The Instruction for Use of PC/PPI+ Electro-optical Isolation Type Programming Cable

The PC/PPI+ programming cable is the transformation electric cable from RS232 to the PPI connection (RS485), and it is suitable for Simens S7-200 series PLC and the TP170 touchscreen programming, the correspondence and the monitoring. It also supports the PPI agreement and the free mouth communication protocol, and can use MODEM (modem) through the telephone line to make a long-distance correspondence. Since the cable is isolated with the electro-optical and built-in anti-static, surge and other transient over-voltage protection circuit, it solves the problem that the communication I always burned easily well. And it is especially suitable for the long-term monitoring communications which are under the industrial site with a poor environment.

Main technical parameters：

★ Isolation voltage: 1000VDC（The maximum to 3000 VDC, orders required statement）

★ According to a transient voltage suppression. The RS485 port can withstand the power of up to 500 W transient over-voltage and lightning impact，the RS232 port and power circuit are equipped with surge protection to protect the circuit. The whole product can be arbitrarily charged plug.

★ Baud rate：0～115.2kbps Adaptive（products available for sale since January 2008 ）

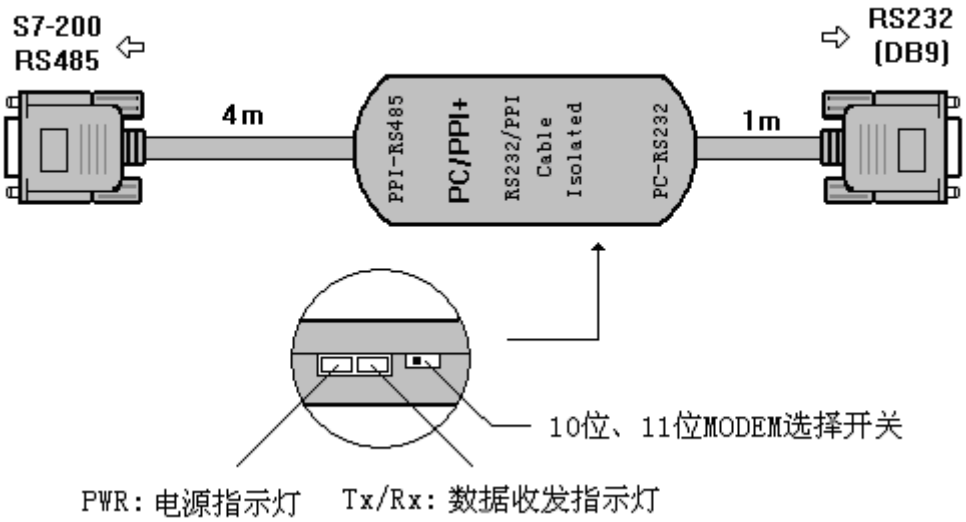
★ The longest communication distance：2 km（Baud rate:9600bps per hour），1km（Baud rate:115.2Kbps per hour）

★ With a power indicator light and the data received and sent indicator light

★ Temperature:-40～85℃（products available for sale since January 2008）

★ Dimension：103×50×26，The total length of cable is 5m.

The product structure：



Signals of PC-RS232 plugs and PPI-RS485 plugs are defined as follows.：

PPI-RS485 plug		PC-RS232 plug	
Pin	Signal explanation	Pin	Signal explanation
2	24V Power source negative （RS485 Logical place）	2	Receive data RD（Output from PC/PPI）
3	RS485 signal B （RxD/TxD+）	3	Send data SD（Send to PC/PPI）
7	24V Power source positive	4	Data terminal ready DTR
8	RS485 signal A （RxD/TxD-）	5	Ground（RS232 Logical place）
9	Agreement choice	7	Require to send RTS

The use of products：

1、 PLC and computer connections for the PPI or free Communication, programming：

Insert the PC / PPI + cable's RS485 plug into the programming mouth of S7-200PLC and the RS232 plug into the computer's RS232 port. Chose the corresponding number of the COM port. Switch the 10bit, 11bit selection switch to 11 bit. The baud rate of the PC/PPI+ cable is adaptive from 0 to 115.2kpbs. There is no need to set that.

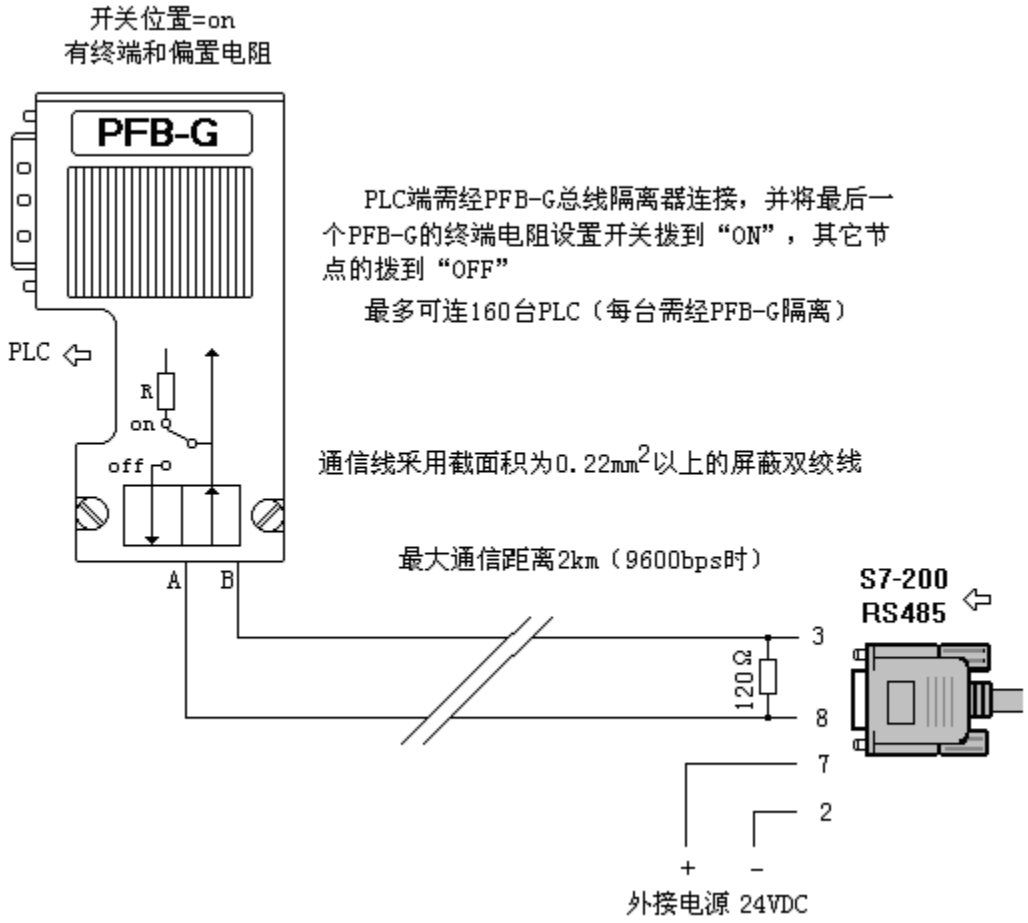
Attention: to meet the following conditions when you need have programming communications with the latest Siemens S7-200 CN CPU normal.

1、Use the programming software STEP 7-Micro/WIN V4.0 SP3 above.

2、Set up the programming software's working environment to the Chinese state

2、The long-distance communications between PLC and computer：

When having long-distance communications, the PC / PPI + requires additional external power and we should parallel 120Ωi end resistance n between the 3, 8 of RS485 plugs to eliminate signal reflection, as shown below:

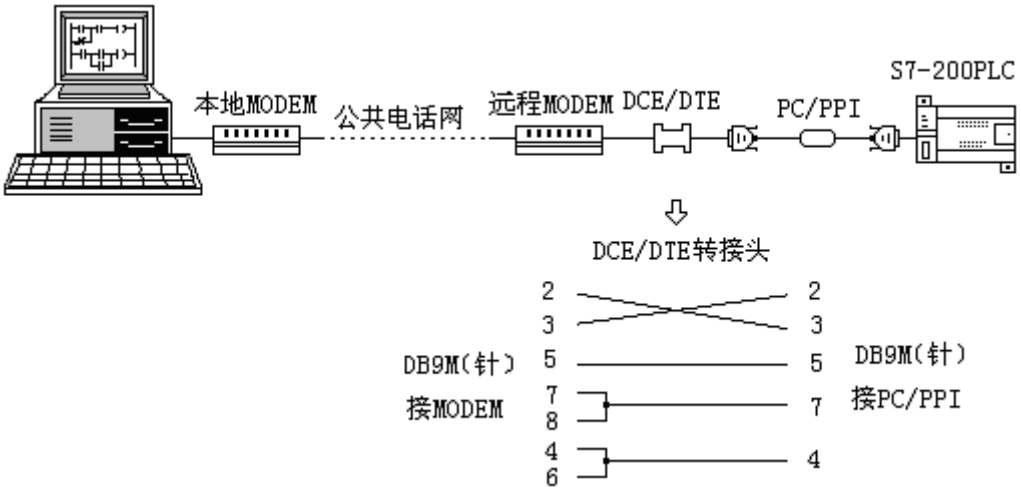


3、 long-distance communications between the PLC and computer via telephone lines:

You have to make a cross-adapter by yourself when you get the PC/PPI+’s RS232 port and the MODEM connected. Switch to the corresponding location according to the MODEM that it is 10 or 11.

10 bits MODEM refers: 1 outset bit, 8 data bits, no parity bit, and 1 stop bit(or 7 data bits,1 parity bit).This kind of MODEM is comparative common on the market.

11 bits MODEM refers: 1 outset bit, 8 data bits, 1 parity bit (Occasionally bit check), and 1 stop bit .


本地MODEM
公共电话网
远程MODEM
DCE/DTE
PC/PPI
S7-200PLC
DCE/DTE转接头
DB9M(针)
接MODEM
DB9M(针)
接PC/PPI
2
3
5
7
8
4
6
2
3
5
7
4


PPI-RS485
PC/PPI+
RS232/PPI Cable
RS232/RS485 Isolated
For SERIES S7-200
PWR
Tx/Rx
10 bit
11 bit
PC-RS232

四星电子PC/PPI+内部电路结构（2008年1月开始发售）