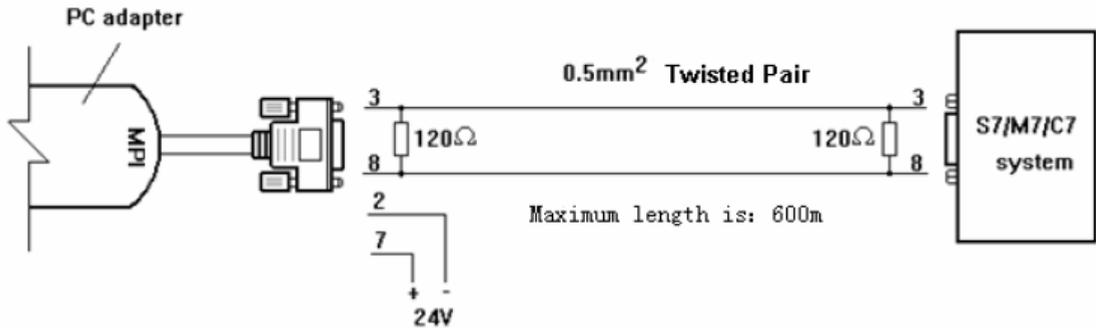
C) After Setting, download project into PLC. Make sure the MPI port's transmission rate is 187.5k, and select "PC Adapter(MPI)" in "set PG/PC interface" menu, change the transmission rate to 187.5k, as following:



The communication of MPI adapter in long distance

Extend the RS485 port:

The cable length must be 600m or less in the 187.5Kbps, the 7 pin and 2 pin must connect with 24VDC power in the port of RS485, the 8 pin and 3 pin must connect with 120 terminal resistance. As following figure shows:



MPI RS232 Cable:

Connection method: Plug the end marked “PC Adapter” to the MPI PC Adapter

Plug the end marked “HMI/PC” to PC or HMI touch panel.

Cable Length: 3m.

Connection figure as following:

